



**Addis Ababa University  
College of Business and Economics  
Department of Accounting and Finance  
(Graduate Program)**

**Factors Affecting Banks' Deposit Growth – A case  
Commercial Bank of Ethiopia (CBE)**

*A Thesis Submitted to the Department of Accounting and Finance  
Presented in Partial Fulfillment of the Requirements for the  
Degree of Master of Science in Accounting and Finance*

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**Addis Ababa University**  
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**Declaration**

*I hereby announce that this thesis prepared by Simeon Abebe, entitled: Factors Affecting Banks' Deposit Growth: A case of Commercial Bank of Ethiopia and submitted in partial fulfilment of the requirements for the degree of Master of Science in Accounting and Finance fulfils with the rule and regulations of the University and encounters the acknowledged standards and criteria with respect to value and originality.*

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## **Abstract**

### **Factors Affecting Banks' Deposit Growth: A case of study of commercial bank of Ethiopia**

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**Addis Ababa University, June 2017**

*This study aimed to identify factors affecting bank deposit growth by taking Commercial Bank of Ethiopia as evidence. Thus, the researcher adopts mixed research approach. Questionnaire is used to gather information from the employees of the bank particularly for those employees who actively participated in deposit mobilization tasks. Regarding to the secondary data; time series data covering 1982 - 2016 was analysed. First, the time series data were assessed using descriptive statistics for the variables. Second, estimated model was a single regression equation with deposit as the dependent variable and explanatory variables as economic growth (gross domestic product), inflation, deposit interest rate, exchange rate, number of branch, population growth, effects of financial innovation and dummy variable. 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 growth and highly significant than others. GDP or economic growth of the country is also next to branch opening is significantly affects CBE's deposit. And finally, the study had recommended what should be done to encouraging deposits growth by Commercial bank of Ethiopia for the benefit of the domestic deposit mobilization, like the need for strong public awareness and sustainability of the prize linked scheme.*

**Key words:** *Commercial Banks, Bank Deposits, Determinants of bank deposits*

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# Table of Contents

## Contents

### Chapter 1 - Introduction

1.1	<i>Back ground of the study</i> .....	1
1.2	<i>Back ground of the Organization</i> .....	3
1.3	<i>Statement of the Problem</i> .....	5
1.4	<i>Objectives of the Study</i> .....	6
1.4.1	<i>General objectives</i> .....	6
1.4.2	<i>Specific objectives</i> .....	6
1.5	<i>Research questions</i> .....	7
	<i>Research hypothesis</i> .....	7
1.6	<i>Significance of the study</i> .....	9
1.7	<i>Scope of the research</i> .....	10
1.8	<i>Limitation of the Study</i> .....	10
1.9	<i>Organization of the Paper</i> .....	11

### Chapter 2 - Related Literature Review (Theories and Empirical Survey)

2.1	<i>Theoretical Review</i> .....	12
2.1.1	<i>The function of Banks in Financial Systems</i> .....	12
2.1.2	<i>Definition of bank deposits and depositors</i> .....	15
2.1.3	<i>Purpose of deposit</i> .....	15
2.1.4	<i>Commercial bank deposits</i> .....	15
2.1.4.1	<i>Importance of Deposit for Banks</i> .....	16
2.1.5	<i>The factors affecting commercial banks deposits</i> .....	2318
2.2	<i>Conceptual Framework of the Research – Empirical Review</i> .....	29

### **Chapter 3 - Methodology**

<i>3.1 Research Design Instruments</i> .....	34
<i>3.2 Procedure for Data Collection, Sampling and Target Population</i> .....	34
<i>3.3 Methods of Data Analysis</i> .....	35
<i>3.4 Model Specification</i> .....	36
<i>3.5 Model Variables and Hypotheses</i> .....	37
<i>3.5.1 Model Variables</i> .....	37
<i>3.5.2 Hypotheses</i> .....	37
<i>3.5.2.1 Dependent Variable</i> .....	38
<i>3.5.2.2 Independent Variables</i> .....	40
<i>3.6 Data Reliability and Validity</i> .....	47

### **Chapter 4 - Data Presentation, Analysis and Discussion of Findings**

<i>4.1 Introduction and Descriptive Data Analysis</i> .....	48
<i>4.2 Variables Statistical Analysis</i> .....	48
<i>4.3 Summary of Regression Analysis and Results Interpretations</i> .....	51
<i>4.4 Results Interpretation</i> .....	52
<i>4.5 Hypothesis Test</i> .....	54
<i>4.6 Analysis of Qualitative Data</i> .....	54

### **Chapter 5 - Summary of Research Findings, Conclusions and Recommendations**

<i>5.1 Summary of Study Findings</i> .....	62
<i>5.2 Conclusions</i> .....	65
<i>5.3 Recommendation</i> .....	66
<i>5.4 Implication for Policy Makers</i> .....	66
<i>5.5 Suggestion for Future Research</i> .....	67

# Chapter 1

## Introduction

### 1.1 Back ground of the Study

There has been a major interest in eradicating poverty in Ethiopia. The leaders of the developed countries in the various G8 summits pledged their support about debt cancellation and aid increments as their quota towards realizing this objective. Much still depends on the ability to mobilize domestic resources to achieve self-sufficiency and to maintain sustainable growth. Here, the financial segment is one of the major sectors of Ethiopian economy that needs to be strengthened constantly in mobilizing resources (Domestic Deposits) to increase investment funds and to address need for deficit zones.

Herald Finger and Heiko Hesse (2009) had written a working paper which empirically examines the demand for commercial banks deposits in Lebanon, a regional financial center. They classified the variables into two, i.e. macro and micro level variables. Regarding bank specific variables they found that the banks' perceived riskiness (z-score), their liquidity buffers, loan exposures and interest margins all bear a significant influence on deposit growth at the bank level, controlling for domestic & external macroeconomic factors.

Other article written in 2006 by Professor Sudin Haron and Dr. Wan Nursofiza which investigates the structural determinants of deposits level of commercial banks in Malaysia, using co-integration techniques. The objective of the study was to examine the effect of selected economic and financial variables on deposits placed at the commercial banks in Malaysia. They concluded that in most cases, the behavioral patterns of Malaysian depositors are in conformity with the existing saving theories. However, there are also deviations from these theories. For example, both inflation and returns on deposit are supposed to have a positive relationship but the study found otherwise. Also the study does not differentiate the behavioral pattern of different classes of depositors.

Joel Katalai (2008) had written a research paper which empirically tests the determinants of Kenyan Commercial Banks Deposit growth. Its main objective was to analyze the factors that influence Commercial banks deposit growth in Kenya. Analyzed results showed that lagged Commercial bank deposits & all the other variables including Structural Adjustment Programs (SAPs) significantly affect Commercial bank deposit

growth in Kenya. Here as a researcher I have identified that inspecting the factors affecting commercial banks' deposit growth as a research gap.

Banks play an intermediary role of mobilizing funds from savers and subsequently lend them to investors - individual/corporations as mostly the case in Germany & Japan. Commercial banks are the main controller of the financial system performing financial intermediation. They control greater portion of the investment funds from domestic deposits and are the main creditors of the corporate bodies, **SMEs** and individual investors. That's why the traditional banking business of supplying funds to the economy is still of importance. For example, most business organizations especially in Ethiopia are highly dependent on bank loans as a source of capital and the ability of banks in giving loan depend much on their ability to mobilize deposits. Also the bank is expected to manage its deposit. *Managing deposits is not possible without knowing and controlling the factors affecting it.* In literature there are several factors that are claimed to be bases of deposits & its growth. There are two factors affecting commercial banks deposit, exogenous & endogenous factors.

Exogenous factors further sub divided into two, i.e. country specific factors and bank specific factors. Country specific factors includes saving interest rate, inflation, real interest rate, population growth of the country, per capita income of the society, economic

include liquidity of the bank, profitability of the bank, security of the bank; number of commercial bank's branches, bank size, reserves and transaction cost.

The endogenous factors include awareness of the society, convenience of bank's office and services in the bank. These are the variables that are claimed in the literature to affect the volume total deposit of commercial banks. In this study these variables are studied theoretically and empirically and the relationship between these variables and total deposit of commercial banks is identified.

Commercial banks, being the main players and the most active sector, have traditionally acted as a backbone of the Ethiopian economy. They had played an essential and peculiar role in the progress of the economy through supporting the private sector, backing the structural current account deficit, and financing the high government mega projects by attracting customers' deposits. *Now a day for Ethiopian Commercial Banks, deposit is a matter of existence or death. Means, without having an adequate amount of deposit banks will definitely disappear and vanish from the business.*

Having this in mind, that is why bankers in Ethiopia chatting and worrying about deposit. As the result of this, the researcher wants to study that which factors are affecting bank deposit growth. Therefore, it is important to prudently understand the issues and make available for which it concern. As a result the Bankers may face a problem of identifying and managing those factors determines bank deposit growth and their effect on it. If banks did not know about those factors that can affect their deposit growth, they never be successful in controlling and managing it.

## **1.2 Background of the Organization**

The agreement that was reached in 1905 between Emperor **Minilik II** and **Mr Ma Gillivray**, r

introduction of modern banking in Ethiopia. Following the agreement, the first bank called Bank of Abyssinia was inaugurated in February 16, 1906 by the Emperor. The Bank was totally managed by the Egyptian National Bank operates until its liquidation in 1931. Thus by 1931 Bank of Abyssinia was legally replaced by Bank of Ethiopia shortly after Emperor Haile Selassie came to power. The new Bank, Bank of Ethiopia, was a purely Ethiopian institution and was the first indigenous bank in Africa and established by an official decree on August 29, 1931 with capital of £750,000. Bank of Ethiopia took over the commercial activities of the Bank of Abyssinia and was authorized to issue notes and coins. During the invasion, the Italians established branches of their main Banks namely Bancad' Italia,

*Nazionale del lavoro* and started operation in the main towns of Ethiopia. However, they all ceased operation soon after liberation except Banco di Roma and Banco di Napoli which remained in Asmara. In 1941 another foreign bank, Barclays Bank, came to Ethiopia with the British troops and organized banking services in Addis Ababa, until its withdrawal in 1943. In April 1943, the State Bank of Ethiopia commenced full operation and acted as the central Bank of Ethiopia and had a

functioned as the principal commercial bank in the country and engaged in all commercial banking activities (<http://www.combanketh.et/>).

The Ethiopian **Monetary** and Banking law that came into force in 1963 separated the function of commercial and central banking creating **National Bank of Ethiopia** and give birth to commercial Bank of Ethiopia. Furthermore it allowed foreign banks to operate in Ethiopia limiting their maximum ownership to be 49% while the remaining balance should be owned by Ethiopians. The **National Bank of Ethiopia** with more power and duties

started its operation in January 1964. Following the incorporation as a share company on December 16, 1963 as per proclamation N of Ethiopia took over the commercial banking activities of the former State Bank of Ethiopia. It started operation on January 1, 1964 with a capital of Eth. Birr 20 million (<http://www.combanketh.et/>).

The first privately owned bank, Addis Ababa Bank Share Company, was established on Ethiopians initiative and started operation in 1964 with a capital of 2 million. There were two other banks in operation namely Banco di Roma S. C and Bank o di Napoli S.C. that later reapplied for license according to the new proclamation each having a paid-up capital of Eth. Birr 2 million. Following the declaration of socialism in 1974 the government extended its control over the whole economy and nationalized all large corporations.

r to create stronger institutions by merging those that perform similar functions. Accordingly, the three private owned banks, Addis Ababa Bank, Banco di Roma and Banco di Napoli Merged in 1976 to form the second largest Bank in Ethiopia called Addis Bank. Consequently Addis Bank and Commercial Bank of commercial bank in the country till the establishment of private commercial banks in 1994.

Subsequent to the demise of the economy system. In line with this, Monetary and Banking proclamation of 1994 laid down the legal basis for investment in the banking sector. Consequently, the first private bank, Awash International Bank was established in 1994, on June 30, 2016. Currently, there are 16 private and 2 government-owned banks operating in Ethiopia and the central regulatory

The Ethiopia ***Growth and Transformation Plan (GTP) 2*** document made by Ministry of finance and economic development, June 2015, in connection with ***“expectations from financial institutions”*** discussed the following issues.

-The achievement of extensive manufacturing industry and export promotion targets depends on all rounded support from the financial institution. The financial industry is

*GTP II.*

-The goal of *GTP II* is to finance at least two-third of gross domestic investment from domestic saving. To this end, target is set to increase the share of gross domestic saving in *GDP* from 21.8 percent in 2014/15 to 29.6 percent by 2019/20. Gross domestic saving

would, on average, be expected to increase to 29.6% (The share of *Private Saving* to 18.9% of *GDP* from its position of 13% in 2014/15)

-To finance the **GTP II**, banks' deposit is expected to grow at an annual average rate of 30.9 percent. Banks are expected to be strengthened with capital and modern payment system; 80% of adult population would have deposit account by 2020; Total Banks in Ethiopia are expected branch networks from 2,693 in 2014/15 to 4,671 (net of 1,978 branch) in 2019/20.

-Development Bank of Ethiopia would start issuance of Long term saving Bond. **MFI**s are also expected to increase their accessibility at minimum to 50% of the rural towns

### **1.3 Statement of the Problem**

Bank deposits consist of money placed into banking institutions for safekeeping. These deposits are made to deposit accounts such as savings accounts, checking or current accounts and time deposit. The account holder has the right to withdraw deposited funds, as set forth in the terms and conditions governing the account agreement. The deposit itself is a liability owed by the bank to the depositor, and the word refers to this liability rather than to the actual funds that have been deposited. When someone opens a bank account and makes a cash deposit, the person surrenders legal title to the cash, and it becomes an asset of the bank. In turn, the account is a liability to the bank.

As National bank yearly magazine 2015 that only 10% of printed money is found in banks' vault from deposits that should be collected by banks in Ethiopia. It indicates that still 90% of it expected to enjoy with banking transaction which is believed kept under the hands of the productive population, from countries tradition money may be kept in traditional way, which is saving personally. This shows that the deposit mobilization practice among commercial banks in the country is not developed and there should be mechanisms to mobilize such resource rather than sitting and waiting for customers. Learning such tools forces this study to be proposed or undertaken.

Deposit is the most fluid money that is found in the treasury of commercial banks and which is ready to be borrowed by a body in need of the fund. A deposit of the commercial bank may be affected by different factors. Since a deposit is most valuable asset of the bank it immaterial to find out the factors affecting it and determining the relationship between them. The researcher believes to fill gaps by identifying the factors that can affect the deposit growth of the commercial banks and determined the extent they are affecting it.

## **1.4 Objectives of the Study**

Given the problems as stated above, the research work was undertaken to distinguish and assess those defining factors affecting bank deposit growth and provide appropriate recommendations on the essential and functional way to the difficulties which is supposed to require solution.

### **1.4.1 General Objectives**

Investigate the factors affecting commercial banks' deposit growth and to evaluate the relationship which influence the selected microeconomic and financial level variables on banks deposit growth.

### **1.4.2 Specific Objectives**

- It exactly examines the effect of deposit interest rate, inflation & exchange rate, growth of money supply and stock prices on the level of bank deposit.
- To find out the aspects to determine deposit growth of commercial banks.
- To evaluate the connection among the commercial bank's deposit growth against the major factors of the independent variables.
- To inspect the effect of qualitative factors like expansion of bank branches (availability and accessibility), services excellence, awareness level of the public and cash related risk and technological factors in the bank on deposit growth of commercial banks.
- Evaluate the quality of staff at the bank in terms their training and academic background.
- Explore the staff attitude towards bank deposit mobilization and deposit growth

## **1.5 Research Questions**

With respect to the objectives set out above, the research work seeks to address the following research questions:-

- What are the variables that can affect the deposit growth rate and the amount of commercial bank deposit?
- How those factors affect commercial bank's deposit growth?
- What are the qualitative aspects which result on keeping the bank's deposit growth?
- What should be done to increase bank deposit growth of the commercial banks?
- What will be the response of staffs to maintain sustainable bank deposit growth?

## **Research Hypothesis**

The study was done based on the following research hypotheses which were derived from the specific objectives and tested throughout the analysis of the study:-

### **1. Economic Growth or Gross Domestic Product (GDP)**

Theoretical and empirical evidence suggests that, economic growth is the main source of banks deposit growth. If there is a real growth in the economy, deposit will grow as well. This hypothesis was proved by the chakra arty committee in 1985. The committee reported that the growth of Indian deposit in 1985 at an accelerated pace was attributed to the higher real growth achieved by the economy (chakra arty committee, 1985).

H0: There is no significant relationship between economic growth and commercial bank deposit growth.

HA: There is a positive significant relationship between economic growth and Commercial bank deposit growth.

### **2. Inflation**

The second theory was, inflation can influence saving through its impact on real wealth. As inflation accelerates, deposits become less attractive, depending on the interest rate.

uncertain (D. Carroll, 2006).

H0: There is significant positive relationship between inflation and commercial bank deposit

HA: There is a significant negative relationship between inflation and Commercial bank deposit.

### **3. Bank Interest Rate Payable for Depository Customers**

In essence, the deposit rate is the interest rate that a bank pays the depositor for the use of their money for the time period that the money is on deposit. As deposit interest rate

increases people can be initiated to put their money in the bank. This leads to increase in deposit growth.

H0: There is significant positive relationship between interest rate and commercial bank deposit

HA: There is insignificant relationship between interest rate and Commercial bank deposit.

#### **4. Exchange Rate**

According to Nugel (2012) as currencies depreciated in one country deposit will be reduced since investors tend to withdraw deposit and exchanged to keep it by rising hard currency or invest in other form of investment rather than bank deposit.

H0: There is negative relationship between exchange rate and commercial bank deposit

HA: There is positive relationship between exchange rate and Commercial bank deposit

#### **5. Branch Inauguration (Opening New Branch and Outlets)**

According to M.A. Baqui, there is a link between commercial banks deposits and commercial bank's branch expansion. Deposit growth is influenced by branch expansion and expansion of bank branches is also influenced by the level of deposits in any area (M.A. Baqui et al, 1987).

H0: There is no significant relationship between branch expansion and commercial bank deposit

HA: There is a positive significant relationship between branch expansion and Commercial bank deposit.

#### **6. Population Growth**

If population is high in a given nation, it can contribute to high labor force participation that can rise saving rate or banks deposit growth. While when source of growth is productivity the younger associates have larger lifetime resources than older ones, and, therefore, younger group saving is larger than the dis- (1986).

H0: There is no significant relationship between population growth and deposit.

HA: There is a positive significant relationship between population growth and bank deposit.

## **7. Effect of Financial Innovations (Electronic Banking/E-Banking)**

E-banking has been very instrumental in improving the quality of service and financial performance of banks (Beck et al, 2007).

H0: There is no significant relationship between e-banking and deposit growth.

HA: There is a positive significant relationship between e-banking and bank deposit growth.

### **1.6 Significance of the Study**

The research work is expected to provide importance to bank managers, policy makers and academicians. Besides, the worth of the study is mainly for banks and bankers. In addition, it will serve as a source of reference for similar research in future. Consequently the study has the following importance:

- This investigation will help business banks to rise their deposit just to know what affects it and which variable is the most essential so that to set due emphasis.
- Because of it's unusual to study related to the issue, the study helps on the field of finance and banking also it will be very vital reference material on the field.
- It may become a motive for scholars to conduct scientific researches in the area.
- It may work as orientation for the coming new researchers on related topics in doing their research and it will aid as stepping stone for further research in similar zones.
- Also, the study will offer worthy impression to the researcher about this specific topic and general knowledge about any research.
- Finally, it is also intend to facilitate the effort of policy makers to come out with policies that will embody effective deposit mobilization strategies.

### **1.7 Scope of the Research**

In order to make the scope of the study handy, this research focused on some major factors that determine bank deposit growth, from 1982 – 2016 G.C. The reason behind the selected

independent variables and the period covered by the investigation is reading experience of the researcher from other related literatures and to be more realistic on the research output as much as possible respectively. The research will be confined to Commercial Bank of Ethiopia by taking some of city and outline branches as a sample based on their differences in the amount of deposit of each branches.

### **1.8 Limitation of the Study**

In carrying out the research work, the researcher encountered the following problems, the first problem was lack of funds for travelling, printing, interviewing, and for other source of data. Again, some Management staff were reluctant to release information that would have facilitated the researcher effort.

The research has been accompanied exhausting 34 years deposit data (from the 1982 to 2016 G.C) and the records are found straight from annual reports of *CBE* and *NBE*. The sample is reduced for the reason that of absence of enough data in the banks records.

Even though the study has been done well, there were real problems. The researcher believes the study had better to cover all the commercial banks in Ethiopia to gather data, though, lack of related documents and material, the researcher to limit the study on Commercial Bank of Ethiopia (CBE). It is selected because the larger proportion (65%) of bank deposit in Ethiopia is on the hands of CBE, annual report, NBE 2016.

### **1.9 Organization of the Paper**

The research work consist of five chapters, these are chapter one, containing the background of the study, background of the organization, statement of the problem, research objectives, research questions, significance of the study, scope of the study, limitation of the study and the organization of the study. Chapter two examines relevant related literature. The research methodology and data is the focus of chapter three. Chapter four consists of data presentation and analysis and the final chapter which is chapter five, discusses the summary of the findings, conclusions, and recommendation.

## **Chapter 2**

### **Related Literature Review**

Literature review is prepared in two parts, i.e. the theoretical review and the empirical review part. In the theoretical review part the theories that states about the commercial banks deposits and the variables that is claimed to affect it are discussed. The empirical literature part discusses past studies that were conducted on the area of factors determining commercial banks deposits. In this part the variables that were included, the methodology that is used to undertake the study and the results of the study under review are discussed.

#### **2.1 Theoretical Review**

There are articles, journals and different information on the issue of the commercial banks deposits and the factors which controls the commercial banks deposits. Some authors had classified the factors and explain their relationship with commercial banks deposits.

Commercial banks are dependent on depositor's money as a source of funds. 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 furnish for these motives, commercial banks offer three categories of deposit facilities that are demand, savings and time deposits. Demand deposit facility is most commonly referred to as current account and is designed for those who need money for transaction purposes. This motive can be looked at from the point of view of consumers who want income to meet their household expenditure and from the viewpoint of businessmen who require money and want to hold it in order to carry out their business activities. Hence, the purpose of deposit facility is for convenience or for making daily commitments.

##### **2.1.1. The function of Banks in Financial Systems**

Understanding the many roles that banks play in the financial system is one of the fundamental issues in theoretical economics and finance. The efficiency of the process through which savings are channeled into productive activities is crucial for growth and general welfare. Banks are one part of this process. Lenders of funds are primarily households and firms. These lenders can supply funds to the ultimate borrowers, who are mainly firms, governments and households, in two ways. The first is through financial markets, which consist of money, bond and equity markets. The second is through banks &

other financial intermediaries such as money market and mutual funds, insurance companies & pension funds (Sheku, 2005).

Financial sector is broad which consists of the banking sector and other financial institution (such as insurance corporations and pension funds, brokers, public exchange and securities markets etc.), however in the context of African continent the banking relies on banking sector as a source of financing (Medhat, 2004). Banks have historically

critical role in facilitating payments. Commercial banks, as well as other intermediaries, provide services in screening and monitoring borrowers; and by developing expertise as well as diversifying across many borrowers, banks reduce the costs of supplying credit (Katherine, 2004). Thus in their role as lenders, banks are often not merely buying someone's debt, rather they are providing significant financial services associated with extending credit to their customers and to the extent that investors want to hold banks liabilities, banks can fund borrowers directly. The main providers of additional financing are domestic commercial banks (Herald et al, 2009).

Banks perform various roles in the economy (Franklin and Elena, 2008):-

- ✓ They improve the information problem between investors and borrowers by monitoring the latter and ensuring a proper use of the depositors' fund.
- ✓ They provide inter temporal smoothing of risk that cannot be diversified at a given point in time as well as insurance to depositors against unexpected consumption shocks. Because of the maturity mismatch between their assets and liabilities, however banks are subject to the possibility of runs and systematic risk.
- ✓ Banks contribute to the growth of the economy.

Commercial banks are institutions that engage in two distinct types of activities, one on each side of the balance sheet deposit-taking and lending (Anil et al, 2002). So that banks are playing mainly intermediation function, this is supported by (Russell and Bamindele, 2009). Mahindra (2005) also states banks as the backbones of the trade and commerce playing the intermediary role of capital formation and supply. Even if other financial institutions are available banks play a major role in facilitating the way the financial sector operates (Eduardo et al). Therefore banks are important of all other financial institutions. Banks influence macroeconomic environment, as to Adam (2005), bank failures involve significant macroeconomic costs. Adam (2005) has developed evidence that bank failures

have significant and apparently permanent effects on real economic activity. Therefore banks are also important influencers in macroeconomic environment.

Banks mobilize, allocate and invest much of society's savings (Berger et al, 2004). Households and businesses are mainly using banks to save their money to get loan for their project undertakings. Kelvin (2001) said that commercial banks are important financial intermediaries serving the general public in any society. In most cases commercial banks hold more assets than any other financial institutions. Apart from their many functions, commercial banks facilitate growth and development. Banks lend in many areas or sectors of the economy.

country both in a good way or bad way. Commercial banks represent a vital link in the transmission of government economic policies (particularly monetary policy) to the rest of the economy. For example, when banks credit is scarce and expensive, spending in the economy tends to slow and unemployment usually increases as Kelvin (2001) explains. So the event in the commercial banks will affect the country's economy in general.

Bank deposits represent the most significant components of the money supply used by the public, and changes in money growth are highly correlated with changes in the prices of goods and services in the economy (Kelvin, 2001). Commercial banks are critical to the development process. By granting loans in areas such as agriculture, manufacturing, services, construction and energy sectors, banks contribute to the development of the country.

affects the function of commercial banks. Bank loan portfolio including volume, tenor and structure may be generally influenced by their expectations of the performance of economy both in terms of stability and level of performance. As cited by Talavera et al. (2006), Russel et al (2009) banks make out more loans during periods of boom and reduced level of macroeconomic uncertainty and curtail lending when the economy is in recession.

### **2.1.2 Definition of Bank deposits and Depositors**

Bank deposits represent the most significant components of the money supply used by the public, and changes in money growth are highly correlated with changes in the prices of goods and services in the economy (Kelvin, 2001). Bank deposits are made to deposit accounts at a banking institution, such as savings accounts, checking accounts, time deposit 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.

### **2.1.3 Purpose of deposit**

From depositors' point of view, the key purposes to use deposit in bank are safety of their money, easy access and a possible real return. In general depositors keep their money in banks for a motive to undertake some activities in the future. According to V. V. Batt (1970), there are motives to save money, the followings are the example of some motives:-

- ✓ To own house
- ✓ To provide for children's education and marriage
- ✓ To provide for old age
- ✓ To bequeath property to children
- ✓ To provide for emergency expenditure

### **2.1.4 Commercial Bank 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. Therefore, banks will be better if they are mobilizing more deposits. However, as *N. Desinga* (1975) indicates deposit mobilization is a very difficult task. The cost of intermediation for mobilizing deposits is also very important part of overall intermediation cost of the banking system as *E. A. Shaw* (1995) indicates.

Deposits provide limits to the working capital of the bank concerned. The higher the deposits, the higher will be the funds at the disposal of a bank to lend and earn profits (*N. Desinga*, 1975). Therefore to maximize its profit the bank should increase its deposit. **Mahendra** (2005) had also mentioned deposits as a foundations up on which banks thrive and grow and unique items on a bank's balance sheet that distinguish them from other type of business organizations. Commercial banking is a service industry with a high degree of built in profit potential (**Meenakshi**, 1975). The number one expense item for a bank is interest paid. Commercial banks mainly depend on the funds deposited with them by the public to lend it out to others in order to earn interest income (*Davinaga*, 2010). *Hamid* (2011) said that if banks lose their deposit base they rely on non-deposit based funding which is expensive.

Hence, the competition for deposits is really a competition 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). Commercial banks earn a return on their deposits and capital by investing deposit funds and capital funds in assets (Richard E, 1971). That is for commercial banks to attain profit

(1971) capital structure in commercial banks are made up of shareholders' funds, borrowing and deposits. Therefore, deposits are one of the sources of capital for commercial banks.

#### **2.1.4.1 The Importance of Deposits for Banks**

Deposits are the foundation upon which Banks thrive and grow. They are a unique item on banks' balance sheet that distinguishes it from other types of business firms.

##### **A. Deposits as a source of fund for loan**

Herald (2009) states deposits are the main source of banks to provide loan. This deposit is mainly provided by people as (Salehi, 2010) 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.

##### **B. Focusing on deposit is cheaper than raising equity**

Banks as any other business organizations can collect funds from debt and/or equity. In the banks context, raising equity is more expensive or costly than attracting deposits. Lorenzo et al (2010) states that, if the lending channel plays a role, the deposit growth should lead to an increase in the supply of loans due to the additional source of financing for banks. As demand for loan increases because of the development work done by individuals, businesses and government, banks should extend their deposit base. When a commercial bank creates a deposit by lending to a business man, it is clearly performing a function for which it is entitled to a return in the form of interest payments (Harold, 1946).

##### **C. Banks make profit using their deposits**

Mahendra (2005) said that deposits provide most of the raw materials for bank loans and thus represent the ultimate source of the bank's profits and growth. Banks make profit by

using their deposits, therefore it is said that depositors can discipline banks. Maria and (Sergio 2001), found that depositors discipline banks by withdrawing deposits and by requiring higher interest rates. For depository corporations mainly deposit money banks, their principal objectives is undertaking financial intermediation to make profit and increase their shareholders value (Sheku, 2005). They achieve their objectives mainly by attracting deposits and investing the money on profitable investment portfolio.

#### **D. Fund investment and/or development projects**

Debt is largely held by domestic commercial 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, the banking system can be viable only if it can mobilize deposits at the required rate. And this can be done only by making a bank deposit more attractive (V.V. Bhatt, 1970). The ability of a bank's management and staff to attract checking and savings accounts from business and individuals is an important measure of the bank's acceptance by the public (Mahendra, 2005). Banks' management major concern is the variability of deposits for several reasons. (George 1972) mentioned the reasons why the variability of banks' deposit is important as follows:-

- Deposit variability is frequently included as an important cause of portfolio strategy. The more volatile a bank's deposits are the more liquid its mix of assets will be.
- To the extent deposit variability affects bank holdings of cash and excess reserves, variability affects the distribution of total member bank reserves within the banking system and thereby the path and speed of monetary policy actions.
- To the extent deposit variability affects the mix of banks assets; it affects the availability of funds for loans and consequently the loan rate.
- To the extent deposit variability affects both the mix of earnings assets and the frequency of engaging in costly reserve adjustments, variability affects the profitability of individual banks.
- Deposit variability is an important factor influencing bank use of the Federal Reserve discount window and thereby affects discount administration.

### **2.1.5 The Factors Affecting Commercial Banks Deposits**

An important indicator of the success and efficiency of any credit agency, which is also a banking institution is, the extent to which it is able to mobilize the savings of the community in the form of deposit. But deposit mobilization is very difficult task. It depends up on various factors exogenous as well as endogenous, to the banking system (N. Desinga, 1975). Exogenous factors are the general economic environment of the region, the volume of business transaction of the region, the confidence of the people on the banking system, the banking habit of the people and the saving potential of the region. Even when exogenous factors are more conducive for deposit mobilization, banks may fail because of unfavorable endogenous factors such as location, type of building and window dressing (furniture, check books, vouchers, pay slips etc.), which assure the customers about the physical fitness of a bank (N. Desinga, 1975).

As N. Desinga (1975) did the researcher classifies the variables which are claimed to have effect on the commercial banks deposits into two, namely exogenous and endogenous factors. Exogenous has further divided into country specific factors and bank specific factors for clarification purpose. Endogenous factors can be controlled by the banking system; however the exogenous factors cannot be controlled by the banking system. The bank specific factors are factors that are specific to the banking system and the country specific factors are factors that are beyond the banking system.

#### **2.1.5.1 Exogenous Factors**

These are factors that are from country and banks that can affect the growth of commercial banks deposits. There are discussed as follows:-

##### **A. Country Specific Factors**

The country's economic, social and political factors can affect the commercial banks deposit. According to Herald and Heiko (2009), country specific risks such as political, economic and financial risks may affect the propensity for depositors to place funds in the banking system. Any single bank operates under the rule and regulation of the country where it belongs, also different problems and shocks that has happened in the country has its own concern in the banks operation. Generally, a bank success in their operation is mainly depends on the environment where the business is undertaken.

The researcher has identified ten country specific factors that have affected the commercial banks deposits from the literature. They are saving interest rate or deposit rate, inflation, real interest rate, number of commercial banks available in the country, population growth, per capita income of the society, economic growth, consumer price index, gross domestic

### **1. Saving interest rate**

One of the most effective factors for deciding to deposit in banking system is the interest rate (*Mohammad and Mahdi, 2010*). Furthermore, 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 factor 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. 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.

Interest rate in the banking system is held as investment cost from the investor's point of view and opportunity cost from the depositor's point of view (**Mohammad and Mahdi, 2010**). Thus, capital market forces balance interest rates. In other words, the just and correct interest rate should be determined through market mechanism, that is, interest rate is balanced in supply and demand conditions in proportion with the inflation rate. Eustacius and David (1995) states that deposits are more interest rate sensitive and banks may choose to increase investments in interest rate sensitive assets and to decrease investments in loans. That is commercial bank deposits are interest rate sensitive, therefore as the interest rate changes the deposit of the commercial banks will change.

It is known that depositors bring money to the bank which the banks in turn lend it to the borrowers. The gross earnings of the bank are determined by the volume and composition of loanable funds and the rates at which they are loaned. After losses and expenses of operation are deducted, the net earnings provide a margin out of which interest on deposits can be paid. Because of the competition for these funds among bankers who desire to loan them at a profit, a bank must pay interest or lose deposits to a competitor. The payment of interest on deposits is explained in this wise, like any other interest rate. 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 (Romer, 2001, p. 346; Athukorala and Sen, 2004, p. 498). This can easily be explained by the utility maximization (cost minimization) premise, as a depositor will choose an action that will maximize their welfare or satisfaction. As to Richard (1971), regulation of the commercial banking industry affects the returns which commercial banks realize on their deposits and capital. That is although deposits are the source for profit of banks it is influenced by regulation of the country. Accordingly, the higher profit rate on demand deposits is to a large extent the result of the prohibition against the payment of interest on these deposits. Therefore, depositors are motivated by returns.

Using an **Adaptive Expectation Model (AEM)**, it is founded that depositors are indeed *On the other hand*, Erna and Ekki (2004) state that Ghafur's (2003) shows that the rate of interest does not have influence on the volume of the deposits. However, Rose (2001) said that banks increase their deposits by offering higher deposit rate. These are the articles that contradict to each other in identifying the relationship among the commercial banks deposits & saving interest rates or deposit rate.

## **2. Inflation**

As to Herald and Heiko (2009), inflation is one of the factor that determines commercial banks deposits. Fischer showed that in Latin America the effect of inflation on savings and **Mohammad and Mahdi, 2010**). 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. According to Devinaga (2010), this will make borrowing more costly than before and thereby the demand for funds will be reduced. Similarly with a reduction in their credit creating capacity, the banks will be more cautious in their lending policies. Since the banks demand for fund decreases obviously the deposits will decrease. Banking system was affected by inflation in terms of deposit absorption and facilities grant (**Mohammad and Mahdi, 2010**). As to **Mohammad and Mahdi (2010)**, in developed countries negative

correlation between inflation and absorbed deposits and granted facilities has been documented. However, in developing countries the opposite is true.

Inflation is seen as an economic problem in developed countries in the second half of 20th century. 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 M Mohammad and Mahdi (2010) 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 decreases; 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 (Mohammad and Mahdi, 2010).

With respect to the effect of inflation on savings, it can be mentioned that in general, all individuals who save a part of their incomes in banks are directly damaged by the inflation and their assets decrease in proportion with money value decrease (Mohammad and Mahdi, 2010). In that case as Mohammad and Mahdi(2010) describes people try to change their cashes and savings to more reliable and stable forms such as land, jewelry, antiques, art collections, foreign currencies that causes to definite decrease in commercial bank's total deposit. High inflation rates reduce the real value of deposits (M. A. Baqui et al, 1987). According to M. A. Baqui et al (1987), inflation technically did not decrease deposit; however it decreases the value of deposits.

### **3. Real Interest Rate**

Real interest rate is nominal interest rate minus inflation rate. Mohammad and Mahdi (2010) said that in negative real interest rate condition, people withdraw their resources supposed that decrease in real interest rate could decrease true demands for money (in its extensive definition including savings and time deposits). Therefore it states that the interest rate and deposit of the banks have positive relationship. According to Von-Chong et al. (2010), while interest rates risk is a major concern for banks due to the nominal nature of their assets and the asset-liability maturity mismatch (Hasan & Sarkar, 2002), some researchers

emphasized that higher interest rates had positive impact on banks deposit growth (Hanweck and Ryu, 2004; Hyde, 2007).

#### **4. Population growth of the country**

The twin objectives of commercial banks, i.e. acquiring deposits and advancing credit cannot be attained without good banking habits of the people (Mahendra, 2005). Moreover Mahendra (2005) states that, the number of deposit accounts is more important because it ensures that the probability of account is more important because it ensures that the probability of account holders withdrawing cash at a time decreases as the number of deposit account increase, thereby creating advantage for banks in terms of increasing the size of the loanable fund. So the higher number of deposit accounts the greater is the advantage to banks. The number of deposit accounts depends on the number of deposit account holders.

#### **5. Per capita income of the society**

ed 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 (Evan, 2006). So, the relationship between income and deposits is positive, that is 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 et al, 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.

#### **6. Economic growth**

Economic performance is generally being measured through **GDP** (*Gross Domestic Product*), a variable that has also become the de facto universal metric for 'standards of living (Yanne et al, 2007). It is universally applied according to common standards, and has some undeniable benefits mainly due to its simplicity (Yanne et al, 2007). According to Herald and Heiko (2009), growth is one of the determining factor for commercial banks deposits. **GDP** is calculated by adding up the value-added at each stage of production (deducting the cost of produced inputs and materials purchased from an industry's suppliers) (Jim, 2008). Erna and Ekki (2004) finds four variables, **GDP**, number of Islamic bank's branch offices, profit sharing rate, and interest rate that are thought to have

influence on the volume of deposits. So, *GDP* can influence the growth of commercial banks deposits.

## **7. Consumer price index**

According to Herald & Heiko (2009), price can determine commercial bank deposit and it can be indicated by consumer price index. In literature there is an evidence for the influence of consumer price index on commercial banks deposit, however this area was rarely studied.

### **B) Bank Specific Factors**

#### **1. Liquidity of the banks**

The concept of liquidity in finance principally lies in two areas (**ISMAL, RIFKI, 2010**):-

A) Liquidity of financial instruments in the financial market

B) The liquidity related to solvency.

The former related to liquid financial markets and financial instruments, smooth transactions and no barriers. As to *ISMAL, RIFKI, (2010)*, the latter discusses the obligation of banks to make payments to third parties (Fiedler, 2000:442). Some examples of this includes: setting up liquidity management policies, reserve liquidity, balancing

important measure of liquidity is loan to deposit ratio. The loans to deposit ratio is 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 Voon-Choong et al(2010), the basic need for liquidity, asset, liability, capital adequacy, credit and interest rates risks management are now more challenging than before (*Mishkin, 2007*). The banks' liquidity management involves acquiring sufficient liquid asset to meet the bank's obligation to depositors (Voon-Choong et al, 2010). According to the findings of Dorothee and Andrea (2009) it is more profitable for savings banks to hold liquid assets than to invest in illiquid assets, such as medium-term interbank lending to other credit institutions.

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*). According to *ISMAL, RIFKI, 2010*, 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 deposit their money in banks if they are certain that they are safe to withdraw the money whenever they want, this is the question of liquidity of banks. The more liquid banks can attract the deposits.

A higher degree of financial intermediation (proxied by the loan-to-assets ratios) may signal a bank's success in generating income as well as a need for it to attract more deposits to support its increased lending activities (Herald and Heiko, 2009). A higher liquidity buffers (measured by the ratio of liquid assets to deposits) tend to favor deposit demand (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.

## **2. Profitability of the bank**

Erna and Ekki (2004) find the long run relationship between commercial banks deposits and the profitability of the banks. Higher bank profits would tend to signal increased bank soundness, which could make it easier for these banks to attract deposits (Herald and Heiko, 2009). However, the effect of bank profitability and bank size are found to be insignificant once controlling for the other variables. So, the effect of profitability and banks size on commercial bank deposit is lower as compared with other variables.

## **3. Security of the bank**

Security of banks matters in mobilizing deposit. Riskier banks would be able to attract deposits only paying higher Interest rates. The securities of banks have its own impact on its attractiveness for depositors. For example in the existence of deposit insurance the depositors no longer are concerned about the soundness of their banks because their deposits are insured in the event of bank failure. So the bank should secure its system so as to mobilize more deposit than before and to attract new depositors and maintain the exiting depositors.

#### **4. Branches**

There is a relationship between commercial banks deposits and commercial bank's branch branches is also influenced by the level of deposits in any area (M.A. Baqui et al, 1987). It is expected that banks make decisions on expanding their facilities by considering factors such as level of competition, deposit potential, regional income and existence of road and vehicles. As deposit potential is one thing that banks consider in expanding its branches, the deposit can also be a reason for branch expansion strategy that the banking sector uses. 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 bank portfolios diversification (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. Besides, it can be concludes that under branch banking the mobility of capital is almost perfect.

#### **5. Bank size**

Among the factors prominently identified as affecting deposit variability one is bank size. Evidence indicates that the number and diversity of the ownership of individual deposit accounts as well as the distribution of deposits by type vary with bank size (George, 1972). Herald and Heiko (2009) founds that although insignificant once controlled by other variables bank size have an effect on deposits. Smaller banks have to generate fewer deposits in absolute terms to achieve the same deposit growth than large banks, thus

possibly favoring smaller banks in achieving higher deposit growth. But a larger bank with economies of scale as well as larger branch network might be able to better attract deposits.

## **6. Reserves**

Richard Goode and Richard S. Thom (1959) said that reserves that are fixed legally can influence the deposits that banks can hold. According to them reserve requirements determine the maximum amount of loans and investments that each commercial banks and the banking system as a whole may maintain in relation to deposits. Thus, if the reserve requirement is 20 percent of deposits, loans and investment may not exceed 80 percent of deposits. Therefore, reserve requirements limit the total expansion of bank deposits that can occur on the basis of any primary increase in deposits. Reserve requirements also have the effect of limiting the reduction in bank credit and deposits that is forced up on the banking system by a primary decrease in deposits. The commercial banks can obtain currency to pay out to customers only by drawing down their reserve deposits at the central bank or by using till money (Richard Goode & Richard S. Thom, 1959).

## **7. Transaction cost**

Important indicator of management's effectiveness in any bank are whether or not deposited funds have been raised at the lowest possible cost and whether enough deposits are available to fund those loans the bank wishes to make (Mahendra, 2005).

This last point highlights the two key issues that every bank must deal with in managing its deposits (Mahendra, 2005):-

- Where can the bank raise funds at the lowest possible cost?
- How can management ensure that every bank always has enough deposits to support the volume of loans and other financial services demanded by the public?

### **2.1.5.2 Endogenous Factors**

In the literature three endogenous factors are identified that can affect the growth of commercial banks deposits. They are awareness of the society for using banks to deposit their money, convenience of Bank's office and service in the banks.

#### **1. Awareness of the society**

According to M. A. Baqui et al (1987), some analysts argue that demand for deposits is influenced by education level which in turn increases the awareness of the rural people about banking services (Mauri; Von Pischke). Since the study of M.A. Baqui Etal (1987) conducted by taking rural area as its base it is obvious that it considers the awareness as a

factor of deposit mobilization. It was also found that literacy as a proxy for awareness about banking, positively influence deposits.

## **2. Convenience of Bank's office**

Road and vehicles directly influence interest bearing deposits because of the reduction in depositors' transaction costs through reduced time spent in travelling to and from banks (M. A. Baqui et al, 1987). Banks can mobilize more deposit when they make themselves closer to their customers (depositors).

## **3. Services in the Bank**

Services can be defined as "any primary or complementary activity that does not directly produce a physical product that is the non-goods part of the transaction between customers and providers. It is known that banks are service giving organizations and the service delivery can affect their business undertakings. M. A. Baqui et al (1987) stated that there is some empirical evidence demonstrating the positive influence of services rendered to depositor (Dudzie, Dunson and Akaah). Baqui further suggested two innovations to be tested to provide incentives to depositors:-

- Additional benefit like prize bounds could be given to depositors for maintaining deposits for particular period.
- As recommended by Nathan (1986), one category of deposits might be specifically tied to future loans. Bank customers might be encouraged to participate in a savings program that, for example, provides machinery or housing after a predetermined amount of savings has been accumulated.

Services in the bank should be attractive enough for the depositors so as to mobilize deposits. If the banks could offer these services, the savers would be inclined to keep a part of their saving in the form of deposits (V. V. Bhatt, 1970). The followings are services that V. V. Bhatt (1970) claims to use to mobilize deposits:-

- (1) Door-to-door collection of small saving in the form of deposits.
- (2) Offering land revenue or insurance premium: - If the banks offer to pay land revenue or insurance premium out of the interest earned on deposits, some persons may be inclined to put deposits of such amounts as would earn enough interest to meet their land revenue or insurance premium liability. To attract deposits these types of services are worth providing.
- (3) An investment service: Some savers have neither the inclination nor the time to select an appropriate portfolio of financial investment. Banks can select the portfolio of investments on their behalf, keep the securities in safe custody, collect Interest or dividend

income and even fill income-tax forms; with such services offered, some savers would be inclined to keep their liquid funds in the form of deposits.

(4) Some persons like farmers get their incomes say once or twice in a year, while their expenditure is spread over the whole year. If banks could collect deposits from them at the harvesting season, and assure them regular withdrawals during the year, farmers may be inclined to keep deposits with the banks. This scheme would ensure safety of their funds, prudence in their management and certainty of regular monthly means to meet their current liabilities. In addition they would earn some interest. With a sympathetic and persuasive approach, farmers could be attracted to such a scheme.

(5) While giving loans to farmers and small sector, the banks could provide them with facility of purchases from recognized dealers instead of giving those cash. In this case, the dealers could send the bills to the banks, which would debit the accounts of the loan receivers. Some banks have introduced agri-cards with such a purpose in mind. If such facilities are provided to others also, the customers would use bank money rather than currency for making payment and once they form this habit, they would be induced to keep their transaction balances in the form of deposits rather than in the form of currency. According to V. V. Bhatt (1970) these are some of the new deposit schemes which, if introduced, could raise the rate of saving as well as the rate of growth of bank deposits. To the extent to which the rate of saving is raised, the growth rate of the economy would be higher.

## **2.2 Conceptual Framework of the Research - Empirical Review**

The empirical literature part discusses past studies that were conducted on the area of factors determining commercial banks deposits. In this part the variables that were included, the methodology that is used to undertake the study and the results of the study under review are discussed. These will help to see where the literature on this area is and how this study will add to the existing literature. Thus, the articles will be discussed below one by one.

Joel Katalai (2008) had written a research paper which empirically tests the determinants of Kenyan Commercial Banks Deposit growth. Its main objective was to analyze the factors that influence Commercial banks deposit growth in Kenya. Time .series data covering 1968 - 2006 was analyzed. First, the time series characteristics of the data were assessed using unit root tests to examine the stationary of each variable. Secondly, the test for co-integration was performed to determine the long run relationship of the non-

stationary variables. Lastly, estimated model was a single regression equation with deposit as the dependent variable and explanatory variables as deposit rate, nominal exchange rate, investment income ratio, number of checks cleared (used as proxy for innovations in the financial sector), real **GDP**, ratio of monetary **GDP** to total **GDP** and Structural Adjustment (*SAPs*). Ordinary Least Squares (**OLS**) technique and Econometric Views (E-views) statistical package used. Analyzed results showed that lagged Commercial bank deposits and all the other variables including Structural Adjustment (*SAPs*) significantly affect Commercial bank deposit growth in Kenya. Based on these results, several policy implications were drawn that aim at encouraging deposits growth by Commercial banks for the benefit of the domestic deposit. First, growth enhancing policies promotes deposits growth. Second, the stability of macroeconomic system should be maintained. Lastly, financial sector innovations encourage deposit growth in Commercial banks in Kenya as people reduce their demand for carrying cash.

Herald Finger and Heiko Hesse (2009) had written a working paper which empirically examines the demand for commercial banks deposits in Lebanon, a regional financial center. They classified the variables into two, i.e. macro and micro level variables. At the macro level, they found that domestic factors such as economic activity, prices, and the interest differential between the Lebanese pound and the U.S. dollar are significant in explaining deposit demand, as are external factors such as advanced economic and financial conditions and variables proxying the availability of funds from the Gulf. At the micro level, they found that in addition, bank-specific variables, such as the perceived riskiness of individual banks, their liquidity buffers, loan exposure, and interest margins, bear a significant influence on the demand for deposits. They have used quarterly data from 1993 to 2008. They have estimated a number of vector error correction model (*VECMs*) to take account of co-integration in the non-stationary time series. They have collected the data for their study from 50 Lebanon banks. They found that both domestic and international factors help explain deposit demand. Among domestic variables, they found that the coincident indicator for real economic activity in Lebanon, consumer prices, and the interest differential between the local currency and the U.S. dollar matter. Among the external variables, advanced economy economic and financial conditions appear significant (especially advanced economy industrial production and the Goldman Sachs Risk Aversion Index), as do some variables proxying the availability of funds from the Gulf. While both domestic and external variables are significant in explaining deposit demand, impulse response functions and variance decomposition analyses underscore the

relative importance of the external variables. Regarding bank specific variables they found that the banks' perceived riskiness (z-score), their liquidity buffers, loan exposures and interest margins all bear a significant influence on deposit growth at the bank level, controlling for domestic & external macroeconomic factors.

Haron and Dr. Wan Nursofiza which investigates 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, **M**

significant impact on deposits. They also found that in most cases, customers of conventional system behave in conformity with the savings behavior theories. The objective of the study was to examine the effect of selected economic and financial variables on deposits placed at the commercial banks in **Malaysia**. Both long- and short-run relationships between these variables are measured using co-integration techniques. The data for the study were taken from the monthly statistical bulletin of Bank Negara **Malaysia** ([www.bnm.gov.my](http://www.bnm.gov.my)). The study uses monthly data covering the period January 1990 to December 2003. In examining the determinants of deposit levels of both Islamic and conventional banks, the paper employs recent advances in time series econometrics. These techniques are co-integration and error correction framework, which was conducted within the vector auto regression (VAR) framework. The first step of the analysis was to test for the presence of unit roots of the variables in the system using the Augmented Dickey-Fuller (ADF) test. Once the stationary condition is examined, the next step is to conduct a co-integration test. And finally they concluded that in most cases, the behavioral

However, there are also deviations from these theories. For example, both inflation and returns on deposit are supposed to have a positive relationship but the study found otherwise. Similarly, instead of an inverse relationship, both composite index and money supply have positive sign with savings account. For each of the deviation found, an explanation has been put forward. And also the study does not differentiate the behavioral pattern of different classes of depositors.

This article is written by Pavla Vodová. It identifies the determinants of liquidity of Slovak commercial banks deposit growth and empirically analyzes them. Finally it describes the result of the study and recommends how states realize deposit growth. By considering bank specific and macroeconomic data over the period from 2001 to 2010 and analyze

them with panel data regression analysis. He has found that bank liquidity drops mainly as a result of the financial crisis. Bank liquid assets decreases also with higher bank profitability, higher capital adequacy and with the size of bank. Liquidity measured by lending activity of banks increases with the growth of gross domestic product and bank profitability and decreases with higher unemployment. Key interest rates, interest margin, rate of inflation and the level of non-performing loans have no statistically significant effect on the liquidity of Slovak commercial banks

This article is written in 2013 by Ndichu Peter Kamau, Ooko Migoreh Erick and James Gachanja Muriithi. The main objective of this study was to investigate the factors that influence liquidity level of commercial banks in Kisumu City. According to the authors, Liquidity is an important determinant of financial distress, without liquidity a bank cannot meet the deposit withdrawals and satisfy customer loans and high liquidity level will mean a decline in returns to commercial banks, thus liquidity level becomes a challenge to commercial banks and investigating the factors influencing it comes in handy. The researcher chose to study on commercial banks due to availability of needed data and convenience. All 27 commercial banks operating in Kisumu City were investigated. Out of the 27 questionnaires distributed to the heads of finance, 26 questionnaires were returned successfully filled giving a response rate of 96.29 %. Exploratory survey research design

analysis and multiple regression analysis were used to determine the relationship between the factors and the liquidity level of banks. The study found that that 42.2 % the variations in liquidity level are explained by changes in the various factors notably; contingency planning, profitability, banks major obligations, management policies, credit rating, monetary policies, government expenditure and Balance of payment status with 57.8 % of the variation being explained by other factors external to the model. From the study it can be concluded that there are other factors, other than Central Bank of Kenya regulations which influence liquidity level of commercial banks in Kisumu City. And finally the researcher recommends a further study to be conducted based on various geographical areas.

Research article made by Samuel Tesfahunegn, October 2005, about challenges of deposit mobilization in Ethiopian private banks, said that, all private commercial banks should prepare for the inevitable stiff competition that will arise from local and with the eminent

future of foreign banks. By doing so, they can solve the paradox of the liquidity problem and the unbanked resource.

**Other article prepared by Yitbarek Takelel (PhD, MA Econ, MBA) and Hibret Belay (MBA), aimed at determining the short and long run impacted of endogenous and exogenous factors of deposit growth of Commercial Bank of Ethiopia for the period 1974/75 - 2013/14. The estimated results suggest Interest Rate has positive but insignificant impact on deposit growth both in the long-run and short-run while Exchange Rate and Branch Expansion significantly increases bank deposit contemporaneously both in the short run and long-relationship with deposit growth but significant only in the long-run.**

As a final point, here in this study I tried to include some independent variables which was not consumed by other researchers previously. Especially, it surveys on six significant elements raised for bank deposit growth in case of commercial bank of Ethiopia (CBE) and the researcher measures both quantitative and qualitative data from our country perspective for the use of the research. I need readers of this study to share me believes in connection with the justification or rationale for selecting CBE as evidence was that of its huge market share (CBE alone mobilized 66.1% of the total deposits banking system owing to its large branch network, **NBE** annual report, page 55, June 2016) related to the subject matter are on the hands of CBE.

## **Chapter 3**

### **Methodology**

Here chapter three describes the sources of data and collection procedure, research design instruments, sampling and data analysis method. It explains the type of data used for the study and the techniques employed in finding the issues that influence the bank deposit growth. It also clarifies the characteristics of population investigated, sample and sampling techniques, data collection schedule, and statistical tools used in the study.

#### **3.1 Research Design Instruments**

For the purpose or the merits of this research work questionnaire were used. The two types of questionnaire were used by the researcher. These are the open-ended and close-ended type of questions. To understand the elements of bank deposit growth in case of Commercial Bank of Ethiopia, the researcher adopts both quantitative and qualitative approach as a tactic for investigation. The indispensable goal of this mixed research approach is to tackle a given research question from any relevant angle, making use where appropriate of previous research and/or more than one type of investigative perspective. The rationale of using such a mixed approach in this study is to gather data that could not be obtained by adopting a single method. And also some of the qualitative data in this study cannot be described and manipulated numerically. That is why the researcher applied mixed research approach.

#### **3.2 Procedure for Data Collection, Sampling & Target Population**

A combination of both primary and secondary methods of collecting data was used. Primary or original data was collected by the researcher from the field personally for the purpose of the research work. It was carried out mainly through the use of questionnaire to obtain original data for the purpose of answering the research questions or problems.

Secondary data was used to ensure completeness of the research work. It involved the consultation and use of articles from the newspapers, management's reports and from the internet. The secondary data was to supplement the information and explanations which the source could not provide for the research work. Secondary data from publications of Commercial Bank of Ethiopia (CBE), National Bank of Ethiopia (NBE) Central Statistics Authority (CSA) and others. Regarding the secondary data the researcher gathered thirty four years quantitative data (from 1981/1982 to 2015/2016 fiscal period). Additionally,

about the primary data questionnaire and interview questions has been used to collect information from employees of the bank, who believed their task is highly related to the study. While the number of questionnaires distributed to the employee were 60, two questionnaire for each branch and 50 of which collected after having complete response. Interview conducted with 20 CBE branch and three bank units (district office, management information system (**MIS** – having consolidated data) section and strategy office). The intention of selecting commercial bank of Ethiopia (CBE) as evidence was that of its large market share (CBE alone mobilized 66.1% of the total deposits banking system owing to its large branch network, *NBE* annual report, page 55, June 2016) related to the subject matter. In addition, as per *NBE* annual report 2015/2016 out of the total deposit liabilities of all banks (16 private and 2 government) in Ethiopia, which is reached birr 438.1 billion as of June 30, 2016, CBE by itself mobilized 288.5 billion birr (66%) as a result of its big market share and large number of branch distribution volume, *NBE*, June 2016.

In relation to the sources, secondary data was picked up from inside and outside the organization. Bank-specific information was collected from the annual audited reports, which are published in book form and unpublished homes of materials and considered as the internal source of data. *NBE*) which regulates the banking sector of the country, *Ministry of Finance and Economic Development (MoFED)* which regulates the macroeconomic issues of the country and *Central Statistics Authority (CSA)* annual reports and others.

### **3.3 Methods of Data Analysis**

The study had used the frequency distribution output from **SPSS** (*Statistical Package for Social Sciences*) software to examine questionnaires and describe the outcome of using both qualitative and quantitative data. About the qualitative data analysis the researcher had examined the information from the secondary sources of data by using descriptive analysis techniques to designate the result. Accordingly, as to demonstrate the total deposit growth trend of commercial bank of Ethiopia and the assessment of each elements of deposit growth, the researcher had studied the data with **Microsoft excel** and **SPSS**, such as total deposits growth and total number of branch growth graph result and its related factors are exhibited together with their real interpretation and likely suggestion by researcher.

Data collected was regressed by time series OLS regression method and interpret with the help of different financial relationship and statistical description including standard deviation, average, minimum, maximum, median (called descriptive statistics) and multiple regression or significant test. Ultimately, the researcher supported by statistical tool eviews7 software and the proposed hypotheses are verified statistically to reach at the decision and implication for policy makers. The data collect was enhanced pictorially in their presentation with the aid of tables, chart and graphs.

### 3.4 Model Specifications

Thirty four year time serious data has been used in ground to this study. Quantitative data received are described through multiple regression technique. It contains one variable, called the dependent or outcome variable and more than one independent variables. Also the constant term and the error term are considered. Regression analysis lets to switch for other several factors that instantaneously affect the dependent variable.

use multiple independent variables, with each controlling for the others. Practically multiple regressions have the following advantages:-

- Better prediction from multiple predictors
- Can “avoid” picking/depending on a single predictor
- Can “avoid” non-optimal combinations of predictors (e.g., total scores)

**Assumptions** - Multiple regressions makes four assumptions, and these need to be checked. The assumptions are about the errors from the model; the errors are the difference between the predicted value of the dependent variable and the actual value of the dependent variable. Accordingly the econometric estimation technique that is used by this study is ordinary Least Square (OLS). Different diagnostic tests are exercised to know whether the model is valid or not, having the model is valid the regression analysis & hypothesis testing is performed by Eview Software Version 8.

Therefore the general models which incorporate all of the variables to test the hypotheses of this study are:

**LNTBDGR**= $\alpha + \beta_1ADR_t + \beta_2IR_t + \beta_3NBIOT + \beta_4GDP_t + \beta_5ER_t + \epsilon$ whereas; **LNTBD**: is total amount deposits growth rate held by commercial bank of Ethiopia on year t`

**ADR**: is average deposit rate of commercial banks of Ethiopia on the year t`

**NBO**: is the number of new branch inauguration in CBE on the year t`

**GDPt**: is the real domestic product/*GDP* growth of Ethiopia on the year t`

**IR**: is the overall inflation rate in Ethiopia on the year t`

**ER:** Exchange Rate or *Monetary Policy* of a country on the year  $t'$

**DV1:** Dummy variable in this case is some of the major policy adjustment in end of year 2010 especially aggressive branch opening rather, branch expansions, using new technology and introduction of core banking system or effect of financial innovation /electronic banking/.  $\varepsilon$ : is representing the random error term of the linear regression model. It also represents all the relevant variables, which were omitted from the model as well as the random errors from the estimation process. It may include variables like population growth, bank size, profitability and shocks which is likely to influence the study. This is because some of these error variables can be influential as well as correlated to the variables under study.  $\beta$  represent the estimated parameters or represent the slope coefficient to the dependent variable.

### **3.5 Model Variables and Hypotheses**

#### **3.5.1 Model Variables**

Outcome or dependent variable in our case is bank total deposit growth which is affected by independent variables. Here the independent variables are factors commonly affects commercial banks deposits growth, which includes economic growth or gross domestic product (*GDP*), inflation, bank interest rate for savers, monetary policy or exchange rate, branch inauguration (expansion or branch or outlet opening), population growth and effect of financial innovations (electronic or e-banking); it also called use financial technologies.

#### **3.5.2 Hypotheses**

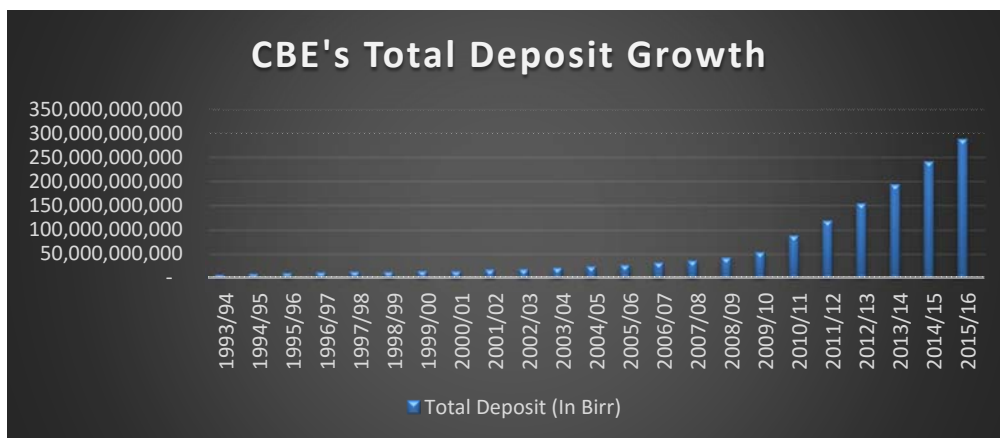
A hypothesis is a speculation or theory based on insufficient evidence that lends itself to further testing and experimentation. With further testing, a hypothesis can usually be multiple regression technique used to direct the association among CBE's total deposit growth and aspects that different literatures and articles considers affecting banks deposit growth. A null hypothesis is a hypothesis that says there is no statistical significance between the two variables. It is usually the hypothesis a researcher or experimenter will try to disprove or discredit. An alternative hypothesis is one that states there is a statistically significant relationship between two variables. The null (denoted by  $H_0$ ) and alternative (denoted by  $H_1$ ) hypothesis are also explained further down. The significance level, also denoted as alpha or  $\alpha$ , is 0.05, it is the probability of rejecting the null hypothesis when it is true.

**H0:** -There is no any relationship between dependent and independent variables, i.e. real *GDP*, inflation, interest rate, exchange rate, financial innovations, population growth and new branch opening have no effect on the dependent variable (CBE total deposit growth).

**H1:-** There is no any relationship between dependent and independent variables, i.e. real *GDP*, inflation, interest rate, exchange rate, financial innovations, population growth and new branch opening have no effect on the dependent variable (CBE total deposit growth).

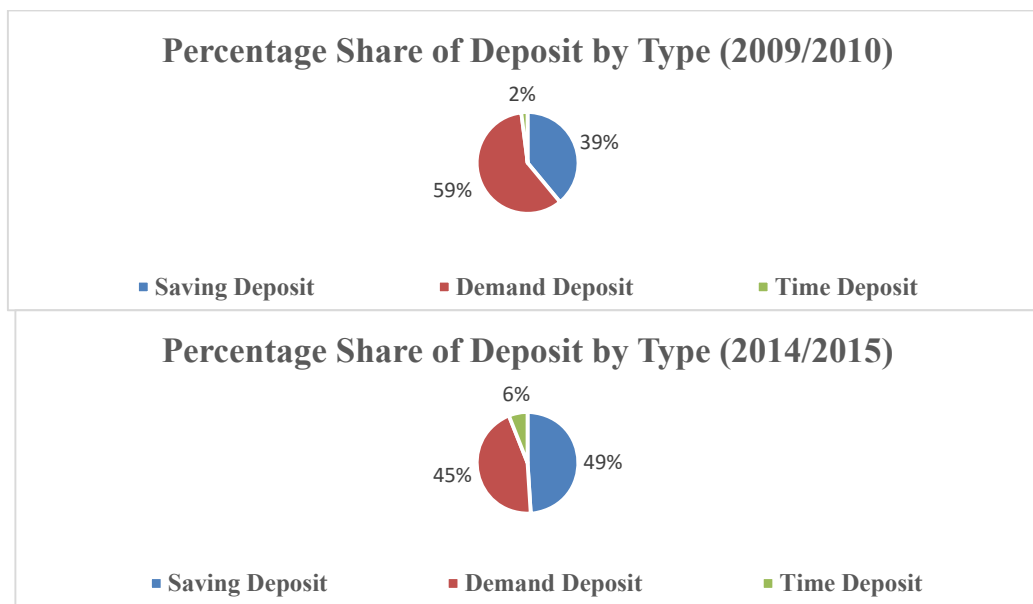
### 3.5.2.1 Dependent Variable

The over-all deposit growth of the commercial bank of Ethiopia is considered as a dependent variable in the study. As the study determines by taking as indication the commercial bank of Ethiopia (CBE), total deposit growth of the bank is examined and analyzed. To encounter the necessary fund demand for bank credit customers (deficit unites), currently, collecting deposit is the major activities by commercial banks. In Ethiopia, deposits mobilized by commercial banks and micro finances have been constantly growing over time, although the rate varies from year to year. Compared with the industry trend, CBE's total deposit has been growing with an average growth of 18% in the last 15 years, (during the period 2000/2001 – 2015/2016). Similarl Bank of Ethiopia 2015/2016 annual report, the banking industry deposits growth depicted a 19.3% percent annual growth during 2015/2016, during the same period 16.2 percent showed on CBE's deposit growth.



The diagram above discloses that the commercial bank of Ethiopia deposit improved over the years. Up to June 30, 1995 (G.C) the total deposit of the bank was below 10 billion birr, however within the next 10 subsequent years, the bank deposit position was highly grown

and shows an incremental amount of birr 10 billion. Besides, its remarkable development dealing with the total deposit recorded between 2005/06 and 2015/16 (on the last eleven years) reaches birr 288.5 billion birr. When we see the previous five years (from 2011 to 2016) end result, the bank recorded net average deposit growth of birr 40 billion, it's unquestionable extraordinary and significant volume of growth comparing other previous years deposit progress result.



**Chart I - Percentage Share of Deposit by Type (From 2009/10 to 2014/15)**

As per the charts below from CBE corporate strategy document, the percentage share of the commercial bank of Ethiopia total deposit by type shows a change or shift from demand to saving deposit.

### 3.5.2.2 Independent Variables

The following independent variables hypothesis is proposed to increase our understanding of the elements of bank of deposit growth in commercial bank of Ethiopia. These were elements identified by detailed review of the literatures, likewise the investigation made used for each of the following independent variables in the study are presented go after.

#### A. Economic Growth or Gross Domestic Product (GDP)

(NBE) 2015/16 annual report, although the worst drought, Ethiopia registered 8% real **GDP** growth rate in 2015/16 which was much higher than 1.4% average for Sub-Saharan Africa. The economic growth was broad based with

industry growing 20.6%, services 8.7% and agriculture 2.3%. However, agriculture still remained a dominant sector, its share in **GDP** continued to shrink from 38.7% in 2014/15 to 36.7% in 2015/16 while that of industry and services stood at 16.7 and 47.3% respectively. According to **NBE**, in 2015/16 Ethiopia has seen not only economic growth but also improvements in income inequality and reducing poverty. **Per capita** income increased to USD 794 from USD 725 a year ago and poverty is estimated to have dropped to 22% from 38.7% a decade earlier. Investment

previous year.

**The following table displays GDP and GDP Growth (In Billions of Birr)**

<b>Items</b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>	<b>2015/16</b>
<i>Total GDP from all sectors</i>	519.5	571.7	630.3	696.5	752.0
<i>Real GDP</i>	517.0	568.0	627.0	692.0	747.0
<i>Growth in Real GDP</i>	8.7	9.9	10.3	10.4	8.0
<i>Per Capital GDP (USD Nominal)</i>	523	559	640	725	794
<i>Growth Rate in Per Capital GDP</i>	32.2	6.8	14.4	13.4	9.5

**Source: National Bank of Ethiopia**

Theoretical and empirical evidence suggests that, economic growth is the main source of banks deposit growth. If there is a real growth in the economy, deposit will grow as well. This hypothesis was proved by the chakra arty committee in 1985. The committee reported that the growth of Indian deposit in 1985 at an accelerated pace was attributed to the higher real growth achieved by the economy (chakra arty committee, 1985).

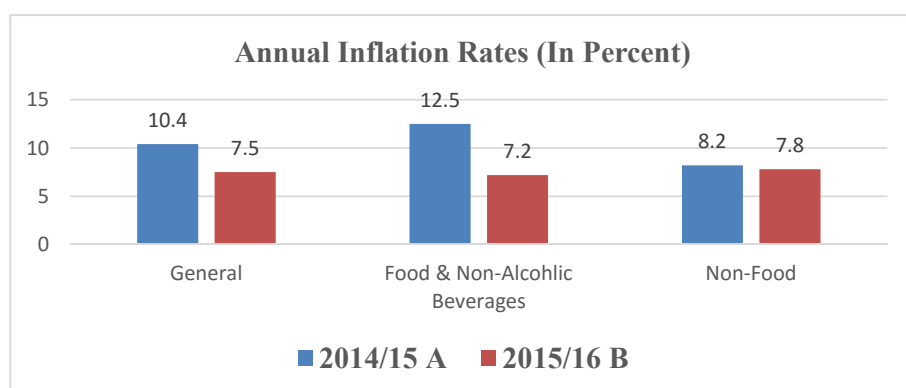
H0: There is no significant relationship between economic growth and commercial bank deposit growth.

HA: There is a positive significant relationship between economic growth and Commercial bank deposit growth.

## **B. Inflation ("Enlargement of prices")**

Inflation is a sustained rise in the general level of prices – the price level. Symmetrically, deflation is a sustained decline in the price level. It corresponds to a negative inflation rate. The practical issue is how to define the price level. **Macroeconomists** typically look at two measures of the price level, at two price indexes: the *GDP* deflator and the consumer price index. As Deaton (1991) explained inflation is measured alternatively by Consumer price

index. The first theory he assumed that greater uncertainty should raise savings since risk-averse consumers set resources aside as a precaution against possible adverse changes in income and other factor. Hence inflation may increase precautionary savings by individuals. Precautionary saving is additional saving that result from the knowledge that the future is uncertain (D. Carroll, 2006). The second theory was, inflation can influence saving through its impact on real wealth. 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.



*Source: National Bank of Ethiopia (NBE) and Central Statistics Agency (CSA)*

The country has also witnessed subdued inflationary pressure despite the El- t 2015/16, accordingly, annual average headline inflation scaled up to 9.7% compared to 7.7% a year ago on account of a 3.7 percentage point increase in food inflation while non-food inflation remained at 8%. In contrast, annual headline inflation plummeted from 10.4% to 7.5% due to 5.3 percentage point slowdown in food inflation despite the drought effect and 0.4 percent in non-food inflation. Hence, **NBE's** policy of maintaining single digit inflation target was achieved aided by the use of prudent monetary and fiscal policies and other administrative measures as well as subdued commodity prices in the global market.

H0: There is significant positive relationship between inflation and bank deposit

HA: There is a significant negative relationship between inflation and bank deposit.

### **C. Bank Interest Rate Payable for Depository Customers**

As for interest rate development, NBE taking into account the country's economic fundamentals, continued to set minimum deposit rate at 5% while allowing commercial banks to decide their own lending rates. Accordingly, simple average minimum savings rate stood at 5.38% while average time deposit rate slightly declined to 5.59% from 5.77% a year earlier. At the same time, simple average lending rate rose to 12.75% from 11.88% last year. Efforts have also been made to improve the real rate of interest by containing domestic inflation around the single digit band without prejudice to enhancing savings and investment. Thus, although all deposit rates and T-bills yields still remained negative in real terms, lending rates were positive and deposit rates improved relative to previous years. *Source: NBE*

Most banks pay the minimum interest rate on saving accounts set aside by the regulatory body. Because the real interest rate is negative, the interest rates are not attractive to the public particularly for those who are saving aiming the interest income. In 2015/16, both minimum and maximum deposit interest rates were unchanged at 5% and 5.75%, respectively. Consequently, average interest rate on savings deposit remained constant at its preceding year level of 5.38%, whereas weighted annual average interest rates on time and demand deposits stood at 5.59 and 0.04 percent respectively.

In essence, the deposit rate is the interest rate that a bank pays the depositor for the use of their money for the time period that the money is on deposit. As deposit interest rate increases people can be initiated to put their money in the bank. This leads to increase in deposit growth.

H0: There is significant positive relationship between interest rate and bank deposit

HA: There is insignificant relationship between interest rate and deposit.

### **D. Exchange Rate**

Exchange rates are quoted as foreign currency per unit of domestic currency or domestic Currency per unit of foreign currency (Bishop, 2006). According to Nugel (2012) as currencies depreciated in one country deposit will be reduced since investors tend to withdraw deposit and exchanged to keep it by appreciating hard currency or invest in other form of investment rather than bank deposit. Alemayehu (2015) also confirms that for developing country in general saving is negatively correlated with unstable exchange rate.

NBE's monetary policy has been geared towards maintaining price and exchange rate stability, ensuring safety and soundness of the financial system and creating conducive environment for overall economic growth. To accomplish these strategic policy objectives, the Bank continued to employ reserve money as nominal anchor and broad money supply as intermediate target. Consequently, reserve money increased by 16.3% on account of 9.8% expansion in currency in circulation and 34.3% surge in commercial banks deposit at the NBE. Meanwhile, broad money supply expanded by 19.9% owing to 24.6% growth in domestic credit signifying buoyant economic activity.

In the exchange rate regime, NBE has focused in maintaining the stability of the Birr and improves external competitiveness by using managed floating exchange rate regime. Accordingly the Birr was allowed to depreciate in the official market against USD which

domestic inflation relative to last fiscal year, real effective exchange rate of the Birr appreciated by 1.1% compared to 11.9% a year earlier implying improved external competitiveness.

H0: There is negative relationship between exchange rate and bank deposit growth.

HA: There is positive relationship between exchange rate and bank deposit growth.

#### **E. Branch Inauguration (Opening New Branch and Outlets)**

**CBE's Branch Network & %age Share from Total Banks in Ethiopia (June 30, 2016)**

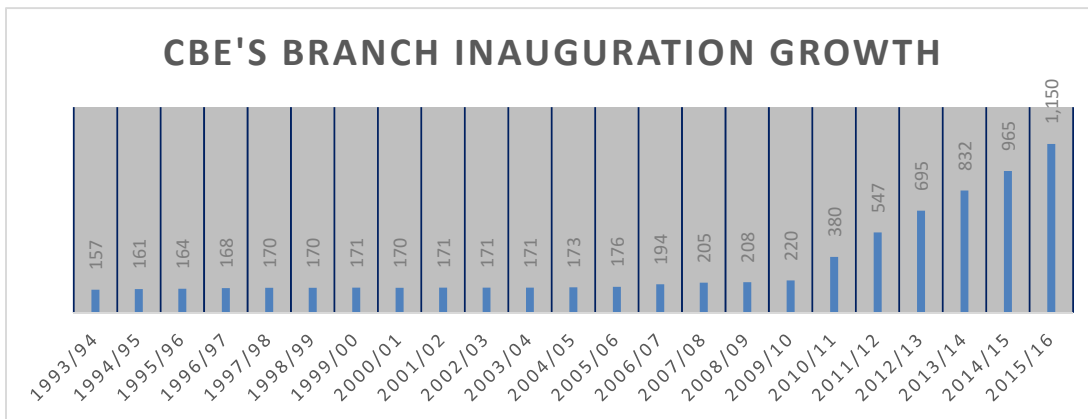
Year	Total Number of Branches			%age Share
	Regions	Addis Ababa	Total	
2014/2015	785	192	977	36.3
2015/2016	888	262	1150	36.1

*Source: Commercial Bank of Ethiopia*

Ethiopian financial sector has been resilient and continued to operate under safe and sound environment. Commercial banks have continued to expand their financial intermediation and remained highly profitable. Following 2015/16 NBE annual report, commercial banks in Ethiopia opened 494 new branches in a single year, and then their total branch network increased to 3,187 from 2,693 a year earlier which resulted in improved access to finance. They have also stepped up their deposit mobilization activity, loan collection and disbursement.

According to *M.A. Baqui*, there is a link between commercial banks deposits and commercial bank's branch expansion. Deposit growth is influenced by branch expansion and expansion of bank branches is also influenced by the level of deposits in any area (*M.A. Baqui et al, 1987*). Commercial bank of Ethiopia has been opening branches in and outside

Before 2008/2009 (G.C) CBE believes that branch opening has reduced its share in terms of branches to about 50% and the need to consolidate the bank's existing branches. In order to carefully understand their concern, the 1999/2000 annual report page 20 says, the share in terms of the number of the branches of the CBE fell from about 60% in 1999 to 55% in 2000.



**Source: Commercial Bank of Ethiopia**

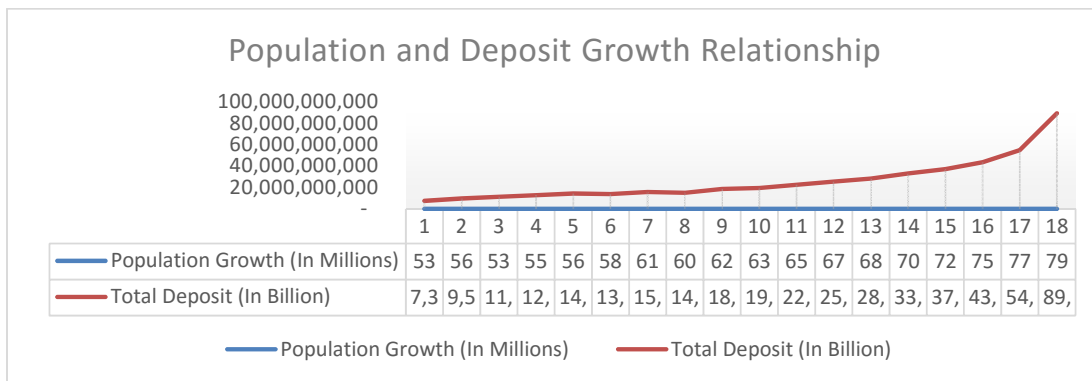
In addition to the above diagram, the following will clearly indicate how commercial banks of Ethiopia expand its number of branches on the last 23 years. Between 1993/94 and 2015/16, the bank able to open 993 new branches, out of this 770 branches are opened after June 2011, the same period incremental deposit amount of the bank was around 200 billion birr. As per literatures indicated above branch opening can be considered as a factor affecting bank deposit growth.

H0: There is no significant relationship between branch expansion and commercial bank deposit

HA: There is a positive significant relationship between branch expansion and Commercial bank deposit.

## F. Population Growth

If population is high in a given nation, it can contribute to high labor force participation that can rise saving rate or banks deposit growth. Saving could happen only when there is transitory income whereas; in steady growing economy saving rate will be changing through population growth or productivity. When source of growth is population, saving rate will increase, this is because of the share of younger households in the economy is larger than those of the retired one. So that saving of younger is much higher than dis-saving of the retired. While when source of growth is productivity the younger associates have larger lifetime resources than older ones, and, therefore, younger group saving is larger than the dis-saving of retired group (*Modigliani, 1986*). The next diagram shows population growth of the country and 18 years CBE's deposit growth, from period 1993/94 to 2010/11. In the period shown, the total population of the country increased by 26 million, while 82 billion birr incremental deposit growth registered.



*Source: Commercial Bank of Ethiopia*

In Ethiopia, total population is 92,205,000 as Central Statistics Agency (CSA) estimation for 2016, out of which the mid-year population (which is believed the productive society and actively participate in saving and investment).

Items	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Mid-Year Population	80.7	82.7	84.8	87.0	89.1	91.2

*Source: National Planning Commission, (In Millions)*

H0: There is no significant r/p between population growth and deposit.

HA: There is a positive significant r/p between population growth and bank deposit.

## G. Effect of Financial Innovations (Electronic Banking/E-Banking)

Innovations in Information Communication & Technology (ICT) have revolutionaries the financial sector resulting in novel delivery channels for financial products and services such as Automated Teller Machines (ATMs), mobile phone banking, online banking, and Agency banking (Ahmad, 2006). These developments leveraged on ICT are termed as electronic banking (e-banking) which is a sub-component of electronic commerce (E-commerce). E-banking has been very instrumental in improving the quality of service and financial performance of banks (Beck etal, 2007).

### Description of Variables and Research Hypothesis

In the course of this research, various articles and master's thesis were also searched for experience, assessment and validation of their conclusions. The variables used in the study, symbolic representation and its units of measurement are display below.

**Table 1 - Variables Definition and its Units of Measurement**

<b>Dependent Variable</b>	<i>D - Total Deposit Growth</i>	<i>In Birr</i>
<b>Independent Variables</b>	<i>EG - Economic Growth or GDP</i>	<i>Percentage</i>
	<i>I - Inflation</i>	<i>Percentage</i>
	<i>IR - Interest Rate Payable for Bank Deposit</i>	<i>In number</i>
	<i>ER - Exchange Rate or Monetary Policy</i>	<i>In number</i>
	<i>BI - Branch Inauguration</i>	<i>In Number</i>
	<i>PG - Population Growth Rate</i>	<i>Percentage</i>
	<i>FI - Financial Innovation (E-Banking) Effects</i>	<i>Percentage</i>

### 3.6. Data Reliability and Validity

The reliability of an assessment tool is the extent to which it measures learning consistently. The validity of an assessment tool is the extent by which it measures what it was designed to measure. Is known that mainly secondary data are at risk to some errors while on data collection. Accuracy of secondary data is not known, because of lack of control on the data quality and the data may be outdated. It certainly strikes the result. The F-test and the coefficient of determination were used to test the validity and reliability of the relationship established by the regression analysis. The influence of respectively independent variable on the dependent one will be revealing in the succeeding section together with the investigation and outcome having in mind the research objective.

## Chapter 4

### Data Presentation, Analysis and Discussion of Findings

#### 4.1 Introduction and Descriptive Data Analysis

This chapter shows the presentations and analysis of data collect from questionnaire administered to get sample opinions of management staff (high, middle and lower level) and other employees working in CBE. Sixty (60) questionnaires went out and fifty (50) questionnaires collected from, and I believed that the analysis and presentation which is related to requests in the questionnaire is a true reflection of them. Also the chapter consists of the analysis of quantitative and qualitative data identified in the previous chapter. It presents the descriptive and statistical data analysis for the variables as well as the test for heteroskedasticity, autocorrelation and normality testing to know if the assumptions of **CLRM** violated or not.

In order to notice the trend of the time series data to be used in economic analysis model on both the dependent and independent variables, descriptive data analysis was conducted. Descriptive research is used to describe characteristics of a population or phenomenon being studied. Descriptive statistics are numbers that are used to summarize and describe data.

#### 4.2 Variables (Both Dependent and Independent) Statistical Analysis

The descriptive statistics includes mean, median, maximum, minimum, standard deviation and others statistics value gives a broader picture that the residuals from the regression using these variables were expected to follow a normal distribution for efficient and unbiased estimators. Table below shows variables used in the model and its interpretations.

**Table: 4.2.1 - The statistical analysis of the variables**

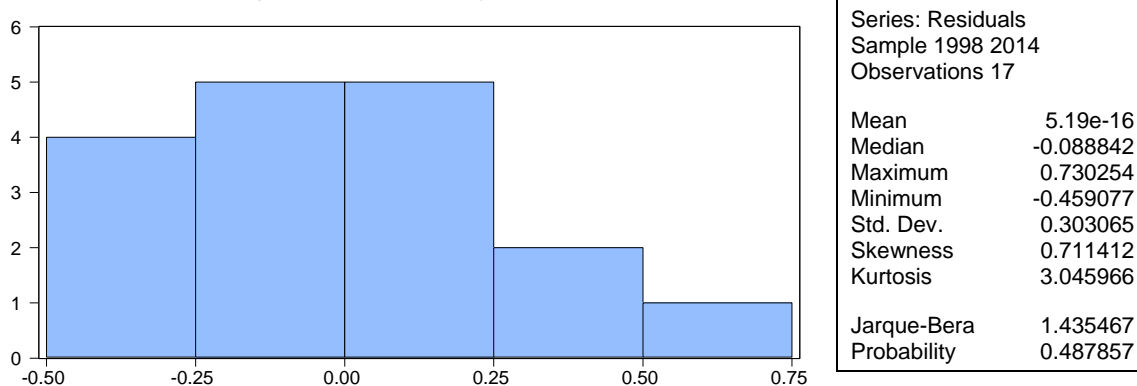
<b>Variables</b>	<b>TDGR</b>	<b>IR</b>	<b>EG</b>	<b>IR</b>	<b>PG</b>	<b>BI</b>
<i>Mean</i>	0.1953	0.1174	0.0799	.0433	0.2630	5.4865
<i>Minimum</i>	0.0608	-0.0820	-0.0350	.0300	0.0211	5.1298
<i>Maximum</i>	0.5419	0.4440	0.1360	.0600	0.6996	6.7522
<i>Std. Dev</i>	0.1334	0.1272	0.0504	.0118	0.1902	0.5491
<i>Skewness</i>	1.2566	1.0628	-1.2030	.0852	0.06237	1.3812
<i>Kurtosis</i>	3.7870	3.9711	3.2926	1.486	2.7403	3.2674
<i>Jarque-Bera</i>	4.9128	3.8686	4.1613	1.643	1.1500	5.4561
<i>Probability</i>	0.0857	0.1445	0.1246	0.439	0.5626	0.0653
<i>Observation</i>	26	26	26	26	26	26

**Source: Research Data from Eview7**

The skewness which measures the asymmetry of the distribution around its mean has values greater than 0 except in one occasion. This is an indication that the distribution has a long right tail. The kurtosis measures the flatness of the series. The result shows that all variables have values nearer to 3 and satisfies that condition except deposit interest rate. The result from the Jarque-bera test indicates an acceptance of the null hypothesis that the random variables are normally distributed because the JB statistics are greater than critical values at 5% level. The probability value of the model also conform that the null hypothesis of variables being normally distributed as the result there is no reject region.

The summary descriptive statistics of the variables used is presented in table 4.3.2 shows us over the study period, the average total CBE deposit grew by 19.53 percent whereas the average inflation rate, *GDP*, deposit interest rate, and country level population rate and number of branches growth rate was 11.74, 8, 4.33, 26.30 and 5.49 percent respectively.

**Table: 4.2.2 - Test for Non-Normality Test**



**Source: EViews7 output for normality test**

A Jarque-Bera normality test has been used for normality test. The non-normality test table 4.3.2 indicates that the kurtosis value is around 3.04 which are related to 3. Jarque-Bera's also indicates that the residuals are normally distributed having the value 1.43 which is greater than 0.05. The p-value given at the bottom of the normality test screen should be bigger than 0.05 to fail to reject the null hypothesis at the 5% level (Chris, 2008) In this case the p-value 0.48 which is greater than 0.05 had failed to reject the null hypothesis of normality presence.

**Table: 4.2.3 - The Heteroskedasticity Test of the Multiple Regression**

The test of heteroskedasticity is a test of the second assumption of *OLS* estimator that says the variance of errors term is constant. The researcher uses Breusch Godfrey test (BG test) to test for heteroskedasticity.

Ho: The assumption that there exists homoscedasticity and

H1: There is no homoscedasticity (There is Heteroskedasticity).

Heteroskedasticity Test: Breusch- -Godfrey

<i>F-statistic</i>	1.469874		0.2436
<i>Obs*R-squared</i>	6.986764	-Square(5)	0.2216
<i>Scaled explained SS</i>	11.38609	-Square(5)	0.0442

**Source – EViews7 Output**

As per the above end revealed the three different types of tests for heteroskedasticity and all fails to reject the null hypothesis of homoscedasticity presence, Therefore, it can be concluded that the variance of error term is constant, which is better, or the second assumption of *CLRM* is not violated.

**Table: 4.2.4 – Test for Multicollinearity (Correlation matrixes)**

<i>Variables</i>	<i>LTDGR</i>	<i>IR</i>	<i>GD</i>	<i>LADIR</i>	<i>DVI</i>	<i>IFRGR</i>	<i>LNB</i>
<i>LTDGR</i>	1.00	0.33	0.38	0.45	0.49	0.09	0.65
<i>IR</i>	0.33	1.00	0.25	0.06	0.43	-0.22	0.24
<i>GDP</i>	0.38	0.25	1.00	-0.09	0.16	0.14	0.29
<i>LADIR</i>	0.45	0.06	-0.09	1.00	0.18	-0.26	0.40
<i>DVI</i>	0.49	0.43	0.16	0.18	1.00	-0.31	0.25
<i>IFRGR</i>	0.09	-0.22	0.14	-0.26	-0.31	1.00	-0.24
<i>LNB</i>	0.65	0.24	0.29	0.40	0.25	-0.24	1.00

**Source: EViews7 output for normality test**

The correlation matrix presented above directs a positive relationship between Total deposit growth (dependent) with explanatory variables (inflation, GD, average deposit interest rate, number of branches, population growth rate of a country and dummy). As expected, all explanatory variables are positively related or correlated to the explained variable. And also there is no higher correlation between independent variables. Therefore it can be concluded that there is no correlation between the explanatory variables.

**Table: 4.2.5 – Results of the Regression Analysis**

**Dependent Variable – LNTBDGR (Total Deposit of the Bank)**

**Method – Ordinary Least Squares**

**Date – 05/01/17 Time; 13:35**

**Sample – 1982 – 2015 GC**

**Included Observations – 26 after adjustments**

<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.</b>
<i>C</i>	-3.311341	1.974738	-1.676851	0.1245
<i>LNADIR</i>	0.671495	0.390946	1.717617	0.1166
<i>GDP</i>	1.466912	2.172543	0.675205	0.5149
<i>IR</i>	0.463257	0.867178	0.534212	0.6049
<i>LNNB</i>	0.551303	0.212841	2.590204	0.0269
<i>MPER</i>	1.378573	0.569883	2.419046	0.0361
<i>DV</i>	1.006113	0.460533	2.184671	0.0538

<i>R-squared</i>	0.766209	<i>Mean dependent var</i>	-1.825670
<i>Adjusted R-squared</i>	0.625935	<i>S.D. dependent var</i>	0.626790
<i>S.E. of regression</i>	0.383350	<i>Akaike info criterio</i>	1.213164
<i>Sum squared resid.</i>	1.469572	<i>Schwarz criterion</i>	1.556252
<i>Log likelihood</i>	-3.311896	<i>Hannan-Quinn critere</i>	1.247268
<i>F-statistic</i>	5.462220	<i>Durbin-Watson stat</i>	1.624255
<i>Prob(F-statistic)</i>	0.009525		

**Source: EViews7 output for normality test**

### 4.3. Summary of Regression Analysis and Results Interpretations

The main variables in this analysis are dependent, independent and dummy variables. The relationship between one dependent variable and six independent variables is regressed using econometric software called EViews7. Dependent variable in this case annual bank deposit growth which is affected by independent variables. Independent variables in this case are factors that mostly affect the commercial banks deposits. These are economic growth or gross domestic product /GDP/ of the country, inflation rate, bank interest rate payable for depository customers, monetary policy or exchange rate, branch inauguration and population growth of the country. But others are collectively contained in error term.

Therefore the general models which incorporate all of the variables to regress are:

**LNTBD:** is total amount of annual deposits growth rate held by commercial bank of Ethiopia on year t`

**ADIR:** is average deposit rate of commercial banks of Ethiopia on the year t`

**NB:** is the number of branch in CBE on the year t`

**GDP:** is the real domestic product/GDP/ growth of Ethiopia on the year t`

**IR:** is the overall inflation rate in Ethiopia on the year t`

**MPER:** Monetary policy or exchange rate in Ethiopia on the year t`

**DV:** Dummy variable is policy change in the year 2011 regarding too aggressive branch opening rather, using new banking technology like core banking and deployments of ATM. As in the year major policy adjustments the value of dummy variable is 1 otherwise 0. The regression by ordinary least square method with the data of successive 34 years from the 1982 G.C to 2015G.C.

### 4.4 Results Interpretations

#### A) Coefficient of determination of the model

The above table (Table 4.3.5) shows the results of regression analysis. An F statistics of explaining the factors that influence the growth of total bank deposits from customers. The

coefficient of determination of  $R^2$  0.766209 means that 76.6% of the variation in deposits is being explained by the independent variables in the model and there is a strong relationship between deposits and the independent variables. Based on the regression results also, the model proved to be consistent with the autocorrelation. But the D-W test of 1.624255 was obtained which is inconclusive to determine autocorrelation is existing or not.

#### **B) Coefficient of determination of the constant term**

The coefficient estimate of the constant of the regression is -3.3112 shows that the value of dependent variable if all independent variable becomes zero. This indicate that the total deposit of commercial banks will be decreased by the unit 3.3112 given all independent variable zero and this indicate that the dependent variables in the model is highly depends on the dependent variable. Then again the probability of 0.1245 showed that this variable was insignificant.

#### **C) Coefficient of determination of average deposit interest rate**

Deposit interest rate was found to have a positive relationship with bank deposit growth but the relationship is however insignificant according to the model in Table 4.3.5 above. This could be attributed to the fact that in CBE interest rates hardly reflect market conditions thus the effects of other macroeconomic indicators in determining CBE's deposits. The correlation coefficient for deposit rates is 0.671495 indicating that ceteris paribus a 1% increase in deposit interest rates leads to a 0.671495 increase in CBE deposits. And also probability value of 0.1166 is greater than 0.05 critical value showed that this variable was insignificant in assessing the research problem.

#### **D) Coefficient of determination of GDP**

A regression coefficient of 1.466912 means that 1% increase in **GDP** per capita results in 1.466912 units increase in CBE deposits. However there is a positive relationship between deposits and level of economic activity, then again the probability value of 0.5149 indicated that this variable is insignificant for the deposit growth in case of CBE deposit growth.

#### **E) Coefficient of determination of inflation rate**

The regression coefficient for inflation is 0.463257. This indicates that ceteris paribus, an increase in Inflation by 1% leads to increase in deposits by 0.463257 units. Consistent with economic theory, as inflation soars households forego banking products. Households are expected to buy properties and other real assets to cushion themselves against loss in purchasing power of their monies. However, in many literatures the effect of inflation is

not clearly defined but in this study the relationship between CBE deposit and inflation is positive but not as significant

#### **F) Coefficient of determination of increasing number of branches**

Based on the model in Table 4.3.5 above, the relationship between branch opening or addition and bank deposit had a positive and robust association in CBE deposit. The study ascertains that CBE'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. This is therefore, the study exhibited us branch opening have positively correlated highly significant on CBE's deposit growth.

#### **G) Coefficient of determination of monetary policy or exchange rate**

Monetary policy or exchange rate of a country has become another significant determinant of household saving and domestic private saving nowadays (Athukorala and Sen, 2001). It has positive impact on individual's income and savings. The table 4.3.5 above in this model also closely shows us the relationship between CBE's deposit and exchange rate from outside have positive and significant relationship against bank deposit growth.

#### **H) Coefficient of determination of Dummy variable**

The deposit market share of the CBE has been dropping for quite a long time with the entry of new banks although it maintained its dominant position in the market. This long term drop was somewhat reversed in 2011 because of some policy adjustment like opening new branches rather than only expansion of existing branch and using new banking technologies. Based on this policy adjustment in end of year 2010, CBE has opened 210 new branches in 2011. This CBE'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. Furthermore extensive training of staff based on the HRD strategy that will be responsive enough to the demands of customers, which results in service excellence.

On the basis of this policy adjustment, the level of deposits by the CBE was reached 86,498 billion birr and 54.5% growth in the end of 2011 compared with other years which was exceptional in the history of CBE' total deposit .

### **4.5 Analysis of Qualitative Data**

The questionnaires are distributed to the employees of commercial bank of Ethiopia (CBE) in selected some of city and outline branches. As per the respondents have good

understanding on which how banks generate their funds, which fundamentally has its roots in bank deposit creation. Also the respondents agree that the level of public awareness towards banking services and perception about banks in general and the CBE in particular are the most determining factors for bank deposit. The study had used the frequency distribution output from *SPSS* software to analyse questionnaires. There are 50 questionnaires analysed. Accordingly, the result of the frequency distribution as displayed by the software is mentioned and interpreted as follows.

### **I. Background/Personal Information of the Respondent**

Here, the researcher tried to point out age category, sex mixture, educational level, working experience at CBE and present job title of all the questionnaire respondents and table below illustrates about the above information collected from.

**Table 1 - The frequency distribution for age category of the respondents**

<b>Age Group</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Valid Percent</b>
<i>Below 30 Years</i>	10	20	20
<i>31 - 40</i>	25	50	50
<i>41 - 50</i>	10	20	20
<i>Above 51 Years</i>	5	10	10
<b>Total</b>	<b>50</b>	<b>100</b>	<b>100</b>

*Source: SPSS output of frequency distribution of the respondents*

Table 1 displays 20% (10) of the respondents time of life is lower than 30 years, half of the respondents are found between 31–40 years, the remaining 20% (10) and 10% (5) of the respondents are in the middle of 41–50 and above 51 years old respectively.

**Table 2 - The frequency distribution for age mixture of the respondents**

<b>Sex Type</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Valid Percent</b>
<i>Male</i>	38	76	76
<i>Female</i>	12	24	24
<b>Total</b>	<b>50</b>	<b>100</b>	<b>100</b>

*Source: SPSS output of frequency distribution of the respondents*

Table 2 shows us 76% (38) of the respondents are male and the rest 24% (12) of the respondents are female; here we can easily see the male staff’s domination.

**Table 3 - The frequency distribution for educational level of the participants**

<b>Educational Level</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
<i>Diploma</i>	2	4	4
<i>BA Degree</i>	34	68	68
<i>MA Degree</i>	14	28	28
<b>Total</b>	<b>50</b>	<b>100</b>	<b>100</b>

*Source: SPSS output of frequency distribution of the respondents*

The above table indicates 2 or 4% of the respondents have diploma, 34 (68%) of them have BA degree, 14 (28%) of them have master's degree and there was no participant who had PhD.

**Table 4 - The frequency distribution for working experience of the respondents in CBE**

<b>Work Experience</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Valid Percent</b>
<i>Below 3 Years</i>	6	12	12
<i>4 - 10</i>	18	36	36
<i>11 - 20</i>	15	30	30
<i>Above 21 Years</i>	11	22	22
<b>Total</b>	<b>50</b>	<b>100</b>	<b>100</b>

*Source: SPSS output of frequency distribution of the respondents*

The table beyond demonstrates the working experience interim of participants in CBE, based on it 12% (6) and 36% (18) were found below 3 years and between 4-10 years respectively. The remaining 15 (30%) of them were found "between" 10-20 and 11 (22%) participants have had above 21 years of working experience in the bank.

**Table 5 -The frequency distribution for present job title of the respondents in CBE**

<b>Current Job Title</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Valid Percentage</b>
<i>Branch Manager</i>	26	52	52
<i>Customer Service Manager</i>	8	16	16
<i>Planning Officer</i>	5	10	10
<i>Senior Customer Service Officer</i>	5	10	10
<i>Customer Service Officer</i>	4	8	8
<i>Customer Relation Officer</i>	2	4	4
<b>Total</b>	<b>50</b>	<b>100</b>	<b>100</b>

*Source: SPSS output of frequency distribution of the respondents*

Depend on the table directly above partial of (26 or 52%) the respondents are branch manager in the bank, I believe that they are the right person to respond as it should be related to the subject matter, also 8 (16%) of the respondents are on the position of customer service manager. In the other hand 5 participants having 10% weight are classified for both senior customer service officer and planning officers. The rest four (8%) and two (4%) of the respondents present job title is customer service officer and customer relation officer.

In order to grasp relevant information, (all respondents are employee of the commercial bank of Ethiopia) specially connected to respondents it's blameless to exhaustively aspect different sections and job titles. In reference to this frequency distribution indicates the normal distribution among each job titles of bank staffs, hence, we can say the maximum respondents are entitled to response the requests raised by the investigator.

## **II. General Information of the Respondent**

### **A. Skill Based Questions**

Evidence about elements of banks deposit growth, as it is presented in the methodology part, I tried to assemble facts and figures from the right persons or bank staffs. Before opening the discussion to the elementary concerns of the research is indeed better to know some real fact attributed to bank deposit growth.

**Table 6 - The frequency distribution for knowhow about deposit mobilization**

<b>Deposit Mobilization Knowhow</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
<i>Yes</i>	46	92	92
<i>No</i>	4	8	8
<b>Total</b>	<b>50</b>	<b>100</b>	<b>100</b>

*Source: SPSS output of frequency distribution of the respondents*

As regard to the above table, 46 or 92% of the respondents have the knowledge or experience about deposit mobilization, but only 4 participants having 8% weight haven't the knowhow.

**Table 7 - The frequency distribution about deposit is a matter of existence for CBE**

<b>Deposit for Survival</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
<i>Yes</i>	42	84	84
<i>No</i>	6	12	12
<i>I don't know/ I have no idea</i>	2	4	4
<b>Total</b>	<b>50</b>	<b>100</b>	<b>100</b>

*Source: SPSS output of frequency distribution of the respondents*

Away from the above table, 42 (84%) of the respondents are agreed that without having deposit the bank can't survive and only 6 (12%) of the respondents disagree that the bank can stay alive even without requiring deposit. Only 2 respondents doesn't have any idea.

**Table 8 - The frequency distribution about awareness on CBE's deposit mobilization (DM) strategy**

<b>DM Strategy Awareness</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
<i>Yes</i>	41	82	82
<i>No</i>	9	18	18
<b>Total</b>	<b>50</b>	<b>100</b>	<b>100</b>

*Source: SPSS output of frequency distribution of the respondents*

Going from the table above 41 (82%) of the respondents are well-known about CBE's deposit mobilization strategy, but the residual 18% of the respondents haven't awareness. It indicates that the sample designated from the whole population is considered virtually perfect to provide significant information accompanying the study as it should be.

**Table 9 - The frequency distribution about mobilizing enough deposits by CBE**

<b>Sufficient Deposit Mobilized</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
<i>Yes</i>	17	34	34
<i>No</i>	30	60	60
<i>I don't know/ I have no idea</i>	3	6	6
<b>Total</b>	<b>50</b>	<b>100</b>	<b>100</b>

*Source: SPSS output of frequency distribution of the respondents*

The above table, 17 (34%) of the respondents react that CBE collects enough deposit, however 60% of the participants in the questionnaire considers that the total deposit mobilized by the bank is not sufficiently satisfactory. Lasting, only 3 respondents didn't know or have no idea whether CBE collects adequate deposit or not.

**Table 10 - The frequency distribution from where the bank mobilizes its deposits**

<b>Where Deposit Comes From</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
<i>Individual Customers</i>	6	12	12
<i>Business Customers</i>	10	20	20
<i>Government</i>	12	24	24
<i>All</i>	22	44	44
<b>Total</b>	<b>50</b>	<b>100</b>	<b>100</b>

*Source: SPSS output of frequency distribution of the respondents*

In regard to table above 6 respondents reply that commercial bank of Ethiopia collects its deposit from individual customers, 10 and 12 participants agreed business customers (organization) and government are the main sources of CBE's deposit respectively. As well 22 (44%) of the respondents states that the bank is mobilizing its deposits from all, private/individual customers, business organizations & government.

## **B. Strategic Questions**

**Table 11 - The frequency distribution for aspects of keeping deposit growth by CBE**

<b>Approach to Keep Deposit Growth</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
<i>Better level of saving awareness</i>	7	14	14
<i>Gained from CBE's larger Market Share</i>	14	28	28
<i>Wider Branch Network Service</i>	20	40	40
<i>Service Excellence</i>	6	12	12
<i>Others</i>	3	6	6
<b>Total</b>	<b>50</b>	<b>100</b>	<b>100</b>

*Source: SPSS output of frequency distribution of the respondents*

Out of the above inquiry 14% of the respondents claim that better level of awareness enabled CBE to keep its deposit growing, however, 28% of them prevailing for advantaged gain pointed out the aspect of wider branch network service to allow CBE's deposit growth in a better level and the 12% advocates the bank to emphasis for service excellence so as to keep its deposit growing. The others 6% believe that peoples like the bank, its public trust and pioneer for the banking industry will preserve CBE's deposit growth.

**Table 12 - The frequency distribution of key factors that affect CBE's deposit growth**

<b>Factors Affect CBE's Deposit Growth</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
<i>Countries' Business Transaction Capacity</i>	6	12	12
<i>Countries' Economic Situation</i>	16	32	32
<i>People's Saving Habit</i>	11	22	22
<i>Others</i>	2	4	4
<i>All</i>	15	30	30
<b>Total</b>	<b>50</b>	<b>100</b>	<b>100</b>

*Source: SPSS output of frequency distribution of the respondents*

Made from the study on table 12, 6 (12%), 16 (32%), 11 (22%) of the respondents approved that the business transaction capacity or volume of the country, economic environment of the country and saving habit of the society will affect the volume of deposit growth respectively. Others fifteen (30%) respondents considers all can be the influential factors affecting deposit growth level of the bank.

**Table 13 - The frequency distribution about deposit variance among CBE branches**

<b>Difference of deposit</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
<i>Yes</i>	45	90	90
<i>No</i>	0	0	0
<i>I don't know/ I am not sure</i>	5	10	10
<b>Total</b>	<b>50</b>	<b>100</b>	<b>100</b>

*Source: SPSS output of frequency distribution of the respondents*

Based on the above table, except 5 (10%) respondents who are not sure what to say, all of them replays that the amount of deposit that CBE had and its progress are different in volume or size among branches of the commercial bank.

**Table 14 - The frequency distribution about cause for dissimilarities of deposit growth among CBE branches**

<b>Major cause of difference</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
<i>Leadership Quality</i>	6	13	13
<i>Societal Awareness</i>	2	4	4
<i>Branch Staff Awareness</i>	5	11	11
<i>Branch Office Convenience</i>	7	16	16
<i>Service Excellence</i>	8	18	18
<i>All</i>	17	38	38
<b>Total</b>	<b>45</b>	<b>100</b>	<b>100</b>

*Source: SPSS output of frequency distribution of the respondents*

Each individual (who believed that CBE's total deposit varies from branch to branch) respondents were questioned to state their sense about major causes for the differences in total deposit among the commercial bank of Ethiopia branches in their respective area. As said by the respondent 6 (13%) put their pen on leadership quality as a reason for. Branch staff awareness and societal awareness had less value. Even though service excellence manipulated by a single branch and branch office convenience score higher, all (38%) of the above arguments together are able to consider as a key reasons for the dissimilarity in total deposit amount under CBE branches.

**Table 15 - The frequency distribution for remarkable deposit growth made by CBE**

<b>Is CBE Deposit Growth Remarkable</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
<i>Strongly Agree</i>	27	54	54
<i>Agree</i>	13	26	26
<i>Disagree</i>	5	10	10
<i>Strongly Disagree</i>			
<i>I Don't Know</i>	5	10	10
<b>Total</b>	<b>50</b>	<b>100</b>	<b>100</b>

*Source: SPSS output of frequency distribution of the respondents*

Having in mind some exceptions, which advises the bank to exert more to maximize and take full advantage for its deposit growth prospect, 80% of the respondents above, approves that CBE's growth in terms of deposit and its constant growth is remarkable.

### **III. Hypothesis or Independent Variables Related Questions**

**Table 16 - The frequency distribution of factors affecting CBE's total deposit growth**

<b>Most Determine factors for Bank Deposit Growth</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>
<i>GDP or Economic Growth of the Country</i>	6	12	12
<i>Total Inflation Rate of the Country</i>	4	8	8
<i>Interest Rate Payable for Bank Deposit</i>	5	10	10
<i>Monetary Policy or Exchange Rate</i>	3	6	6
<i>Branch Inauguration (Opening New Branches)</i>	11	22	22
<i>Population Growth</i>	5	10	10
<i>Effects of Financial Innovations (E-banking)</i>	3	6	6
<i>Others</i>	3	6	6
<i>All</i>	10	20	20
<b>Total</b>	<b>50</b>	<b>100</b>	<b>100</b>

*Source: SPSS output of frequency distribution of the respondents*

In reference to the table overhead the 22%, and the 12% of branch inauguration and economic growth rate of the country (**GDP**) respectively reflected as major reasons to decide on CBE's

total deposit growth. Both saving interest rate and population growth of a country scores a weight of 10%. As per the 8% respondents total inflation rate affected bank deposit growth. Extra variables like monetary policy and effects of financial innovation affect bank deposit growth at 6%. The last 20% of the respondent said that all are considered as factors affecting bank deposit growth rate together. The six percent, called others, stated by three respondents includes customer base expansion (create saving awareness & opening bank account) and increment on per capital income (average income earned by a person) used for better living standards and saving.

## Chapter 5

### Summary of Research Findings, Conclusions and Recommendations

#### Introduction

This chapter presents summary of the research work. It covers the major findings, conclusions arrived at and the recommendations made. Additionally, the chapter reviews the study results and discusses the conclusions drawn from the investigation, and make available recommendations for policy makers (**NBE**) and proposals for researches yet to come related to the study.

#### 5.1 Summary of Study Findings

The key purposes of the study was to find out the main elements or factors affecting commercial bank deposit growth (in case of commercial bank of Ethiopia) and to evaluate the relationship which influence the selected microeconomic and financial level variables on banks deposit growth. It faithfully examines the vibrant effect of **GTP** or economic gross rate of the country, deposit interest rate, inflation, monetary policy or exchange rate, financial innovations, population growth of a country and branch opening or inauguration on the level of bank deposit growth. Also to find out the aspects to determine deposit growth of commercial banks, to evaluate the connection among the commercial bank's deposit growth against the major factors of the independent variables and to inspect the effect of qualitative factors like expansion of bank branches (from availability and accessibility point of view), customer base expansion, loan, services excellence, public saving awareness level, cash related risk and technological factors on deposit growth of commercial banks.

As a result of the investigation and explanation, the followings are the leading summary description of the findings and research results:

Saving is local resource for banks expected for mobilization from the whole society in the form of payable to the saver on demand. Besides, it is well-known that collecting money (for deposit) is the most vital activities of the commercial bank of Ethiopia. Saying that, without having deposit and maintaining its growth it's unable to persist as a bank for CBE.

Depending on evidence ascertains in the study, leading in proper way is not thinkable without understanding and monitoring the fundamentals elements affecting deposits and

way of its growth. Also it is actually hard to lead the banking industry market in the absence of deposit available for loan. For the reason that, staffs, the management and stakeholders of the bank has concerned about deposit and the responsible elements for bank deposit growth.

Following the study, CBE has the capability, readiness and motivation to contribute for the healthy economic growth of the country by keeping its deposit growth. Similarly, the study indicates the foundations and categories of CBE's deposit. As a result there are three forms of deposits: basic saving deposit (traditional saving account), demand deposit (current account) and fixed time or certificate of deposit (time deposit), the sources of bank deposit are from all financial units including individuals, private and government. Likewise financial institutions (like banks, microfinance, insurance companies, trust companies and credit unions) and public enterprises (totally owned by government) are considered as a source of deposit for commercial bank of Ethiopia.

The paper grasp that the volume of CBE's deposits has been constantly increasing over time through the rate fluctuates from time to time. In addition, the strategic factors for deposit growth are better level of saving awareness, advantage gained from CBE's large market share, wide branch network service, service excellence, branch expansion (opening new branches and outlets), use of new technologies (like card, mobile and internet banking and point of sale (buying goods and services using cards) and public marketing activities.

Results from the qualitative analysis determine that mobilization of deposit is challenging task owing to many elements govern bank's deposit growth. To validate such result I have had used empirical data by applying economic analysis model, the comings are the relationship between bank deposit growth and influential elements presented.

In addition, CBE's aggressive branch opening has positive correlation with deposit mobilization and deposit progress in connection with increasing number of customer and improved commercial attachment over making available to the unbanked society (both in rural and urban areas).

In view of that, the study makes known that new branch inauguration is extremely significant and important task aimed at CBE's deposit growth. As per CBE annual report 2014/15, the market share growth is obtained through reaching the unbacked society segment by expending accessibility (not snatching from the existing customer base of the

industry). Connected with economic analysis model result inflation, **GDP** and deposit interest rate was found to have a positive relationship with bank deposit growth although the weight on deposit growth is insignificant. The same is true for financial innovations and population growth.

Also, I tried to gather respondents reaction about things should be done to mobilize deposit to enable the bank ensure sustainable growth. As per the respondent, increases in per capital income and awareness creation are vital. Especially awareness creation is a perfect instrument for bank deposit growth; because the more the people are aware the higher will be the savings mobilization. Likewise, providing high touch client service (quality customer services), integrated advice for depositors and highly trained professionals are similarly necessary to warrant maintainable deposit growth. Also commercial bank of Ethiopia must come up with products and services for the unbanked population all over the country as a result can promote their products and built brand loyalty in the public mind by taking the first mover advantage at hand.

To end with, the review discloses round about strategic change in direction of guiding principle on increasing bank branch networks (new branch opening as of availability and accessibility standpoint). On the strength of this policy change in year 2010/2011, the incremental deposit of the bank shows 200 billion birr between 2010/2011 to 2015/2016. Then, the total deposit position of the bank reached more than 288 billion birr and this number between the above mentioned years leads us to conclude 324% growth. Additionally, 756 additional branches, which is 67% of CBE's total number of branches was opened during the period stated overhead. This fact tell us 70% of the bank's total deposit was collected for the last five years, which is understood remarkable success and great achievement for commercial bank of Ethiopia, because the incremental deposit growth amount which is collected on the previous five years (on the 1<sup>st</sup> growth and transformation plan (**GTP-I**) period of the country) is more than three times deposit collected by the bank in its 75 years line of business.

## **5.2 Conclusions**

The finding from the study led the researcher to conclude in the following manner, the research studied the significant factors affecting bank deposit growth and to evaluate the relationship which influence the selected microeconomic and financial level variables on banks deposit growth in the case of Commercial Bank of Ethiopia, constructed on the

outcome of practical/empirical and descriptive analysis, the study taken to finish resulting later ends as a decision and conclusion.

Conforming to this academic work, mobilizing deposit is much challenging everyday jobs. Mobilizing deposit and ensuring its growth is a matter of existence used for every single commercial bank in Ethiopia. Banks are very much dependent on this issues discussed above, because lacking sufficient amount of deposit for banking industry is double trouble risky business. This study also guaranteed us without having adequate deposit and without ensuring its deposit growth commercial bank of Ethiopia can't stay alive as a bank. Referring to this rational confirmation from the investigation, the crucial looks for CBE's deposit growth are better level of saving awareness (people's saving habit), advantage gained from large market share (CBE's large market share), wider branch network service, service excellence, branch expansion (new branch opening), public trust (because CBE is pioneer for banking industry) and new banking technologies (e-banking).

In general, outcomes commencing statistical enquiry revealed that the descriptive variables were positively correlated with the illuminated variable entirely in the case of CBE. Among the variables, wider branch network service (new branch and outlet inauguration in all over the country) is a significant line of attack for deposit mobilization and to attain sustainable deposit growth, it is also extremely substantial than other independent variables. Advantages gained from large market share of the bank, better level of saving awareness and service excellence are also next to wide branch network significantly affects CBE's deposit growth. The others (e.g. effects of financial innovation (E-banking), monetary policy or exchange rate) and inflation rate of the country) are affects positively and can increase CBE's deposit but these factors are not as such significant. But, interest rate is reflected significant or major influence on deposit growth, as a result saving depositors aiming the interest income search for banks having better interest rate.

Also, the 'p' value in the model shows as there was significantly high; hence the explanatory variables were able to account for the total variation of the dependent variable (deposits growth). The value of Durbin Watson Statistic (DW) showed that there was no presence of autocorrelation; hence, the model produced a sound economical result.

### **5.3 Recommendation**

The bank should also educate its customers about saving and its advantage. Also strong branch opening activities of the bank should remain unchanged. Because, while CBE aggressively opens new branch the customer base for the bank also increases, as a result deposit growth of the bank will be healthy and sustainable deposit progress will maintain.

As it has been distinguished, improved availability and accessibility has a positive relationship with bank deposit growth. Thus, by doing so, CBE can grow its deposit and can station more resources which is found in the hands of the community to help the development of the country.

The bank would provide rewards continuously for saving customers (savers) related to prize linked scheme in order to acknowledge clients, besides the campaign plays a critical role for promoting the organization and societal awareness creation.

### **5.4 Implication for Policy Makers (For the Government and/or NBE)**

The macroeconomic event of Ethiopia could have strong effect on deposit mobilization, which calls for responsive policy to increase domestic saving for the sustainable financial liberty of the country. Based on the analysis made and the major findings obtained, the following policy recommendations are forwarded;

1. Improve infrastructure and incentives for banks to open branches in both remote and central area to reach on the unbanked society. There should be also an investment in strengthening the operational capacity of the existing branches. Particularly those which are located in faraway areas with limited human and other resources. The empirical evidence indicated that deposit would increase vastly as the number of branch increases.
2. There is a well-established positive relationship between economic growth and deposit mobilization. This calls for a continued policy support and investment in enhancing economic growth that would not only increase the capacity of banks to mobilize resources, but also trigger the overall growth of the economy. Likewise, the government should continue to manage inflation below its threshold or optimal level.
3. The result also indicates that increase in population growth will positively affect the growth of deposit. While unmanaged population could hinder economic growth and social development, regulated population growth would mean an increase in functional labour force that would attract investment and create wealth which would positively affect overall economic growth, as a result deposit will grow.

### **5.5 Suggestion for Further Research**

This study has investigated the factors that determines bank deposit growth and evaluated the relationship which influence the selected microeconomic and financial level variables on bank deposit growth and recommendations are made based on the findings. But, yet there are factors such as the customer service quality, loan and education level which is identified by some other literatures to have impact on deposit mobilization and bank deposit growth. Thus a study has to be further strengthened on the significance of these factors on deposit growth and its mobilization activity of commercial banks.

Also academicians can investigate the influence of excellent customer service on bank deposit growth and the relationship between bank loan service for a particular customer and related deposit growth of the customer; it will may determine the link in the middle of loan and deposit.

**Addis Ababa University**  
**College of Business and Economics**  
**Department of Accounting and Finance**  
**(Graduate Program)**

**Factors Affecting Bank Deposit Growth: A case of Commercial Bank of Ethiopia**

**Dear Respondents,**

This study is conducted in partial fulfilment of the requirements for the masters of Science in accounting and finance at Addis Ababa University. Its main objective is to investigate the factors affecting commercial banks' deposit growth and to evaluate the relationship which influence the selected microeconomic and financial level variables on banks deposit growth. The research is going to be carried out based on your responses and other data to be collected from reliable source.

The aim of this questionnaire is to acquire your opinions and observations against the questions below. The information you will give enable me to critically analyse the influential factors for bank deposit growth. Your cooperation to respond is very important to this study.

Please answer each question. The questionnaire search for basic truthful evidence and you can tick the option that you choose or write your answer on the blank space provided. You can add further notes, comments or explanations. I would promise that all information you provide would be strictly confidential.

**Thank you very much in advance for your aid and support.**

**Researcher's Name: Simeon Abebe Y.**  
**E-mail: Nameon7117@gmail.com**  
**Telephone: +251 911 463842**

# Questionnaire

## I. Personal Information

1. Age

Below 30 years  31-40 years  41-50 years  and 50 and above

2. Sex

Male  Female

3. Educational level

Certificate  Diploma  Bachelor degree

Master's degree

If others please specify \_\_\_\_\_

4. Are you employee of Commercial Bank of Ethiopia?

Yes

5. If yes, your work experience in commercial bank of Ethiopia

Below 3 years  4-10 years  11-20 years  21 and above years

6. What is your current job title in Commercial Bank of Ethiopia?

officer

Customer relation officer  Customer service officer

If others please mention it \_\_\_\_\_

## II. General Information

### A. Skill and Experience Related Questions

1. Do you have the knowhow about deposit mobilization?

Yes

2. Do you agree deposit is a matter of existence for commercial banks in Ethiopia?

Yes

3. Do you have any idea about commercial bank of Ethiopia deposit mobilization strategy?

Yes

4. Is commercial bank of Ethiopia mobilizing enough deposits, currently?

Yes

5. Frequently from where does the commercial bank of Ethiopia saving its deposits?

Individuals  Business customers  Government  All

### B. Strategic Questions

6. According to your observation, what aspects have enabled CBE to keep its deposit growing?

Better level of saving awareness  Advantage gained from CBE's large market share

Wide branch network service  Service excellence

Other (please specify) \_\_\_\_\_

7. Which of the following is the major factors affect CBE's deposits growth?

Countries' business transaction capacity

Countries' Economic situation   All

8. Is the amount of deposit collected by CBE's different branches vary?

Yes

9. If yes, what are the major reasons for the dissimilarities in deposit growth among the CBE branches?

Leadership quality  societal awareness  Branch staff awareness  Branch

office convenience  Service Excellency  All

Other (please specify) \_\_\_\_\_

10. Do you think that CBE's growth in terms of deposit is remarkable?

Strongly Agree  Agree  Disagree   
Strongly disagree  I don't know

11. What should be done to mobilize CBE's deposit to enable the bank ensure sustainable growth?

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### III. Hypothesis or Independent Variables Related Questions

#### A. Economic Growth or Gross Domestic Product (GDP)

deposit growth?

Strongly Agree  Agree  Disagree   
Strongly disagree  I don't know

#### B. Inflation

13. Do you think that the total inflation rate of the country affects bank deposit growth?

Strongly Agree  Agree  Disagree   
Strongly disagree  I don't know

#### C. Bank Interest Rate Payable for Depository Customers

14. Do you think that saving interest rate affects bank deposit growth?

Strongly Agree  Agree  Disagree  Strongly disagree   
I don't know

#### D. Monetary Policy or Exchange Rate

15. Do you think that monetary policy or exchange rate affects bank deposit growth?

Strongly Agree  Agree  Disagree   
Strongly disagree  I don't know

#### E. Branch Inauguration

16. Do you think that opening new branch and service outlet affects bank deposit growth?

Strongly Agree  Agree  Disagree   
Strongly disagree  I don't know

#### F. Population Growth

17. Do you think that population growth affects bank deposit growth?

Strongly Agree  Agree  Disagree   
Strongly disagree  I don't know

**G. Effect of Financial Innovations (Electronic Banking/E-Banking)**

18. Do you think that the use of electronic banking affects bank deposit growth?

Strongly Agree  Agree  Disagree   
Strongly disagree  I don't know

19. Which of the following is the most determining factors for CBE's total deposit growth?

**(You can tick more than one)**

Economic or  Total inflation rate of the country   
saving interest rate  monetary policy or Exchange rate  Branch expansion   
 Effects of financial innovation (E-banking)  All

**Thank You for Your Cooperation to Fill the Questionnaire**

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