ST. MARY'S UNIVERSITY COLLAGE SCHOOL OF GRADUATE STUDIES

DETERMINANTS OF DEPOSIT MOBILIZATION THE CASE OF ETHIOPIAN PRIVATE COMMERCIAL BANKS

BY

GETANEH AYAL

JUN, 2020
SMU,
Addis Ababa

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A RESEARCH SUBMITTED TO ST. MARY'S UNIVERSITY COLLAGE SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION.

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Declaration

I, Getaneh Ayal, hereby declare that the thesis work entitled "Determinants of Deposit Mobilization the Case of Ethiopian Private Commercial Banks" submitted by me for the award of the degree of Masters of General Business Administration St Mary's University, is my original work and it has never been presented in any university. All sources and materials used for this thesis have been duly acknowledged.

Name Getaneh Ayal

Signature: _____

Endorsement

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

_____ _____

Advisor Signature

St Mary's University, Addis Ababa Jun 2020

APPROVAL SHEET

As members of board of examining of the final MBA thesis open defense, we certify that we have read and evaluated the thesis prepared by Getaneh Ayal under the title "Determinants of Deposit Mobilization the Case of Ethiopian Private Commercial Banks" we recommend that this thesis to be accepted as fulfilling the thesis requirement for the Degree of Master of Business Administration in Business Administration.

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_____	_____
External Examiner	Signature

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Acronyms and Abbreviations

ATM: Automated Teller Machine

BBE: Bank Branch Expansion

BLQ: Bank Liquidity

BLUE: Best Linear Unbiased Estimator

CBE: Commercial Bank of Ethiopia

CBs: Commercial Banks

CLRM: Classical Linear Regression Model

CSA: Central Statistical Authority

DEP: Deposit

DINTR: Deposit Interest Rate

EXGR: Exchange Rate

GDP: Gross Domestic Product

INFR: Inflation Rate

JB: Jarque Bera

LDR: Loan to Deposit Ratio

MNSP: Money Supply

MOFED: Ministry of Finance and Economic Development

NBE: National Bank of Ethiopia

OLS: Ordinary Least Square

PCI: Per Capital Income

SPSS: Statistical Package for Social Science

USD: United State Dollar

VIF: Variance Inflation Factors

WAMA: West African Monetary Agency

WAMA: West African Monetary Agency

WBG: World Bank Group

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Abstract

Deposit mobilization is a fundamental and critical part of banking activity. Understanding the nature of Deposit Mobilization behavior is critical in designing policies to promote savings and investment which in turn enhance economic growth through capital formation. Accordingly, this paper empirically examines the determinants of Private commercial banks deposit mobilization in Ethiopia for the periods 2009-2019. In order to achieve these objectives, the study adopts quantitative data from National Bank of Ethiopia (NBE), Ministry of Finance and Economic Cooperation (MOFEC), Central statistical Authority (CSA), World Bank website. The Target population was selected private commercial banks that engage in commercial activities and registered by National Bank of Ethiopia to act. Consequently, eleven banks, out of sixteen private commercial banks in existence as at June 2019, have purposively been selected for the finding. Different diagnostic test was performed to know whether the model is valid or not. All the tests were valid and eventually regression analysis was performed using SPSS version 20 software. The result from regression analysis showed that Deposit Interest rate, exchange rate, number of bank branches was significantly and positively correlated with total deposit, Money supply, bank liquidity ratio was significantly and negatively correlated with the total deposit; Inflation rate was insignificantly and negatively correlated with the banks total deposit and per capital income was positively and insignificantly correlated with deposit. Finally result from the study. And finally, the study had recommended what should be done to encouraging deposits by Private Commercial bank of Ethiopia for the benefit of the domestic deposit mobilization.

Key Words: Determinants of Commercial Banks deposit, Regression Analysis, Private commercial Banks.

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CHAPTER ONE

INTRODUCTION

1.1. Background

The role of the financial system in economic growth has been at the center of intense policy debate since the beginning of financial history. Financial development should, at least in principle, made financial resources available for the growth and development of the real sector of the economy. In the financial system process commercial banks play a vital role for the economic resource allocation of nations. They mobilizing surplus funds from the various economic units such as Government, business and household units and then channeling it in the form of loans and advances to the deficit sectors of the economy for productive investment. Beyond the intermediation function, the financial performance of banks has critical implications for economic growth of countries. Good financial performance rewards the shareholders for their investment and 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 repercussion on the economic growth (Adenitis, 2010, Okoth and Gemechu, 2013).

Deposit mobilization is the collection of cash or funds by a financial institution from the public through its current, savings and fixed amounts and other specialized schemes Banson (2013). Deposit mobilization 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 (Rajeshwari, 2014). The Deposit Money Banks must tap deposits from urban and rural areas. Selvaraj and Kumar (2015) state that, the success of the banking sector greatly lies on the deposit mobilization. Mobilization of deposits is one of the important functions of banking business Mohan (2012); it is an important source of working fund for the bank.

In the present context banks' performance is measured on several indicators, including the deposit mix and the quantum of low-cost deposits in the mix among others. In the present era of competition and with the emergence of private and multinational banks, an ideal mix of deposits

is a must to survive. Since the interest paid on deposit forms a big burden on bank, the mobilization of low-cost deposits, like current account and savings bank deposit is the urgent need for the bank. Deposit mobilization is the chief source of funds to undertake lending operations, for profitable operation, the amount of deposits is very important. The banks should introduce various deposits schemes to attract the public to deposit. It is the size of the deposits that largely decides the lending potential of a bank. (Rajeshwari, 2014)

Deposits are normally considered as a cost-effective source of working fund. However, a number of factors affect the deposit mobilization commercial banks. According to (Ongore & Kusa, 2013), these factors can be classified into bank specific (internal) and (external) macro-economic variables. The internal factors are those that are peculiar to banks and thus can be managed effectively to achieve the desired objective of increased deposit mobilization. Hence, the volume of deposit mobilized by a bank in a year may be a function of its internal characteristics such as deposit interest rate, branch network expansion, bank's liquidity and other internal factors, all of which may be said to fall though relatively within the control of the bank.

The external factors which are the macro economic factors are those that are beyond the control of the bank. They include inflation rate, lending rate, exchange rate, government expenditure, unemployment rate, Gross domestic product (GDP) and all other external factors that can only be managed by the government and regulatory agencies. The general performance of the economy is reflected by the macroeconomic aggregates including the gross domestic product (GDP), employment level, industrial capacity utilization, inflation, money supply and exchange rate Churchill (2014). Banks therefore adjust their deposit mobilization in response to the signals from these factors, such that positive signals make banks become more favorably disposed to attracting more deposit and vice versa.

There has been growing empirical literature on the macroeconomic and bank-specific determinant of banks deposit mobilization in Ethiopia and in other countries of the world. There are some empirical literatures on the aspect of deposit mobilization. Thus, it is against this backdrop that the researcher is motivated to examine how changes in the macroeconomic and bank-specific factors affects deposit mobilization of the Ethiopian banking sector so as to complement the depth in knowledge on the few empirical literatures in the subject matter.

1.2. Statement of the Problem

Commercial Banks play an important role in the economic development of the countries. For instance, they allocate resource and channel funds from savers to investors continuously (Okoth et al. 2013). They do so, if they get necessary deposits to cover their operational cost they incur. Mobilizing deposits domestically is crucial in many developing countries. Domestic funds provide a cheap and reliable source of funds for development, which is of great value in developing countries, especially when the economy has difficulty in raising capital in international markets. Yet, in many developing countries, there is a considerable amount of savings that are not intermediated through the formal sector. In particular, there exists a significant savings potential in the rural and/or semi-urban sector in many developing countries (Rutherford, 2000).

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. 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. Therefore, commercial banks should increase ways to approach and mobilize the huge deposits lying in the unbanked people to maximize and maintain their portfolios.

In the Ethiopian economy, Commercial banks have played a major role in mobilization of deposits for growth. Apart from accepting deposits and lending to credit worthy borrowers against suitable collateral, Commercial banks also play a catalytic role in facilitating growth of other sectors of the economy. Commercial banks face numerous challenges in their deposits mobilization efforts characterized by unsound financial institutions with the absence of prudent regulations and supervision with a few Commercial banks dominating the sector for instance according to National Bank of Ethiopia report of 2017/18 and 2018/19 Commercial bank of Ethiopia (CBE) alone mobilized 64.4% of the total deposits. Other problems include the issue of profitability of additional assets, the propensity to increase their deposit by customers and

Central bank regulations which require banks to hold a non interest earning proportionate reserve cash in their account with them (ACEG, 2004).

In Ethiopian financial sector, according to World Bank Group (WBG) 2017, 62% of Ethiopians reported saving money in the past year, only 26% saved formally at financial institutions, while 38% saved with a person outside of a family or at an informal saving club; of the total unbanked surveyed adults, 85% reported insufficient funds as a reason for not opening an account. The report also adds that in 2017, the percentage of adults in Ethiopia with an account rose to 35%, up from 22% in 2014; despite, this increase in account ownership, Ethiopia lags behind its neighboring countries. In Kenya, for example, 82% of adults have an account, while in Rwanda, account ownership stands at 50%. This shows that they are unable to save the issue is to mobilize these peoples by explaining them the importance and benefits related to savings.

As far as the knowledge of the researchers is concerned, there are some researchers conducted related to determinants of commercial banks deposit in Ethiopia and outside Ethiopia, Erna and Ekki (2014) in Indonesia using 11 years‟ time series data, Mohammed & Mansur (2014) in Malaysia using 7 years panel data and Giragn (2015) in Ethiopia using 13 years panel data indicated that GDP has not significant influence on the volume of commercial bank deposits. While, Mohammed (2014) in Bahrain using 20 years‟ time series data and Shemsu (2015) in Ethiopia using 17 years‟ time series data revealed that GDP has positive influence on the volume of commercial bank deposit. Wubetu (2012) found that Branch expansion had positive and significant effect on total deposit whereas deposit interest rate and inflation rate were insignificant. As opposed to this finding, Tizita (2014) reported that branch expansion has negative effect on private saving in the short term. She also concluded that inflation rate influenced private saving negatively and significantly.

Another study conducted by Kibebe (2016) and Jeneber (2014) tried to investigate the way expected inflation, micro economic factor, loan, existence of competitors, branch expansion, Profitability of the bank, Security of the bank, and cost of advertisement affect deposit growth in commercial banks but, they did not include all variables that affect the deposit growth of commercial banks such as exchange rate, money supply, liquidity and other important variables that determine the deposit mobilization process of commercial banks. Shemsu, (2015) and Hibret, (2015), conducted study on determinants of commercial banks deposit of a single

commercial bank, i.e. Commercial Bank of Ethiopia and Fekadu, (2019) tries to investigate service quality, branch expansion, interest rate, technology, disposable income in one private commercial bank i.e. Dashen Bank. All of the three researches are conducted only by taking one government and one private commercial bank. This research tries to include greater number of private commercial banks and incorporate commercial bank deposit variables which are not included by the above researchers and also add recent up-to-date time series data to identify both the internal and external factors that can affect deposit mobilization activities of private Commercial Banks in Ethiopia.

1.3. Research Questions

- What are the internal (bank specific) factors that determine deposit mobilization of private Commercial Banks in Ethiopia?
- What are the external (macroeconomic) factors that determine deposit mobilization of Private commercial banks in Ethiopia?

1.4. Research Hypothesis

Deposit Interest Rate: Mustafa and Sayera (2009) stated that low deposit rates are discouraging saving mobilization. Khalai., Ondiek, & Musiega. (2014) stated that low rates of interest on deposits have always been an obstacle to savings mobilization. And also, Mashamba et al (2014) stated that to encourage private savings, the deposit interest rate should be positive. Furthermore, innovative saving schemes should be introduced to mobilize more resources. Mohammad and Mahdi (2010) believe that one of the most effective factors for deciding to deposit in banking system is the interest rate; Moreover, they said that low deposit rates are discouraging saving mobilization. Therefore, it states that deposit interest rate and bank deposit have positive and significant relationship. From the above evidence the study hypothesized deposit interest rate has positive and significant impact on commercial bank deposit.

H1: Deposit interest rate is expected to have a positive and significant impact on deposit mobilization of Ethiopian private commercial banks.

Inflation: According to Owolabi and Adegbite (2013), inflation is described as a general and persistent increase in the prices of goods and services in an economy. Inflation affects bank deposits in two ways. First is that it reduces the purchasing power of money and hence leads to

high cost of living implying that a household can purchase very little with their available income and thus may be left with little or nothing to deposit in the bank. Secondly, in a situation when there are hyperinflation i.e. rapid, excessive and out-of-control price increases in an economy; cash or savings deposited in the banks decreases in value or becomes worthless since the money has far less purchasing power.

According to Carroll (2006); as inflation accelerates; deposits become less attractive; depending on the interest rate. In this case the assumption would be that as deposit interest rate rise, deposits would increase in principle as well. The narrower the spread between deposit interest rate and inflation; the less attractive it should be to hold deposits above the required level. From the above evidence the study hypothesized that inflation has negative and significant impact on commercial banks deposit.

H2: Inflation rate is expected to have a negative and significant impact on deposit mobilization of Ethiopian private commercial banks.

Money Supply: According to (Al-Qudah &Jaradat, 2013), Money supply is a measure of the total amount of money in an economy. Money supply is the summation of currency in circulation, demand deposit, time deposit and saving deposit. Money supply is the amount of money within a specific economy available for purchasing goods or services. Excess money supply, whether created though the direct or indirect channels, influences economic activity (growth) and may provide downside risks on macroeconomic stability, impacting negatively on inflation, interest rates and exchange rate. From the above evidence the study hypothesized that money supply has negative and significant impact on commercial banks deposit.

H3: Money supply is expected to have a negative and significant impact on deposit mobilization of Ethiopian private commercial banks.

Per Capital Income: Per capital is the level of GDP divided by the population of a country or region Jim (2008). Changes in real GDP per capita over time are often interpreted as a measure of changes in the average standard of living of a country. If households and firms desire to hold more money, deposits will increase. So, the relationship between income and deposit is positive, as the income of the society increases the same happens for the commercial bank deposits. Income is expected to have a positive effect on deposits (M. A. Baqui & Richard L. Meyer,

1987). Therefore, as society's per capital income increases the same will happen for commercial banks deposits. From the above evidence the study hypothesized that per capital income of the society has positive and significant impact on commercial banks deposit.

H4: Per capital income of the society is expected to have a positive and significant impact on deposit mobilization of Ethiopian private commercial banks.

Banks Liquidity Ratio: Liquidity can be defined as a measure of the relative amount of asset in cash or which can be quickly converted into cash without any loss in value available to meet short term liabilities Ketema (2017). Managing liquidity is a daily process required by bankers to monitor and project cash flow to ensure adequate liquidity is maintained. Fore commercial banks, customers deposit are its primary liabilities; whereas reserves and loans are its primary assets. Banks liquidity can be measured with different liquidity ratio. For this study loan to deposit ratio (LDR) is used. The loan to deposit ratio (LDR) is used to assess bank liquidity by comparing a bank's total loans to its total deposits for the same period. The LDR is expressed as a percentage. If the ratio is too high, it means that the bank may not have enough liquidity to meet customer's withdrawals and may discourage people from further depositing their money. Conversely, if the ratio is too low, the bank may not be earning as much as it could. Thus, a bank must strike a balance between liquidity and profitability so as to maintain public confidence and ensure regularity of customer deposits. From the above evidence the study hypothesized that banks liquidity ratio has positive and significant impact on commercial banks deposit (Venkatesan, 2012).

H5: Banks liquidity is expected to have a positive and significant impact on Ethiopian private commercial banks deposit mobilization.

Exchange Rate: Exchange rate is the rate at which one currency is being converted into another currency. Exchange rate changes can affect deposit mobilization as when the currency of one country depreciates in value, most investors will withdraw their deposits in the bank in exchange for currencies with higher value. According to Nugel (2012) currencies depreciated in one country deposit will be reduced since investors tend to withdraw deposit and exchanged to keep it by appreciating currency (Hard currency) or invest in another form of investment rather than bank deposit. In Ethiopia the average rate of Birr to US dollar in the official market showed

annual depreciation of 5.4% since 2011/12 and in January 2014; the exchange rate reached 19.107; showed 4.85 % depreciation since January 2013 (Ketema, 2017). From the above evidence the study hypothesized that exchange rate has positive and significant impact on commercial banks deposit.

H6: Exchange rate is expected to have a positive and significant impact on Ethiopian private commercial banks deposit mobilization.

Number of Bank Branches: According to the study of Bhattacherjee (2012), reveal that branch expansion is a significant factor affecting for deposit mobilization. According to Erna and Ekki (2004), there is a long run relationship between commercial bank branch and commercial banks deposits. Expansion of bank facilities increases the amount of aggregate savings in the economy Tareq, (2015). As volume of economic activities increases in a community the potentiality of establishing bank branches increases, which ultimately increases the level of voluntary savings of the households. According to (Tegene, 2012) unrestrained access to public goods and services is an essential condition of an open and efficient society. It is argued that as banking services are in the nature of a public good, it is essential that the availability of banking services to the entire population without discrimination should be the prime objective of public policy of any country. Expectations of poor people from the financial system is security and safety of deposits, low transaction costs, convenient operating time, minimum paper work, frequent deposits, and quick and easy access to credit and other products, including remittances suitable to their income and consumption. From the above evidence the study hypothesized that exchange rate has positive and significant impact on commercial banks deposit. From the above evidence the study hypothesized that branch expansion has positive and significant impact on commercial banks deposit.

H7: Branch expansion is expected to have a positive and significant impact on Ethiopian private commercial banks deposit mobilization.

1.5. Research Objective

1.5.1. General Objective

The main objective of the study is to identify the factors that determine deposit mobilization of Ethiopian private commercial banks.

1.5.2. Specific Objectives

The specific objectives of the study would be:

- To examine the impacts of deposit interest rate on deposit mobilization of private commercial banks in Ethiopia.
- To determine the impacts of inflation rate on deposit mobilization of private commercial banks in Ethiopia.
- To identify the impacts of money supply on deposit mobilization of private commercial banks in Ethiopia.
- To identify the impacts of per capital income on deposit mobilization of private commercial banks in Ethiopia.
- To examine the effects of liquidity on deposit mobilization of private commercial banks in Ethiopia.
- To identify the impacts of exchange rate on deposit mobilization of private commercial banks in Ethiopia.
- To examine the impacts of bank branch expansion on deposit mobilization of private commercial banks in Ethiopia.

1.6. Significance of the Study

The study is useful for banking industry, government, further researchers and monetary policy makers in their evaluation of policy options, regulators, investors in Ethiopian banking industry in general and Ethiopian private commercial banks management, managers and deposit mobilization teams in particular. It helps the bank managers by letting them to know which variable (factor) is a core factors so that the managers should be given due emphasis and persuades regulatory organ to see and adjust the tough policies imposed on private commercial banks. It also provides information for all stakeholders especially for boards and management of banks in order to minimize the impact of factors determining deposits mobilization by making them to design effective strategies. The research would provide information to other researchers as a starting point or may serve as an additional source of reference on the literature and would also provide an opportunity for future research to deeply investigate on this issue.

1.7. Scope and Limitation of the Study

This study was focused on the determinants of deposit mobilization in Ethiopian private commercial banks. Even if there are so many factors such as interest rates; expected inflation, micro economic factor, loan, existence of competitors, interest rate, branch expansion and cost of advertisement, marketing strategy, banking technology, geographical location of the bank branches, varieties of services offered, society awareness and bank's image among others that affects commercial banks deposit, this study is limited to those factors such as the effect of diopsit interest rate, exchange rate, money supply, inflation, per capital income, branch expansion and liquidity of the bank on deposit mobilization of Ethiopian private commercial banks. From the entire financial sector operating in Ethiopia, the research covers particularly the activities of eleven privately-owned commercial banks that are registered by NBE and are being operational is assessed through secondary data during the study period (2009-2019).

1.8. Organization of the Study

This paper had consisted of five chapters with different sections and sub-sections, and it will structure 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 policy implication and further research direction.

CHAPTER TWO

LITERATURE REVIEW

2.1. Theoretical Literature

2.1.1. Deposit Mobilization

Deposit mobilization is an integral part of banking activity. Mobilization of Savings through deposit collection has been regarded as the major task of banking industry. Deposit mobilizations are an indispensable factor to increase the sources of the banks to serve effectively. Mobilizing deposits play an important role in development of all spares of economy (Shettar, 2014). According to Banson (2013), deposit mobilization is the collection of cash or funds by a financial institution from the public through its current, savings and fixed amounts and other specialized schemes. Normally deposits are considered as the cost-effective working funds that can increase the sustainability and profitability of the deposit taking institutions (Garo, 2015).

Richard et al. (2015), defined deposit mobilization as the main function of financial institution. Mobilizing funds from the surplus economic agents to the deficit economic agents is the process of deposit mobilization and it is thus affected to increase the economic growth. In banking sector deposit mobilization is a scheme intended to encourage customers to deposit more cash with the bank and this money in turn will be used by the bank to disburse more loans and generate additional revenue for them. Furthermore, the key role of the loans, banks offer the more profit they make. However, the success of the deposit mobilization process depends on development of the financial system as well as the strategic practices adopted by banks.

According to Richard, Florence and Zenon, (2015), advocate that to mobilize enough deposits, banks should present various kind of deposit schemes to attract customers. Normally customers

have various kinds of needs and wants with respect to their gender, age, profession, level of income, type of necessity, tenure, size of business and so many other factors lead to make a discrepancy among customers when they deposit their money in banks. Therefore, banks should be more attractive and strategic to absorb those deposits (Hemachandra, 2009).

Generally, in economics theory, banks are considered as oligopolistic institutes which have high interdependency and high competition. Therefore, banks to ensure the competitiveness, the previous traditional and contemporary methods of deposit mobilization should be substituted by the modern technology and multiple characteristics. These new schemes of deposit mobilization address to the diverse needs of people and many instances, in today's banking context, banks adopt many strategic advertising methods to mobilize more deposits. The benefits and incentives (lotteries, gifts) to depositors, banks offer services around-the-clock and during all 7 days, innovative facilities like mobile banking, internet banking and door-step banking are appeared as the contributory factors to mobilize deposits in modern day banking industry (Hemachandra, 2009).

2.1.2. Commercial Bank Deposits

A Bank deposit is the amount of money in cash or cheque form or sent via a wire transfer that is placed into a bank account. "Formal providers are beginning to make important progress in reaching lower-income markets with savings services" (Ledgerwood et al. 2013). When savings services are offered by institutional providers, they are generally referred to as deposits. "Savings is a more general term used when discussing a broad set of activities related to holding assets stored by others; deposits are the portion of savings held in financial institutions" (CGAP, 2005). The target bank account can be any kind of account that accepts deposits. "Bank Deposit is money placed into a banking institution for safekeeping. Bank deposits are moneys in an account at a banking institution, such as savings accounts, checking accounts and money market accounts. The account holder has the right to withdraw any deposited funds, as set forth in the terms and conditions of the account. The "deposit" itself is a liability owed by the bank to the depositor (the person or entity that made the deposit), and refers to this liability rather than to the actual funds that are deposited" (Ledgerwood, et al. 2013).

According to the Keynesian theory of demand for money, there are three main motives why people hold money: transactions, precautionary and investment motives. In order to crate for

these motives, commercial banks offer three categories of deposit facilities that are demand, savings and time deposits. Commercial Bank deposits are major liabilities for commercial banks. (Kelvin, 2001) said that deposits of commercial banks account for about 75% of commercial bank liabilities. Due to the fact that commercial banks are using this liability to lend it and gain return on it their deposits are using them do their business. Commercial banks are dependent on depositor's money as a source of funds. Therefore, banks will be better if they are mobilizing more deposits. Hence, the completion for deposits is really a completion for profits. Commercial banks compete for deposits in order to become profitable and thus to be able to supply more funds to the public. However, such financial growth is profitable only if the commercial bank does not incur additional expenses to obtain and retain cash (Davinaga, 2010).

2.1.3. Major Types of Deposit Products

A deposit account is a current account, savings account, or other type of bank account, at a banking institution that allows money to be deposited and withdrawn by the account holder. These transactions are recorded on the bank's books, and the resulting balance is recorded as a liability for the bank, and represents the amount owed by the bank to the customer. "They must be carefully designed through a balance of product features, security, convenience, and price to allow them to be used in different combinations for different purposes by all types of savers-poor and non-poor, individuals and institutions" (Robinson 2006). According to (Islam & Ghosh, 2014) the Major types of deposits are: -

Current Account: - Such deposits are payable on demand and are, therefore, called demand deposits. These can be withdrawn by the depositors any number of times depending upon the balance in the account. The bank does not pay any Interest on these deposits but provides cheque facilities. These accounts are generally maintained by businessmen and Industrialists who receive and make business payments of large amounts through cheques.

Savings Accounts: - These are depositing whose main objective is to save. Savings account is most suitable for individual households. They combine the features of both current account and fixed deposits. Accounts maintained by retail banks that pay interest but cannot be used directly as money (for example, by writing a cheque). Although not as convenient to use as checking

accounts, these accounts let customers keep liquid assets while still earning a monetary return. Interest paid on savings account deposits is lesser than that of fixed deposit.

Fixed Deposits: - Have a fixed period of maturity and are referred to as time deposits. These are deposits for a fixed term, i.e., period of time ranging from a few days to a few years. A money deposit at a banking institution that cannot be withdrawn for a preset fixed 'term' or period of time. They can be withdrawn only after the maturity of the specified fixed period. They carry higher rate of interest. Generally speaking, the longer the term the better the yield on the money.

2.1.4. The Benefits of Deposit for Banks

Deposits are crucial for commercial bank's profitability and sustainability. Through financial intermediation, deposit is far more convenient and efficient for a bank, which has ongoing relations with thousands of depositors, to raise the funds from them, and then lend the money to the company (Brealey, 2007). Funds acquired from deposit sources are cheaper than those from capital sources. A bank's success in finding depositors consequently plays a critical role in its ability to satisfy customer credit demands and perform other banking functions. Moreover, much of a bank's profitability is derived from gathering deposits at one set of interest rates and then lending or investing these funds at higher rates. These key roles that deposits play in overall bank performance have thus drawn much attention to bank funding practices and the ability of individual banks to maintain or expand their deposit base.

Deposits as a Source of Fund for Loan

Deposits are the main source of banks to provide loan (Herald, 2009). This deposit is mainly provided by people as (Mohammad and Mahdi, 2010). However, deposits can also be provided by business organizations, NGOs, government and so on. Therefore, whether deposits are from individuals, businesses and government they are important financial source of banks. In similar way banks in our country give bank services by receiving deposits from depositors on a lesser interest rate and lend it back to borrowers in a higher rate when they need of the fund against offering of security.

Attracting Deposit is Cheaper than Raising Equity

In the bank's context raising equity is more expensive or costly than attracting deposits. Due to the additional source of financing for banks; if the lending channel plays a role, the deposit growth should lead to an increase in the supply of loans (Lorenzo et al, 2010). As demand for loan increases because of the development work done by individuals, businesses and government, banks should extend their deposit base.

Banks Make Profit using their Deposit

Deposits provide most of the raw materials for bank loans that represents 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 (Maria and Sergio, 2001, Mahendra, 2005) found that depositors discipline banks by withdrawing deposits and by requiring higher interest rates. According to Ethiopian context, we call as "customer is the king" if there is enough deposit granted to borrowers all their salary and benefits of employees, cost of all material expenditures, building cost or lease costs are achieved and get extra a profit.

Fund Investment and Development Projects

Debt is largely held by domestic banks which are funded mainly from deposits, the government demand for bank assets enabled banks to continue to expand their deposit base rapidly and profitably Herald and Heiko (2009). Individual investors and government are mainly depending on the deposits of banks to fund their investments and/or development projects. Generally, if it can mobilize deposits at the required rate the banking system can be viable and this can be done only by making a bank deposit more attractive.

A Source of Investment

Intermediation functions of banks play a vital role in the efficient allocation of resources of countries by mobilizing resources for productive activities (Ongore & Kusa, 2013). They transfer funds from those who don't have productive use of it to those with productive venture. (Nwanko, Ewuim, & Asoya, 2013) States that, savings are resources which one decides to put aside for investment purposes and not for luxury. What people save, avoiding consuming all their income, is called "personal savings". These savings can remain on the bank accounts for future use or be actively invested in houses, real estate, bonds, shares and other financial instruments.

Low cost

The success of the banking greatly lies on the deposit mobilization (Shettar & Sheshgiri, 2014). Performances of the bank depend on deposits, as the deposits are normally considered as a cost-effective source of working fund. According to (Elser, Hannig, & Wisniwski, 1999) savings are a source of funds with low financial costs i.e., interest costs, Compared to other commercial funds. With regard to financial costs, most of the institutions apply a differentiated interest rate schedule, compensating for the higher administrative costs with no or low interest rates on small savings and increasing them according to the size of the deposit.

A Source of Profit

According to (Varman, 2005) the ability of a bank ‘s management and staff to attract checking and saving accounts from business and individuals is an important measure of the bank ‘s acceptance by the public. Deposits provide most of the raw materials for bank loans and thus represent the ultimate source of bank profits and growth. Deposits are an indispensable tool of commercial banks use to enhance its profitability through advancing deposits mobilized to its customers in form of loans which make in return interest to commercial banks (Tuyishime, Memba, & Mbera, 2015).

Economic Growth and Development

In addition to resource allocation; good bank performance rewards the shareholders with sufficient return for their investment (Ongore & Kusa, 2013). 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. Poor performance can lead to runs, failures and crises. Banking crisis could entail financial crisis which in turn brings the economic meltdown.

2.1.5. Determinants of Deposits Mobilization

According to (Ongore & Kusa, 2013), the performance of commercial banks can be affected by internal and external factors; these factors can be classified into bank specific (internal) and (external) macro- economic variables. The internal factors are individual bank characteristics

which affect the bank's performance. These factors are basically influenced by the internal decisions of management and board. The external factors are sector wide or country wide factors which are beyond the control of the company (Aftabi, Daneshvar, Karimbakhsh, Shadab, & Mortezaei, 2013), also stated that, in a general classification, the factors affecting the banking resources can be divided into two categories: external and internal factors.

External factors are uncontrollable factors of bank management and factors such as inflation, money supply growth rate, National income, economic growth, GDP growth rates and central bank policy are included.

Internal factors can be categorized into service factors such as variety of baking services, quality of banking services, electronic banking services, and specialized skills of staffs. Financial factors such as Paid loans, the interest rate paid on deposits, liquidity, capital adequacy, bonuses paid to depositors. Relationship and human factors such as advertise, bank employee 's behavior and how they deal with customers, appropriate informing and training customers, proper individual characteristics of employees. Physical condition factors such as location of bank branches, number of bank branches, interior and exterior design and beauty of branches, appropriate physical facilities and institutional affiliation factors such as payment of staff salaries and social security, organization of social security and pension benefits paid by the bank.

External (Macro-Economic) Factors

Interest Rate

Interest rate is the price for money that depositors receive from the bank. This is the opportunity cost of capital that savers/borrower receive/pay by lending to/borrowing from the financial intermediaries. With regards to deposit mobilization the ruling interest rates attracts more deposits when it is comparatively higher than the rate of investment. In the developing countries the trend of the government has been the use of interest rate ceilings as a regulatory mechanism to provide cheap credit to SMEs" World Development Report (1989).

Over the years, interest rates have remained a subject for critical assessment with diverse implications for deposit mobilization and investment promotion. Interest rate is defined as the rental payment for the use of credit by borrowers and return for parting with liquidity by lenders. Banks pay interest on deposits on one hand and on the other hand they charge interest on loans

and advances lent to borrowers. Banks tend to adjust the interest rate paid on deposit upwards as a way of mobilizing more deposit from the public. Mohammad and Mahdi (2010) believe that one of the most effective factors for deciding to deposit in banking system is the interest rate; Moreover, Mohammad and Mahdi said that low deposit rates are discouraging saving mobilization. Herald and Heiko (2009) also mention interest as one of the determining factors for Deposit Money Banks deposits. As to Erna and Ekki (2004), Economists mainly conventional ones, believe that depositors are attracted to deposit their money in banks because of the opportunity cost of holding cash in hand is high when the interest rate is also high. Savings or deposits, according to classical economists, are a function of the rate of interest. The higher the rate of interest, the more money will be saved, since at higher interest rates, people will be more willing to forego present consumption.

"Regulation of interest rate below the competitive market interest rates by government legislation leads to capital flight by the international investors especially where portfolio investment is significant and withdrawal of deposits domestically" (Gilbert et al, 2001). This hypothesis further argues that "freeing interest rate as part of the liberalization policy will promote deposit mobilization and ensure efficient allocation of credits to the sectors where returns can be maximized" (Laurenceson, 2004). The above arguments confirm that, high interest rates attract savers to save more and this increases the rate of deposits banks receive. Mustafa and Sayera (2009) said that low deposit rates are discouraging saving mobilization.

According to (Tareq, 2015) Interest rate on deposit has a profound impact on the savings mobilization. People deposit with the banks with the expectation of getting some return. Low interest rates discourage savings. In this model average interest rate has been taken. Interest rate for both urban and rural has been assumed to be the same. (Khalai, Ondiek, & Musiega, 2014) Low rates of interest on deposits have always been an obstacle to savings mobilization. The classical theory of interest otherwise called the demand and supply theory of interest, maintains that the rate of interest is determined by the demand for and the supply of funds by businessmen and households respectively. The supply of funds is governed by the time preference and the demand for capital by the expected productivity of capital. The common peculiarity of monetary theories of interest is that the interest is a monetary phenomenon. And monetary theorists believed that interest rate varies inversely with supply of money and positively with the

purchasing power (value) of money. The defenders of the monetary theories of interest argued that when supply of money increases, purchasing power (value) of money falls and, hence the rate of interest also come down.

(Mashamba, Magweva, & Gumbo, 2014) Stated that to encourage private savings, the real interest rates should be positive. Furthermore, innovative saving schemes and investment bonds should be introduced to mobilize resources. These savings are ultimately channeled to the productive sectors of the economy and this promotes economic growth. In light of this countries with repressed financial system find it hard to raise deposits as interest rates on deposits are controlled by the government, hence the need for financial liberalization. They showed that financial liberalization led to higher interest rates which equated the demand and supply of savings. The authors expressed their view that higher interest rates lead to increased savings and financial intermediation in improving the efficiency of savings and investment. The higher real interest rates increase the extent of financial intermediation which in turn raises the rate of economic growth in developing countries. The growth of any economy depends on capital accumulation, and this requires investment and an equal amount of saving to match it.

Inflation Rate

According to Owolabi and Adegbite (2013), inflation is described as a general and persistent increase in the prices of goods and services in an economy. Inflation affects bank deposits in two ways. First is that it reduces the purchasing power of money and hence leads to high cost of living implying that a household can purchase very little with their available income and thus may be left with little or nothing to deposit in the bank. Secondly, in a situation when there are hyperinflation i.e. rapid, excessive and out-of-control price increases in an economy; cash or savings deposited in the banks decreases in value or becomes worthless since the money has far less purchasing power. Thus, people may decide to convert their deposits and cash in to hoarding of goods with the expectation that prices may increase further in future and hence might not deposit their money in the bank. Mohammad and Mahdi (2010), stress that with respect to the effect of inflation on savings, all individuals who save a part of their incomes in banks are directly damaged by the inflation and their assets decreases in proportion with money value decrease.

Inflation is one of the factors that determine commercial banks deposits (Herald and Heiko, 2009). The classical belief is that, because bank assets and liabilities are expressed in monetary terms and because these assets will normally grow in line with growth in money supply, banks are relatively immune from the effects of inflation (Devinaga, 2010). In brief, monetary policy works by controlling the cost and availability of credit. During inflation, the Central bank can raise the cost of borrowing and reduce the credit creating capacity of commercial banks.

Inflation with effect in economic growth, employment, income distribution and wealth as well as social and political conditions of a country can influence its entire dignity (Mohammad and Mahdi, 2010); Moreover, Banking system as an important effective factor in economic performance has also been under the influence of inflation. As to Mohammad and Mahdi (2010), as far as the effect of inflation on financial sector conceived the literature demonstrates that inflation affects the capacity of financial sector for optimal allocating of resources. That is as inflation rate increases, true yield rate of money and assets decrease; therefore, deposits are no longer attractive. Also, the increase of inflation rate has a negative effect on the performance of financial sector through the market credits and in turn, on the performances of banks and capital markets and finally on the long-term economic growth.

According to (Tareq, 2015) Inflation rate is considered to be an influential variable in saving mobilization. It has an adverse impact on the personal savings rate in the economy. The overall inflation rate of the economy has been considered as the interest rate for both sectors. According to (Zeidy, 1996) Inflation reduces the real value of financial holdings, discouraging financial savings by inducing their holders to shift them into physical or real assets which are better store of value. Although this is true at a theoretical level there is no conclusive empirical evidence that negative real rates have an adverse impact on domestic savings. (Ahlswede & Schildbach, 2012), states as inflation accelerates, deposits become less attractive, depending on the interest rate. In this case, the assumption would be that as deposit interest rates rise, deposits would increase in principle as well. The narrower the spread between deposit rates and inflation, the less attractive it should be to hold deposits above the required level.

Money Supply

According to (Al-Qudah &Jaradat, 2013), Money supply is a measure of the total amount of money in an economy. Money supply is the summation of currency in circulation, demand deposit, time deposit and saving deposit. Money supply is the amount of money within a specific economy available for purchasing goods or services. The broad definition of money supply is adopted which includes currency in circulation, demand deposits, quasi-money and foreign currency deposits. The money creating activities of the deposit money banks impact directly on money supply and given that the national bank is responsible for controlling money supply in an economy, it is important to evaluate the role of these banking institutions on the convergence process. Excess money supply, whether created though the direct or indirect channels, influences economic activity (growth) and may provide downside risks on macroeconomic stability, impacting negatively on inflation, interest rates and exchange rate.

Per Capita Income

According to Jim (2008) per capita is the level of GDP divided by the population of a country or region. Changes in real GDP per capita over time are often interpreted as a measure of changes in the average standard of living of a country. If households and firms desire to hold more money, deposits will increase. So, the relationship between income and deposit is positive, as the income of the society increases the same happens for the commercial bank deposits. Income is expected to have a positive effect on deposits (M. A. Baqui & Richard L. Meyer, 1987).

Therefore, as society's per capita income increases the same will happen for commercial banks deposits. Mahendra (2005) also indicates that income of the society matters for banks' deposit growth. (Nwanko, Ewuim, & Asoya, 2013), has stated that a tri-lateral relationship among savings, consumption, and income is the key determinant of the amount of personal savings. On the first side, given a certain income, the decision to buy goods and services negatively affects savings. Savings passively adjust to consumption and income. They represent a resource slack, buffering shocks in income and consumption desires. (Tareq, 2015) Also stated that, Income is the most important factor that influence. Higher the income greater will be the ability to acquire temporary surpluses which can be deposited with the banks as well as the need to hold financial

assets as a means of payments. It is evident that capacity of the poor to save is much higher than was anticipated. The individual savings behavior of the households not only depends on his income but also on the income of others.

Exchange Rate

Exchange rate is the rate at which one currency is being converted into another currency. Exchange rate changes can affect deposit mobilization as when the currency of one country depreciates in value, most investors will withdraw their deposits in the bank in exchange for currencies with higher value. According to Nugel (2012) currencies depreciated in one country deposit will be reduced since investors tend to withdraw deposit and exchanged to keep it by appreciating currency (Hard currency) or invest in another form of investment rather than bank deposit.

Exchange rate of Ethiopian Birr to USD for the major net importing country like Ethiopia, variability of the exchange rate of the local Ethiopia money (Birr) to foreign currency values is enormous. As the exchange rate of Birr to USD ratio grows, local deposits will deplete in the process of importing goods and services. This means as the country does by far more imports than exports and the exchange rate of Birr to USD grows, then local deposits in banks will reduce showing that there is inverse relationship. There are also cases where it shows the opposite trend by increasing the foreign direct inflows. However, the study by Ngula (2012) on the 'Determinants of deposit mobilization and its role in economic growth in Ghana has demonstrated that a deterioration in the Ghanaian currency with respect to the US currency resulting in a higher deposit mobilization.

Internal (Bank Specific) Factors

Liquidity of the Banks

Liquidity can be defined as a measure of the relative amount of asset in cash or which can be quickly converted into cash without any loss in value available to meet short term liabilities Ketema (2017).The loan to deposit ratio (LDR) is used to assess bank liquidity by comparing a bank's total loans to its total deposits for the same period. The LDR is expressed as a percentage.

If the ratio is too high, it means that the bank may not have enough liquidity to meet customer's withdrawals and may discourage people from further depositing their money. Conversely, if the ratio is too low, the bank may not be earning as much as it could. Thus, a bank must strike a balance between liquidity and profitability so as to maintain public confidence and ensure regularity of customer deposits.

The concept of liquidity in finance principally lies in two areas (Ismal, Rifki, 2010): - liquidity of financial instruments in the financial market and the liquidity related to solvency. The former related to liquid financial markets and financial instruments, smooth transactions and no barriers. Some examples of this includes: setting up liquidity management policies, reserve liquidity, balancing assets and liabilities and preparing liquid financial instruments (Ismal, Rifki, 2010). An important measure of liquidity is loan to deposit ratio. The loans to deposit ratio are inversely related to liquidity and consequently the higher the loans to deposit ratio the lower the liquidity and vice versa (Devinga, 2010).

Key liquidity indicators such as central bank credit to financial institutions, deposits as a share of monetary aggregates, loans to deposits ratios, are important for open market operations and liquidity management (Sheku, 2005). According to the theories of financial intermediation, the two most crucial reasons for the existence of financial institutions, especially banks, are their provision of liquidity and financial services (Ismal, Rifki, 2010). Ismal, Rifki also points out that, regarding the provision of liquidity, banks accept funds from depositors and extend such funds to the real sector while providing liquidity for any withdrawal of deposits, however the banks' role in transforming short term deposits into long term loans makes them inherently vulnerable to liquidity risk (Bank for International Settlements (BIS), 2008b:1). Individual, business and government will be willing to deposits their money in banks if they are certain that they are save to withdraw the money whenever they want, this is the question of liquidity of banks. The more liquid banks can attract the more deposits. Liquidity risk occurs in two cases; it arises symmetrically to the borrowers in their relationship with the banks, for example when banks decide to terminate the loans but the borrowers cannot afford it. It arises in the context of the banks' relationships with their depositors, for example, when depositors decide to redeem their depositors but the bank cannot afford it.

Liquidity risk is the possibility that depositors may withdraw some or all of their funds, and default risk is the possibility that borrowers may not repay all their debts when due (M. Shubik and M. J. Sobel, 1992). Banks that are perceived as less risky maintain a high level of liquidity or have a lower concentration of assets, particularly to the government, may be expected to be able to attract more deposits than their peers (Herald and Heiko, 2009). Liquid banks as well as banks with a higher loan exposure are associated with higher deposit growth. (Herald and Heiko, 2009), states that the liquidity situation of the bank also plays a significant role in determining banks deposit growth. According to (Nada, 2010), Banks perceived as risky should have had more difficulty attracting deposits and making loans than banks perceived as safe. When banks fail to pay for its depositors then it faces liquidity risk that makes other depositors not to deposit in that particular bank.

Branch Expansion

There is a relationship between branch expansion of banks and deposit growth of banks (Banqui, 1987). Banks make their expansion decisions based on level of competition, deposit potential, regional income and development of infrastructure (roads). However, since deposit mobilization is the main role of banks, branch expansion also decided on the level of deposit mobilization(Samuel, 2014). According to the study of Bhattacherjee (2012), reveal that branch expansion is a significant factor affecting for deposit mobilization. According to Erna and Ekki (2004), there is a long run relationship between commercial bank branch and commercial banks deposits. It is often argued that branching stabilizes banking system by facilitating diversification of bank portfolios (Carlson and Mitcheer, 2006). Mark and Kris (2006), found from theoretical literature on banking regulation that branch banking leads to more stable banking systems by enabling banks to better diversify their assets and widen their deposit base (Gart, 1994, Hubbard, 1994). An argument commonly articulated in the literature is that branch banking stabilizes banking systems by reducing their vulnerability to local economic shocks; branching enables banks to diversify their loans and deposits over a wider geographical area or

customer base (Mark and Kris, 2006). Restrictions on branching have been linked to the instability of banking systems.

Daniel (2005), suggest that the lack of widespread branching bank networks hindered the development of large-scale industrial firms. It is stated that unit banks become increasingly incapable of receiving deposits from a widespread geographic area. The single office bank is also not able to monitor geographically diffuse debtors as easily as could be done with multiple offices. Moreover, it can be concluded that under branch banking the mobility of capital is almost perfect. Commercial banks in Ethiopia expend huge investment budget for branch expansion in and outside Addis Ababa yearly, because branch expansion play significant role for resource mobilization and customer attraction. Opening bank branches at different locations facilitate for proximity to customers, supports the bank mobilize deposit and attract more customers. However, before opening branch at a certain location the marketing department of a bank conducts feasibility study and identify the target market. Then assignment of employees and customer attraction endeavor will take place. Therefore, branch expansion to banks is very crucial with regard to deposit mobilization and customer attraction.

2.1.8. The Effects of Poor Deposit Mobilization

According to (Khalayi, Ondiek, & Musiega, 2014) there are a number of effects that are brought about as a result of the poor deposit mobilization. These Include

- Inability to disburse loans to qualifying members on demand,
- Inability to meet operation costs,
- Inability to service debts,
- Unstable board of directors due to frequent reshuffle as disgruntled members vote officials out,
- Quitting of members to competitors,
- Falsification of financial reports. These can cause the voting out of elected officials on accusations of fraud, financial mismanagement practices. In addition, dissatisfied members can quit in large numbers to join alternative and emerging financial institutions for fear of losing their savings if the situation deteriorates.

2.2 Empirical Literature

Ketema (2017) empirically examined the determinants of commercial banks deposit mobilization in Ethiopia for the periods 2000-2015. Different diagnostic tests (test for assumption of Homoscedasticity, Autocorrelation, Normality, average value of theerror is zero and independent variables are non-stochastic) were conducted to check the appropriateness of the model. The results reveal that credit risk, exchange rate, and Bank Profitability are positively and statistically significant on bank deposit growth; whereas, Loan to Deposit ratio (Bank's Liquidity) and Money Supply influence is negatively and statistically significant on bank deposit growth. Deposit Interest Rate had insignificant positive influence on bank deposit growth. Whereas Inflation and Government Expenditure had insignificant negative influence on bank deposit growth.

Hassan (2013) evaluated the effect of interest rate on commercial bank deposits in Nigeria covering period of 2000 to 2013. Using the Ordinary Least Square (OLS) multiple regression techniques; the study revealed that there is a negative relationship between the interest rates and the commercial bank deposits suggesting that interest rates have not been responsible for customers deposits in commercial banks in Nigeria. Haron and Wan Azmi (2006) investigated the structural determinants of deposits level of commercial banks in Malaysia, using co-integration techniques. The results suggest that determinants such as rates of profit of Islamic bank, rates of interest on deposits, Base Lending Rate, Kuala Lumpur Composite Index, Consumer Price Index, Money Supply and Gross Domestic Product have significant impact on deposits.

Shemsu (2015) aimed to identify and evaluate those factors affecting bank deposit in general by taking Commercial Bank of Ethiopia as evidence. Estimation was done using Ordinary Least Squares technique by E-views7 statistical package. The results from economic analysis showed that all the explanatory variables were positively correlated with the explained variable. Among these variables, branch opening is an important strategy for deposit mobilization, it is highly significant than others. Individual remittances from diasporas is also next to branch opening is significantly affects CBE's deposit. The others are affects positively and can increase CBE's deposit. Dereje (2017) investigated the determinants of deposit mobilization in private commercial banks of Ethiopia using panel data of six private commercial banks from year 2002 to 2012. The study used both quantitative and qualitative research

approach. Secondary financial data were analyzed using multiple linear regressions models for the six bank's deposit. Fixed or random effect regression model was applied to investigate the impact of bank branches, exchange rate, Real Gross domestic product, Capital Adequacy and Liquidity on private commercial banks deposits. The empirical results from regression analysis showed that bank branches, exchange rate, and real gross domestic product affects deposit of the bank positively whereas, capital adequacy and liquidity affect the deposit of the private banks negatively.

Telatela (2013) examined factors influencing deposits mobilization in financial institutions in Tanzania, employed a quota sampling technique, where 120 customers and 40 bank staff were sampled, revealed that information communication technology, varieties of services offered and location of the bank are among the most important factors to facilitate deposit mobilization.

Emmanuel and Willy (2015) assessed the factors affecting deposit mobilization by bank agents in Kenya. The study employed a case study design. The target population was 80 respondents. The data collected was analyzed using descriptive and inferential statistics and a regression analysis was also conducted. The study revealed that agent transaction influences deposit mobilization by bank agents in Kenya to a great extent, requirements for cash deposits were made in national bank of Kenya branch thus influencing deposit mobilization by bank agents in Kenya negatively. From the above empirical review, this study has not been widely investigated in Nigeria. The study is an improvement to previous empirical studies as it will introduce unemployment rate as an important macroeconomic factor that affects the deposit mobilization effort of the Nigerian banking sector. Again, other estimation technique such as the granger causality test that was not used in previous studies will be employed in this study. This will however form the basis of the research gap.

An empirical study made by (Muhammad & Amir, 2013), on commercial banks in Pakistan with the aim of identifying the key determinants of banking liquidity. The study examines the bank specific and macroeconomic determinants of commercial banks liquidity in Pakistan. The sample of the study consists of 26 Pakistani commercial banks. The study period consists of 5 years from 2007 to 2011, which also covers the period of the Asian financial crisis 2008. Bank's liquidity is measured by two ways; one is cash and cash equivalents to total assets (Li) and second is advances net of provisions to total assets (L2). Two models are estimated based

on these measures of liquidity. The results of model 1 (Li) indicate that the bank specific fundamentals (NPL and TOA) and monetary policy interest rate positively determine the bank liquidity whereas inflation has a negative impact. Bank liquidity measured by Li is negatively and significantly affected by the financial crisis. The results of model 2 (L2) indicate that the bank size and monetary policy interest rate positively and significantly determine the bank liquidity.

According to (Gemedu, 2012), the article used data from Commercial Banks of Ethiopia in doing the research through mixed methodologies of the investigation. The data of total deposit of CBEs for 12 years regressed against three independent variables namely deposit rate, number of branches and inflation rates. The type of the data for this study is time series including the 12 years of data in the regression analysis. The model is multiple regression models with one dependent variable and three independent variables. The dependent variable of this multiple regression is total deposit of commercial banks, which is indicated by the symbol LNTD. Whereas the independent variables are deposit rate, inflation rate and branches of commercial banks, which are indicated by the symbol DR, INFRATE and LNBR respectively.

Deposit rate (DR) and Inflation rate (INFRATE) had positive insignificant effect on the commercial bank deposits. However, the branches of commercial bank (LNBR) had positive coefficient estimates and significant at 5% significant level, therefore branch expansion has positive significant effect on commercial banks deposit. Given the summary result of descriptive and empirical analysis, the study had concluded the following to commercial banks by taking CBE as evidence of the study. The major ones are adopted here: The main source of capital for commercial banks is deposit and saving deposit is the most used kind of deposit in banks. Deposit rate improvement, service excellence, good will of the bank, branch expansion, promotional effort, awareness creation and coupon prize can be an opportunity for deposit attraction and mobilize more deposits.

According to (Adem, 2015), adopted mixed research approach; the rationale of using such a mixed approach is to gather data that could not be obtained by adopting a single method. Regarding to the qualitative data; questionnaire is used to gather information from the employees of commercial bank of Ethiopia particularly for those employees who actively participated in deposit mobilization tasks in CBE city branches. Regarding to the secondary data; time series

data covering 1998 -2014 was analyzed. First, the time series data were assessed using descriptive statistics for the variables as well as the test for heteroskedasticity, autocorrelation and normality testing to know if the assumptions of CLRM violated or not. Second, estimated model was a single regression equation with deposit as the dependent variable and explanatory variables as deposit interest rate, overall inflation rate, number of branch opening, gross domestic product, individual foreign remittance and dummy variable. Estimation was done using Ordinary Least Squares technique by E-views7 statistical package. The results from economic analysis showed that all the explanatory variables were positively correlated with the explained variable. Among these variables, branch opening is an important strategy for deposit mobilization, it is highly significant than others. Individual remittances from diasporas is also next to branch opening is significantly affects CBE 's deposit. The others are affects positively and can increase CBE 's deposit.

The study by Bahredin (2016) aimed to find the determinants of commercial banks deposit growth in Ethiopia. In order to achieve this objective quantitative research approach has been used. Target population was all banks that engage in commercial activities and registered by National Bank of Ethiopia to act. Consequently, eight banks, out of the eighteen commercial banks in existence as at 2014, have purposively been selected for the study. The panel dataset for the study used secondary source consisted of annual data spanning from 2000 to 2014 gathered from the National Bank of Ethiopia time series database and commercial banks financial database. The dependent variable used to this study was bank deposit growth. Explanatory variables used in this study were inflation, deposit interest rate, loan to deposit ratio, bank branches, money supply growth, per capita income growth, and lagged bank deposit. Different diagnostic tests were conducted to check the appropriateness of the model. The random effect technique had been applied to find out the most significant variables. According to the final results achieved by applying panel data techniques, bank branches and per capita income growth influence was positively and statistically significant on bank deposit growth; whereas, lagged bank deposit and loan to deposit ratio influence was negatively and statistically significant on bank deposit growth. Money supply growth had insignificant negative influence on bank deposit growth; whereas deposit interest rate and inflation had insignificant positive influence on bank deposit growth. The study implies that stimulation of

economic growth; banks presence and financial intermediation were most important factors that affect bank deposit growth.

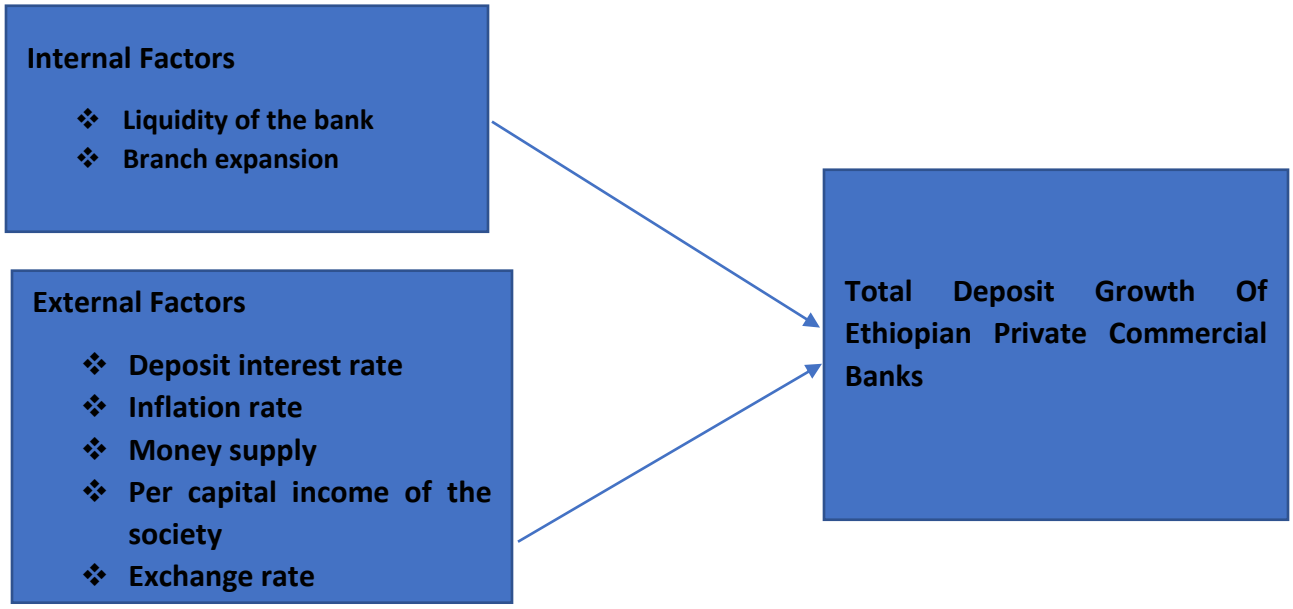
Andinet (2016) the aim of this study is to examine factors influencing deposit mobilization in private commercial banks in Ethiopia. In doing so, the study adopted quantitative methods research approach using secondary data. The study had found variables that can affect the total deposits of the banks. Seven variables are regressed with the dependent variable i.e. total deposit. The explanatory variables are number of bank branches, deposit interest rate, liquid asset to deposit ratio, lagged value of bank deposits, net interest margin, inflation rate and economic growth (GDP). The data for these variables were collected from the respective private commercial banks‟ financial statements, national bank of Ethiopia, central statistical authority and MOFEC of the sample year 2005 up to 2015. Different diagnostic test was performed to know whether the model is valid or not. All the tests were valid and eventually regression analysis was performed using E view statistical package. The result from regression analysis showed that number of bank branches, deposit interest rate, net interest margin and GDP were significantly and positively correlated with the explained variable. Lagged value of bank deposit was significantly and negatively correlated with total deposit. However, liquid asset to deposit ratio and inflation rate were insignificantly negatively correlated with bank deposit.

2.3. Conceptual Framework

From the above theoretical and empirical literature reviews the main factors that determines the deposit growth of private Commercial banks is divided in to both macro and micro economic factors. The study has quantified how these variables are determining the deposit of Commercial banks in Ethiopia. The researcher reveals that there are independent factors determining deposit mobilization performance of private commercial Banks in Ethiopia (the dependent variable). Deposit is normally not brought about by a single variable but rather an interaction of various networks of different variables and factors. Among the factors Deposit interest rate, inflation

rate, liquidity, per capital income of the society, Money supply, capital adequacy, branch expansion, Exchange Rate are those claimed to affect the deposit Growth of private commercial Banks activity. The Conceptual framework of these variables is a guide to this research and shows how they determine deposit performance of private commercial banks in Ethiopia. Below are indicated independent and depending variables included in the research topic determinants of deposit mobilization in Ethiopian commercial banks. The conceptual framework interlinks independent and dependent variables as depicted in the figure below.

Figure 2.1 Conceptual Fretwork



Source: compiled by the researcher mainly based onoduro (2015), shemisu (2015) and Venkatesan (2012)

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1. Research Approach and Design

The choice of research design depends on the objectives that the researcher wants to achieve Admas et al., (2007). The most important factor that determines the research design is the nature of the problem at hand, which is done to accomplish the intended objectives. The research design is focused on how data sources were collected and analyzed. In order to triangulate and getting

deep analysis in the study area and would come up with optimal solution to the proposed challenges.

The study examines the cause and effect relationships between growth of deposit and its determinant; therefore, it is an explanatory research and the problem identified factors affecting the outcome having numeric value, it is quantitative approach. Since this study was designed to examine the relationships between deposit growth and its determinants, a logical reasoning either deductive or inductive is required. Deductive reasoning is applicable for quantitative research whereas inductive reasoning is for qualitative research Admas et al., (2007). Thus, due to quantitative nature of data, the researcher used deductive reasoning to examine the cause and effect relationships between private commercial banks deposits and its determinants.

3.2. Population, Sample Size and Sampling Procedure

As noted by (Kothari, 2004) good sample design must be viable in the context of time and funds available for the research study. Accordingly, this study employed purposive sampling technique to select the required sample of banks from the below listed banks since it is viable in line with time and funds available for this study. This sampling method is a form of non-probability sampling in which decision concerning the individual source of data to be included in the sample is taken by the researcher, based upon a variety of criteria.

In Ethiopia there are sixteen private and two government banks as of June 30, 2019; these are Awash International Bank S.C, Bank of Abyssinia S.C, Wegagen Bank S.C, United Bank S.C, Nib International Bank S.C, Dashen Bank S.C, Cooperative Bank of Oromia S.C, Lion International Bank S.C, Zemen Bank S.C, Oromia International Bank S.C, Buna International Bank S.C, Berhan International Bank S.C, Abay Bank S.C, Addis International Bank S.C, Debub Global Bank S.C, Enat Banks S.C, Commercial bank of Ethiopia and Development Bank of Ethiopia. Accordingly, eleven private commercial banks were selected purposely from the total of 16 private commercial banks in Ethiopia. Hence, Awash International Bank S.C, Dashen Bank S.C, Bank of Abyssinia S.C, Wegagen Bank S.C, United Bank S.C, and Nib International Bank S.C, Oromia International Bank S.C, Cooperative Bank Of Oromia S.C, Lion International Bank S.C, Bunna International Bank S.C, Zemen Bank S.C with service year ranging from 10 years and above only included in this study. The rational for which selecting the above eleven banks is set by first, those commercial banks have financial statements for consecutive Ten years and

also, the gross profit annually earning of these selected banks on average is higher than other private commercial banks, which made them comparatively more competitive than the rest private commercial banks.

3.3. Data Sources and Data Collection Method

The researcher used secondary panel and time series data set for Ethiopian private Commercial banks between 2009 and 2019, for Ten years. Eleven private Commercial banks operating in Ethiopia during the period under the study was included in the panel data set. The researcher prefers to use panel data since panel data can take heterogeneity among different units into account over time by allowing for individual-specific variables. The panel Secondary data collected were comprised cross-sectional and time serious data. Cross-sectional elements were reflected by the different banks and the time series element is reflected in the period of study (2009 – 2019).

Accordingly, the researcher employed secondary sources of data that is panel in nature. The researcher preferred a secondary source of data since it is less expensive in terms of time and money while collecting. And also, it affords an opportunity to collect high quality data (Saunders et al., 2007) cited in (Gadise, 2014). Secondary data were obtained from the audited annual financial statements of the concerned private commercial banks in Ethiopia. These data include both bank internal and external factors. Bank internal factor were collected from annual reports and statement of accounts of the selected banks. However, data on external factors were collected from the National Bank of Ethiopia (NBE) and Ministry of Finance and Economic Development (MoFEC), National Planning Commission, and Central Statistical Authority (CSA).

3.4. Data Analysis Method

Creswell (2005) defined data analysis as a process which involves drawing conclusions and explaining findings in words about a study. The objective of this study is to examine the determinants of Ethiopian commercial banks deposit mobilization. To achieve this objective the study used panel data of Eleven banks for Ten years. The researcher used panel data because by combining time series of cross section observations, panel data give more informative data, more

variability, less co-linearity among variables, more degrees of freedom and more efficiency (Gujarati,2004). The researcher used quantitative data and employs multiple regression models and analyzed by using Statistical package for social science (SPSS) Version 20. Multiple regression analysis used to build better models for predicting the dependent variable and it can incorporate fairly general functional form relationship and the model allows for much more flexibility. The type of the data for this study is time series data for Ten years of private commercial Banks deposit from 2009-2019.The model is multiple regression models with one dependent variable and six independent variables.

3.5. Model Specification

The nature of data that the researcher used in this study is panel data model which is deemed to have advantages over cross sectional and time series data methodology. Panel data involves the pooling of observations on the cross-sectional over several time periods. As Brooks (2008) stated the advantages of using panel data set; first and perhaps most importantly, it can address a broader range of issues and tackle more complex problems with panel data than would be possible with pure time-series or pure cross-sectional data alone. Second, it is often of interest to examine how variables, or the relationships between them, change dynamically (over time). To do this using pure time series data would often require a long run of data simply to get a sufficient number of observations to be able to conduct any meaningful hypothesis tests. But by combining cross-sectional and time series data, one can increase the number of degrees of freedom, and thus the power of the test, by employing information on the dynamic behavior of a large number of entities at the same time.

To decompose the model into its actual variables to be estimated, the equation can be presented as below: -

$$DEP=\alpha + \beta 2\ DINTRt + \beta 3\ INFRt + \beta 4\ MNSPt + \beta 5\ PCIt + \beta 6\ EXGRt + \beta 7\ BLQt + \beta 8\ BBEt + \varepsilon$$

Where:

DEPt = Represents the total deposit of private commercial banks for period t.

DINTRt = Represent deposit interest rate of private commercial banks for period t.

INFRt = Represents overall inflation rate in Ethiopia for period t.

MNSPt = Represents money supply for a period t

PCIt= Represents per capital income of the society for a period t

EXGRt = Represents the growth of Ethiopian birr with USD for a period t.

BLQt= Represents liquid asset to deposit ratio (liquidity ratio) of bank at time t

BBEt= Represents number of bank branches of bank at time t

t: Time period from (2010-2019)

ε = is error term with zero mean and constant variance

α = while $\beta 1$- $\beta 8$ are coefficients of the respective variables.

3.6. Diagnostic Test Methods

Diagnostic tests assumptions were performed to check for the validity of the parameters. The assumptions were made relating to the classical linear regression model (CLRM). Every estimator of the model should have to meet the Ordinary Least Squares (OLS) assumptions before the estimation is carried out. If the estimators of the model satisfy the OLS assumption it is possible to say the estimator is BLUE (Best Linear Unbiased Estimator) (Brooks,2008). According to Brooks, 2008 there are five assumptions to test the classical linear regression model (CLRM) and the researcher also Conducted the research according to the given below Assumption of (CLRM).

3.6.1. Test for Assumption of Heteroscedasticity

According to Brooks (2008), Heteroscedasticity means that error terms do not have a constant variance. If Heteroscedasticity occur, the estimators of the ordinary least square method are inefficient and hypothesis testing is no longer reliable or valid as it will underestimate the variances and standard errors and if the Homoscedasticity assumption is violated.

3.6.2. The Assumption of Autocorrelation

According to Brooks (2008), when the error term for any observation is related to the error term of other observation, it indicates that autocorrelation problem exists in this model. In the case of autocorrelation problem, the estimated parameters can still remain unbiased and consistent, but it

is inefficient. In other word 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 auto correlated or they are serially correlated. The result of T-test, F-test or the confidence interval will become invalid due to the variances of estimators tend to be underestimated or overestimated. Due to the invalid hypothesis testing, it may lead to misleading results on the significance of parameters in the model.

3.6.3. Test for the Assumption of Normality

Normality tests are used to determine if a data set is well-modeled by a normal distribution. With the normality assumption, ordinary least square estimation can be easily derived and would be much more valid and straight forward. This study used Jarque Bera Test (JB test) to find out whether the error term is normally distributed or not

3.6.4. Test for Correlation Matrix & Multicollinearity

First, there is a correlation matrix created in which all variables are included. This matrix shows the correlations and their corresponding significance between the variables. The correlation matrix gives a first insight in the direction and the strength of the relationships between the variables. When the correlation between two or more independent variables is (too) high, the problem of multicollinearity occurs (Wooldridge, 2000). The problem of multicollinearity may lead to less accurate results in the analyses; the coefficients may have very high standard errors and perhaps even incorrect signs or implausibly large magnitudes. Multicollinearity can be detected by calculating the variance inflation factors (VIF) for each independent variable. Multicollinearity is present when VIF values are larger than 10. Furthermore, the critical value can be calculated by 1/VIF. If this value is below 0.1, this would mean that more than 90% of the variation in the variable is explained by the other variables. The variable(s) with VIF values larger than 10 or 1/VIF values below 0.1 should be excluded from the analyses (Rabe-Hesketh and Everitt, 2004)

3.7. Validity and Reliability of Data

Reliability of data concerns its consistency. Thus, reliability refers to the extent to which the data is the same irrespective of their source. That is, the data specifically, the annual reports of the commercial banks and publications of Association of Commercial Banks Apex Bank were not at variance with each other and therefore were reliable. This study, however, is threatened by the fact that the data used was mainly from secondary sources and therefore any error from that data collection process will definitely affect the outcome. The methodology used for this study was selected because of its suitability in its dependence on certified information from recognized institutions other than subjective opinions, which would have been associated with primary sources. The F test and the coefficient of determination were used to test the validity and reliability of the relationship established by the regression analysis.

Summary of Expected Sign of Variables used in Regression

	Symbol	Description	Relationship with Deposits
Dependent Variable			
Deposits	DEP	Total Bank Deposits	Positive (+)
Independent Variables			
Deposit Interest Rate	DINTR	Interest payment to depositors	Positive (+)
Inflation Rate	INFR	Overall Inflation Rate in Ethiopia	Negative (-)
Money Supply	MNSP	Broad money supply	Negative (-)
Per Capital Income	PCI	Per capital income of the society	Positive (+)
Exchange Rate	EXGR	Rate of USD to Ethiopian Birr	Positive (+)
Bank Liquidity	BLQ	Ratio of loan to total deposit	Positive (+)
Bank Branch Expansion	BBE	Number of bank branches to total deposit	Positive (+)

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1. Descriptive Statistic

This section presents the descriptive statistics of dependent and explanatory variables used in this study. The dependent variable used in this study was total bank deposit and the explanatory variables were deposit interest rate, inflation rate, money supply, per capital income, exchange rate, bank liquidity and bank branch on the private commercial bank deposits.

Table 4.1 Summary Statistics of the Data

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Bank Deposit interest rate	10	37.68	308.90	127.3114	90.91862
Bank Interest Rate	10	.04	.07	.0530	.00949
Inflation Rate	10	.03	.34	.1320	.08699
Money Supply	10	52.43	308.94	161.2442	85.63823
Per capital Income	10	1.83	20.36	9.1971	5.91518
Exchange Rate	10	.14	.29	.2082	.04702
Bank Liquidity	10	.51	.68	.5964	.05719
Bank Branch's	10	4.00	32.96	14.9290	10.41066
Valid N (listwise)	10				

Source: SPSS software Output

Table 4.1 shows the average indicators of variables computed from the financial statements, NBE annual report, Central Statistics Agency report, Ministry of Finance and Economic Cooperation. Standard deviation that shows how much dispersion exists from the average value. According to Brooks, (2008), a low standard deviation indicates that the data point tends to be very close to the mean, whereas high standard deviation indicates that the data point is spread out over a large range of values. The logarithm of commercial bank deposit was used for regression and its maximum and minimum value was 308.90 and 37.68 respectively and also a mean of 127.31. It can be noticed that the commercial bank deposit fluctuates between 308.90 and 37.68. This means, commercial banks were achieved on average birr 308.90 from deposit for the period of 2009-2019. Theoretically, a growth rate of 32.1% in deposits may be considered sufficient to increase supply of loanable funds (Sylvester, 2011). The standard deviation among banks in

terms of bank deposit was 90.92 percent for private commercial Banks; this confirms that there were high variations of deposit among commercial banks during the study period. The reason of this variation of deposit may attribute to high amount of deposit collected by Commercial Banks.

The mean value of banks deposit interest rate over the period under the study was 5.3% with the maximum and minimum values 7% and 4% respectively. There was a little variation of interest rate towards its mean value over the period under the study with the standard deviation 0.95%. This implies that the stability of deposit interest rate for subsequent years under the study period in a sense there is a control of minimum and maximum deposit interest rate by government body. Therefore, there is no completion among commercial banks to attract customers with a motive of return on deposit.

The inflation or average price of goods and service on the basis of inflation in the country over the sample period was recorded an average of 13.20%. The maximum inflation was recorded in the country 34% and the minimum was in the country was 3%. The rate of inflation dispersed which exhibits higher dispersion larger than its mean value over the periods under study towards its mean with a standard deviation of 8.70%. This clearly shows that there was a bit more variations in terms of cost of living as it measured by inflation consumer price index.

The mean growth rate of broad money supply by the government is 161.24%, the maximum and the minimum growth rate of broad money supply was 308.94% and 52.43% respectively. The growth rate of dispersion is 52.43% which is high. The standard deviation is 85.64%t; this confirms that there were higher variations of money supply growth in Ethiopia during the study period. The other external factor is Per capital income in Ethiopia during 2009-2019 of 9.2%, with a maximum of 20.36% and a minimum of 1.83% with a standard deviation of 5.92%; this implies that Medium variation Per capital income on its mean value of deposits during the period of 2009 to 2019.

The average growth of exchange rate is 20.82%. The maximum and minimum growth was 29% and 14% the growth is increasing from year to year with the standard deviation of 4.7% which is a very low dispersion. The average loan to deposit ratio of the studied commercial banks was

59.64%. The maximum loan to deposit ratio of 68% was registered in the year 2009- 2019. This indicates that, on average the commercial banks in Ethiopia have higher amount of volatile deposits which are tied up with illiquid loans. On the other hand, the minimum loan to deposit ratio of 51% was register in the year 2009-2019. The standard deviation of 5.72% percent shows there was low dispersion of loan to deposit ratio from its mean value. The total number private commercial bank branches have the log number of 14.93% with 32.96, 4% maximum and minimum respectively. And standard deviation 10.41%, from this we can see that there is dispersion larger than its log number mean value, this implies that private banks expand branching network aggressively in the study period.

4.2. Correlation Analysis

Correlation measures the degree of linear association between variables. Values of the correlation coefficient are always ranged between +1 and -1. A correlation coefficient of +1 indicates that the existence of a perfect positive association between the two variables, while a correlation coefficient of -1 indicates perfect negative association. A correlation coefficient of zero, on the other hand, indicates the absence of relationship (association) between two variables Brooks, (2008). Table 4.2 below shows the correlation matrix among dependent and independent variables.

Table 4.2 Correlation Analysis of Variables

Coefficient Correlations

Model		BBE	INFR	PCI	DINTR	EXGR	MNSP
Correlations	Bank Branch's	1.000	-.141	.069	.225	.553	-.892
	Inflation Rate		1.000	.303	-.469	-.323	.338
	Per capital Income			1.000	-.806	.287	-.128
	Bank Deposit interest rate				1.000	-.231	-.115
	Exchange Rate					1.000	-.854
	Money Supply						1.000

Source: SPSS output adjusted to show only the correlation part

From the correlation table we see that the most significant factors for deposit volume growth is the deposit interest rate, branch expansion, the money supply, the exchange rate of Birr to USD

and general inflation. Per capital income have also their influences at a lesser magnitude. All factors are found to have positive relations with the deposit volume except the inflation rate and money supply having a negative relation with deposit volume. Inflation rate and money supply have negative correlation with total deposit. It refers that when inflation rate and money supply increase total deposit will decrease. Whereas per capital income, interest rate, exchange rate and number of bank branches has positive correlation with total deposit which indicates that when per capital income, interest rate, exchange rate and number of bank branches increases, at the same time total deposit will be increase. The coefficient estimates of correlation in the above table 4.2 shows -0.141 for inflation rate and -0.892 for money supply; this implies that inflation rate and money supply is highly negatively correlated with total deposit. However, 0.069, 0.0.225, 0.553 and 1.00 for per capital income, deposit interest rate, exchange rate and number of branches respectively have highly positive correlation with the total deposit.

As recalled from the chapter one, there are six research hypotheses that postulate the relationship between the dependent variable and the independent variables. The research hypotheses predict that there is a positive correlation between CBs 'deposit growth and; per capital income, deposit interest rate, exchange rate and number of branches. At the same time the hypotheses predict that there is negative relationship between the rest of two variables i.e. inflation and money supply and CBs 'deposit growth. In line with the research hypothesis, the correlation matrix in table 4.2 produced statistical evidence that CBS 'deposit is positively correlated with per capital income, deposit interest rate, exchange rate and number of branches with correlation coefficient of 0.069, 0.0.225, 0.553 and 1.00 respectively. Also, the result of the correlation matrix indicates that inflation and money supply have negative correlation with CBs 'deposit growth with coefficients of -0.141 and -0.892 respectively. In general, even though the correlation analysis shows the direction and degree of associations between variables, it does not tell us the cause and effect relationship among the identified variables. Thus, in examining the effects of selected independent variables on CBs 'deposit growth, the econometric regression analysis which is discussed in the forthcoming section of the paper gives assurance to overcome the shortcomings of correlation analysis.

4.3. Diagnostic Tests

The diagnostic tests are very important to the model because they validate the parameter evaluation out comes achieved by the estimated model. This arises because, if there is a problem in the residuals from the estimated model; it is an indication that the model is not efficient such that parameter estimates from the model may be biased. Accordingly, the CLRM assumptions were tested.

4.3.1 Tests for The Classical Linear Regression Model (CLRM) Assumptions.

To maintain the data validity and robustness of the regressed result of the research, the basic classical linear regression model (CLRM) assumptions must be tested for identifying any misspecification and correcting them so as to augment the research quality Brooks, (2008). There are different CLRM assumptions that need to be satisfied and that are tested in this study, which are: errors equal zero mean test, heteroscedasticity, autocorrelation, normality, multicollinearity and model specification test.

1. **The errors have zero mean (E (ut) = 0**

This part shows the test for the assumptions of classical linear regression model (CLRM) namely the error has zero mean, heteroscedasticity, autocorrelation, normality and multicollinearity. Relay on Brooks (2008), the first assumption required is that the average value of the errors is zero. In fact, if a constant term is included in the regression equation, this assumption will never be violated. Hence, study's regression model has included a constant term, so that this assumption was not violated.

2. **Test for heteroskedasticity assumption (var (ut) = $\sigma 2 < \infty$)**

As indicated by Brooks (2008), this assumption requires that the variance of the errors to be constant. If the errors do not have a constant variance, it is said that the assumption of homoscedasticity has been violated. This violation is termed as heteroscedasticity. If heteroscedasticity occur, the estimators of the ordinary least square method are inefficient and hypothesis testing is no longer reliable or valid as it will underestimate the variances and standard errors. There are several tests to detect the Heteroscedasticity problem, which are Park Test, Glesjer Test, Breusch-Pagan-Goldfrey Test, White‟s Test and Autoregressive Conditional Heteroscedasticity (ARCH) test. In this study, Breusch-Pagan-Goldfrey test was employed to test for the presence of heteroscedasticity. The hypothesis for the Heteroscedasticity test was formulated as follow; In this study test was used to test for existence of heteroscedasticity across the range of explanatory variables.

The scatter plot sub command to plot standard residuals by the predicted values show that residuals are saturated initially in a linear shape showing that they are relatively homogeneous. One can also recheck same results with a histogram depicted below.

3. Test for autocorrelation assumption (cov(ui, uj) = 0 for i ≠ j

This assumption stated that the covariance between the error terms over time (or cross-sectional, for that type of data) is zero. 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 auto correlated or that they are serially correlated Brooks, (2008). Autocorrelation problem occurs when the error term in each period is influenced by each other so that the variance of error term is not in an optimal level. The term autocorrelation may be defined as "correlation between members of series of observations ordered in time [as in time series data] or space [as in cross-sectional data]. The study used Durbin-Watson test (DW test for the existence of autocorrelation. The null hypothesis for this test is the error at the current time and the error at previous time is independent of one another(there is no autocorrelation) and the alternative hypothesis is that the error at the current time is dependent on the error of the previous time(there is evidence for the presence of autocorrelation). Therefore, if the null hypothesis is rejected then it is said that there is an evidence for the presence of autocorrelation.

Null hypothesis	**Decision**	**If**
No Positive Autocorrelation	Reject	0<d<dL
No Positive Autocorrelation	No decision	dL≤d≤dU
No Negative Correlation	Reject	4-dL<d<4
No Negative Correlation	No decision	4-dU≤d≤4-Dl
No Autocorrelation, Positive or Negative	Do Not Reject	dU < d < 4-dU

Source: Gujarati, 2004

Table 4.3. Durbin-Watson Correlation Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.986[a]	.971	.968	16.29497	.711

a. Predictors: (Constant), MNSP, BBE, BLQ, EXGR, PCI, INFR, DINTR

b. Dependent Variable: DEP

Results on Durbin- Watson d test: Decision Rules

This is an assumption that the errors are linearly independent of one another (uncorrelated with one another). If the errors correlated with one another, it would be stated that they are auto correlated. Autocorrelation test will be invalid with the presence of lagged dependent variable. Therefore, this was tested without the lag variable and the DW calculated value for seven regressors and one regresses and became 0.711. To test whether there is autocorrelation or not, it should be compared with the table value. Both versions of the test; R and R-squared version of the test indicate that the null hypothesis of no autocorrelation should not be rejected, since the Durbin-Watson values are considerably in excess of 0.05. The conclusion from both versions of the test described that the null hypothesis of no autocorrelation is not rejected.

4. Test of normality ((ut~N (0, σ2))

Test of normality means determining whether the data is well modeled by normal distribution or not. This test of normal distribution may take place either graphical (histogram and dot plot) or non-graphical (Skewness /Kurtosis tests for normality) methods of tests. The decision rule behind the Skewness/Kurtosis tests for normality states that if the p-value of the error term is greater at the chosen level of significances, i.e., 1%, or 5 %, or 10 %, it indicated that the error terms are normally distributed (Gujarati, 2004). The testing mechanism for the residuals whether they were normally distributed or not is by using Smirnov-Kolmogorov's test. According to this test, if the test is significant i.e. P value is greater than 0.05 (5%), then the residual is normally distributed i.e. the model is normal. But, if the value is less than 0.05, it is not normally distributed.

Table 4.4 Normality Test Result

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
DEP	.189	10	.200*	.875	10	.113
DINTR	.424	10	.000	.699	10	.001
INFR	.187	10	.200*	.860	10	.077
MNSP	.130	10	.200*	.942	10	.579
PCI	.336	10	.002	.805	10	.017
EXGR	.121	10	.200*	.964	10	.827
BLQ	.148	10	.200*	.946	10	.616

BBE	.167	10	.200*	.901	10	.227

Source: SPSS Output

The straight line in the above plot represents a normal distribution of the residuals, and the points represent the observed residuals. Therefore, in a perfectly normally distributed data set, all points will lie on the line. The above figures tell us that the three assumptions are well met.

5. Test for multicollinearity

As referred by Brooks (2008), an implicit assumption that is made when using the OLS estimation method is that the explanatory variables are not correlated with one another. If there is no relationship between the explanatory variables, they would be said to be orthogonal to one another. However, a problem occurs when the explanatory variables are very highly correlated with each other, and this problem is known as multicollinearity. Malhotra (2007) stated that multicollinearity problems exists when the correlation coefficient among explanatory variables should be greater than 0.75. However, Brooks (2008) mentioned that if the correlation coefficient along with the independent variables is 0.8 and above, multicollinearity problems will be existed. Multicollinearity is an indication for a linear relationship between independent variables (Gujarati, 2003). To test the existence or not-existence of multicollinearity problem, Variable Inflation Factor (VIF) technique is employed. The variance inflation factor, VIF, is a measure of the reciprocal of the complement of the inter-correlation among the predictors: VIF=1/ (1- r2). where r2 is the multiple correlations between the predictor variable and other predictors. A decision rule for multicollinearity test of the model states a variable whose VIF values are greater than 10 indicate the possible existence of problem of multicollinearity. Tolerance, defined as 1/VIF is used by many researchers to check on the degree of collinearity (Gujarati, 2003).

Table 4.5 Correlation Matrix between independent variables

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	16.598	147.577		.112	.918		
	DINTR	3064.323	2693.285	.320	1.138	.338	.032	9.801
	INFR	23.353	79.958	.022	.292	.789	.438	2.282
	MNSP	.480	1.222	.452	.393	.721	.002	6.736
	PCI	.640	2.306	.042	.277	.799	.114	8.780
	EXGR	-1190.176	1334.294	-.616	-.892	.438	.005	5.744
	BBE	7.344	5.152	.841	1.426	.249	.007	5.723

Source: SPSS Output

The method used in this study to test the existence of multicollinearity was by checking the Pearson correlation between the independent variables. The correlations between the independent variables are shown in table 4.6 above. All correlation results are below 0.75, therefore bases on the above assumptions; the result indicates that multicollinearity is not a problem for this study

4.4. Results of Regression Analysis

This section discusses the regression results of fixed effect model that determines deposit mobilization in private commercial banks in Ethiopia. This regression analysis is based on the data collected from National Bank of Ethiopia and seven purposively selected CBs from the year 2009 to 2019. Accordingly, the regression result was made and coefficients of the variables were estimated via, SPSS version 20 software version to verify the coefficients of the explanatory variable is statistically significant to model or not. The coefficients of explanatory variable were estimated by the use of ordinary least square (OLS) technique. Accordingly, the researcher tries to depict in previous chapter with a mathematical equation model presents the result of fixed effect regression model that examines the impact of explanatory variables on bank deposit growth. Hence, Deposit is Outcome variable DEP is dependent variable whereas Inflation (INFR), Deposit Interest Rate (DINTR), Money Supply (MNSP), Exchange Rate (EXGR), Bank

Liquidity (BLQ), Per Capital Income (PCI) and Bank Branch (BBE) are Covariate variables that are showed Operational model, used to find the statistically significant determinants of private commercial banks deposit growth in Ethiopia, as follows:

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	BBE, INFR, PCI, BLQ, DINTR, EXGR, MNSP[b]	.	Enter

Source: SPSS Output

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.996[a]	.993	.967	16.56852	.993	38.430	7	2	.026

Source: SPSS Output

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	73846.728	7	10549.533	38.430	.026[b]
	Residual	549.032	2	274.516		
	Total	74395.760	9			

Source: SPSS Output

Model	Unstandardized Coefficients		t	95.0% Confidence Interval for B		P>t
	B	Std. Error		Lower Bound	Upper Bound	
(Constant)	-1055.838	389.7993	-.271	-2733.09	621.3335	0.114
DINTR	6062.91	2133.11	2.84	--3115.12	15240.94	.105
INFR	-234.411	103.37	-2.27	-679.1898	210.3678	.151
MNSP	-3.988597	1.64	-2.43	-11.05812	3.08093	.136
PCI	.917681	1.59	0.58	-7.777708	5.942347	.623
EXGR	4270.184	1887.46	2.26	-3850.907	12391.28	.152

BLQ	697.261	258.56	2.7	-415.2498	1809.772	.114
BBE	15.55791	4.28	3.63	-2.872114	33.98793	.068

Source: SPSS Software output.

$DEP=\alpha + \beta 2\ DINTRt + \beta 3\ INFRt + \beta 4\ MNSPt + \beta 5\ PCIt + \beta 6\ EXGRt + \beta 7\ BLQt + \beta 8\ BBEt + \varepsilon$

Based on the regression result, showed on the above the relationship between the variables included in the model can, therefore be represented as follows: DEPOt=α+6062.91*DINTR-234.41INFR-3.99MNSP*-0.917PCI*+4270.18EXGR*+697.26BLQ*+15.56BBE.

4.4.1. Interpretation of R-squared

As the researcher try to show in Table 4.3, an R-squared coefficient of 0.993 obtained from the estimated model; revealing that 99.3 percent of variation in DEP is dependent variable whereas Inflation (INFR), Deposit Interest Rate (DINTR), Money Supply (MNSP), Exchange Rate (EXGR), Bank Liquidity (BLQ), Per Capital Income (PCI) and Bank Branch Expansion (BBE). The R-square result makes sense because there are other factors such as loans to asset ratio, size of the bank and the other factors that were not included in the model but could help in explaining deposit growth in private Ethiopian commercial banks. These and other remaining factors can account for the remaining 0.7 percent.

4.4.2. Interpretation of Adjusted R-squared

An adjusted R-squared value which takes into account the loss of degrees of freedom associated with adding extra variables were inferred to see the explanatory powers of the models. In other words, the adjusted R-squared shows a very good levels, which mean that nearly 96.7 percent of the volatilities in deposit growth are explained by the volatilities of independent variables included in the equation. Therefore, an adjusted R square having value of 0.967 shows that 96.7 percent of dependent variable is explained by the independent variables included in the model. However, the remaining 3.3 % changes in banks 'deposit growth are caused by other factors that are not included in the model

4.4.3. Interpretation Results of The Regressors (Independent) Variables.

Deposit Interest Rate (DINTR) on Private Commercial Bank Deposit Growth: Interest rate on deposit as a fraction of total deposit is taken as a measure for interest rate on deposit. It was hypothesized that deposit rate has positive and significant impact on bank's deposit. The result of

the regression shows that, interest rate on deposit has positive and significant impact on private commercial banks deposit. The positive relation was consistent with the findings of Hibret and Shemsu (2015) on commercial Bank of Ethiopia.

According to the model in Table 4.3 above a one unit increase in deposit interest rate generates 6,062.91 unit increase in total deposit of private commercial banks and the probability value of 0.105 indicated that this variable is significant for the deposit growth in case of CBs deposit growth and concludes that deposit interest rate does significantly contribute to bank deposit mobilization. This result is supported by the findings of Hibret, (2015); Andinet (2016) and Ngula, (2012 have shown that interest can either be positive or irrelevant in the saving function. One of the most effective factors for deciding to deposit in banking system is the interest rate Mohammad and Mahdi, (2010). Moreover, this article shows the impact of interest rate on the performance of the banking system to achieve the goals that are expected from the banking system. Herald and Heiko (2009) also mentioned interest as one of the determining factors for commercial banks deposits.

(Philip 1968), also states that the offering of attractive interest rate on bank deposits may be considered to have had a beneficial effect. Moreover, Mustafa and Sayera, (2009) said that low deposit rates are discouraging saving mobilization. V. Bhatt (1970) said that the banking system is unlikely to be in a position to meet the demand for bank credit unless concerted policy is pursued to raise the rate of saving generally and the rate of saving in the form of deposits in particular. This implies that deposit interest rate is a major factor in explaining the private commercial bank deposit in Ethiopia meaning that interest rate more plays an important role in deposit. In fact, there is competition between private commercial banks in terms of attraction using deposit interest rate. As a result, I should reject null hypothesis.

Inflation Rate (INFR) on Total Deposit: The inflation rate is the rate at which the price level increases. Symmetrically, deflation is a sustained decline in the price level. According to Herald and Heiko, (2009), price can also determine commercial bank deposit and it can be indicated by consumer price index. According to the regression result of this study, Inflation has negative and statistically significant impact on deposit of private commercial banks. The coefficient of this relationship of -234.41 indicates that holding other things constant, a one unit increase in

inflation rate will lead to a 234.41 unit decrease in bank deposit growth at a significant level of greater than 10 percent. The probability value of 0. 151; this implies that persistent inflation has a negative significant effect on growth of bank deposit. So higher inflation induces savers to save less, perhaps households get stable price prediction from deposit.

This result is consistent with the precautionary motive, suggesting that increased macroeconomic uncertainty induces people to save a proportion of their incomes. This is particularly true for households in developing countries such as Ethiopia whose income prospects are more uncertain than their counterparts in developed countries. The negative relation was consistent with the findings of (Hibret 2015) on commercial Bank of Ethiopia on the long run and (Andebet, 2016) on Private Commercial Banks which found that non-statistically significant relationship between deposit and inflation rate. But contrasts with findings of Tizita, (2014).

Money Supply (MNSP) and Commercial Bank Deposit: According to the result in the regression result of this study, Money Supply has negatively and statistically significant impact on deposit of commercial banks. According to Nugula (2012), if money supply is high people can easily find cheap funds to finance their needs. Thus, people tend to decrease saving and increase consumption. This finding is consistent with Ketema (2017) and Ngula (2012) findings. Consequently, the research hypothesis saying money supply has negative effect on deposit growth is failed to reject.

The coefficient of this relationship of -3.99 indicates that holding other things constant, a unit increase in Money Supply will lead to a 3.99 unit decrease in bank deposit growth at a significant level. And the probability value of 0.105 indicated that this variable is significant for the deposit growth of private commercial banks deposit growth in Ethiopia. This significant impact relation of Commercial Bank Deposit and Money Supply is consistent with the funding of (Hibret, 2015) and (Girang, 2015). However, according to WAMA (West African Monetary Agency), Excess money supply, whether created though the direct or indirect channels, influences economic activity (growth) and may provide downside risks on macroeconomic stability, impacting negatively on inflation, interest rates and exchange rate.

Per Capital Income (PCI) and Commercial Banks Deposit: A regression coefficient indicates, other explanatory variables remaining constant, a unit increase in per capital income increase the level of deposit by 0.92 but statistically insignificant. And the probability value of 0.623

indicated that this variable is insignificant for the deposit growth of private commercial banks deposit growth in Ethiopian Private Banks deposit is mostly mobilized to creditworthy customers which does not necessarily use the credit to factors of production.

Exchange Rate (EXGR) and Commercial Bank Deposit: Exchange Rate was found to have a positive relationship with commercial bank deposit growth and the relationship significant according to the model in Table 4.3 above. This could be the attribution of remittance from Diasporas to families in home-country is increasing. According to NBE report, in Ethiopia remittance from Diaspora is one of the most beneficial sources to offset foreign trade deficit of the foreign currency for the country. It has positive impact on individual's income and savings (Shemisu, 2014). Ketema (2017) and Nafkot (2016) found that exchange rate has positive significant effect on bank deposit growth in Ethiopia. The regression coefficient for exchange rate is 4,270.18. This indicates that ceteris paribus, an increase in exchange rate by 1 unit leads to increase in deposits by 4,270.18 units. The probability value of 0.152 indicated that this variable is significant for the deposit growth of private commercial banks deposit growth in Ethiopia. The significant relation was consistent with the findings of (Jembere 2014), Hibret (2015) and Girang (2015). Thus, the hypothesis saying exchange rate has significant positive effect on deposit growth failed to reject but, in consistent with Nugel (2012) result.

Bank Liquidity (BlQ) and Commercial Banks Deposit: In this study, Ratio of total loan and advance to total deposit is used as proxy bank liquidity. The ratio of loan and advances to deposits reflects the quantity or proportion of the customers' deposits that has been given out in form of loans. When the ratio is high it means that large portion deposit is given out in the form of loan. The result in this study found the at Bank liquidity is negatively and statistically significant impact on commercial banks deposit. The beta coefficient value 697.26 significant shows that, keeping other things constant, a percentage change in liquidity of the banks will result in a unit increment or vice versa in the deposit mobilization of the selected private banks to the extent of 697.26. The probability value of 0.114 indicated that this variable is significant for the deposit growth of private commercial banks deposit growth in Ethiopia. Therefore, the depositors are concerned with liquidity position which determines a bank's ability to respond to disturbance the withdrawal needs which are normally on demand or a short notice as the case may be because deposit is an obligation of the banks to pay the depositor during request.

In other word, it means that the depositors are concerned with liquidity position which determines a bank's ability to respond to the withdrawal needs which are normally on demand or on a short notice as the case may be. According to Nada (2010), Banks perceived as risky should have had more difficulty attracting deposits and making loans than banks perceived as safe. When banks fail to pay their depositors then they face liquidity risk that makes other depositors not to deposit in that particular bank. The finding was found to be consistent with the findings of Jemeber (2014) and in line with Devinga, (2010), loans to deposit ratio is inversely related to liquidity and consequently the higher the loans to deposit ratio the lower the liquidity which affects deposit growth and vice versa.

Bank Branches Expansion (BBE) on Banks Total Deposit: Based on the model in the above regression analysis, the relationship between branch opening or addition and bank deposit had a positive and robust association in private CBs deposit. The study ascertains that CB's aggressive branch opening that has positive correlation with deposit mobilization with respect to widening customer base and increased financial inclusion through creating accessibilities to the unbanked rural and urban areas. The coefficient estimate of the branch expansion is 15.56 indicating that ceteris paribus a 1 unit increase in branch expansion leads to 15.56 units increase in CBs deposits. And the probability value of 0.105; this implies that the importance of branch expansion of commercial banks over the country that leads to highly affecting total deposit of private commercial banks, meaning that banks with many branches in Ethiopia have high total deposit.

Thus, in general, null hypothesis has been rejecting and conclude that bank branches have causality relationship with increasing of total deposit of private commercial banks. In other word it is one of the major factors that banks can use to achieve increasing of total deposit via a proper management of branch expansion in all direction of the country. The expansions of the branch network not only reduce transaction costs for depositors but also increase accessibility of banking services and provides other important financial services and increases the awareness of people about banking. The expansion of banking facilities is the key factor in deposit because easier physical access should reduce transaction costs for depositors. Even so, rural branches are still clustered in relatively more urban areas so banking services are not evenly distributed, and many potential areas remain unbanked. Therefore, based on the result of table 4.8 rejected null

hypotheses. Positive and significant coefficient for bank branches validates the argument of Hibret, (2015); Shemsu, (2015); Wubitu, (2012), Bahredin, (2016 and Tizita, (2014).

CHAPTER FIVE

SUMMARY, CONCLUSSION AND RECOMMENDATIONS

5.1. Summary of The Findings

The main objective of this study was to investigate the determinants of deposit mobilization of private commercial banks operating in Ethiopia. An explanatory research design was adopted to explain the casual relationships between the variables. The study employed quantitative methods on secondary data sourced from financial statements of banks, and NBE publications. The researcher used an eleven years data for each variable and this data is deeply discussed under chapter four. The researcher had used the econometric model of multiple regressions. The model contains one dependent variable, six independent variables, the constant term and the error term. The ordinary least square (OLS) method is used to come up with the econometric results. Before running the regression equation, the following validity tests were carried out, multicollinearity test using the correlation matrix and Heteroskedasticity test using Breusech Pagan Godfrey. autocorrelation test using Durbin-Watson correlation test and normality test. As these tests prove the validity of the model, the study had continued in to regression analysis. Accordingly, the output of the tests which are displayed by SPSS version 20 software are presented and interpreted.

Regression model was tested for classical regression model assumption which is identify seven explanatory variables, six of the explanatory variables proved to statistically significant determinants of banks deposit. the result found out that variables such as Deposit Interest Rate, Exchange Rate, Bank Liquidity and Number of Bank Branches have positive coefficient and are statically significant impact and major determinants of the commercial banks deposit. Money Supply and Inflation Rate has a negative and statistically significant effect on commercial banks deposit. On the other hand, Per Capital Income has statically positive and Insignificant effect to the growth of commercial bank deposit. The descriptive analysis, correlations between the

variables and through the regression's analyses; it illustrates how the independent variables influence the dependent variable. Thus, a discussion of the result indicates as follows: -

Independent variables	Expected Relationships with DEP	Actual result	Statistical Significance Test
Deposit interest rate	+	+	Significant
Inflation Rate	-	-	Significant
Money Supply	-	-	Significant
Per capital Income	+	+	Insignificant
Exchange Rate	+	+	Significant
Bank liquidity	+	+	Significant
Bank Branch's	+	+	Significant

5.2. Conclusions

The main objective of this study was to identify the macroeconomic and bank specific determinants of deposit of Ethiopian private commercial banks. To comply with the objectives of the study, two banks specific and five macroeconomic variables were used.

The bank specific variables include; Bank Liquidity and Number of bank branch's, and the macroeconomic variables were Inflation Rate, Deposit Interest Rate, Money Supply, Per Capital Income and Exchange Rate. The study was used panel data for the sample of Eleven private commercial banks in Ethiopia which had ten years of banking service over the period 2009 to 2019. The bank specific data were mainly collected from annual audited financial reports of the respective sample banks and the macroeconomic data were collected from National Bank of Ethiopia (NBE) and Central Statistical Authority (CSA). Data was presented and analyzed by using descriptive statistics, correlation analysis and balanced fixed effect regression analysis to identify the determinants of deposit of Ethiopian private commercial banks. Before performing OLS regression the model was tested for the classical linear regression model assumptions. From Seven explanatory variables, 72% of them proved to be statistically significant.

- Concerning to deposit interest rate, it implies that deposit interest rate is a major factor in explaining the private commercial banks deposit in Ethiopia. Private commercial banks meaning that interest rate more plays an important role in creasing deposit mobilization. In fact, of this the competition between private commercial banks in terms of attraction using deposits interest rate. The effect of deposit interest rate on commercial bank deposit is higher.
- The number of Banks branch, the increase in the total deposit of private commercial banks that operate in Ethiopia is significantly and positively affected by number of branches (expansion of branches). Recently banks have been more aggressive towards the expansion in more geographical areas by opening new branches which has caused an increase in the level of number of branches; resulting increase total deposit of banks.
- In connection with liquidity, the study indicated that the bank liquidity has negative and statically significant effect on commercial bank deposit. Deposit growth decreases when the bank liquidity increases or reduces liquidity risk. Liquidity arises mainly from the type of deposit where commercial banks were collected. Most of the deposit of the commercial banks are either individual or demand deposits and these deposits are withdrawn by the depositor at any time so the commercial banks should have adequate money to meet the withdrawal of the customer.
- The total deposit reacts positively towards increase Exchange Rate
- The deposit growth reacts negatively towards the increase in inflation. The relationship is similar to the expected sign. Since the county has experienced double digits inflation in the study period that results in higher costs of doing business; which leads to decrease in deposit mobilized by commercial banks.
- In regard to Per Capital Income of the society it has an insignificant positive impact on commercial bank deposits growth. Higher Per Capital Income of the society would tend to signal increased the societies income, which could make it easier to save in a financial institution such as banks.
- The other macro level determinant of commercial bank deposit is money supply which have a negative significant impact on the commercial bank deposit. When the government supplies excess money to the economy the economic growth will be affected

negatively by increasing the inflation, exchange rate etc. and also the commercial bank deposit will decrease.

5.3. Recommendation

This study was intended to identify the empirical determinants of deposit of Ethiopian private commercial banks; and hence on the basis of the findings of the study, the following recommendations are drowned.

- It is well known that deposits are the critical resource for the banks to stay profitable, by the same analogy commercial Banks major activity is mobilizing deposit. Therefore, the bank should give due emphasis to its deposit mobilizing tasks by considering mobilizing deposit is a way to survival by crating tactical marketing strategy to win the competitors.
- Commercial banks are highly sensitive organization open to public scrutiny. As such, they must continuously ensure their profitability, which is essential for their deposit growth and viability as also for infusing public confidence. Thus, banks have assumed greater responsibilities in mobilizing domestic resources for financing the priorities of the economy and commercial banks should have managed liquidity that contributes some for reduction of deposit growth and NBE shall also keep its liquidity requirement in the future to increase the deposit growth of the banks.
- A lack of liquidity can put a quick and final end to a financial institution's efforts to mobilize deposits and, in the worst case, can cause it to collapse or close. Deposit mobilization requires clients to trust that they will always be able to access their savings when they want or need them. As the study point out, commercial bank required to have enough liquid asset to meet the demand for cash outflows, so as to generate and sustain public confidence of the depositors.
- The government should decrease its supply of broad money to the economy; by selling bonds to the public the government can absorb the excess cash in the circulation. Since the excess supply of money will have a negative impact to the growth of the country and the growth of the commercial bank deposit.

- The bank should provide excellent service for its customers to mobilize more deposits through giving various incentives such as coupon prizes for the potential customers and also Private commercial banks should provide effective and efficient technology connected service like ATM, Mobile banking, internet banking…etc. to attract new customers and hold the existing one in a sustainable way to have enough deposits.
- The private commercial banks should apply research and development for market assessment to identify the potential resource of the area in time of branch expansion. It is observed that branch expansion is positively and significantly correlated with deposit mobilization. The growth of deposits will be larger if there are more bank branches. Consequently, it is advised that private commercial banks should expand their branches in order to increase their deposit. And also, the concentration regarding to the branch expansion should be both rural and urban areas.
- To improve management efficiency; commercial banks should give due attention in providing training packages consistently for their employees to update their knowledge and skills about the product and services of the banks that may attract depositors.
- Because inflation has negative effect on deposit growth, the government tries to keep inflation rate single digit and commercial banks must be focused in doing with exporters and foreign banking agents to have enough foreign currencies which attracts potential depositors.
- While loan and advances have positive and significant effect on deposit growth of CBs in Ethiopia, CBs in Ethiopia should also expand their loan providing capacity to customers in order to increase their deposit.
- The government should have free and fair policies among the state and private owned banks to have liberalized economy to achieve welfare of the societies.
- Banks should come up with new, innovative and low-cost services and also products and services targeting small business and low-income groups to farmers that would ultimately broaden its customer base by focusing on the unbanked population to expand their deposit growth.

5.4. Suggestions for Future Research

The prime focus of this research was identifying factors that determining commercial Banks deposit in the case of private commercial banks in Ethiopia using selected variables. However,

there are other bank specific and macroeconomic specific variables that were not included in this study. Thus, future researchers are recommended to undertake similar study by considering additional bank specific variables and macroeconomic variables. And also, this research is done using secondary data only thus, future researches are recommended to do similar study by including qualitative and quantitative variables that were not included in this study and different research design such as case study and descriptive research design.

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APPENDIXES

Appendix –I List of Private Commercial Banks in Ethiopia

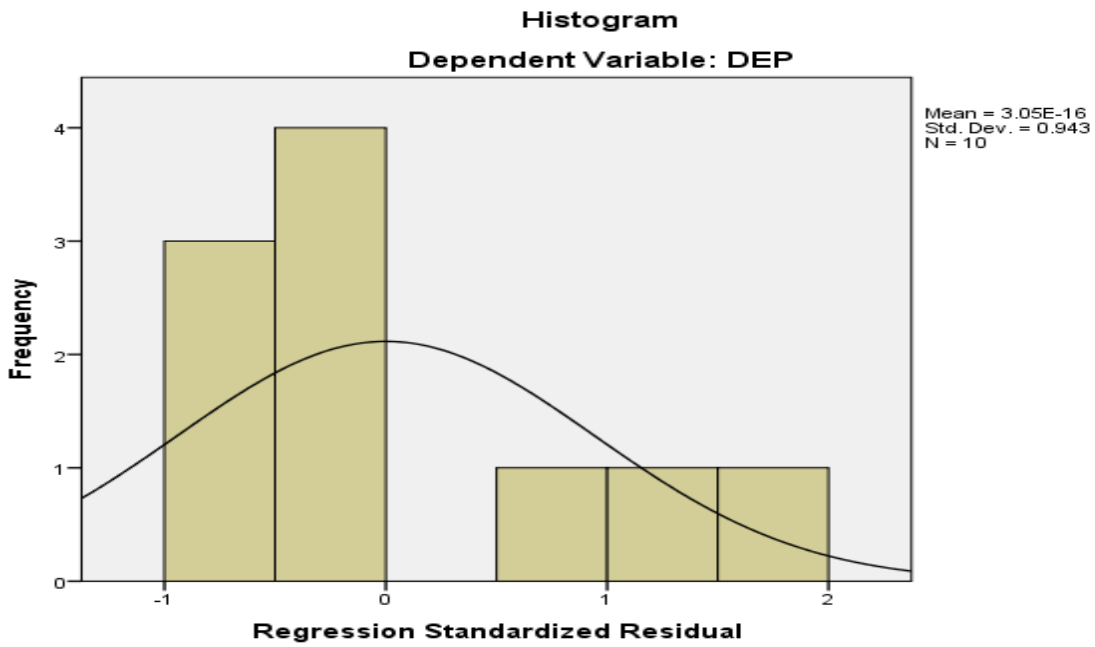
No	Name of Banks	Establishment Year
1	Awash Bank	1994
2	Dashen Bank	1996
3	Bank of Abyssinia	1996
4	Wegagen Bank	1997
5	United Bank	1998
6	NIB International Bank	1999
7	Cooperative Bank of Oromia	2007
8	Lion International Bank	2006
9	Oromia International Bank	2008
10	Bunna International Bank	2009
11	Zemen Bank	2009
12	Abay Bank	2010
13	Berhan International Bank	2010
14	Addis International bank	2011
15	Debub Global Bank	2012
16	Enat Bank	2013

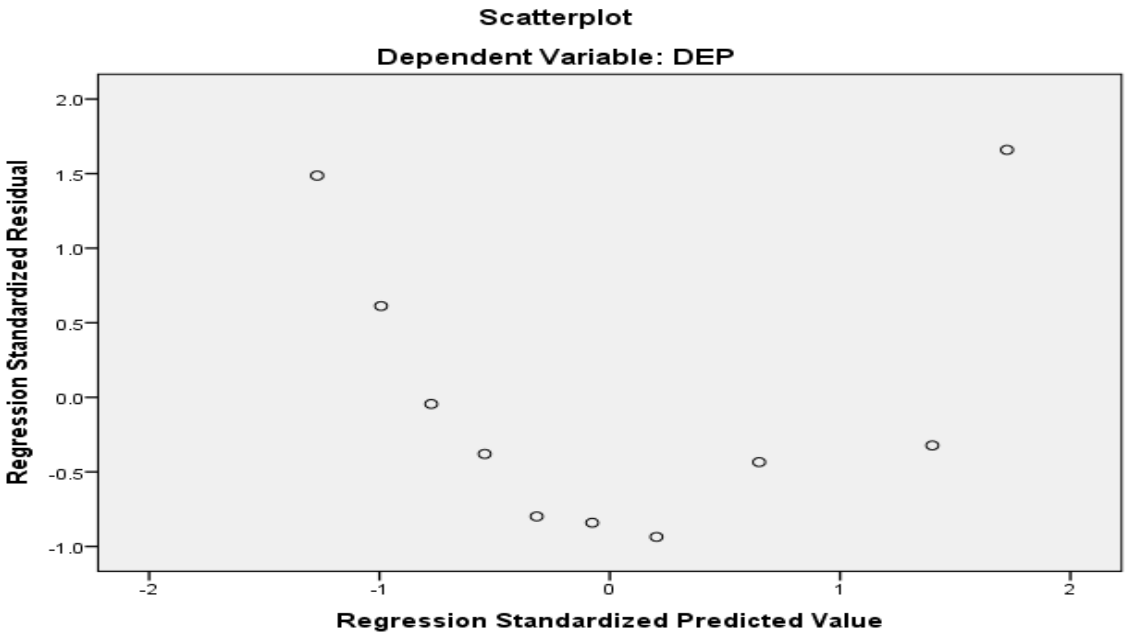
Appendix-II Trend of Commercial Bank Deposit (in millions)

Year	BOA	AWASH	DASHEN	OIB	NIB	WEGAGEN	COO	UNITED	BUNNA	ZEMEN	LION
2009/10	5,784	6,455.50	10,100.00	821.00	3,296.39	3,903.66	1,370.00	4,724.86	239.00	278.00	704.00
2010/11											

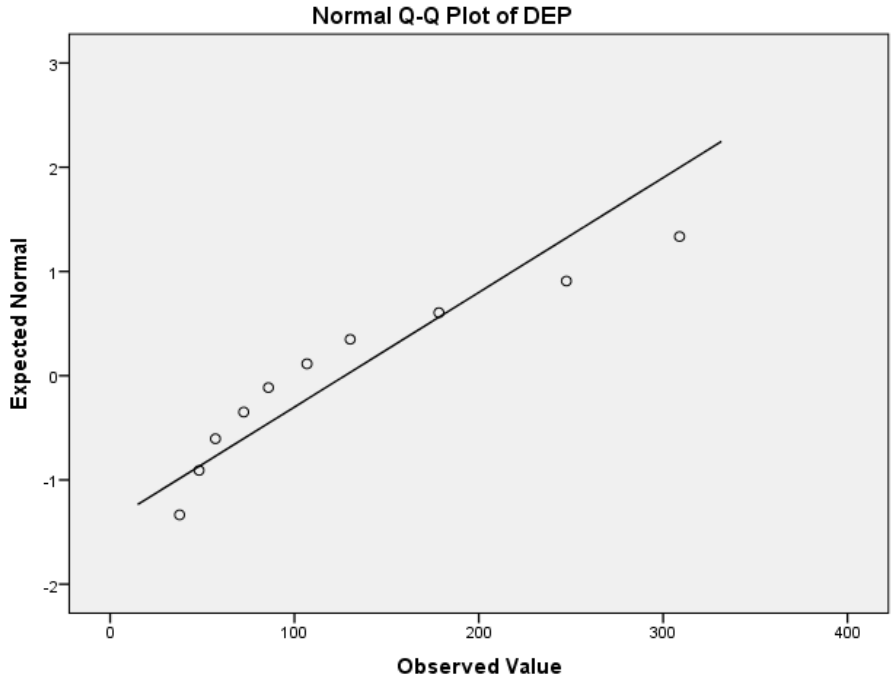
	6,100	8,044.54	11,800.00	1,526.30	4,127.19	5,957.48	1,980.00	6,065.83	491.00	1,161.31	1,018.00
2011/12	6,800	9,564.54	14,100.00	2,117.30	5,838.00	5,764.45	2,800.00	6,757.62	903.00	1,162.00	1,297.00
2012/13	8,500	13,104.80	15,900.00	3,050.40	6,665.00	7,600.00	4,470.00	8,100.00	1,548.00	1,792.00	1,737.00
2013/14	9,100	16,117.80	17,700.00	5,004.00	7,923.00	8,400.00	5,450.00	9,400.00	2,152.00	2,500.00	2,105.00
2014/15	11,120	19,506.00	19,800.00	8,006.00	9,774.00	10,200.00	7,370.00	11,800.00	3,501.00	3,000.00	2,686.00
2015/16	13,640	24,236.00	22,800.00	9,369.00	12,423.00	11,900.00	8,520.00	13,700.00	5,385.00	3,800.00	4,457.00
2016/17	20,700	32,783.90	27,800.00	13,462.00	16,416.00	15,700.00	14,300.00	17,800.00	7,532.00	5,500.00	6,334.00
2017/18	25,790	45,906.00	35,987.00	19,927.00	21,619.00	20,500.00	25,810.00	23,100.00	9,947.00	7,300.00	11,640.00
2018/19	32,100	62,464.00	44,722.00	26,589.00	27,664.00	23,500.00	36,170.00	29,080.00	10.59	10,200.00	16,397.00

Appendix- III Heteroskedasticity





Appendix-IV Normality Test



Appendix- V Regression Result

Model	Unstandardized Coefficients		t	95.0% Confidence Interval for B		P>t
	B	Std. Error		Lower Bound	Upper Bound	
(Constant)	-1055.838	389.7993	-.271	-2733.09	621.3335	0.114
DINTR	6062.91	2133.11	2.84	--3115.12	15240.94	.105
INFR	-234.411	103.37	-2.27	-679.1898	210.3678	.151
MNSP	-3.988597	1.64	-2.43	-11.05812	3.08093	.136
PCI	.917681	1.59	-0.58	-7.777708	5.942347	.0.623
EXGR	4270.184	1887.46	2.26	-3850.907	12391.28	.152
BLQ	697.261	258.56	2.7	-415.2498	1809.772	.114
BBE	15.55791	4.28	3.63	-2.872114	33.98793	.068

Source: SPSS Software output.