The Impact of Deposit Mobilization and Loan Disbursement on Financial Performance of Commercial Banks in case of Ethiopia

Solomon Ymenu

A thesis submitted to the department of Accounting and Finance in partial fulfillment of the requirements for the award of Master of Business administration (MBA) On Financial Service

ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
DEPARTMENT OF ACCOUNTING AND FINANCE
ADDIS ABABA, ETHIOPIA
May, 2018
Declaration

I, Solomon Ymenu, hereby declare that the thesis entitled “The impact of deposit mobilization and loan disbursement on the performance of commercial banks in case of Ethiopia ” in partial fulfillment of the requirements for the award of Master of MBA on financial service is a record of original research work done by me and supervision and guidance of Sewale Abate (PhD).

Name: Solomon Ymenu
I.D No.  GSE/1262/08
Signature ___________
Date ___________
Statement of Certification

This is to certify that thesis entitled,“ The impact of deposit mobilization and loan disbursement on the performance of commercial banks in case Ethiopia”, undertaken by Solomon Ymenu for the partial fulfillment of degree of Master of business administration in Financial institution at Addis Ababa University, to the best of my knowledge, is an original work and not submitted earlier for any degree either at this University or any other University.

Thesis advisor:- Sewale Abate (PhD)
Addis Ababa University
College of Business and Economics
Department of Accounting and Finance

This is to certify that the thesis prepared by Solomon Ymenu, entitled: **The impact of deposit mobilization and loan disbursement on the performance of commercial banks in case Ethiopia** submitted in partial fulfillment of the requirements for the of Degree of Master of business administration in financial service complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the Examining Committee:

Examiner____________________ Signature______________ Date________

Examiner____________________ Signature______________ Date________

Advisor  **Sewale Abate (PhD)** Signature______________ Date ____________

______________________________________________________________
Chair of Department or Graduate Program Coordinator
Acknowledgments

The researcher extend special acknowledgement to the following individuals for their unreserved support without which this research would not become reality. My first sincere and deepest gratitude goes to my advisor Sewale Abate (PhD) for his unreserved assistance in giving me relevant comments and guidance throughout the study.

Second, I would like to thank National Bank of Ethiopia for supporting me in collection of the essential data.

Finally, my sincere thanks go to all individuals who contribute a lot for the success accomplishment of my thesis.

Solomon Ymenu

May 2018
Abstract

Mobilization of deposits is one of the important functions of banking business and it is an important source of working fund for the bank. On the other hand, performance of banking industry may be gauged through value of deposit and loan. The aim of this research is to investigate the impact of deposit mobilization and loan disbursement on Bank’s financial performance using seven years data from the year 2010 to 2016 with a sample of thirteen Ethiopian commercial banks. The relevant literature was reviewed for the purposes of this study. Explanatory research design was used in trying to establish the causal effect relationship between the independent variables (amount of mobilized deposit, amount of disbursed loan and none performing loan) including the control variable (bank size) and the dependent variable (Return on Asset). To get information about the selected variables secondary data was collected from the NBE. The study utilized both correlation and panel data with multiple regression method as data analysis in drawing conclusions about the study. The findings of the study shows that amount of mobilized deposit, amount of disbursed loan and bank size had positive and significant impact on the performance of Ethiopian commercial banks. On the other hand, none performing loan had a negative and insignificant impact on banks performance. Based on the findings and conclusion the recommends that banks should attract depositors and deposit by providing convenience accessible banking (through expanding number of branches, introduce and enhance E-banking such as internet banking, card banking and mobile banking), quality service (Improving employees knowledge and skills on banking product and customer service)

Key terms:- Deposit mobilization and Loan disbursement, Financial Performance, ROA, Commercial banks, Ethiopia.
# Table of Content

Declaration ................................................................................................................................. ii
Statement of Certification .......................................................................................................... iii
Acknowledgments ..................................................................................................................... v
Abstract .................................................................................................................................... vi
Table of Content ........................................................................................................................ vii
Acronyms and abbreviations ...................................................................................................... ix
List of figures and tables ............................................................................................................. x

## Chapter One - Introduction .................................................................................................... 1
  1.1 Background of the study ..................................................................................................... 1
  1.2 Statement of the Problem .................................................................................................. 4
  1.3 Research Questions .......................................................................................................... 6
  1.4 Objective of the study ...................................................................................................... 6
    1.4.1 General objective ....................................................................................................... 6
    1.4.2 Specific objective ....................................................................................................... 6
  1.5 Hypotheses ....................................................................................................................... 7
  1.6 Scope and Limitation ........................................................................................................ 7
    1.6.1 Scope of the study ..................................................................................................... 7
    1.6.2 Limitation of the study ............................................................................................. 8
  1.7 Significance of the Study ................................................................................................ 8
  1.8 Organization of the Paper ................................................................................................. 9

## Chapter Two - Literature review ............................................................................................ 10
  2.1 Theories and empirical studies of deposit mobilization and Loan disbursement .......... 10
    2.1.1 Deposit mobilization and bank performance ............................................................ 11
    2.1.2 Loan disbursement and bank performance ............................................................... 14
    2.1.3 Asset Quality and bank performance ...................................................................... 15
  2.2 Bank Performance Indicators ........................................................................................ 16
  2.3 Conceptual Frame Work ................................................................................................. 17

## Chapter Three - Methodology .............................................................................................. 18
  3.1 Research Design ............................................................................................................... 18
  3.2 Source of data and collection methods ........................................................................... 18
3.3 Method of Data Analysis .................................................................................................................. 19
3.4. Description of variables and their measurements ........................................................................... 19
  3.4.1 Dependent variable ....................................................................................................................... 19
  3.4.2 Independent variables .................................................................................................................. 20
  3.4.3 Control variables ........................................................................................................................ 21
3.5 Specifications of empirical research model ....................................................................................... 22
Chapter four - Results and Discussion .................................................................................................. 23
  4.1. Descriptive Statistics of Variables ............................................................................................... 23
  4.2. Correlation analysis of ROA and deposit mobilization and loan disbursement ......................... 25
  4.3 Regression Results and Discussion ............................................................................................... 26
    4.3.1 Diagnostic tests of the data set ................................................................................................. 26
    4.3.2 Results of regression analysis ................................................................................................. 30
    4.3.3 Discussion of regression results ............................................................................................. 31
Chapter five - Conclusions and Recommendations .............................................................................. 35
  5.1 Conclusions .................................................................................................................................... 35
  5.2 Recommendations ........................................................................................................................ 36
  5.3. Recommendation for future Research ......................................................................................... 37
References .............................................................................................................................................. 38
Index ..................................................................................................................................................... 44
Acronyms and abbreviations

CLRM……    Classical linear regression model
OLS……    Ordinary least square
NBE……    National Bank of Ethiopia
AMD……    Amount of mobilized deposit
ALD……    Amount of loan Disbursed
NPL……    None performing loan
BS……    Bank Size
ROA……    Return on Asset
List of figures and tables

Figure 1 Conceptual Frame work.................................................................17

Table 4.1 Descriptive Statistics of the study variables.................................24
Table 4.2 Correlation Matrix........................................................................26
Table 4.3 Normality test..............................................................................28
Table 4.4 Heteroscedasticity test.................................................................28
Table 4.5 Autocorrelation test.....................................................................29

Table 4.6 Model specification error (linearity) test........................................30

Table 4.7 Random Vs Fixed effect Model test summary................................31
Table 4.8 Regression analysis.......................................................................32
Chapter One - Introduction

1.1 Background of the study

Financial intermediaries perform an important role in the development process, particularly through their role in allocating resources to their most productive uses. More efficient financial markets help economic agents hedge, trade, pool risk, raising investment and economic growth. Financial institutions provide consumers and commercial clients with a wide range of services and different types of banking products.

Banks, the world over, thrive on their ability to generate income through their lending activities. The lending activity is made possible only if the banks can mobilize enough funds from their customers. Since commercial banks depend on depositor’s money as a source of funds (Tomola 2013).

According to Tesfaye (2014) a commercial bank is a profit-seeking business firm, dealing in money and credit. It is a financial institution dealing in money in the sense that it accepts deposits of money from the public to keep them in its custody for safety. So also, it deals in credit, i.e., it creates credit by making advances out of the funds received as deposits to needy people. It thus, functions as a mobilizer of saving in the economy. A bank is, therefore like a reservoir into which flow the savings, the idle surplus money of households and from which loans are given on interest to businessmen and others who need them for investment or productive uses.

Kehinde, James S. & Adejuwon, Kehinde D. (2011) argued that, financial resources are mobilized and channeled to economic activities by financial institutions or financial intermediaries, especially banks, who channel these resources from surplus economic units to deficit economic units. Moreover, Gibson & Tsakalotos (1994) demonstrated that the banks could be a catalyst of economic growth if it is developed and healthy. The benefits accruable
from a healthy and developed financial system relate to savings mobilization and efficient financial intermediation roles. In addition to resource allocation good bank performance rewards the shareholders with sufficient return for their investment. When there is return there shall be an investment which, in turn, brings about economic growth. On the other hand, poor banking performance has a negative repercussion on the economic growth and development (Heffernan, 1996; Shekhar, 2007). Poor performance can lead to runs, failures and crises. Banking crisis could entail financial crisis which in turn brings the economic meltdown as happened in USA in 2007 (Marshall, 2009). Thus, to avoid the crisis due attention was given to banking performance.

Sheku (2005) stated profit is the ultimate goal of commercial banks. All the strategies designed and activities performed thereof are meant to realize this grand objective. However, this does not mean that commercial banks have no other goals. Commercial banks could also have additional social and economic goals. However, the intention of this study is related to the first objective, profitability.

The performance of commercial banks can be affected by internal and external factors (Al-Tamimi, 2010; Aburime, 2005). These factors can be classified into bank specific (internal) and macroeconomic variables. This study focused on internal factors that are not studied in most cases, like deposit mobilization, resource allocation and the quality of loan (NPL).

Performances of the bank depend on deposits and resource allocation (Loan disbursement). Mobilization of deposits is one of the important functions of banking business. It is an important source of working fund for the bank (Rajeshwaries, 2014). Deposit mobilization is an indispensable factor to increase the sources of the banks to serve effectively. The Commercial Banks must tap deposits from urban and rural areas. This helps the banks to provide large amount of funds to priority sectors for development.

Mohammed, Alexander & Musa (2015) reveal that, the successful functioning of commercial banks depends on the extent of funds mobilized. Deposits are the life blood of banking companies. Deposits constitute a vital source of funds required for banking business. There are different types of deposits, with different maturity pattern carrying different rates of interests.
Deposit mobilization is depending on the cost of deposits. Mobilization of deposits for a bank is as essential as oxygen for human being.

On the other hand, the availability of loans is a factor that influences bank profitability. Commercial banks borrow money for the purpose of lending at a higher rate of interest. Bank grants various types of loans to the industrialists and traders thus most of the bank’s income is generated from loan production. The margin between the interest rate the bank pays the depositors and interest rate it charges for loans represents the bank’s profit. Therefore, the higher a bank’s loan-to-deposit ratio, the more money it can earn in terms of lending revenue (Ahmed, 2014). Though, deposit mobilization and resource allocations (loan disbursement) have a great impact on banks performance, the quality of loan portfolio determines the profitability of banks. The loan portfolio quality has a direct bearing on bank profitability. The highest risk facing a bank is the losses derived from delinquent loans (Dang, 2011). It is the major concern of all commercial banks to keep the amount of nonperforming loans to low level. Thus, low nonperforming loans to total loans shows that the good health of the portfolio a bank. The lower the ratio the better the bank performing (Sangmi and Nazir, 2014).

The banking environment in Ethiopia has, for the two decades, undergone many regulatory and financial reforms. These reforms have brought about many structural changes in the banking sector of the country and have also encouraged private banks to enter and expand their operations in the industry. During those periods, Ethiopia has been showing an impressive performance in banking service and the economic growth as a whole (Dasalegn, 2014). Recent data also testifies that mostly, the banking sector has experienced a trend of growing profitability alongside positive trends related to balance sheet expansion (NBE Report 2014/15). However, the contributing factors, whether internal or external, to the greatest profitability earned by the industry was not well analyzed. It is important therefore, to understand if the banking sector profitability is being driven by factors related to the bank or are from external sources. In a country where the financial sector is dominated by commercial banks, any failure in the sector has a huge implication on the economic growth of the country. This is due to the fact that any bankruptcy that could happen in the sector has a domino effect that can lead to bank runs, crises and bring overall financial crisis and economic problems (Dawit F, 2016). However, substantial
amount of studies have not conducted to investigate the impact of deposit mobilization and loan disbursement on banks performance, specially, in case of Ethiopia. This study focused on internal factors that were not studied in most of the prior similar studies, like deposit mobilization, resource allocation and the quality of loan (NPL) and it examines their impact on bank performance in case Ethiopia.

1.2 Statement of the Problem

Kehinde, S. & Adejuwon, D. (2011) argued that, financial resources are mobilized and channeled to economic activities by financial institutions or financial intermediaries, especially banks, who channel these resources from surplus economic units to deficit economic units.

Banks, the world over, thrive on their ability to generate income through their lending activities. The lending activity is made possible only if the banks can mobilize enough funds from their customers. Since commercial banks depend on depositor’s money as a source of funds (Tomola 2013). According to Shollapur (2010), bank use customer’s deposits mainly to give out loans to deficit economic units or borrowers. The larger the amount of deposits a bank receives from its customers, the better is its capacity to give out loans and the higher is the interest income.

In addition to resource allocation good bank performance rewards the shareholders with sufficient return for their investment. When there is return there shall be an investment which, in turn, brings about economic growth (Heffernan, 1996; Shekhar, 2007). On the other hand, poor banking performance has a negative repercussion on the economic growth and development. And, it can lead to runs, failures and crises (Marshal, 2009). Thus, to avoid the crisis due attention should be given to banking performance.

Thus, financial performance analysis of commercial banks has been of great interest to academic research since the Great Depression Intern the 1940’s. In the last two decades studies have shown that commercial banks in Sub-Saharan Africa (SSA) are more profitable than the rest of the world with an average Return on Assets (ROA) of 2 percent (Flamini et al., 2009). Besides, the banking environment in Ethiopia has, for the past two decades, undergone many regulatory
and financial reforms. These reforms have brought about many structural changes in the banking sector of the country and have also encouraged private banks to enter and expand their operations in the industry. During those periods, Ethiopia has been showing an impressive performance in banking service and the economic growth as a whole (Dasalegn. 2014).

However, the performance of commercial banks can be affected by various factors (Al-Tamimi, 2010; Aburime, 2005). These factors can be classified into bank specific (internal) and macroeconomic (external) variables. Among various factors, deposit mobilization and loan disbursement have an impact on performance of commercial banks. Even though, the impact of deposit mobilization and loan disbursement on bank performance is not widely studied some of the relevant studies have examined the impact of deposit mobilization and loan disbursement on banks’ performance around the world (Rajeshwari, 2014; Kaur, 2012; Verma & Kumar, 2007)

According to Rajeshwari (2014) mobilization of deposits is one of the important functions of banking business and it is an important source of working fund for the bank. So, the success of the banking greatly lies on the deposit mobilization. On the other hand, Omid & Javaid (2016) depicted performance of banking industry may be gauged through value of deposit and loan, since it reflects as to how the funds are utilized by the banks to generate their revenue and increase the market share. Loan is the major source of income and is expected to have a positive impact on bank performance, other things constant, the more deposits are transformed into loans, the higher the interest margin and profits (Sehrishgul 2011)

Despite some studies developed to examine the impact of deposit mobilization and loan disbursement on the bank performance, most of them did not target Ethiopian banking industry. So, further research is needed to get better understanding on the impact of deposit mobilization and loan disbursement on the performance of commercial banks, specially, in case of Ethiopia. Therefore, this study is conducted to measure and analyze the impact of deposit mobilization and loan disbursement on banks performance using commercial banks in Ethiopia.
1.3 Research Questions

Specifically, this study is conducted to explore answers for the following research questions:

☑ How does deposit mobilization affects the financial performance of commercial banks in Ethiopia?
☑ How does loan quality affects the financial performance of commercial banks in Ethiopia?
☑ How does loan disbursement affect the financial performance of commercial banks in Ethiopia?
☑ What effect does bank size has on the financial performance of commercial banks in Ethiopia?

1.4 Objective of the study

1.4.1 General objective

The main objective of the study is to examine the impact of deposit mobilization and loan disbursement on the performance of commercial bank in case of Ethiopia.

1.4.2 Specific objective

Beside the overall objective, this study had several specific objectives. The specific objectives include;

❖ To determine the effect of deposit mobilization on commercial banks financial performance in Ethiopia.
❖ To examine the effect of loan disbursement on commercial banks financial performance in Ethiopia.
❖ To investigate the effect of loan quality on financial performance of commercial banks in Ethiopia.
❖ To ascertain how does bank size affects the financial performance of commercial banks in Ethiopia.
1.5 Hypotheses

Based on the conceptual framework, the following hypotheses were formulated to be tested:

**H1**: There is significant positive relationship between deposit mobilizations and financial performance of commercial banks in Ethiopia

**H2**: There is significant positive relationship between loan disbursements and financial performance of commercial banks in Ethiopia

**H3**: There is significant negative relationship between non-performing loan and financial performance of commercial banks in Ethiopia

**H4**: There is significant positive relationship between bank sizes and financial performance of commercial banks in Ethiopia

1.6 Scope and Limitation

1.6.1 Scope of the study

The scope of the study is to examine the impact of deposit mobilization and loan disbursement on the financial performance of commercial banks. The study investigated 13 (thirteen) selected commercial banks (Commercial bank of Ethiopia, Dashen bank, Awash bank, Lion international bank, Wegagen bank, NIB international bank, Cooperative bank of Oromia, Buna International bank, Birhan international bank, Abysinia bank, Oromia international bank, Zemen bank and United bank) which are licensed and supervised by the National bank of Ethiopia and operating in Ethiopia.

Furthermore, the study examines the impact of deposit mobilization and loan disbursement on the bank’s financial performance by taking evidence from commercial banks in Ethiopia for the period of seven years running from 2010 to 2016. There are various factors that have impact on commercial bank performance; however, the dependent variable of this research incorporated return on asset (ROA). The explanatory variables are mobilized deposit, disbursed loan, and quality of loan. Also, Bank size has been used as a control variable.
1.6.2 Limitation of the study

In this study the sample banks were selected purposively based on the availability of data and convenience. This may introduce bias inherent with non-probability sampling method. Due to non-existence of capital market in Ethiopia, this research is also limited to accounting based measures. Therefore, only the accounting measure of bank performance was applied. These may limit the findings of this study.

The generalizability of the study limited due to the exclusion of other variables that may affect the performance of banks, such as legal reserve and loan cap.

1.7 Significance of the Study

The result of this study will contribute to commercial banking firms by identifying the impact of deposit mobilization and loan disbursement on performance commercial banks and how these variables affect financial performance. Also it contributes to the existing literature by providing evidence on the relation between the stated factors and banks' financial performance.

In addition that, this study “The impact of deposit mobilization and loan disbursement on the financial performance of commercial banks” is beneficial for different stakeholders such as management/Administration, Board of directors, owner & employees which are interested in identifying indicators of success and failure to take the necessary actions to improve the performance of the company and choose the right decisions. Furthermore, this study has a paramount importance in providing a better ground for bank managers, business professionals, business initiatives and policy makers. It may also serve as a stepping stone for future researchers who want to conduct an in-depth study on related topics.
1.8 Organization of the Paper

This paper consists of five chapters with different sections and sub-sections, and it was structured as follows. Chapter one presents the introduction for the main part of the paper. Chapter Two reviews the most significant analytical and empirical studies. Chapter three focuses to present the methodology of the study. Chapter four also provides the analysis of results and discussion. Chapter five, as usual, gives conclusion and recommendation with further research direction.
Chapter Two-Literature review

This chapter focuses on the impact of deposit mobilization and loan disbursement on bank performance that were discussed by different authors on the research topic. Basically it emphasized on the importance and effect of deposit mobilization, loan disbursement and asset quality. Further, the chapter includes performance indicator and conceptual frame work of the study.

2.1 Theories and empirical studies of deposit mobilization and Loan disbursement

Commercial banks play a vital role in the economic resource allocation of countries. They channel funds from depositors to investors continuously (Shanta and Mithun, 2014). They can do so, if they generate necessary income to cover their operational cost they incur in the due course. In other words for sustainable intermediation function, banks need to be profitable. Beyond the intermediation function, good financial performance rewards the shareholders for their investment (Vincent & Gemechu, 2013). This, in turn, encourages additional investment and brings about economic growth. On the other hand, poor banking performance can lead to banking failure and crisis which have negative repercussions on the economic growth (Marshall, 2009, Heffernan, 1996; Shekhar and Shekhar, 2007.) Thus, to avoid the crisis due attention was given to banking performance.

Financial performance analysis of commercial banks has been of great interest to academic research since the Great Depression Intern the 1940’s. In the last two decades studies have shown that commercial banks in Sub-Saharan Africa (SSA) are more profitable than the rest of the world with an average Return on Assets (ROA) of 2 percent (Flamini et al., 2009). However, the performance of commercial banks can be affected by various factors (Al-Tamimi, 2010; Aburime, 2005). These factors can be classified into bank specific (internal) and macroeconomic (external) variables. Among various factors, deposit mobilization and loan disbursement have an impact on performance of commercial banks. The impact of deposit mobilization and loan disbursement on bank performance is not widely studied, however, some of the relevant studies
have examined the impact of deposit mobilization and loan disbursement on banks’ performance around the world (Rajeshwari, 2014,. Verma, P., & Kumar, N. 2007, Kaur, R. 2012)

As cited by Khalily and Hushak (1987), the deposit and lending activities of banks determine to a large extent, the profitability of banks. This is because banks generate their income from the interest differentials from what they pay for deposit and what they charge for their loans and advances.

Herald and Heiko (2009) states deposits are the main source of banks to provide loan. On the other side, banks cannot achieve its goals until and unless it mobilizes its deposits in right sectors and by performing different activities. Much kind of activities and other thing can origin for the purpose of receiving invest from the bank. But bank should separate the useful and profitable sector for mobilization its deposits (Sanderson, 2013). Therefore, Bank mobilizes its deposits by performing different activities to achieve its desired goals i.e. earning profit. According Mohammad and Mahdi (2010) banks are able to earn sufficient profit by mobilizing its deposits in proper way into the different profitable sector. Based on this concept, in the ensuing paragraphs, this study briefly describe the theoretical and empirical perspectives which are used in explaining the impact of deposit mobilization and loan disbursement on financial performance of commercial banks.

2.1.1 Deposit mobilization and bank performance

Deposit mobilisation is one of the crucial functions of a conventional financial institutions or banks to satisfy one of the requirements of a "banking business", i.e. sourcing of funds or borrowing money from customers. Continuous and adequate deposit mobilisation would ensure the bank shall be able to sustain its business of lending and investing, thus incurring profit for future growth. (Suresh, 2012).

According to Bologna (2011), deposits play a pivotal role in bank funding, as a major portion of a commercial bank’s assets is usually financed through customer deposits. To enhance deposit mobilization from the public, banks have used various strategies and most increasingly adopt a marketing approach for deposits mobilization.
Furthermore, mobilization of deposits is an important source of working fund for the bank and it is an indispensable factor to increase the sources of the banks to serve effectively. Mobilization of deposit plays an important role in providing satisfactory service to different sectors of the economy. The Commercial Banks must tap deposits from urban and rural areas. This helps the banks to provide large amount of funds to priority sectors for development (Rajeshwari, 2014). The success of the banking business greatly lies on the extent of deposit mobilized. Performances of the bank depend on deposits, as the deposits are normally considered as a cost effective source of working fund.

On other hand, if finance is not provided to any economic sector, it will suffer and that sector will eventually fail (Sanderson, 2013). However, the ability to provide the relevant financing is dependent on the ability of the banks to mobilise adequate amount of deposits in the economy and other foreign sources of funding.

Mahendra (2005) said that deposits provide most of the raw materials for bank loans and thus represent the ultimate source of the bank’s profits and growth. Banks make profit by using their deposits, therefore it is said that depositors can disciple banks. For depository corporations mainly deposit money banks, their principal objectives is undertaking financial intermediation to make profit and increase their shareholders value (Sheku, 2005).

Studies around the world have shown that banks should fund more of their loan books with customer deposit in order to stand more robustly against liquidity squeezes and contribute to the stability of the banking system (Tough, 2014). So, deposits are the primary source of funds for a bank, which facilitates the uses of funds (loans and investments). The higher the deposits amount, the bigger the lending and investments portfolio can be maintained by the banks to sustain its expansion and future growth. The banks must have adequate deposits to meet the lending volume required by the public and at the same time maintain extra cash for withdrawals by depositors (Mona and Yousefi, 2009). The inability to get sufficient deposits could result in negative fund situation. The level of deposits growth also indicates the bank's performance in relation to customers' satisfaction on interest payout and services rendered.
And also, deposits serve as key liquidity indicator, according to Aliyu (2010) deposits are made mainly in cash, the most liquid asset for banks. Once withdrawal requests are made by depositors, banks must immediately provide cash for that particular purpose. Dang (2011) opined that, as compared to other liquidity components such as short term investments which take time to be converted into cash, it is rather wise for a bank to simply get more deposits beyond the withdrawal amount.

Therefore, deposit mobilization is a key first step in the financial intimidation process. Banks simply cannot function without deposits from savers in the economy. Deposits mobilised by the banks are utilised for: (i) loans and advances, (ii) investments in government and other approved securities in fulfillment of the liquidity stipulations, and (iii) investment in commercial papers, shares, debentures, etc. up to a stipulated ceiling. Commercial Banks enjoys a special privilege of credit creation by multiple expansions of deposits (Omid & Javaid, 2016)

From the foregoing, it is realized that the deposit and lending activities of the banks are affected by a myriad of factors, with ultimate effects on banks’ liquidity and profitability. The effect of an increase in the trends of deposits and loans will be that the performance of the banks would be impressive. This is because an increasing trends in deposit mobilization implies more liquidity for the banks and more funds will be available for lending, thereby increasing the ability of the banks to make more profits (Mohamed, Alexander & Musa, 2015).

Odusola (2001) depicted banks mobilize deposits as their primary source of funds. Having optimal deposits level, banks shall be able to lend the funds to generate interest on lending. In addition to lending, the deposits fund can be placed in certain investments avenues which suits the banks' or the deposits' objectives. Deposit mobilisation is a continuous function for a bank to ensure the sum total of deposits at any time adequate to maintain the current level of lending and investments especially to compensate the withdrawals made by depositors. Usually, the deposits level is kept slightly or certain percentages above the lending and investments level to ensure the bank has adequate cash reserves to meet expected withdrawals and also recurring withdrawals. The cash reserves are called Liquidity Reserves. Deposits bring costs to the banks, either on the
maintenance of the deposits and its transactions or on the interest payout onto the deposits upon deposit maturity.

2.1.2 Loan disbursement and bank performance

Vohra and Sehgal (2012) argued, lending is one of the two principal functions of banks, not only because of their social obligation to cater to the credit needs of different sections of the community, but also because lending is the most profitable, for the interest rates realized on loans have always been well above those realized on investments. So, loan is the major source of income and is expected to have a positive impact on bank performance. Other things constant, the more deposits are transformed into loans, the higher the interest margin and profits. According SehrishGul (2011), the loan to deposit ratio have a positive relationship with profitability and more than 80% of the profit of commercial banks is from interest income, so management should maintain balance between the deposits. It can be noted that the higher the ratio the lower the liquid the bank is. However, if a bank needs to increase risk to have a higher loan-to-asset ratio, then profits may decrease (Munyambonera, 2013).

Banks accept customer deposits and use those funds to give loans to other customers or invest in other assets that will yield a return higher than the amount bank pays the depositor (McCarthy et al., 2010). It follows that customers’ deposit is the primary source of bank loan and hence, increasing or guaranteeing deposits directly has a positive effect on lending & its profitability.

Banks, the world over, thrive on their ability to generate income through their lending activities. The lending activity is made possible only if the banks can mobilize enough funds from their customers. Since commercial banks depend on depositor’s money as a source of funds (Tomola 2013). According to Shollapur (2010), bank use customer’s deposits mainly to give out loans to deficit economic units or borrowers. The larger the amount of deposits a bank receives from its customers, the better is its capacity to give out loans and the higher is the interest income.

Lending is the major source of income of banks and covers a lion’s share of their assets. Its performance would have a direct effect on banks profit and survival in the competition.
Staikouras et al. (2007) studied that operating performance is positively related to loan quality and negatively related to liquidity, which is the source of fund for most commercial loans.

Loan is a major asset, income source for banks, and risky area of the industry. Moreover, its contribution to the growth of any country is very clear. Therefore, managing loan in a proper way not only has positive effect on the banks performance but also on the borrower firms and a country as a whole (Zewdu, 2010).

2.1.3 Asset Quality and bank performance

Asset quality is another factor that is considered by banks in determining profitability. Loan is the major asset of commercial banks from which they generate income. The quality of loan portfolio determines the profitability of banks. The loan portfolio quality has a direct bearing on bank profitability. The highest risk facing a bank is the losses derived from delinquent loans (Dang & Uyen, 2011). In addition, poor credit quality has a negative effect on bank profitability and vice versa. This relation exists because an increase in the doubtful assets, which do not accrue income, requires a bank to allocate a significant portion of its gross margin to provisions to cover expected credit losses (Zewdu, 2010). It is the major concern of all commercial banks to keep the amount of nonperforming loans to low level. This is so because high nonperforming loan affects the profitability of the bank. Thus, low nonperforming loans to total loans shows that the good health of the portfolio a bank.

Because of external and internal reasons some loans given to customers may not be collected on time and sometimes borrowers default to pay the full amount of the loan. The non-performing loans decrease performance and finally lead to crisis or failure to banks (Waweru and Kalani 2009).

Non-performing loans are those financial assets from which banks no longer receive interest and/or installment payments as initially or beforehand booked. They referred to as non-performing because the loan ceases to generate income for the bank (Choudhury et al., 2002)
On other side, loan default simply defined as incapability of someone to fulfill his loan obligation as at when due (Balogun and Alimi, 1990). In the same way the inability to pay a debt when due as stipulated in a contract, a loan default occurs when the borrower does not make required payments or in some other way does not comply with the terms of a loan. This was so because loan default automatically raises the level of cost for financial institution and sometimes banks are not able to recoup their loans given, thereby leading to a collapsed of most or several financial institutions.

Though, deposit mobilization and resource allocations (loan disbursement) have a great impact on banks performance, the quality of loan portfolio determines the profitability of banks. The loan portfolio quality has a direct bearing on bank profitability. The highest risk facing a bank is the losses derived from delinquent loans (Dang, 2011). It is the major concern of all commercial banks to keep the amount of nonperforming loans to low level. Thus, low nonperforming loans to total loans shows that the good health of the portfolio a bank. This indicates that, the lower the ratio the better the bank performing.

2.2 Bank Performance Indicators

Good Financial performance is the ultimate goal of commercial banks. All the strategies designed and activities performed thereof are meant to realize this grand objective. In many of the literature reviewed its explained that bank performance is represented mainly by quantifiable financial indicators. The literature on the determinants of bank performance has closely tied bank performance with profitability measures such as ROA, ROC and NIM (Smirlock, 1985). For the purpose of this research, the study applies ROA as profitability measure, since a major portion of a commercial bank’s assets is usually financed through customer deposits (Bologna, 2011).

Return on asset (ROA) is an indicator of how profitable a company is relative to its total asset (Khrawish, 2011). It measures a company’s ability to turn its asset in to profit for its shareholders. 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. A higher ROA shows that the company is more efficient in using its resources (Wen, 2010).

2.3 Conceptual Framework

After the careful study of literature review the following conceptual model is formulated to illustrate the impact of deposit mobilization and loan disbursement on banking performance.

**Explanatory Variable**

- ADP = Amount of deposit mobilized
- ALD = Amount of loan disbursed
- NPL = Non-performing loan

**Bank performance**

**Control variable**

- BS = Bank size

**Dependent variable**

- ROA = Return on asset

Source: Author constructed based on different literature

**Independent Variables**

- ADP = Amount of deposit mobilized
- ALD = Amount of loan disbursed
- NPL = Non-performing loan

**Controllable variables**

- BS = Bank size

Source: Author constructed based on different literature
Chapter Three-Methodology

This chapter describes the sources of data, the research design, the characteristics of the study population, sample and sampling techniques, data collection methods, and statistical tools used in the study. It explains the type of data used for the study and the techniques employed in identifying the impact of deposit mobilization and loan disbursement on banks performance.

3.1. Research Design

The study employed an explanatory survey design with a quantitative approach. The explanatory type of research design helps to identify and evaluate the causal relationships between the different variables under consideration.

The main objective of this study is to examine the impact of deposit mobilization and loan disbursement on banks financial performance. To achieve this objective explanatory type of research design with a quantitative method was employed. The explanatory type of research design helps to identify and evaluate the causal relationships between the different variables under consideration. So that, in this study the explanatory research design was employed to examine the relationship of the stated variables. A panel data study design which combines the attributes of cross sectional (inter-firm) and time series data (inter-period) was used. The advantage of panel data analysis is that more reliable estimates of the parameters in the model can be obtained (Gujarati, 2004).

3.2 Source of data and collection methods

According to the official website of the NBE, currently there are 17 Commercial Banks in Ethiopia which are licensed and operating in Ethiopia. However, except Commercial bank of Ethiopia all the rest are private one. For the purpose of this study the researcher selected thirteen Commercial banks as a sample which covers above 70% of the total population. The selection is primarily based on purposive sampling technique in which it is based on the availability of data for the period 2010 to 2016. The necessary data for this study were collected from secondary
sources. The secondary source of data was the audited financial statements of the sample commercial banks over a period of seven years (2010-2016). These data was obtained from National Bank of Ethiopia.

### 3.3 Method of Data Analysis

The method of analysis used in the study was descriptive statistics, correlation and linear regression methods. The descriptive statistics was used to quantitatively describe the important features of the variables using mean, maximum, minimum and standard deviations. The correlation analysis was used to identify the relationship between the independent, dependent and control variables using correlation analysis. The correlation analysis shows only the degree of association between variables and does not permit the researcher to make causal inferences regarding the relationship between variables. Therefore, multiple panel linear regression analysis was also used to test the hypothesis and to explain the relationship between the dependent variables (Amount of deposit, amount of loan and none performing loan) and the dependent variable (financial performance) measures by controlling the influence of some selected variables. Eviews 8 software was used for analysis and the results were presented through tables. In addition, for the purpose of this study, diagnostic tests like: Test for Heteroscedasticity, Test for Autocorrelation, Test for normality and Test for Multicollinearity were performed to ensure whether the assumptions of the CLRM are violated or not in the model.

### 3.4 Description of variables and their measurements

In this study, the variables were selected based on alternative theories and previous empirical studies related to the stated independent variables and firm’s financial performance. In accordance with the theory and empirical studies, the independent, dependent and control variables of the study were identified in order to investigate the impact of deposit mobilization and loan disbursement on firms’ financial performance.

#### 3.4.1 Dependent variable

In this study, the dependent variables are variables that are used to measure the financial performance of sample commercial banks. To measure the financial performance of banks
profitability measures were used i.e. accounting measures of profitability (see for example Erhardt et al., 2003; Aldamen et al., 2011; Al-Manaseer et al., 2012). Those are:

a. **Return on Asset (ROA)** - measures the overall efficiency of management. It gives an idea as to how efficient management is at using its assets to generate earnings.

\[
\text{ROA} = \frac{\text{Profit after Tax}}{\text{Total Asset}}
\]

3.4.2 **Independent variables**

In this study, the independent variables are variables that are used as a determinant of financial performance of the sample Ethiopian commercial banks. The independent variables of the study are amount of deposit mobilized, amount loan disbursed and amount of none performing loans. The definition and measurements of the variables are as follows:

a. **Amount of deposit**

It can be defined as the amount of deposit mobilized at the end of the year. The higher the deposits amount, the bigger the lending and investments portfolio can be maintained by the banks to sustain its expansion and future growth. Mahendra (2005) said that deposits provide most of the raw materials for bank loans and thus represent the ultimate source of the bank’s profits and growth.

Remark:- Amount of deposit mobilization is measured as amount of deposit mobilized at the end of the year.

b. **Loan disbursed**

Loan disbursed can be defined as outstanding loans at the end of the year. Lending is the major source of income of banks and covers a lion’s share of their assets. Vohra and Sehgal (2012) argued, lending is one of the two principal functions of banks, not only because of their social obligation to cater to the credit needs of different sections of the community, but also because
lending is the most profitable, for the interest rates realized on loans have always been well above those realized on investments.

Remark:- Amount of loan disbursed is measured as amount of outstanding loan at the end of the year.

C. Non-performing loan

Non-performing loans are those financial assets from which banks no longer receive interest and/or installment payments as initially or beforehand booked. They referred to as non-performing because the loan ceases to generate income for the bank (Choudhury et al., 2002).

The quality of loan portfolio determines the profitability of banks. Poor credit quality has a negative effect on bank profitability and vice versa. This relation exists because an increase in the doubtful assets, which do not accrue income, requires a bank to allocate a significant portion of its gross margin to provisions to cover expected credit losses (Zewdu, 2010). It is the major concern of all commercial banks to keep the amount of nonperforming loans to low level. This is so because high nonperforming loan affects the profitability of the bank.

Remark:- Amount none performing loan is measured as loan loss provision

3.4.3 Control variables

In this study one bank specific control variable is included to account its potential influence on banks’ financial performance in order to know the selected explanatory variables effect on banks’ financial performance. The selected control variable is bank size. The control variable is selected based on previous studies.

Bank size - measured as the natural logarithm of total assets at year-end.
3.5 Specifications of empirical research model

To estimate the impact of deposit mobilization and loan disbursement on the financial performance of commercial banks in case of Ethiopia, the following empirical research model has been developed.

\[ \text{ROA}_{it} = \beta_0 + \beta_1(ADP_{it}) + \beta_2(ALD_{it}) + \beta_3(NPL_{it}) + \beta_4(BS_{it}) + e_{it} \]

Where:

**Dependent variable**

\( \text{ROA} \) = Return on asset

**Controllable variables**

\( BS \) = Bank size

**Independent Variables**

\( ADP \) = Amount of deposit mobilized
\( ALD \) = Amount of loan disbursed
\( NPL \) = None performing loan

\( \beta_0, \beta_1, \beta_2, \beta_3, \beta_4 \), are the regression co-efficient
\( e \) = error term

\( i \) denote banks ranging from 1 to 13 (cross-sectional dimension).
\( t \) denote years ranging from 2010 to 2016 (time-series dimension).
Chapter four-Results and Discussion

This chapter presents the descriptive statistics, correlation analysis and multiple panel linear regression analysis of the study variables. It has three sections. The first section is the descriptive statistics which summarizes the main features of the study variable such as mean, maximum, minimum and standard deviation. The second section is the correlation analysis which shows the degree of association between the study variables. The third sections of the chapter, includes regression results report the OLS (Ordinary list square) estimation output of the regression model.

4.1. Descriptive Statistics of Variables

This section presents the descriptive statistics of dependent and independent variables used in the study for the sample banks. The dependent variable used in the study was ROA. The independent variables were amount of deposit, amount of loan and none performing loan. Whereas the control variable used in this study was bank size.

Table 4.1 demonstrates the mean, standard deviation, minimum and maximum values for the dependent and independent variables for sample banks over the year 2010 to 2016.

Table 4.1: Descriptive Statistics of the study variables

<table>
<thead>
<tr>
<th></th>
<th>ROA</th>
<th>ADP</th>
<th>ALD</th>
<th>NPL</th>
<th>BS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.322574</td>
<td>18893.58</td>
<td>8756.886</td>
<td>184.7701</td>
<td>26459.58</td>
</tr>
<tr>
<td>Median</td>
<td>3.400000</td>
<td>6011.652</td>
<td>3644.115</td>
<td>90.76000</td>
<td>8061.045</td>
</tr>
<tr>
<td>Maximum</td>
<td>4.830000</td>
<td>310400.0</td>
<td>92500.000</td>
<td>2210.000</td>
<td>485600.0</td>
</tr>
<tr>
<td>Minimum</td>
<td>1.800000</td>
<td>238.0080</td>
<td>153.1940</td>
<td>2.000</td>
<td>379.5150</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.653616</td>
<td>49122.36</td>
<td>18449.06</td>
<td>440.2088</td>
<td>73917.15</td>
</tr>
<tr>
<td>Observations</td>
<td>91</td>
<td>91</td>
<td>91</td>
<td>91</td>
<td>91</td>
</tr>
</tbody>
</table>

Source: researcher’s computation using Eviews 8

The ROA measured by the net income divided by total asset has a mean value of 3.323. This indicates that the sample banks on average earned a net income of 3.323 percent of the total asset during the study period. Since ROA indicates the efficiency of the management of a company in generating net income from all the resources of the institutions, the higher ROA shows that the
company is more efficient in utilizing its resources. The maximum value of ROA was 4.83 and minimum value of 1.8 that means, the most profitable bank among the sampled banks earned 0.048 cents of net income for a single birr invested in the assets of the firm. On the other hand, the least profitable bank of the sampled banks incurred 0.018 cents for each birr investment in the assets of the firm. The standard deviation is 0.65 from the average value 3.32. The standard deviation of 0.65 suggests that there is not wide dispersion in the return on asset of the sample of commercial banks in Ethiopia.

Regarding the explanatory variables, out of the minimum of 238 mill and the maximum of 310 bill, the mean of deposit mobilized of the Banks is 18.8 bill. On the other hand, the standard deviation of 49.12 Bill suggests that there is an extensive dispersion in the amount of deposit mobilization of the sample of commercial banks in Ethiopia. This indicates that there is a huge gap among banks on mobilizing deposit and also it shows that there is an opportunity for banks to mobilize deposit in the market.

In addition, the table noted that on average amount of loan disbursed by Ethiopian commercial banks during the sample period was 8.7 bill. The standard deviation is 18.4 bill, with minimum of 153 mill and the maximum of 92.5 bill. This result suggests that there was a huge dispersion in the amount of loan disbursed among the sample commercial banks.

As it can be seen in the table above that the mean value of none performing loan, as measured by the provision of loan loss was 184.7 mill with a maximum of 2.2 bill and a minimum of 2 mill. And it varies from the mean value by 440.2 mill. The standard deviation of none performing loan indicates that, there is a huge difference on asset quality among the banks. On the other hand, the bank size, measured as the total assets of the bank at year-end, has a mean value of 26.4 bill with a minimum of 379.5 mill and maximum of 485.6 bill. The standard deviation is 73.9 bill from the mean value of 26.4 bill.
4.2. Correlation analysis of ROA and deposit mobilization and loan disbursement

This section of the study presents the results and discussions of the correlation analysis. To identify the relationship among the independent variables (Amount of deposit mobilized, amount loan disbursed, none performing loans and bank size) and the dependent variable (financial performance) correlation coefficients were used.

Below in table 4.2, the correlation matrix which shows the relationship of the return on asset with amount of deposit mobilized, amount of loan disbursed and non-performing loan. This table also shows the linear relationships between each independent variables and control variables used in this study.

Based on the correlation matrix the independent variables; amount of deposit, amount of loan disbursed and non-performing loan have positive correlation with the return on asset. Besides, the control variable (Bank size) has positive correlation with return on asset.

The correlation analysis shows only the direction and degree of association between variables and it does not permit the researcher to make causal inferences regarding the relationship between the identified variables. Therefore, it is not possible to explain the relationship between the independent variables and the bank financial performance measure by controlling the influence of some selected variables using correlation analysis. As a result the main analysis is left for regression analysis that overcomes the shortcomings of correlation analysis.

Table 4.2. Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>ROA</th>
<th>ADP</th>
<th>ALD</th>
<th>NPL</th>
<th>BS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADP</td>
<td>0.123390</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALD</td>
<td>0.273980</td>
<td>0.435643</td>
<td>1.000000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPL</td>
<td>0.272904</td>
<td>0.498804</td>
<td>0.331332</td>
<td>1.000000</td>
<td></td>
</tr>
<tr>
<td>BS</td>
<td>0.387548</td>
<td>0.674606</td>
<td>0.566864</td>
<td>0.700370</td>
<td>1.000000</td>
</tr>
</tbody>
</table>

Source: researcher’s computation using Eviews 8
4.3 Regression Results and Discussion

This section of the study presents the results and discussions of the regression output. In order to examine the impact of deposit mobilized, loan disbursed and none performing loan on Ethiopian commercial banks financial performance multiple panel linear regression models were estimated. The regression analysis enables the researcher to empirically test the proposed hypothesis and to achieve the research objective. The method of least squares has some very attractive statistical properties that have made it one of the most powerful and popular methods of regression analysis (Gujarati, 2004). Thus, by conducting the appropriate diagnosis tests OLS estimation method was used in the model.

4.3.1 Diagnostic tests of the data set

To insure that the result obtained from the regression model in this study were consistent, free from bias and efficient, the data sets were tested for the classical linear regression model assumption. Brooks (2008) suggests five critical assumptions that must be met before utilizing Ordinary Least of Square (OLS) estimation in order to validly test the hypothesis and estimate the coefficient. The classical linear regression model assumptions and their diagnostic tests are discussed below

The average value of the errors is zero. If a constant term is included in the regression equation, this assumption will never be violated. So that in the model of this study a constant term is included. As a result this assumption was not violated.

Test for normality:- This test is performed to confirm the assumption of CLRM which states that the disturbances terms are normally distributed. One of the most commonly applied tests for normality is the Bera Jarque (BJ) test. BJ uses the property of a normally distributed random variable that the entire distribution is characterized by the first two moments, the mean and the variance, (Brooks 2008). According to the same author if the residuals are normally distributed, the histogram should be bell-shaped and the Bera-Jarque statistic would not be significant. This means if the p-value is bigger than 0.05 the null hypothesis of normality should not be rejected at 5% level of significant. In case of this study, as shown in Table 4.3, the p-value of BJ test is 0.72
as a result we fail to reject the null hypothesis for residual normality. It indicates the residual value is normally distributed. Moreover, kurtosis is 2.76, which is near to 3. Therefore, there is no normality problem on the data used for this study.

**Table 4.3 Normality test,**

<table>
<thead>
<tr>
<th>H0: Residuals are normally distributed</th>
<th>H1: Residuals are not normally distribute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series: Standardized Residuals</td>
<td></td>
</tr>
<tr>
<td>Sample 2010 2016</td>
<td></td>
</tr>
<tr>
<td>Observations 91</td>
<td></td>
</tr>
<tr>
<td>Mean -6.87e-16</td>
<td></td>
</tr>
<tr>
<td>Median 0.089994</td>
<td></td>
</tr>
<tr>
<td>Maximum 1.375835</td>
<td></td>
</tr>
<tr>
<td>Minimum -1.267596</td>
<td></td>
</tr>
<tr>
<td>Std. Dev. 0.587368</td>
<td></td>
</tr>
<tr>
<td>Skewness -0.167102</td>
<td></td>
</tr>
<tr>
<td>Kurtosis 2.766225</td>
<td></td>
</tr>
<tr>
<td>Jarque-Bera 0.630718</td>
<td></td>
</tr>
<tr>
<td>Probability 0.729527</td>
<td></td>
</tr>
</tbody>
</table>

Source: Eviews 8 test result summary

**The assumption of homoscedasticity:** This assumption requires that the variance of the errors to be constant. If the errors do not have a constant variance, we say that they are heteroscedastic. To check this assumption Breusch-Pagan-Godfrey was conducted for the model (See table 4.4). In the model there is no problem of heteroscedasticity or the error variance is constant since the p-value is not significant, meaning that p-value is 0.34 which is greater than 0.05. This means the null hypothesis was not rejected which says that the error variance is constant.

**Table 4.4 Heteroscedasticity test**

| H0: The variance of the error is Homoscedastic |
| H1: The variance of the error is Heteroscedastic |

**Heteroskedasticity Test: Breusch-Pagan-Godfrey**

<table>
<thead>
<tr>
<th>F-statistic</th>
<th>1.131109</th>
<th>Prob. F(4,86)</th>
<th>0.3473</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs*R-squared</td>
<td>4.548204</td>
<td>Prob. Chi-Square(4)</td>
<td>0.3369</td>
</tr>
<tr>
<td>Scaled explained SS</td>
<td>3.587320</td>
<td>Prob. Chi-Square(4)</td>
<td>0.4647</td>
</tr>
</tbody>
</table>

Source: Eviews 8 test result summary
**Test for Autocorrelation**: The CLRM assumes that the disturbance term relating to any observation is not influenced by the disturbance term relating to any other observation. In other words, it is assumed that the errors are uncorrelated with one another. If the errors are not uncorrelated with one another, it would be stated that they are ‘autocorrelated’. The first test was Durbin-Watson which is shown in the regression output of the model. As per this test the value of Durbin--Watson for the model is 1.39 which is near to 2. Thus, the null hypotheses were not rejected for the model so there is no problem of autocorrelation. However, Durbin-Watson is a test for first orders autocorrelation. It tests only for a relationship between an error and its immediate previous value. Therefore, in addition to DW test it is desirable to conduct. Breusch-Godfrey Serial Correlation LM test to examine a joint test for autocorrelation that will allow examination of the relationship between error term and several of its lagged values at the same time. Thus, Breusch-Godfrey test was also conducted for the model (see below table 4.5) and found no problem of autocorrelation for the model, meaning that p-value of the test resulted 0.13 which is greater than 0.05.

**Table 4.5. Autocorrelation test**

<table>
<thead>
<tr>
<th>Breusch-Godfrey Serial Correlation LM Test:</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-statistic</td>
</tr>
<tr>
<td>Obs*R-squared</td>
</tr>
</tbody>
</table>

Source: Eviews 8 test result summary

**Model misspecification error**: With regard to model misspecification Error Ramsey reset test was conducted for the model (See table 4.6). The Ramsey regression specification error test result for the model is insignificant, (i.e. test statistics probability is 0.18>0.05). The researcher fails to reject the null hypothesis. Thus, the result indicates no model specification error in the model of the study. Therefore, in this study appropriate functional form has been used.
Table 4.6. Model specification error (linearity) test

H0: The model functional form is appropriate
H1: The model functional form is inappropriate

<table>
<thead>
<tr>
<th>Ramsey RESET Test</th>
<th>Value</th>
<th>Df</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>t-statistic</td>
<td>1.331818</td>
<td>85</td>
<td>0.1865</td>
</tr>
<tr>
<td>F-statistic</td>
<td>1.773739</td>
<td>(1, 85)</td>
<td>0.1865</td>
</tr>
<tr>
<td>Likelihood ratio</td>
<td>1.879402</td>
<td>1</td>
<td>0.1704</td>
</tr>
</tbody>
</table>

Source: Eviews 8 test result summary

In addition to the above diagnostic tests, the data set was checked for the problem of multicollinearity. The presence of multicollinearity among explanatory and control variables can be easily detected by looking the correlation coefficient in the correlation matrix as discussed in the correlation analysis section. If correlation between two variables exceeds 0.8, we have to reject the null hypothesis (Gujarati, 2004). Therefore, all correlation coefficients of the study variables are smaller than 0.8 at which the phenomenon of colinearity is pronounced. Then, there is no problem of multicollinearity.

**Fixed effect Versus Random effect**

It is also necessary to determine whether the fixed effect or random effect approach is appropriate. Fixed effect model allows for heterogeneity or individuality among sample commercial banks by allowing having its own intercept value, but the intercept does not vary over time. In Random effect model the sample commercial banks have a common mean value for the intercept. Therefore, it is necessary to determine whether the fixed effect or random effect approach is appropriate the model of the study.

To determine whether the fixed effect or random effect approach is proper, running a Hausman test is appropriate. To conduct a Hausman test the number of cross section should be greater than the number of coefficients to be estimated. In this study the numbers of coefficients (4) are less than the number of cross sections (13) so it is appropriate to conduct a Hausman test.
The Hausman test result shows (See Table 4.7) that the p-value of the test summary is 0.5 (i.e. test statistics probability is 0.5>0.05) meaning the researcher fails to reject null hypothesis. Thus, the result indicates that the Random Effect Model is appropriate.

**Table 4.7 Random Vs Fixed effect Model test summary**

| H0: Random effect model is appropriate | H1: Fixed effect model is appropriate |

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

<table>
<thead>
<tr>
<th>Test Summary</th>
<th>Chi-Sq. Statistic</th>
<th>Chi-Sq. d.f.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-section random</td>
<td>3.350789</td>
<td>4</td>
<td>0.5009</td>
</tr>
</tbody>
</table>

Source: Eviews 8 test result summary

### 4.3.2 Results of regression analysis

The multiple regression results of the econometric model used in the study are presented in table 4.8; the regression output was run by taking ROA as a dependent variable and other variables (amount of mobilized deposit, amount loan disbursed and amount of none performing loan) and control variables (bank size) as an independent variable. From the table R-squared statistics and the adjusted-R squared statistics of the model were 68.57% and 64.56% respectively. This shows that 68.57% variability of the dependent variable is explained by the movement of explanatory variables included in the model. In other word 68.57% variability of ROA of sample banks were attributed to the change in explanatory variables. The remaining 36.44% of changes was explained by other factors which are not included in the model.

The adjusted R2 measures how well the model fits the data by taking into account the loss of degrees of freedom associated with adding extra variables. Therefore, the model best fits the data.
4.8 Tables of regression result

Dependent Variable: ROA  
Method: Panel EGLS (Cross-section random effects)  
Date: 05/23/18   Time: 10:37  
Sample: 2010 2016  
Periods included: 7  
Cross-sections included: 13  
Total panel (balanced) observations: 91

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.225133</td>
<td>1.266418</td>
<td>0.177771</td>
<td>0.8593</td>
</tr>
<tr>
<td>ADP</td>
<td>0.298505</td>
<td>0.148754</td>
<td>2.006706</td>
<td>0.0479</td>
</tr>
<tr>
<td>ALD</td>
<td>0.045401</td>
<td>0.052062</td>
<td>0.872041</td>
<td>0.0356</td>
</tr>
<tr>
<td>NPL</td>
<td>-0.022190</td>
<td>0.101378</td>
<td>-0.218886</td>
<td>0.8273</td>
</tr>
<tr>
<td>BS</td>
<td>0.548285</td>
<td>0.196504</td>
<td>2.790195</td>
<td>0.0065</td>
</tr>
</tbody>
</table>

R-squared 0.685756  Mean dependent var 1.478489  
Adjusted R-squared 0.645639  S.D. dependent var 0.538604  
S.E. of regression 0.503350  Sum squared resid 21.78908  
F-statistic 4.262140  Durbin-Watson stat 1.396212  
Prob(F-statistic) 0.003403

Source: Eviews 8 test result summary

In addition, The F- statistic of 4.26 is significant with P- value of zero, showing that the null hypothesis, that all the coefficients are jointly zero is rejected. This indicates that the change in dependent variable is well explained by the change in the independent variables of the model. Here one can infer from the results of R-squared and F-statistics that the implemented model of this research is well fitted that the independent variables (deposit mobilized, loan disbursed and none performing loan) have a significant effect on commercial banks’ financial performance.

4.3.3 Discussion of regression results

In this section, the impact of amount of mobilized deposit, amount of loan disbursed and none performing loan on financial performance of banks in Ethiopia is analyzed and discussed based
on the regression output and different theories related to the variables. This study consist three
independent variables and one control variable. The independent variables are represented by:
amount of deposit mobilized, amount of loan disbursed and none performing loan. While the
controllable variable is represented by bank size. On the other hand the proxy for financial
performance is return on asset. To check the relationship between the aforementioned
independent variables and bank performance four hypotheses were developed. The regression
results of each independent variable’s effect on performance of banks were analyzed based on
theoretical framework and previous empirical results as follows.

**Amount of deposit mobilized**

As shown above, table 4.8, amounts of deposit mobilized (ADP) has a positive effect on
commercial banks financial performance. It has a positive coefficient (C=0.2985) and
statistically significant effect (p-value of 0.047 < 0.05) on Return on Asset of commercial banks
at 5 percent significant level. The result indicated that increment on amounts of deposit
mobilized have a significant positive influence on the financial performance of Ethiopian
Commercial banks and vice versa. This suggests that mobilizing large amount of deposit plays
an important role in bank to ensure the sum total of deposits at any time adequate to maintain the
current level of lending and investments especially to compensate the withdrawals made by
depositors. In addition, this result indicates that continuous and adequate deposit mobilization
would ensure the bank to be able to sustain its business of lending and investing, thus incurring
profit for future growth (Suresh, 2012).

Hypothesis 1 predicts that there is a significant positive relation between deposits mobilized and
banks financial performance. The result is in line with the proposed hypothesis. Thus, there is a
significant positive relationship between deposit mobilized and financial performance of
commercial banks in Ethiopia. This result supports the finding revealed by Mahendra (2005) and
Tough (2014). They argue that performance of bank depends on deposit, since deposits provide
most of the raw materials for bank loans and thus represent the ultimate source of the bank’s
profits and growth.
Amount of loan disbursed

Hypothesis 2, expected that amount of disbursed loan (ADL) is positively and significantly associated with commercial banks financial performance. As expected, a positive (Coefficient = 0.045401) and significant (p-value of 0.0356<0.05) association is found between amount of disbursed loan and return on asset. It means the higher the amount of disbursed loan the higher the financial performance (as measured by return on asset) of sample banks in Ethiopia. The result indicate that amount of disbursed loan is highly important because lending is the major source of income of banks and it has a direct effect on banks profit. Moreover, the finding of the study supports SehrishGul (2011) amount of loan have a positive relationship with profitability. The regression result supports the hypothesis of amount of disbursed loan (ALD) is positively and significantly associated with commercial banks financial performance.

None performing loan (NPL)

The relationship between amount of none performing loan (NPL) and the financial performance measure (ROA) is insignificant (p-value of 0.88 > 0.05). And it has a negative coefficient with return on asset. Even though hypothesis 3 predicts that, the amount of none performing loan is negatively associated with financial performance of the bank, the insignificant coefficient of the amount of none performing loan does not support this hypothesis.

Therefore, this study does not support the view that small amount of none performing loan leads to superior banks financial performance. Some previous studies document the non-performing loans decrease performance of banks and finally lead to crisis or failure to banks (Dang, 2011; Waweru and Kalani, 2009). However, this study does not find a significant association between amounts none performing loan and banks financial performance.
Bank size

Bank size which was measured by Logarithm of total asset has a statistically significant (p-value of 0.0065 < 0.05) positive (C=0.5482) relationship with the financial performance of commercial bank’s measured by Return on Asset. The result can be explained as commercial bank which is large has an advantage of economics of scope and scale. The result implies size of banks measured by its asset enhance financial performance. Therefore, sample Ethiopian commercial banks are utilizing their size to enhance their financial performance.
Chapter five- Conclusions and Recommendations

The previous chapter presented the analysis of the findings, while this chapter deals with the conclusions and recommendations provided based on the findings of the study. In this chapter, the conclusion of the study was made followed by recommendations.

5.1 Conclusions

According to Shollapur (2010), bank use customer’s deposits mainly to give out loans to deficit economic units or borrowers. The larger the amount of deposits a bank receives from its customers, the better is its capacity to give out loans and the higher is the interest income. In addition to resource allocation good bank performance rewards the shareholders with sufficient return for their investment (Heffernan, 1996; Shekhar, 2007).

Despite some studies developed to examine the impact of deposit mobilization and loan disbursement on the bank performance, those studies did not target Ethiopian banking industry. The aim of this study was to empirically examine the impact of deposit mobilization and loan disbursement on banks performance using commercial banks in Ethiopia. In achieving this aim, the researcher consisted thirteen Ethiopian commercial banks with a data set covering seven years period from the year 2010 to 2016. Based on the results of the descriptive statistics, correlation and regression analysis the researcher made the following conclusions.

Based on the descriptive statistics the mean value financial performance of commercial banks are 3.32 measured by return on asset. Whereas, the independent variables: amount of deposit, amount of disbursed loan and none performing loan have a mean value of 18.8 bill, 8.7 bill and 184.7 mill with its standard deviation of 49.1 bill, 18.4 bill 440.2 mill respectively. This result suggested that, there is a huge gap among banks on mobilizing of deposit and also there is a huge dispersion in the disbursement of loan.

The correlation analysis indicates that independent variables; amount of deposit, amount of loan disbursed and none performing loan have a positive correlation with return on asset. Besides, control variable (Bank size) has a positive correlation with return on asset.
The regression result show that amount of deposit mobilized has a significant positive effect on return on asset. Accordingly, the researcher concludes that mobilization of deposit significantly and positively affects financial performance of commercial banks as measured by return on Asset. This conclusion also support Mahendra (2005) and Tough (2014). They argue that performance of bank depends on deposit, since deposits provide most of the raw materials for bank loans and thus represent the ultimate source of the bank’s profits and growth.

Based on the regression result Table 4.8, the researcher concludes that, amount of loan disbursed significantly and positively influences the financial performance of sample commercial banks. This indicates that, loan is the major source of income and is expected to have a positive impact on bank performance. Other things constant, the more deposits are transformed into loans, the higher the interest margin and profits. Moreover, this study supports SehrishGul (2011) amount of loan have a positive relationship with profitability.

No statistically significant relation was found between amount of none performing loan and financial performance of Ethiopian commercial banks. Based on the finding the researcher concludes that, Even though hypothesis 3 predicts that, the amount of none performing loan is negatively associated with financial performance of the bank, the insignificant coefficient of the non-performing loan does not support this hypothesis.

**5.2 Recommendations**

This study examined the impact of deposit mobilization and loan disbursement on commercial banks financial performance by taking evidence from selected Commercial banks in Ethiopia. On the basis of the findings and conclusions reached, the following recommendations were forwarded.
Amount of deposit mobilized is positively and significantly affects the performance of commercial banks in Ethiopia. Therefore, to enhance deposit mobilization from the public, the researcher recommends that, banks should build public trust and confidence. Once these are established, the banks should attract depositors and deposits by providing convenience and accessible banking (through expanding number of branches, introduce and enhance E-banking such as internet banking, card banking and mobile banking), quality services (Improving employees knowledge and skills on banking product and customers service. And deploying new technology that can enhance banking services), develop new products that can provide special benefits to the customer such as hybrid deposit account and saving for future investment.

Likewise deposit mobilization, finding of this research supported that, amount of loan disbursed is positively and significantly affects the performance of commercial banks in Ethiopia. Thus, the researcher suggests that, to earn sufficient profit banks should mobilize (allocates) its deposits in proper way into the different profitable sector because the availability of loans is a factor that influences bank profitability. Loan is the major source of income and has a positive impact on bank performance. Other things constant, the more deposits are transformed into loans, the higher the interest margin and profits (Mohamed, Alexander & Musa, 2015). So, commercial banks should grant various types of loans to the industrialists, consumers and traders like idea financing and credit card loan (overdraft loan for consumer).

5.3. Recommendation for future Research

The relationship of deposit mobilization and disbursed loan with commercial banks’ financial performance can also be further explained and the result will be more robust by increasing the sample size and number of year of observation. Moreover, the researcher recommend for future researchers to conduct study by including more variables focusing on liquidity ratio and reserve on NBE.
References


Ahmad ArefAlmazari 2014 Impact of Internal Factors on Bank Profitability: Comparative Study between Saudi Arabia and Jordan, Journal of Applied Finance & Banking, vol. 4, no. 1


Bologna, P. (2011) Is there a Role for Funding in Explaining Recent US Bank Failures?. *Bank of Italy Occasional Paper* 103


Dawit, F. (2016), Determinants of commercial banks financial performance in Ethiopia, Addis Ababa University, College of Business and Economics.


Munyambonera, F. (2013), Determinants of Commercial Bank Profitability in Sub-Saharan Africa, Canadian Center of Science and Education


Omid, s. & Javaid, A. (2016), Performance of Banking through Credit Deposit Ratio in Public Sector Banks in India, IRACST- International Journal of Research in Management & Technology (IJRMT), Vol.6, No.4


Zewdu, S. (2010), impact of reducing loan by Ethiopian banks on their own performance, Graduate School of Business Leadership, University of South Africa.
## Index

Raw data used for regression

<table>
<thead>
<tr>
<th>Year</th>
<th>Bank</th>
<th>ALD</th>
<th>NPL</th>
<th>ADP</th>
<th>BS</th>
<th>ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1</td>
<td>5,048.84</td>
<td>110.11</td>
<td>10,144.55</td>
<td>12,353.38</td>
<td>2.93</td>
</tr>
<tr>
<td>2011</td>
<td>1</td>
<td>6,217.54</td>
<td>103.02</td>
<td>11,841.24</td>
<td>14,659.79</td>
<td>3.34</td>
</tr>
<tr>
<td>2012</td>
<td>1</td>
<td>8,123.81</td>
<td>115.32</td>
<td>14,065.60</td>
<td>17,520.04</td>
<td>3.45</td>
</tr>
<tr>
<td>2013</td>
<td>1</td>
<td>8,862.32</td>
<td>119.00</td>
<td>15,851.26</td>
<td>19,747.17</td>
<td>3.76</td>
</tr>
<tr>
<td>2014</td>
<td>1</td>
<td>9,607.82</td>
<td>111.10</td>
<td>17,681.34</td>
<td>21,962.20</td>
<td>3.82</td>
</tr>
<tr>
<td>2015</td>
<td>1</td>
<td>11,526.99</td>
<td>102.11</td>
<td>19,814.11</td>
<td>24,763.88</td>
<td>3.92</td>
</tr>
<tr>
<td>2016</td>
<td>1</td>
<td>12,478.00</td>
<td>110.18</td>
<td>22,758.00</td>
<td>28,576.00</td>
<td>3.73</td>
</tr>
<tr>
<td>2010</td>
<td>2</td>
<td>3,145.69</td>
<td>148.31</td>
<td>6,105.94</td>
<td>7,944.78</td>
<td>3.4</td>
</tr>
<tr>
<td>2011</td>
<td>2</td>
<td>3,986.46</td>
<td>144.91</td>
<td>7,743.78</td>
<td>10,115.78</td>
<td>4.0</td>
</tr>
<tr>
<td>2012</td>
<td>2</td>
<td>5,504.61</td>
<td>148.89</td>
<td>9,204.36</td>
<td>13,125.22</td>
<td>3.6</td>
</tr>
<tr>
<td>2013</td>
<td>2</td>
<td>7,710.00</td>
<td>142.79</td>
<td>12,545.21</td>
<td>17,783.93</td>
<td>3.8</td>
</tr>
<tr>
<td>2014</td>
<td>2</td>
<td>9,176.36</td>
<td>138.62</td>
<td>15,039.71</td>
<td>20,028.79</td>
<td>3.8</td>
</tr>
<tr>
<td>2015</td>
<td>2</td>
<td>12,482.04</td>
<td>117.16</td>
<td>18,520.42</td>
<td>23,869.61</td>
<td>3.90</td>
</tr>
<tr>
<td>2016</td>
<td>2</td>
<td>15,450.77</td>
<td>118.32</td>
<td>23,869.64</td>
<td>29,609.60</td>
<td>3.80</td>
</tr>
<tr>
<td>2010</td>
<td>3</td>
<td>3,153.24</td>
<td>233.55</td>
<td>5,138.85</td>
<td>6,279.54</td>
<td>2.4</td>
</tr>
<tr>
<td>2011</td>
<td>3</td>
<td>3,315.69</td>
<td>110.48</td>
<td>6,075.26</td>
<td>7,277.96</td>
<td>2.7</td>
</tr>
<tr>
<td>2012</td>
<td>3</td>
<td>3,897.41</td>
<td>100.10</td>
<td>6,771.46</td>
<td>8,239.51</td>
<td>2.8</td>
</tr>
<tr>
<td>2013</td>
<td>3</td>
<td>4,702.07</td>
<td>93.54</td>
<td>8,496.15</td>
<td>10,129.37</td>
<td>2.4</td>
</tr>
<tr>
<td>2014</td>
<td>3</td>
<td>5,061.00</td>
<td>92.45</td>
<td>9,096.48</td>
<td>11,276.39</td>
<td>4.2</td>
</tr>
<tr>
<td>2015</td>
<td>3</td>
<td>5,905.22</td>
<td>90.33</td>
<td>11,118.17</td>
<td>13,667.55</td>
<td>3.30</td>
</tr>
<tr>
<td>Year</td>
<td>Period</td>
<td>Value</td>
<td>Growth</td>
<td>Total Value</td>
<td>Interest</td>
<td>Rate</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
<td>-------</td>
<td>--------</td>
<td>-------------</td>
<td>----------</td>
<td>------</td>
</tr>
<tr>
<td>2010</td>
<td>3</td>
<td>8,011.60</td>
<td>91.02</td>
<td>13,634.96</td>
<td>16,828.00</td>
<td>3.4</td>
</tr>
<tr>
<td>2010</td>
<td>4</td>
<td>2,613.61</td>
<td>95.33</td>
<td>4,724.85</td>
<td>5,896.23</td>
<td>3.0</td>
</tr>
<tr>
<td>2011</td>
<td>4</td>
<td>3,276.96</td>
<td>90.76</td>
<td>6,065.82</td>
<td>7,725.62</td>
<td>3.4</td>
</tr>
<tr>
<td>2012</td>
<td>4</td>
<td>4,085.38</td>
<td>91.23</td>
<td>6,757.51</td>
<td>8,786.86</td>
<td>3.6</td>
</tr>
<tr>
<td>2013</td>
<td>4</td>
<td>4,710.76</td>
<td>87.57</td>
<td>8,063.47</td>
<td>9,977.67</td>
<td>3.8</td>
</tr>
<tr>
<td>2014</td>
<td>4</td>
<td>5,069.62</td>
<td>73.05</td>
<td>8,904.98</td>
<td>11,876.37</td>
<td>3.70</td>
</tr>
<tr>
<td>2015</td>
<td>4</td>
<td>6,860.08</td>
<td>83.87</td>
<td>11,804.36</td>
<td>14,360.87</td>
<td>3.50</td>
</tr>
<tr>
<td>2016</td>
<td>4</td>
<td>8,534.36</td>
<td>82.98</td>
<td>13,037.64</td>
<td>17,269.87</td>
<td>3.70</td>
</tr>
<tr>
<td>2010</td>
<td>5</td>
<td>2,473.87</td>
<td>98.25</td>
<td>3,922.80</td>
<td>5,741.93</td>
<td>4.1</td>
</tr>
<tr>
<td>2011</td>
<td>5</td>
<td>2,910.05</td>
<td>102.16</td>
<td>5,957.48</td>
<td>8,061.05</td>
<td>4.4</td>
</tr>
<tr>
<td>2012</td>
<td>5</td>
<td>3,565.67</td>
<td>86.70</td>
<td>5,758.18</td>
<td>8,347.15</td>
<td>4.1</td>
</tr>
<tr>
<td>2013</td>
<td>5</td>
<td>4,690.14</td>
<td>105.04</td>
<td>7,550.66</td>
<td>10,393.80</td>
<td>3.7</td>
</tr>
<tr>
<td>2014</td>
<td>5</td>
<td>4,604.42</td>
<td>76.89</td>
<td>8,384.48</td>
<td>11,242.58</td>
<td>3.8</td>
</tr>
<tr>
<td>2015</td>
<td>5</td>
<td>6,071.91</td>
<td>97.58</td>
<td>9,870.94</td>
<td>13,711.36</td>
<td>3.80</td>
</tr>
<tr>
<td>2016</td>
<td>5</td>
<td>7,506.22</td>
<td>95.65</td>
<td>11,078.55</td>
<td>16,189.16</td>
<td>3.50</td>
</tr>
<tr>
<td>2010</td>
<td>6</td>
<td>24,016.97</td>
<td>444.16</td>
<td>54,646.21</td>
<td>74,186.91</td>
<td>2.95</td>
</tr>
<tr>
<td>2011</td>
<td>6</td>
<td>35,981.19</td>
<td>881.93</td>
<td>84,798.54</td>
<td>114,264.93</td>
<td>3.04</td>
</tr>
<tr>
<td>2012</td>
<td>6</td>
<td>62,314.37</td>
<td>1,374.11</td>
<td>116,584.46</td>
<td>158,814.43</td>
<td>3.98</td>
</tr>
<tr>
<td>2013</td>
<td>6</td>
<td>71,544.58</td>
<td>1,869.81</td>
<td>152,386.03</td>
<td>197,104.24</td>
<td>3.43</td>
</tr>
<tr>
<td>2014</td>
<td>6</td>
<td>87,261.79</td>
<td>2,043.00</td>
<td>192,275.22</td>
<td>242,811.81</td>
<td>3.06</td>
</tr>
<tr>
<td>2015</td>
<td>6</td>
<td>92,500.00</td>
<td>2,120.00</td>
<td>246.00</td>
<td>410,000.00</td>
<td>4.73</td>
</tr>
<tr>
<td>2016</td>
<td>6</td>
<td>91,651.23</td>
<td>2,210.00</td>
<td>310.00</td>
<td>485,600.00</td>
<td>4.83</td>
</tr>
<tr>
<td>2010</td>
<td>7</td>
<td>153</td>
<td>2</td>
<td>238</td>
<td>380</td>
<td>2.0</td>
</tr>
<tr>
<td>Year</td>
<td>Month</td>
<td>Value</td>
<td>Value</td>
<td>Value</td>
<td>Value</td>
<td>Value</td>
</tr>
<tr>
<td>------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>2011</td>
<td>7</td>
<td>331.818</td>
<td>3.711</td>
<td>694</td>
<td>914</td>
<td>3.3</td>
</tr>
<tr>
<td>2012</td>
<td>7</td>
<td>499.55</td>
<td>5.854</td>
<td>932</td>
<td>1,285</td>
<td>3.1</td>
</tr>
<tr>
<td>2013</td>
<td>7</td>
<td>979</td>
<td>15</td>
<td>1,593</td>
<td>2,197</td>
<td>3.0</td>
</tr>
<tr>
<td>2014</td>
<td>7</td>
<td>1184.695</td>
<td>19.352</td>
<td>2,012</td>
<td>2,813</td>
<td>2.0</td>
</tr>
<tr>
<td>2015</td>
<td>7</td>
<td>1845.79</td>
<td>21</td>
<td>3,068</td>
<td>4,172</td>
<td>3.0</td>
</tr>
<tr>
<td>2016</td>
<td>7</td>
<td>3701.65</td>
<td>29</td>
<td>5,297</td>
<td>7,196</td>
<td>3.5</td>
</tr>
<tr>
<td>2010</td>
<td>8</td>
<td>369</td>
<td>4</td>
<td>821</td>
<td>1119</td>
<td>2.7</td>
</tr>
<tr>
<td>2011</td>
<td>8</td>
<td>662</td>
<td>7</td>
<td>1526</td>
<td>1962</td>
<td>2.9</td>
</tr>
<tr>
<td>2012</td>
<td>8</td>
<td>1020</td>
<td>13</td>
<td>2117</td>
<td>2787</td>
<td>2.1</td>
</tr>
<tr>
<td>2013</td>
<td>8</td>
<td>1,621</td>
<td>24</td>
<td>3050</td>
<td>3911</td>
<td>2.0</td>
</tr>
<tr>
<td>2014</td>
<td>8</td>
<td>2,531.61</td>
<td>5.00</td>
<td>5004</td>
<td>6152</td>
<td>3.1</td>
</tr>
<tr>
<td>2015</td>
<td>8</td>
<td>4,706.57</td>
<td>41.00</td>
<td>7292</td>
<td>9535</td>
<td>2.7</td>
</tr>
<tr>
<td>2016</td>
<td>8</td>
<td>5,167.75</td>
<td>31.00</td>
<td>9348</td>
<td>11281</td>
<td>2.1</td>
</tr>
<tr>
<td>2010</td>
<td>9</td>
<td>384</td>
<td>6</td>
<td>688</td>
<td>1,056</td>
<td>3.3</td>
</tr>
<tr>
<td>2011</td>
<td>9</td>
<td>645.225</td>
<td>11.49</td>
<td>1,163</td>
<td>1,613</td>
<td>4.5</td>
</tr>
<tr>
<td>2012</td>
<td>9</td>
<td>1012.69</td>
<td>18.132</td>
<td>1,793</td>
<td>2,394</td>
<td>4.3</td>
</tr>
<tr>
<td>2013</td>
<td>9</td>
<td>1,370</td>
<td>117</td>
<td>2,506</td>
<td>3,248</td>
<td>3.5</td>
</tr>
<tr>
<td>2014</td>
<td>9</td>
<td>1,429.96</td>
<td>126.28</td>
<td>3,031</td>
<td>3,925</td>
<td>4.1</td>
</tr>
<tr>
<td>2015</td>
<td>9</td>
<td>2,157.00</td>
<td>2.00</td>
<td>3,823</td>
<td>4,874</td>
<td>3.5</td>
</tr>
<tr>
<td>2016</td>
<td>9</td>
<td>3,253.94</td>
<td>23.50</td>
<td>5,486</td>
<td>7,374</td>
<td>3.3</td>
</tr>
<tr>
<td>2010</td>
<td>10</td>
<td>584</td>
<td>9</td>
<td>1018</td>
<td>1,364</td>
<td>3.45</td>
</tr>
<tr>
<td>2011</td>
<td>10</td>
<td>676</td>
<td>10</td>
<td>1,297</td>
<td>1,808</td>
<td>3</td>
</tr>
<tr>
<td>2012</td>
<td>10</td>
<td>970.663</td>
<td>15.043</td>
<td>1,737</td>
<td>2,463</td>
<td>4</td>
</tr>
<tr>
<td>2013</td>
<td>10</td>
<td>1318</td>
<td>17</td>
<td>2106</td>
<td>2942</td>
<td>4</td>
</tr>
<tr>
<td>2014</td>
<td>10</td>
<td>1,541.17</td>
<td>19.00</td>
<td>2687</td>
<td>3613</td>
<td>3</td>
</tr>
<tr>
<td>2015</td>
<td>10</td>
<td>2,831</td>
<td>28</td>
<td>4,457</td>
<td>5,859</td>
<td>3</td>
</tr>
<tr>
<td>2016</td>
<td>10</td>
<td>4,303</td>
<td>86</td>
<td>6333.56</td>
<td>8,119</td>
<td>3</td>
</tr>
<tr>
<td>2010</td>
<td>11</td>
<td>2,546</td>
<td>99</td>
<td>4127</td>
<td>5971</td>
<td>3.7</td>
</tr>
<tr>
<td>2011</td>
<td>11</td>
<td>2,767</td>
<td>114</td>
<td>5157</td>
<td>7112</td>
<td>4</td>
</tr>
<tr>
<td>2012</td>
<td>11</td>
<td>3709</td>
<td>101</td>
<td>5838</td>
<td>8276</td>
<td>3.7</td>
</tr>
<tr>
<td>2013</td>
<td>11</td>
<td>4543</td>
<td>114</td>
<td>6655</td>
<td>9145</td>
<td>3.4</td>
</tr>
<tr>
<td>2014</td>
<td>11</td>
<td>5,407.74</td>
<td>115.76</td>
<td>7923.29</td>
<td>10747.28</td>
<td>3</td>
</tr>
<tr>
<td>2015</td>
<td>11</td>
<td>6,894.04</td>
<td>105.15</td>
<td>9774.11</td>
<td>13256.12</td>
<td>2.8</td>
</tr>
<tr>
<td>2016</td>
<td>11</td>
<td>7511.984</td>
<td>114.57</td>
<td>12423.02</td>
<td>15830.38</td>
<td>2.7</td>
</tr>
<tr>
<td>2010</td>
<td>12</td>
<td>722</td>
<td>18</td>
<td>1372</td>
<td>1768</td>
<td>1.8</td>
</tr>
<tr>
<td>2011</td>
<td>12</td>
<td>802</td>
<td>16</td>
<td>1980</td>
<td>2501</td>
<td>2</td>
</tr>
<tr>
<td>2012</td>
<td>12</td>
<td>1384</td>
<td>20</td>
<td>2798</td>
<td>3671</td>
<td>3</td>
</tr>
<tr>
<td>2013</td>
<td>12</td>
<td>2,116</td>
<td>36</td>
<td>4465</td>
<td>6539</td>
<td>4</td>
</tr>
<tr>
<td>2014</td>
<td>12</td>
<td>3644.115</td>
<td>68.36</td>
<td>5450</td>
<td>7351</td>
<td>4.5</td>
</tr>
<tr>
<td>2015</td>
<td>12</td>
<td>6566.04</td>
<td>172.179</td>
<td>7368</td>
<td>11462</td>
<td>3</td>
</tr>
<tr>
<td>Year</td>
<td>FISI</td>
<td>ADM</td>
<td>ALD</td>
<td>NPL</td>
<td>BS</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>----</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>13</td>
<td>192</td>
<td>2</td>
<td>240</td>
<td>480</td>
<td>3</td>
</tr>
<tr>
<td>2011</td>
<td>13</td>
<td>366.261</td>
<td>4.156</td>
<td>491</td>
<td>781</td>
<td>3.1</td>
</tr>
<tr>
<td>2012</td>
<td>13</td>
<td>651.94</td>
<td>7.29</td>
<td>903</td>
<td>1365</td>
<td>2.6</td>
</tr>
<tr>
<td>2013</td>
<td>13</td>
<td>949</td>
<td>11</td>
<td>1548</td>
<td>2128</td>
<td>2.6</td>
</tr>
<tr>
<td>2014</td>
<td>13</td>
<td>1,343.30</td>
<td>19.35</td>
<td>2152</td>
<td>3012</td>
<td>3.1</td>
</tr>
<tr>
<td>2015</td>
<td>13</td>
<td>2,417.94</td>
<td>29.20</td>
<td>3501</td>
<td>4499.69</td>
<td>3.6</td>
</tr>
<tr>
<td>2016</td>
<td>13</td>
<td>3631.844</td>
<td>35</td>
<td>5384.6</td>
<td>6820.96</td>
<td>3.3</td>
</tr>
</tbody>
</table>

Source: NBE

Remark:-

- Amount of deposit mobilized (ADM) - measured as the natural logarithm of amount of deposit at year-end.
- Amount of loan disbursed (ALD) - measured as the natural logarithm of amount of loan at year-end.
- None performing loan (NPL) - measured as the natural logarithm of amount provision for none performing loan at year-end.
- Bank size (BS) - measured as the natural logarithm of total assets at year-end.