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DETERMINANTS OF BANK DEPOSIT IN ETHIOPIA: A CASE OF AWASH BANK.

THESIS SUBMITTED TO THE DEPARTMENT OF ACCOUNTING AND FINANCE IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARDOF DEGREE OF MASTER OF SCIENCE IN ACCOUNTING AND FINANCE (MSC.)

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DECLARATION

I, Argan, declare that this study entitled "**DETERMINANTS OF BANK DEPOSIT IN ETHIOPIA: A CASE OF AWASH BANK"** is my own creative work. I have taken on the research work individually with the direction and support of my research advisor. And has never been available for any award of Diploma or Degree in any other College

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APPROVAL

This is to declare that this thesis prepared by Argan Defar entitled: **DETERMINANTS OF BANK DEPOSIT IN ETHIOPIA: A CASE OF AWASH BANK.** And thesis submitted to the department of accounting and finance for the partial fulfillment of the requirements for the award of degree of Master of Science in accounting and finance (MSc.) obey with the regulations of the College and meets the accepted standards with respect to originality and quality.

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LIST OF ABBREVATIONS AND ACRONOMYS

ATM	Automated Tellers Machine
CBE	Commercial Bank of Ethiopia
CSA	Central Statistical Agency
DEPO	Deposit
DIR	Deposit Interest Rate
LTDR	Loan to Deposit Ratio
NBE	National Bank of Ethiopia
NGO	Non-Governmental Organization
OLS	Ordinary Least Square
PROFGR	Profitability Growth Rate
SAP	Structural Adjustment Programmed
SPSS	Statistical Package for Social Science
SSA	Sub Saharan Africa
UNER	Unemployment Rate

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Abstract

It is very important to identify factors determining the deposit of a bank and examine the relationship between exogenous and endogenous variables. The main purpose of this study is to investigate the determinants of Awash Bank deposit over a period of twenty six years. Explanatory research design and quantitative research approach were employed. The study identified bank-specific (profitability, loan to deposit ratio), and macroeconomic variables including, deposit interest rate and unemployment rate, as a target variable in determining bank deposit over the twenty six years of time series data from 1995 up to 2020. In order to answer the research question, secondary data was collected from financial statement of the bank, national bank of Ethiopia and central statistical agency of Ethiopia. Analysis was done by using descriptive statistics and multiple linear regression analysis with OLS and Granger causality model using STATA software package. The empirical findings showed that the overall regression model is significant, and also specifically, LTDR, UNER & PROF are significant at 1%. But, DIR is insignificant at 5%. The bank strongly advised to pay attention on both internal and external determinants. It had better if awash bank give strong emphasis on deposits and its determinant factors. And also bank ought to take a remedial action periodically for those influential determinants which has affected bank deposit significantly like profit, unemployment rate and loan to deposit ratio. And also the government should create job opportunities and reduce unemployment rate. Additionally, the researcher put the further suggestion that similar study to be conducted by covering a both primary and secondary source of data that might be determinant factors of commercial bank such as: technology, number of customer, service quality, and number of staff, inflation rate and other variables which have a qualitative and quantitative in nature.

Key words: Awash Bank, Deposit, Determinants

CHAPTER ONE

INTRODUCTION

1.1. Chapter Introduction

This chapter includes background of the study, organizational background, problem statement, research questions, objectives of the study, hypothesis, significance of the study, scope of the study, and limitation of the study.

1.2 Background of the Study

A bank is an organization in which people keep their money balances in the form of deposits. And now a day activities of all commercial banks are primarily focus on accepting deposits (deposit mobilization) and providing loans (fund utilization) Otu & Peter(2015). However, a number of factors have been found those influence deposits of financial institution, particularly commercial banks.

The function of bank as financial mediator is well recognized facts in the economy of different countries. Without enough deposits banks and financial institutions might fail to attain their business target as well as economic growth enhancement Viswanadham, Yirgalem, & Medanit(2013). Bank is the most essential intermediaries among those with surplus income (depositors) and those persons and businesses with possible projects but requiring money for their investment (creditors). Consequently, banks play a significant role in the economy of every country, and commercial banks usually acted as a back bone of the country's economy.

Gebeyew(2013) development of financial institutions add a lot to economic development in different ways mainly in developing countries including Ethiopia where level of monetization is very low. Some past study indicated still in developing countries of Sub-Saharan Africa (SSA), like Ethiopia, financial institution have not been well-developed to play critical role of intermediation. For example Woldegiorgis(2010) the country/Ethiopia is under- banked and banks have limited outreach. Garedachew(2008) Ethiopian banking system is one of the most under developed compared to the rest of the

world. Private commercial banks in Ethiopia are in their infant phase Shemsu(2015). Saving/deposit is an essential engine of economic growth in Africa but level of saving very low. Gross Domestic Savings as a percentage of GDP in eastern Africa has been low compared to several African countries Haile, Zelalem, Aweke, & Essey (2017). This indicates that the amount of deposit mobilized in the country is not sufficient to satisfy the demand of investors who engaged in the economic development of the country.

The existence of commercial bank is depends on bank deposit due to deposit mobilization is a key activity of commercial banks. Therefore, the issue of banks deposit and its determinant factors is serious to the financial industry of developing country. Deposit is the crucial task of commercial banks since their successful depends on the amount of funds they collected Shemsu(2015).

In Ethiopia, banks are the biggest financial intermediaries in the economy to finance economic growth of the country. Financial intermediaries like banks assist to link the gap between borrowers and lenders by creating a market with two types of securities, one for the lender and the other for the borrower. But, the degree to which this could be done depends on the level of advancement of the financial sector as well as the knowledge of banking and deposit habit of the people Bahiredin (2016).

Deposits are pillar on which banks survive and profitable. They are exceptional things on a bank's balance position that distinguish them from other types of business organizations. The performance of a bank's management and employees to attract deposit from business and individuals is a important measure of the bank's acceptance by the community. Deposits help bank to provide loans and generate income in the form of interest Fisseha (2017). Depositors save their cash in banks in ordered to carry out some activities in the future. According to savers‟ point of view, the main reason to use deposit in bank are protection of their cash, simple access and avoid the risk.

According to Mohammad & Mansur(2014) deposit of banking sector are obviously collected from people’s saving. Meaning that deposits are the important resources for commercial banks. Thus, the amount of deposit should be sufficient to make the bank involve in the market activities and to fulfill the financial needs of its clients.so, based on

this overall fact the bank is expected to govern its deposit. Handling deposits is not attainable without considering and monitoring the factors determining it. However, their handling systems for the deposits are being affected by both inside and outside influences. In this favor, the basic target of the study is to identify the major determinant factors that determine the Awash bank deposit and to examine the connection between those determinants and bank deposit.

1.3 Background of Awash Bank

The first Banks in Ethiopia were mainly developed in 1905 NBE (2018). Private commercial bank in Ethiopia was allowed during new economic policy introduce in November 1991 G.C. by the transitional government of Ethiopia laid the blue print for the transition from centrally planned economic system to market economic system in which the critical role of the private sector in development is fully recognized. In the banking industry, the policy was implemented in to action through the issuance of the certifying and direction of banking business declaration No 84/94, which allowed the Ethiopian private sector to establish privately owned banks. Next the fall of the Dergue, private banks were permitted to work and they started to have market share. Following this, Awash Bank is the first private bank established after the fall of the Derg Regime by 486 founding shareholders with a paid-up capital of Birr 24.2 million on November 10, 1994 and started banking operations on Feb. 13, 1995. As of end of June 2020 the number of shareholders and its paid-up capital increased to over 4369 and Birr 5.87 billion, respectively. Likewise, as of end June 2020, its total assets reached Birr 95.6 billion with over 466 branches found across the country, Awash Bank continues to be leading private commercial Bank in Ethiopia. It is a bank that has succeeded over 26 years in a fast.

Its strategic goals and objectives are based on the aspiration of Vision, “To be the First Choice World Class Bank”, and Mission, “To provide Innovative, Competitive and Diversified banking services accessible to the society with qualified and committed staff in a profitable and socially responsible manner” in addition to this, its Core Values are

Accessibility, Wisdom, Accountability, Socially Responsible and Honesty. Nowadays, Awash Bank play great role in the economy of the country and social responsibility.

1.4 Statement of the Problem

Deposit is the backbone of commercial banks. Bank deposits comes from the depositors who keeping their resources in commercial banks. Deposit mobilization is one of the most important functions of banking industry and so it is a very important source of working fund for the bank that was collected from people through saving, current, fixed and other specialized schemes Viswanadham, Yirgalem, & Medanit (2013). Mobilizing deposits is impossible without considering and governing the factors determining it. Nowadays, more than ever before, Commercial bank of Ethiopia aggressively stretched its business in end to end of the country. Even if private commercial banks in the country were profitable, commercial bank of Ethiopia has taken large market share Shemsu (2015).

Even though many studies have been conducted in abroad countries on determinants of commercial banks deposit, limited studies are available in Ethiopia that investigates the factors determining commercial banks deposit. As the best of researcher knowledge most abroad country studies in recent time focus on macro-economic factors rather than investigating both micro (bank specific) and macro (beyond to bank) determinants of banks deposit. For instance, the study conducted by Tenaye (2019), Nathanael(2014), Hassan (2016), Mashamba & Gumbo (2014), Mohammad & Mansur (2014), Simon-Oke & Jolaosho (2013), tries to analyze the impact of different macroeconomic indicators, on the banks deposit. Most of the time at global level the determinant variables usually explained as a factors determining deposit amount are deposit interest rate and gross domestic product. For example Mashamba & Gumbo (2014) examine the association between deposit interest rates and deposit in Zimbabwe for the study period 2000-2006. The studied outcome shows that the was a positive relationship between bank deposit rates and banks' deposits for. In contrary, Hassan (2016) the study outcome shown that there was a negative association between the bank deposit interest rates and the bank deposits. Totally, there is no universal conclusion on the determinants of commercial

bank deposit and that may not be applicable for other countries like Ethiopia, due to differences in social, economic and legal environments. Therefore, this study tries to analyze the impact of those and other macro-economic variables on Awash bank deposit.

To the best of the researcher's knowledge, in Ethiopia some empirical works were done by different researchers like Mamo (2017) and Shemsu (2015). But both studies were done on analyzing the determinants of public commercial banks, which is Commercial Bank of Ethiopia. There are no enough studies specifically dedicated to the factors determining private commercial bank deposit in Ethiopia particularly in private commercial bank. With respect to Ethiopia, studies relating to bank deposit, a study made by Bahiredin (2016) by using 15 years' time series data showed that loan to deposit ratio has negative significant influence on the commercial banks deposit. Contradictory of this, finding by Fisseha (2017) stated that loan to deposit ratio have a positive and significant influence on bank deposit.

Most of the studies done in Ethiopia have mostly focused on public commercial bank, which is Commercial Bank of Ethiopia. However, this research is basically different in its study area selection. A few studies were undertaken with this thesis was that; the research conducted by Andinet (2016) on factors determining private commercial banks of Ethiopia from year 2005 to 2015. The researcher had consider the following explanatory variables, those were deposit interest rate, inflation, and net interest margin, .As stated by El (2017) findings from empirical studies suggest that unemployment rate have high influence than others to determine total deposits of a bank. The above stated all studies conducted in Ethiopian commercial banks have not incorporated unemployment rate and profit as a variable in identifying factors that determine commercial banks deposit.

Therefore, this study investigates the determinants of awash banks incorporates unemployment rate and profit variables to fills the gap of previous study.

1.5 Research questions

The researcher specifically tried to answer the following questions:

- What is the effect of deposit interest rate on Awash Bank deposit?
- What is the effect of profit on Awash Bank deposit?
- What is the effect of Loan to deposit ratio on Awash Bank deposit?
- What is the effect of unemployment rate on Awash Bank deposit?

1.6 Objectives of the study

1.6. 1 General objective

The overall objective of the study was to investigate the determinants of Awash Bank's deposit.

1.6.2 Specific objectives

The specific objectives of this study were:

- To examine the effect of Deposit interest rate on Awash Bank deposit.
- To investigate the effect of profitability on Awash Bank deposit.
- To examine the effect of Loan to deposit ratio on Awash Bank deposit.
- To identify the effect of unemployment rate on Awash Bank deposit.

1.7 Hypothesis of the Study

Research hypotheses are predictions about the outcome of the results or a statement created by the researcher to guess the outcome of a research. Therefore, after reviewing the theoretical and empirical studies that will concern on determinants of banks deposit, this study will have identified and formed the following eight hypotheses:

Hypothesis 1: Deposit interest rate has a significant and positive effect on deposits of Awash Bank.

Hypothesis 2: Profit has a significant and positive effect on deposits of Awash Bank.

Hypothesis 3: Loan to deposit ratio has a significant and positive effect on deposits of Awash Bank.

Hypothesis 4: unemployment rate has a significant and negative effect on deposits of Awash Bank.

1.8 Significance of the study

The research has examined the determinants that affect Awash bank deposit as well as evaluate the relationship between those determinants and total deposits of bank. The importance of the study has been seen in two dimensions: theoretical contributions and practical implications. Theoretically, the study has filled an essential gap in the literature relate to investigate the most important factors that have determined bank deposit and it has to be expected to serve as an input for future researchers interested in the study area.

On the practical side, the study has helped a bank beneficiary party, government body of the country, management body of a bank and depositors of bank to identify the most important factors that may determine bank deposit and enables them to take proper remedial action to alleviate problems related to Bank deposit.

1.9 Scope of the study

The scope of the study was limited to the internal (loan to deposit ratio and profit) and external (deposit interest rate and unemployment rate) determinant factors those have determined the deposit of awash bank over the years of 1995 to 2020. To fill the gap of study area, the data was collected through started from the foundation of the company. For this study purpose, the researcher has adopted a quantitative research approach and secondary data source.

1.10 Limitations of the study

Awash bank deposit was not affected by only those variables in the study, there were unobservable variables those were exclude from the study. The other limitation of this study was the fact that it has only used quantitative approach and secondary data.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1. Chapter Introduction

This chapter includes the following sections: theoretical review, empirical review, the conceptual framework, and the research gaps. The theoretical and conceptual review and empirical review. In the theoretical review part the theories that states about the commercial banks deposits and the variables that are claimed to affect it has been discussed. The empirical literature part discusses past studies that were conducted on the area of factors determining commercial banks deposits.

2.2 Theoretical review

2.2.1Bank Deposits

Deposit is an amount of fund accumulated from saver for safe keeping; Bank deposits are insured by organizations to decrease their risk. Deposits are credited on deposit accounts at a banking institution, such as savings accounts, demand account and checking accounts. The account holder can make withdraw when he/she wanted. The deposit is a liability that payable by the bank to the depositor on demand Mansour (2012)**.** Deposit is the assets and the most liquid of the banks that banks highly interested to mobilize and that was used to borrow in need of the fund. Yusuf (2001) defined savings as in a bank is that money put by the clients as their deposit.

According to Kelvin (2001) deposits are liabilities for banks sector and Commercial banks are using this liability to provide loan and achieve return on it, deposits are using them to run their business. So, Commercial banks like Awash Bank is accepting deposits from the customers and lending it to borrowers.

2.2.2 Deposit Mobilization

Deposit mobilizations are a back bone of bank to rendering their services, to perform their capacity, and it is the most indispensable for successful of their journey based on the

level of money to be mobilized. So that banks are estimated to have the potential capacity and prospects for mobilizing financial resources and allocating them to productive investments Nathanael (2014).

According to John M. Keynes in the 1930s, people save to precaution against the unknown, for emergencies, to have funds in reserve for necessities, for retirement or old age ,to foresight in predicting known events such as a down payment or education expenses ,wealth augmentation due to interest earning and capital appreciation, financial independence ,bequest of gifts and donation to others, avarice or miserliness, for their children's needs, to own house, for holidays, to provide for marriage, to provide for emergency expenditure ,

2.3 Types of bank deposits

2.3.1 Saving Accounts

Mayivaganan & Prabakaran (2016) said that savings account is can be opened by individual(s) or company that operated by either passbook or without pass book as per the interest of the customers and the individuals of the lower and middle level use this product to save a part of their incomes for their future needs and also plan to receive a return from their invest in the bank. But, the banks put certain limits on the savings account deposit and also provide certain amount interest rate.

2.3.2 Current Accounts

Mayivaganan & Prabakaran stated that (2016) a current account is operated without pass book meaning that it is run by check. There is no limit on the number and the amount of pulling out from a current account. It is run by individual, public authorities' businessperson, organizations, and public organization, companies, etc., for whom their banking transactions take place daily.

2.3.3 Demand Deposit Account

Yang (2009) concluded that demand deposit can be moved at any time in need of the depositors. This type of account allows you to “demand” or “call” your income at bank whenever you want.

2.3.4 Fixed Time Deposit Account

It is amount saved for fixed period which is indicated at the time of deposit made and sometimes it refers to term deposits account. Mayivaganan & Prabakaran (2016) a term deposit is refundable on the expiry of a mentioned period, preferred by the depositor to get up his/her drive and to empower him to get back the amount depend on the contract.

2.4 The Significance of Deposits for Banks

About the importance of deposit Mamo (2017) depending upon the nature of deposit, funds deposited with banks also earn interest. If the rate of interest is higher, the customers are motivated to deposit more resource in the bank. Banks in turn accept money from the customers and lend it to the borrowers. Therefore, deposits are the most important source of fund for commercial banks. The studies made by Harald & Heiko (2009) states that deposits are the core fund of banks to offer loan and advance. Mohammad & Mansur (2014) state that deposit is collected from individual(s), business person, company, and others.

As bank point of view, rising equity is more cost than attracting deposits. Lorenzo et al (2010) states that, if the loaning network acting a role, the deposit progress lead to an growth in the supply of credits due to the extra source of funding for banks. As appetite of borrower increase for loan for the development work done by individual(s), banks have to collect a lot of money. At the time of bank generates a deposit for lending to a individual(s), it is clearly carrying out a purpose for which it is eligible to generate income in the form of interest paid Harold (1946).

Deposits are liability that banks use to increase its income through lending to its customers in form of loans and advance which produce return in the form of interest to commercial banks Richard, Dr. Florence, & Zéno (2015). Keria, Jamil, & Firdaus (

2015) state that banks generate profits through interest from loans by charging higher rates than the cost of paying interest to depositors. According to Mahendra (2005) deposits was the raw materials that bank used to provide loans, and thus it represents the ultimate source for the bank's income and growth. Maria and Sergio (2001) said that depositors can punish banks by withdrawing deposits and by requesting higher interest rates. Deposits are the most important funding source for all commercial banks as well as banks use deposits in a variety of ways, primarily to fund loans and investments. Banks and financial institutions uses deposit as source of funds for loans and investments which are core business for their income and wealth Venkati (2016). Liability is largely held by domestic banks which were financed principally from depositors, the government mandate for banks assets empowered banks to continue to increase their deposit base speedily and successfully Harald & Heiko (2009). Investors and government are primarily reliant on the deposits of banks to finance their investments and progress projects.

2.5 The role of banks in economic developments of the country

Commercial bank deposit plays a key role in economic growth and development by accelerating investments in the economy. Yonas, Arega, & Anteneh (2013) stated that banks are the key financial institutions that provide financial services there by highly contributing to the economy of a given country. Role of the commercial banks is considered as a backbone to the survival of the economy of a country as their function intermediates between depositors (savers), borrowers, investors, and other stakeholders in the financial sector. Mostly the private banks in Ethiopia get their main revenue from collecting deposit, providing loans and foreign exchange. According to Aron, Nigus, & Getnet (2013) stated that saving is an important factor in economic development as it enables the conversion of resources into capital. Adequate deposits are important for capital formation and have a direct impact on economic growth, and as such are vital for achieving macroeconomic stability.

Transfer (remittance) of Money, Cash can be transferred simply from one area to another and from one country to another by the assistance of a bank. It has facilitated transactions

in distant places. This, in turn, has expanded the internal and external trade and market. The individuals have become free of the risks of carrying cash, gold, silver etc.

The functions of banks are classified into two categories: the first functions and second functions including agency services. The primary functions of banks include: accepting deposits and lending money. The primarily activity of banks are to collect deposits from depositors who have surplus fund and utilize to whom in need depending on the collateral, capacity, ability, and liquidity she/he has provided. The second important function of banks is to clearance of deposit, sale/purchase of share/bonds, to provide letter of credit, provide locker of facility and etc.

According to Gebeyew (2013) Ethiopia is one of the less developed countries whose economic performance is partly dependent on external resources. Domestic resource mobilization in Ethiopia needs an extra effort and coordination with appropriate policy and right regulation to attain the desired development. Most of the financial institutions functioning in Ethiopia used deposits as raw material for loan providing. Thus, accumulating important amount of fund and directing it to productive investments through credit is one of the main roles of commercial banks. Rahman & Uddin (2005) stated that saving (deposit) is one of the important variables for economic development that has emerged as the central issue in developing countries at least for two reasons. First, foreign aid inflow to the developing economies has declined during recent years. Second, saving positively affects the growth and development. The greater is the saving rate, the higher is the growth rate a country can attain. Commercial banks have impact on the overall economy of a one country through in a positive way or negative one. It represents a crucial link in the allocation of government monetary policy to the rest of the economy. For instance, while bank credits are infrequent and cost, investing in the economy decline and unemployment was increased rapidly Kelvin (2001).

Saving/deposit is a pillar of economic growth when its provision as a loan passes through appropriate channels. Saving mobilization and credit provision by financial institutions are considered as a proxy for economic growth. Researchers Jappelli & Pagano (1994) stated that saving contributes a great role investment and saving plays an important role

in economic growth with a different role at different levels. This idea is consistent with the study results of Levine & Renelt (1992) they stated that higher rates of savings have translated into higher investment and higher growth rate.

Banks facilitate a fast economic growth in the country through the banks make available loans of different periods to agriculture, industry and trade. They make direct investments in industrial sectors. They give industrial, agricultural and business consultancy therefore, it facilitating the process of economic development Sanderson & Fabling (2013).

Pollet (2009) stated that greater is the saving rate, the higher is the growth rate a country can attain. For economic development, growth is a must which cannot be achieved without investment or capital accumulation and saving through investment plays a vital role in this process.

2.6 Determinants of Commercial Banks Deposits

Commercial banks are highly motivated to mobilize deposit since it was the source of income after it was lent for whom in need of the resource. Since deposit mobilization is a very important for commercial banks, considering the determinant factors of it is a critical assignment for banks. Deposit collection is impossible without understanding and monitoring the factors affecting resource mobilization. Bank deposits can be affected by different influences. It is most useful liabilities of the commercial banks. Thus, it is significant to find out factors determining bank deposit and examine the relationship between factors. Many researchers are classified the factors affecting commercial bank deposits in to different categories namely exogenous and endogenous factors, external and internal factors, macro and micro factors and bank specific as well as economic factors. Independent factors are the overall economic environment of the county, the volume of business operation of the county, the self-reliance of the people on the banking system, the banking habit of the individuals and the saving potential of the county. Explanatory factors cannot be controlled by the banking system. This also further separated into external factors and internal factors. The bank (internal) factors are factors that are specific to the banking system and the country factors are factors that are beyond the banking system Shemsu (2015).

2.6.1 Country Specific Factors

It was beyond the commercial bank management that has impact on the progress of commercial banks deposits. Commercial bank deposit may be affected by the country's economic, social and political factors.

Harald & Heiko (2009) sated that external factor such as economic, political, and financial risks may have impact on the health of bank deposit to utilize funds in the banking system. Any bank runs under the rule and regulation of the country where it operates, and also different issues and shocks that has occurred in the country its own concern in the banks task. There are discussed as follows:-

2.6.1.1 Saving Interest Rate/Deposit interest rate

The researchers Simon-Oke & Jolaosho (2013) stated that to successfully mobilize deposit in an economy, the deposit interest rate should be high comparatively, and inflation rate has to be stabilized to guarantee a high positive real interest rate which encourages depositors to save from what they get from their income. One of the most effective factors for deciding to deposit in banking system is the interest rate Mohammad & Mansur (2014). Fisseha (2017) stated that the greater the rate of interest, the more fund has been saved since the willing of depositors were focus on the high bank interest rate. Small interest rates on savings encouraged depositors to take their fund out of banks and search for Higher-yielding investments. When the bank interest rate was huge, it harms the margin of the bank. However, Hassan (2016) there is no significant relationship between interest rates and commercial bank deposits. In his article findings he suggests that interest rate has not been responsible for customer's deposits in commercial banks in Nigeria. Shemsu (2015) stated that in Ethiopia, minimum interest rate is established by National Bank of Ethiopia. Thus, it has no significant impact on commercial bank deposits.

2.6.1.2 per Capita Income of the Society

Jim (2008) stated that per capita income is measured by the level of GDP allocated by the population of a country. When individuals and companies need to save more money,

deposits will be increased Evan et al (2006). Thus, as society's per capita income will be increased, commercial banks deposits also increased.

2.6.1.3 Real Interest Rate

The price of future consumption relative to current consumption was determined by interest rate. According to the economic theory recommends that increase in interest rate may have either positive or negative impact on saving. Mohammad & Mansur (2014) said that, in the condition of negative real interest rate, the individuals withdraw their fund from bank.

2.6.1.4 Economic Growth (GDP)

The researcher Hassan (2016) concludes this has been regarded as total cost of all goods and services produced in one country a fiscal year. This factor captures the market conditions that certainly have an impact on deposit growth. During periods of good economic condition, loan demand tends to be higher, allowing banks to provide more loans, which lead commercial banks to mobile high deposit mobilization. According to both and empirical and theoretical revised, economic growth was the primary source for banks deposit progress. Demirguc & Hizinga (1999) showed that rapid economic growth increase income of individuals in fact of this deposit will be increase for a large number of countries. One assumption would be that as incomes rise, deposits with banks do so as well. Technically speaking, per capita income captures upswings and downswings manifesting in the business cycles. Consequently, movements in general activity level are expected to generate direct impacts on deposit of banks. Hassan (2016) stated that GDP has a positive relationship with commercial bank deposits. Ayele (2016) said that Economic growth causes privates savings in Ethiopia which is in line with Keynesian theory, that it is higher economic growth that leads to higher saving.

2.6.1.5 Foreign remittances

Remittances are a source of profits and deposits for commercial banks that assist the transmission of these capital flows. Remittances related recorded transactions also facilitate the migrants and the households access other financial products like banks accounts and loans. Several developing countries such as Ethiopia, India, Kenya, Turkey and Nigeria have liberalized their financial systems allowing foreigners to open Foreign

Current Deposits (FCD) accounts in an attempt to attract Diaspora savings. Remitting charges are a source of revenue for commercial banks. Peter & Charles (2014) stated that remittances are an essential source of revenue for the home country, in particular in developing countries. Athukorala & Sen (2001) stated that the household saving and domestic private saving are determinate by Remittance from Diasporas. It is part of the income of beneficiary household, and it increases their income that helps them to savings.

2.6.1.6 Unemployment rate

Unemployment rate is a problem for both developed and undeveloped countries. However the impact and intensity is might differ. Serneels (2004) said that "a negative relationship between unemployment rate and the country's economy indicates that high unemployment rate in the given country directly reduce the individuals saving rate (amount)".

2.6.2 Bank Specific Factors

2.6.2.1 Liquidity of the Banks

Liquidity is measured by loan to deposit ratio. It is inversely related to the loans to deposit ratio meaning that the higher the loans to deposit ratio has the lower the liquidity and vice is true Devinaga (2010).That means the depositors have challenged to withdrew the amount she/he need. This was leading the customers to release the bank and find another option where they have used when he/she need. So, balanced liquidity (average loan to deposit ratio) was very import to retain the customers. According to Harald & Heiko (2009) the liquidity condition of the bank also acting a major role in influencing banks deposit growing.

2.6.2.2 Profitability of the Bank

According to Erna and Ekki (2004) stated that there was the long run relationship between bank profitability and commercial banks deposits. Thus, bank profits have demonstrated signal increased bank soundness that has made advantages for these banks to attract high volume of deposits Harald & Heiko (2009).

2.6.2.3 Branches

Bahiredin (2016) stated that bank branches are essential to capture the deposits from the unbanked areas. When people are more accessible to banking system, they have willing to deposit their fund. Bank branches are essential to capture the deposits from the unbanked areas. These indicate that there is a relationship between deposits and bank's branch increase.

2.6.2.4 Number of customer

Mahindra (2005) stated that, as the number of deposit accounts is increase, probability of all account holders withdrawing fund once rare. So, the commercial bank that has many customers has the probability to have more volume of deposit in their account.

2.6.2.5 Age of Company

The age of the company is one of the most influential characteristics in organizational studies. Newly established banks are particularly low deposit in their established years of operation, as they place greater emphasis on increasing their deposit, rather deposit share in other oldest company, on deposit growth older bank expected to be high deposit mobilization recourse due to their longer tradition and the fact that they could build up a good reputation Athanasoglou et al., (2005). Age of company (measured as the number of years a company is operating in the market since it was founded) is an important determinant of financial performance.

2.7 Empirical review

A number of empirical studies have been carried out by different scholars in different countries on the factors determining commercial banks deposit and the relationship between determinant factors and deposit. There have been some studies relating to the determinants of banks deposit in different counties. The researcher Lomuto (2008) conducted a study on the determinants of Kenyan commercial banks deposits growth in Kenya using time series data covering period, 1968–2006 and the researcher consider deposit as the dependent variable. The empirical study results showed that deposit interest rate, lagged Commercial bank deposits and economic growth are significantly affect banks deposit progress in Kenya. Depend on the study result the researcher

recommends on the need for macroeconomic stability, the establishment of conditions that attract private investment, strengthening bank supervision and the legal infrastructure, which enhances financial stability and strongly suggest on deregulation on real deposit rate of commercial bank deposit. Therefore the study recommended further research to better understand which factors are affecting commercial bank deposits.

Another study conducted by El (2017) examined the factors determining the banks deposit in morocco for 2003-2014. The researcher employed Time series data regression for analysis purpose. In the study, deposits are treated as dependent variables. The study concluded that bank's deposits significantly determined by internal and external factors like unemployment rate and interest rate. At the last the researcher concluded that customer as well as bank deposits are strongly determined by unemployment rate rather than other variables.

The study made by Otu & Peter (2015) investigated the impact of some macroeconomic and financial level factors on deposits in Ghana. On the bases of certain parameters like as deposit interest rate, inflation, monetary policy rate, growth of money supply and stock prices (All Share Index) as independent variables. The results reveal that inflation rate and money supply has a significantly negative short-term impact on bank deposits in Ghana. While, the author conclude that the positive insignificant impact of deposit interest rate and monetary policy on banks deposit in Ghana. The long-run effects of the different explanatory variables on bank deposit are also discussed.

The study made by Nathanael (2014) examined the macroeconomic factors which determine Nigerian bank deposits by using data for 30 years. The variables used in the study are bank branches, and interest rate as determinant factor that determine the bank deposit. Shaban (2013) conducted a study to assess factors that determine deposits mobilization in Tanzanian financial institution from 2002-2010. The researchers used ICT, Varieties of Services, and location of the bank branches. The finding indicated that deposit mobilization can be increased through encourage IT, different services provide and selecting location for bank opening. There for, the study recommended the improvement on the use of information communication technology in financial

institutions to allow more utilization of electronic money and credit cards, commercial banks should design a way to make neglected semi-urban and rural population to get the banking services, and outsourcing some of the operational activities like mobile phone banking and Automated Tellers Machine (ATM) for easing deposits mobilization and saving unnecessary expenses and at the last the researcher also noted that bank should increase deposit interest rate to attract more deposits in the banks after consultations with central bank.

The studies done by Mashamba & Gumbo (2014) discussed that the relationship between deposit interest rate and deposit mobilizations/bank deposit in Zimbabwe. The researchers developed an ordinary least square regression technique to explain the link between the response and predictor variables. According to the researchers found interest and deposit has positive relationship. Depend on the research results, the researchers suggested some recommendation such as opening additional branch, differentiate the product and also increasing interest rate on bank deposits to attract depositors.

A researcher conducted the study Hassan (2016), with the aim of to investigate the effect of interest rate on commercial banks deposits in Nigeria. The article treated commercial banks deposit as dependent variables and two macro-economic variables like as interest rates and the Gross Domestic Product (GDP) as independent variables. The researcher used secondary data generated from the Central Bank of Nigeria numerical bulletin and the National Bureau of Statistics from 2000 to 2013 and analyzed them by using OLS multiple regression methods. The result of research stated that there was negative relationship between the bank interest rates and the bank deposits. Depending on the found, interest rate has no impact on customer's deposits in commercial banks in Nigeria. Finally the researcher conclude that even if the sufficient awareness be prepared by commercial banks to attract more of customers' deposits by educating on the measure of interest that will accrue to them when they deposit their funds with the commercial banks.

Sudin & Wan (2006) investigated the determinant factors of deposits in commercial banks in Malaysia, with general objective of examining the effect of economic and

financial variables on deposits on commercial banks in Malaysia. In investigative the determinant factors of deposit stages of Islamic bank and conventional bank, the paper employed in time series data. Long- and short- run relationships among the listed variables were examined by using co integration methods. They concluded that rates of return of Islamic bank, on deposits, base lending rate, rates of interest, consumer price index, money supply and gross domestic product have significant impact on bank deposit. And also the researchers recommended that, the depositors are in conformity with the existing saving theories. But, there were also deviations from these theories. For instance, inflation and yields on deposit were supposed to have a positive relationship.

Harald & Heiko (2009) examined the demand for commercial bank deposits in Lebanon, a regional financial center. With Lebanon's huge fiscal deficits financed mostly by domestic commercial banks that rely on deposit funding, deposit growth is a key variable to assess government financing conditions. At the macro level, they find that domestic factors such as economic activity, prices, and the interest differential between the Lebanese pound and the U.S. dollar are important in explaining deposit demand, as are external determinants such as advanced economy economic and financial conditions and variables proxying the availability of funds from the Gulf. On micro stage, they found that in addition, internal variables

2.8 Related Empirical Evidence in Ethiopia

Among the few research conducted on the subject in Ethiopia, the researcher has selected the following study as empirical literature for this thesis.

Study conducted by Aron, Nigus, & Getnet (2013) with the aim of to investigate the root causes of poor saving habit in selected cities of Ethiopia. They suggested that domestic saving and investment are highly correlated. They stated that saving rate of Ethiopia to GDP is 9.5% i.e., the poorest saving rate in the world as compared to China, Bangladesh and South Africa which have a better saving rate in the world. Hence, Ethiopia is characterized by poor saving culture which results in very small domestic savings available for investment. Knowing this fact, the country has envisaged in its five year Growth and Transformation Plan (GTP) (2010/11 - 2014/15) to increase saving rate from

9.5% to 20% of the GDP. Data was collected from 544 households' selected using non-proportional quota sampling technique covering three major cities namely Addis Ababa, Hawassa, and Mekelle. They developed descriptive statistics and chi-square tests to analyze the data. The result of their findings indicated that the main causes of poor saving were inappropriate saving products, lack of incentive to save, low income level, high level of debt, low interest rate and high inflation rate. Based on their findings they are recommend to government and development actors should work to create awareness on saving among the society, stabilize inflation, implement forced saving, modernize and make saving institutions accessible. In addition, mechanisms of enhancing income generation and reviewing the saving interest rate regulation should be devised is the additional recommendations of their study.

Mamo (2017) adopted a quantitative research approach conducted on to find the determinants of commercial bank deposit such as loan to deposit ratio, deposit interest rate, bank branch and existence of competitors of commercial banks in Ethiopia, by using time series data and a multiple linear regression model. The results show that loan and branch expansion positively and significantly influence total deposits of public commercial banks, whereas competitor's influences total deposit negatively and significantly. Deposit interest rate was found to be insignificant in influencing the total deposits of commercial bank of Ethiopia.

Giragn (2015) conducted the study to examine the impact of branch expansion, deposit interest rate, money supply, real per capita growth of GDP, inflation and exchange rate on deposit mobilization of commercial banks by analyzing public commercial banks data. The study concluded that commercial bank deposit mobilization significantly affected by the branch expansion, inflation, exchange rate and money supply growth.

Similar to the above study the research conducted by Shemsu (2015) on to determinants of commercial bank deposit by analyzing whether bank branch, average deposit interest rate, inflation, GDP, foreign remittance growth and other qualitative variables has any impact on commercial banks deposit. The research included 1 commercial bank in Ethiopia out of a total number of 17 commercial banks in Ethiopia. Time series data has

been used for analysis. From the researcher regression output the average deposit interest rate of the public commercial banks was found to positively and insignificantly influence commercial banks total deposit meaning a rise in deposit interest rate might lead to higher levels of deposit and vice versa. Again, the researcher empirical finding indicated that number of bank branch is positively correlated with commercial banks total deposit. This suggests that as number of bank branches of commercial banks increases deposit mobilization also increases and vice versa. The researcher finding states that the coefficient of foreign remittance growth is positively and significantly related to commercial banks total deposit. This implies that the rise of foreign remittance growth in Ethiopia creates the opportunity to commercial banks, which means that commercial bank of Ethiopia attracting more deposits from the remittance. Beside of the internal factors inflation rate and bank deposit have a positive relationship but insignificant. The last quantitative variable economic growth has a positive relationship with commercial bank deposit growth but this variable is not significantly affecting the banks deposit. From the qualitative data's used by researcher Excellency of service, branch increase, advertising effort, interest rate, creation of awareness and provide new technologies have its own influence on commercial banks deposit growth .Finally, the study has recommended that Commercial bank of Ethiopia gave direction on domestic deposit mobilization.

According to Bahiredin (2016) the study empirically analyzed determinants of commercial banks deposit growth in Ethiopia by constructing an econometric model to study the effect of various factors such as per capita income, inflation rate, bank branches, loan to deposit ratio, money supply growth, lagged bank deposit and interest rate. Accordingly, factors that determine bank deposit growth the researcher analyzed the data by using the OLS technique. The regression result showed that the number of branches and growth of per capita income have positive and significant influence on bank deposits growth in Ethiopia whereas loan to deposit ratio and lagged bank deposit have negative and significant influence on bank deposit growth. This brings to bear that bank deposit growth determined by certain external and internal variables and the regression

result thus shows how bank deposit growth responds to changes in loan to deposit ratio, lagged bank deposit, growth of per capita income and bank branches.

The research conducted by Tenaye (2019) stated that the empirical examination of studying the determinant factors of commercial bank deposit progress in Ethiopia was done through a Time series data set involving of financial data of commercial bank in Ethiopia and supports the finding with secondary source of data. The results of pooled OLS regression analysis revealed that number of branches, deposit interest rate; Economic Growth, Net Interest Margin and Age of Company were statistically significant to explain private commercial bank deposit growth. The result of the study also shows that number of branches, Economic Growth and Age of Company were positively related to Deposit growth, while Loan to Deposit Ratio negatively and statistically insignificant related impact on deposit growth. The data from Secondary data source also support regression Reviews 8 output; generally three variables are positive and significant impact on deposit growth out five significant factors of six total variable.

At last research conducted by Andinet (2016) used adopted a quantitative research approach. The researcher considers seven independent variables in this study. The data were collected from the commercial banks' financial statements, central statistical authority, and national bank of Ethiopia, and also MOFEC from 2005 to 2015. The researcher employed different diagnostic test to identify whether the model is effective or not. The results from economic analysis showed that the explanatory variables deposit interest rate; number of bank branches, GDP and net interest margin were positively and significantly associated with the dependent variable. While the regression result of this researcher displays that Lagged of bank deposit was negatively and significantly associated on total deposit. Furthermore the study result of the researcher advocates that inflation rate and liquid asset to deposit ratio were negatively and insignificantly associated with bank deposit. Lastly, the researcher recommended private commercial banks what should be done to mobilize more deposits. This is improvement on management efficiency, improvement on economic environment and suggestions for researchers or the area need other study.

2.9 Research Gap and Justification of the study

From the above empirical works done in foreign and country all authors have stated a different opinion on the determinants of commercial bank deposit and its relationship with total deposit and there is no universal finding to the determinants of commercial bank deposit and their findings may not be applicable to other countries like Ethiopia, due to differences in social, economic and legal environments. Some of authors found that there is a positive, negative or no impact of those factors on commercial bank deposit and some of the study result is contradict with theoretical frames.

Few studies were conducted in Ethiopia on the determinants of commercial banks deposit and even these studies were limited on public banks i.e. commercial banks of Ethiopia like Giragn (2015), Mamo (2017), Tizita (2014) and Shemsu (2015). This shows that the study conducted on the topic determinants of commercial banks deposit is limited to industry selection (study area). Therefore, this study helps to fulfill the study area gap by conducting this paper on the private commercial bank particularly awash Bank. As per researcher's knowledge, only study conducted by Andinet (2016) and Tenaye (2019) on private commercial banks was similar with this study. However, the study failed to take in to account some variables such as, unemployment rate and profitability of company. And also they have not conducted on single private commercial Bank.

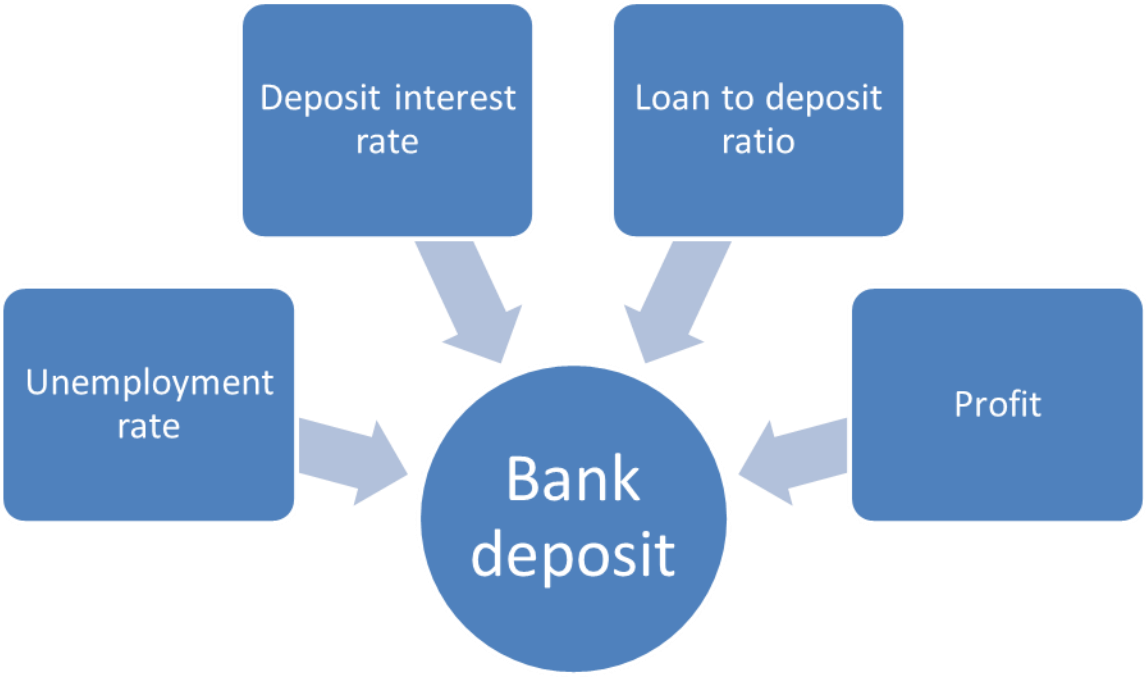
As stated by El (2017) findings from empirical studies suggest that unemployment rate have high influence than others to determine total deposits of a bank. The all stated studies conducted in Ethiopian commercial banks have not incorporated unemployment rate as a variable in identifying factors that determine commercial banks deposit. Therefore this study has incorporated this variable in this study.

Furthermore, most of the researchers also have concluded that, Ethiopian commercial banks deposit affected by other additional factors. Because of this reason the area needs additional study**.**

2.10 Conceptual framework

Commercial bank deposit was not affected only by a single variable instead of the collection of different variables that affect commercial banks deposit. Among those factors include: profit of the bank, loan to deposit ratio, deposit interest rate and unemployment rate. This conceptual frame work has described the relationship of dependent variable, total deposit of awash bank, with its determinants, explanatory variables, and based by the theoretical and empirical perspective and the empirical results were described from the following diagram.

Figure 2.1: Relation between total deposit and its determinants



Source: developed by researcher

CHAPTER THREE

RESEARCH METHODOLOGY AND DESIGN

3.1. Chapter Introduction

The preceding chapter has shown stationary test, granger causality test, diagnostic test methods, model specification and Variables Measurement and expected result. And also discussed the research design and the methodology have to be employed.

3.2. Research Methodology

3.2.1 Research Approach

There are three types of research approach Creswell (2009). Those are a quantitative, qualitative and mixed research approach. A quantitative research approach is a help to examine objective theories through investigative the relationship between variables. In other way, qualitative research method is a means for discovering the meaning of individual(s) attribute to a social issue with intent of constructing a theory inductively. The last one mixed approach is in which the researchers examine the research problem. So, to examine the relationship between the endogenous and exogenous, the researcher has employed the quantitative research approach. The basic reason of using this type of a quantitative research approach is to collect secondary data that have a quantitative nature and it was possible for to test the relationship between the variables that were used in this study.

3.3 Research Design

Research design is the master plan for guiding, answering questions and fulfilling the objectives Cooper & Schindler (2014). Explanatory study was necessary in such a study a situation or problem leads to the explanation of the relationship between variables Saunders & Thornhill (2009). The purpose of this study was to examine the determinants factors of Awash bank total deposit and to examine the relationship between the variables, response and explanatory variable. Therefore, to examine the regression

analysis result with corresponding to empirical evidence on the determinant factors of bank deposit in Awash Bank, the researcher has employed explanatory research designs.

3.4. Research Method

3.4.1 Data Collection method

To achieve the study objectives, the researcher has collected data from secondary data sources. The researcher has preferred a secondary data source this was because the advantage of using secondary data includes the higher quality data; it is cheap in terms of money and time while collecting. And it has collected from NBE, bank annual reports, Central Statistical Agency of Ethiopia. The data has contained the Time series data (like unemployment rate, profitability, deposit interest rate, loan to deposit ratio, and total deposit) of Awash bank over the period 1995 to 2020.

3.4.2 Sampling technique

Define a target population as a population by which the researcher of a study hopes to take a broad view of the findings Graziano & Raulin (2013).To examines the determinants of total deposit in Awash bank, the target population has internal and macroeconomic factors of bank deposit over the twenty six years' through time series data. The source of secondary data was attained from both internal and external of the company. The internal sources were collected from the annual audited reports, which were published. The external sources were National Bank of Ethiopia (NBE) which controls the banking industry in the country, and Central Statistics Authority (CSA) annual reports. Thus, this study has employed all population data through a time series data from the period 1995 up to 2020 for 26 years and a time series data.

3.4.3 Methods of Data Analysis

The research paper was analyzed based on quantitative research approach. To analyze, interpret and summarize the data, the researcher adopted descriptive statistics such as multiple linear regression analysis and correlation. The descriptive statistics contain standard deviation, mean, minimum and maximum, that was computed by using STATA

software. A correlations and multiple linear regression analysis was done to test whether there is relationship between dependent variable (total deposit) and explanatory variables (loan to deposit ratio, deposit interest rate, profitability, and unemployment rate to measure the impact of determinant factors on awash bank deposit.

3.8 Description of Variables

3.8.1 Dependent variable

Deposit has been used as the dependent variable in the study. Deposit is the essential funds banks extremely inspired to collect and the most liquid resource that commercial bank used to lending to whom in need of the finance. There are many different ways to measure banks deposit, as shown in previous studies. In this study total deposit was used to measure banks total deposit. Hence, other researchers such as (Fisseha, 2017), Nathanael (2014), Andinet (2016) & Dr. Radhe S & Dipika (2011) had done on determine total deposits of commercial banks.

3.8.2 Independent variables

Among numerous major determinants of banks deposit identified in previous similar studies; deposit interest rate, loan to deposit ratio, profitability, and unemployment rate were included in this study.

3.8.3 Deposit interest rate

The interest is one of the most factors on determining deposit in banking system Mohammad & Mansur (2014). Fisseha (2017), if the deposit interest rate is increased, the money will be deposited, since people willing to get higher interest rates and reduce present consumption. If low interest rate was employed on savings, it has forced depositors to take out their money from banks and search for profitable investments. In addition to this, when the deposit interest rate is very high, it has negative impact on the margin of the bank. And also, when the rate is very small, clients will take their deposit somewhere else and volume of deposit will be declined.

3.8.4 Profit

According to Erna and Ekki (2004) there was the long run relationship between bank profitability and commercial banks deposits. Thus, bank profits have demonstrate signal increased bank soundness that has made advantages for these banks to attract high volume of deposits Harald & Heiko (2009).

3.8.5 Loan to deposit ratio

Liquidity is measured by loan to deposit ratio. It is inversely related to the loans to deposit ratio meaning that the higher the loans to deposit ratio has the lower the liquidity and vice is true Devinaga (2010). According to Harald & Heiko (2009) the liquidity condition of the bank also acting a major role in influencing banks deposit growing.

3.8.6 Unemployment rate

Unemployment rate is a problem for both developed and undeveloped countries. However the impact and intensity is might differ. Serneels (2004) Said that "a negative relationship between unemployment rate and the country's economy indicates that high unemployment rate in the given country directly reduce the individuals saving rate (amount)". As stated by El (2017) findings from empirical studies suggest that unemployment rate have high influence than others to determine total deposits of a bank

3.9 Model Specification

In this research multiple linear regression models, ordinary least square (OLS) estimation method and granger causality test were used. According to Brooks (2004) the general multiple regression model with X independent variables can be written as follows:-

$$Yt = \beta 0 + \beta 1 X_{1\text{-}1} + \beta 2 X_{2\text{-}2} + \ldots + \beta t\, Xt + \mu t \quad (t = 1, 2, 3 \ldots n)$$

Where X1… Xt are the t^{th} observation of the explanatory variables, Yt is the t^{th} observation of the response variable, β0… βi are the parameters/regression coefficients, μi is the t^{th} the error term observation , and n is the number of observations. Hence, the determinants of deposit (DEPO) can be modeled as described below:-

$$\ln DEPO_t = \beta_0 + + \beta_1 (DIR)_{t-1} + \beta_2 (PROF)_{t-2} + \beta_3 (LTDR)_{t-3} + + \beta_4 (UNER)_{t-4} + + \mu t$$

Where;

B0 is an intercept,

β1, β2, β3, β4, represent the regression coefficients or parameter to be estimated

DIR t: Interest Rate on the Bank Deposits for bank at time t

PROF t: Profitability for bank at time t

LTDPR t: Loan to Deposit Ratio (Liquidity Ratio) at time t

UNER t: Unemployment rate for bank at time t

t: Time (1995-2020).

μt: Represents error terms

3.10 Tests for Stationary Series

It is common practice in cointegration analysis to test all the time series variables for stationarity. The idea is that all of the variables to be used in the cointegration analysis have the same order of integration. Therefore, an Augmented Dickey-Fuller was used to test the given variables whether they are unit root or not. If the absolute value of 5% of critical value is less than the absolute value of the test statistics at the chosen level of significance, the variable is stationary. Otherwise the series is non-stationary or unit root Gujarati (2004).

3.11 Granger Causality Procedure

This paper has investigated the causality between dependent variable and independent variables. Empirically, the existence of causality can be determined using the Granger Causality technique.

3.12 Diagnostic test methods

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

Brooks (2008) stated that if a constant term is involved in the regression equation, this assumption will never be violated.

3.12.2 Test for Heteroskedasticity

One of the basic assumptions in the classical linear regression model is that the probability distribution of the disturbance term unchanged over all in the observations of X; i.e. the variance of each u_i is the same for all the values of the explanatory variable. This feature of homogeneity of variance (or constant variance) is known as Homoscedasticity. But if the disturbance terms do not have the same variance, there was Heteroscedasticity in the model Brooks (2008).

3.12.3 Test for Autocorrelation

The term autocorrelation may be defined as "correlation between members of series of observations ordered in time (as in time series data).This assumption stated that the errors were linearly independent each other. If the errors were associated with one another, it would be stated that they are auto correlated. To test for the existence of autocorrelation or not, the popular Durbin-Watson test and Breusch-Godfrey LM test was employed Gujarati (2004).

3.12.4 Test for normality

Test of normality means determining whether the data is well modeled by normal distribution or not. The researcher used the Shapiro-Wilk test for to assessing normality.

3.12.5 Correlation matrix & multicollinearity

The correlation matrix gives a first insight in the direction and the strength of the relationships between the variables. When the correlation between two or more independent variables is (too) high, the problem of multicollinearity occurs Wooldridge,

(2000). According to Gujarati (2004) Multicollinearity is the state in which the explanatory variables are extremely correlated. When predictors variables are multi collinear, there is overlap power. This condition may direct to the paradoxical effect, whereby the regression model fits the data well, but none of the independent variables has a significant impact in predicting the response variable. This is because when the predictor variables are highly correlated with one another, they share essentially the same information. Thus, together, they may explain a great deal of the dependent variable, but may not individually contribute significantly to the model. Thus, the impact of multicollinearity is to reduce any individual explanatory variable's predictive power by the extent to which it is associated with the other explanatory variables.

In addition to this the problem of multicollinearity may lead to less accurate results in the analyses; the coefficients may have very high standard errors and perhaps even incorrect signs or implausibly large magnitudes Baddeley & Barrowclough (2009, Baum (2006). Multicollinearity can be detected by calculating the variance inflation factors (VIF) for each independent variable. Multicollinearity is present when VIF values are larger than 10. Furthermore, the critical value can be calculated by 1/VIF. If this value is below 0.1, this would mean that more than 90% of the variation in the variable is explained by the other variables. The variable(s) with VIF values larger than 10 or 1/VIF values below 0.1 should be excluded from the analyses Rabe-Hesketh & Everitt (2004). In addition to this (Baddeley & Barrowclough, 2009) suggested that a variance inflation factor (VIF) value greater than 10 calls for concern, Also, Adeyemi & Fagbemi (2010) stated that a tolerance value less than 0.1 indicate a serious multi-collinearity problem between the independent variables.

Cooper and Schendlar (2009) suggested that a correlation above 0.8 should be corrected for the given variables. Also, Hair et al (2006) argued that correlation coefficient below 0.9 may not cause serious multicollinearity problem.

3.13 Variables Measurement and expected result

Based on the research hypothesis the following relationships were expected for the bank deposit and selected determinant factors.

Table 3.1 Summary of variables measurement and its expected result

Proxy variables	Symbol	Measurement	Expected result
Deposit	(lnDEPO)	lnDeposit at the end of Year	
Deposit Interest Rate	(DIR)	Deposit Interest Rate Of The Year	+
Loan To Deposit Ratio	(LTDR)	Total Loans and Advances/ Total deposit at the end of the year	+
Profitability	(PROF)	income Before tax growth rate At The End Of Year	+
Unemployment Rate	(UNER)	Annual unemployment growth rate	-

Source: developed by researcher (2020)

CHAPTER 4

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF RESULTS

This chapter presents and discusses the results of the study. This includes: stationary test, granger causality test, diagnostic test, and descriptive statistics of variables, correlation analysis, and model specification test and regression analysis results. The analysis of secondary data was made by using STATA 14.2 software.

4.1 Tests for Stationary Series

It is common practice in cointegration analysis to test all the time series variables for stationarity. The idea is that all of the variables to be used in the cointegration analysis have the same order of integration. Therefore, an Augmented Dickey-Fuller was used to test the given variables whether they are unit root or not. If the absolute value of 5% of critical value is greater than the absolute value of the test statistics at the chosen level of significance, the variable is non-stationary. Otherwise the series is stationary Gujarati (2004).

Ho::lnDeposit has unit root or not stationary at first level.

H1: lnDeposit has not unit root or stationary at first difference.

Table 4.1 Augmented Dickey-Fuller Test Summary

	Test Statistic	1% Interpolated Critical Value	Dickey-Fuller 5% Critical Value	10% Critical Value
Z(t)	-4.335	-4.38	-3.6	-3.24

Source: - annual report of Awash bank computed using stata output version 14.2.

From the above result Augmented Dickey-Fuller test output showed that the value of the test statistic is greater than 5% critical value. This implies that, the null hypothesis was rejected. Meaning that there was no evidence for the occurrence of unit root at first difference.

4.2 Granger cointegration test

Table 4.2 Lag Order Selection Criteria

lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-39.4823				2.32192	3.68021	3.69189	3.7298
1	23.5275	126.02*	1	0.000	.008276*	-1.95705*	-1.93368*	-1.85786*
2	23.6244	.19371	1	0.660	.008995	-1.87494	-1.83989	-1.72616
3	24.7919	2.3351	1	0.126	.00888	-1.89018	-1.84345	-1.6918
4	24.8843	.18476	1	0.667	.009682	-1.80766	-1.74925	-1.5597

Source: - annual report of Awash bank computed using stata output version 14.2.

Therefore, an unrestricted VAR was estimated for various lag lengths (at a maximum of one lags) and the AIC, HQIC and SBIC were computed. Table 4.2 provides a summary of the AIC, HQIC and SBIC at the same lag lengths. That was 1 optimal lag length. Moreover, compared to the AIC, HQIC the SBIC always is the parsimonious and popularly used in the empirical literature Mallik (2008) Ramaddhan and Naseeb (2008)

4.2.1 Causality Analysis

Null: There is no granger causality

Alternative: There is granger causality.

Prob > F is less than 5 %, meaning that we reject null hypothesis & accept alternatives hypothesis.

Table 4.3 presents the results of the Granger Causality Test on lnDEPO and DIR, PROF, UNER, DIR. The main target here was to assess the existence of causal relationship and also determines the direction of causality between the two variables The results show that, PROF granger causes lnDEPO,LTD and UNER at 5% level of significance. And

also,DEPO granger causes LTD and PROF. The empirical result confirms the existence of significant through unidirectional causality for PROF to LTD and DEPO to LTD. But, it was Bi-directional causality from PROF to DEPO and vice- versa

Table 4.3 Granger causality Wald tests

Equation	Excluded	chi2	Df	Prob > chi2
lnDEPO	LTDRinM	10.215	2	0.006
lnDEPO	PROFinB	7.2955	2	0.026
PROFinB	lnDEPO	16.637	2	0.000
PROFinB	LTDRinM	19.704	2	0.000
PROFinB	DIR	4.853	2	0.088
PROFinB	UNER	19.462	2	0.000
PROFinB	ALL	34.39	8	0.000

Source: - annual report of Awash bank computed using stata output version 14.2.

4.2.2 Cointgration Test by Using Residual Value

Ho: Residual has unit root or not stationary at first level.

H1: Residual has not unit root or stationary at first difference.

		_____ Interpolated Dickey-Fuller _____		
	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
Z(t)	-2.849	-4.380	-3.600	- 3.240

Source: - annual report of Awash bank computed using stata output version 14.2.

The above table residual showed that the absolute value of 5% critical value(3.6) greater than the absolute value of Test statistic(2.849). Therefore, the null hypothesis was taken (accepted). Meaning that there was no cointegration in the model.

4.4 Testing assumptions of classical linear regression model (CLRM)

The first part of this chapter was testing the classical linear regression model/CLRM assumptions. The diagnostic tests were taken to ensure that the data fits the basic

assumptions of classical linear regression model. Therefore, before running the regression model the researcher was testing the following CLRM assumptions:

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

According to Brooks (2008) the assumption will never be violated if a constant term was involved in the regression equation, this..

4.4.2 Test for Heteroskedasticity Assumption (Var (ut) = σ2)

The second CLRM assumptions which was conducted in this study was testing heteroscedasity which stated that the variance of the errors was constant it implies that there was Homoscedasticity. According to (Brooks, 2004), there was heteroscedastic if the errors do not have a constant variance. And this assumption can be tested through the Breush-Pagan / Cook-Weisberg method and White's test was used. This test comprised testing of the null hypothesis that the variance of the errors was constant Homoscedasticity and also the alternative hypothesis that the errors did not have a constant variance.

4.4.2.1 Breush-Pagan/Cook-Weisberg test for Heteroskedasticity.

According to the decision rules of Breush-Pagan/Cook-Weisberg examine for Heteroskedasticity states that the problem of Heteroskedasticity exists if the p-value obtained from Breush-Pagan/Cook-Weisberg test of Heteroskedasticity is smaller than the chosen level of significances, i.e.5%. The researcher used the following hypothesis for Breush-Pagan / Cook-Weisberg test of not constant variance.

Ho/Null Hypothesis/: The assumption that there exists Homoscedasticity

H1/Alternative Hypothesis/: There is no Homoscedasticity (there is Heteroskedasticity)

The following Breush-Pagan output showed that the value of prob> Ch2 is significant at 0.05 of given level of significance i.e. 17.31 is greater than 0.05. Therefore, there is no problem of Hetroscedasticsity (depend on STATA output from Bruesh pagan statistic test). It concluded that there was no confirmation for the existence of Hetroscedasticsity, due to the p-value was more than 5%).

Table 4.4: Breush-Pagan/Cook-Weisberg test for Heteroskedasticity

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
      Ho: Constant variance
      Variables: fitted values of lnDEPO

      chi2(1)     =    1.86
      Prob > chi2  =   0.1731
```

Source: - annual report of Awash bank computed using stata output version 14.2.

4.4.2.2 White's Test for Heteroskedasticity

In addition to Bruesh-Pagan/ Cook -Weisberg test for Heteroscedasticity, white test was also used to test the existence of Hetroscedasticsity across the range of explanatory variables. The p-value for the tests should be greater than 0.05. In order to conclude that Hetroscedasticsity problem does not exist. As it observed from the table 4.2 p-value is 6.43% which is greater than 5%. As a result indicated that the variance of error term was remain constant meaning that this provide the conclusion that Hetroscedasticsity problem does not exist.

Table 4.5: white `test for Hetroscedasticsity

```
White's test for Ho: homoskedasticity
          against Ha: unrestricted heteroskedasticity

          chi2(14)      =     22.76
          Prob > chi2   =    0.0643

Cameron & Trivedi's decomposition of IM-test
```

Source	chi2	df	p
Heteroskedasticity	22.76	14	0.0643
Skewness	5.18	4	0.2692
Kurtosis	0.85	1	0.3565
Total	28.79	19	0.0693

Source: - annual report of Awash bank computed using stata output version 14.2.

4.4.3 Test for Autocorrelation

The term autocorrelation may be defined as "correlation between members of series of observations ordered in time (time series data). Auto correlated has been appeared when the errors are correlated with one another. To examine the presence of autocorrelation or not, the researcher has employed Breusch-Godfrey LM test.

The hypothesis for Breush–Godfrey serial correlation LM test stated as follow:

H0 = No autocorrelations errors
H1 = Autocorrelations errors

As shown in table 4.3 the P-value 0.1121 which was beyond the significance level of 0.05. Thus, the null hypothesis of no autocorrelation was failed to reject at 5% of significant level.

Table 4.6 Breush-Godfrey LM Test for Autocorrelation

Breusch-Godfrey LM test for autocorrelation

lags(p)	chi2	df	Prob > chi2
1	7.492	4	0.1121

H0: no serial correlation
Source: - annual report of Awash bank computed using stata output version 14.2.

4.4.4 Normality Test

The normality assumption (i.e. the normally distributed errors). The following table presents the results from the well-known tests of normality Shapiro-Wilk Test. Therefore, the Shapiro-Wilk test as a numerical means of assessing normality is used. The Shapiro-Wilk test of residuals is 87.46%, which is greater than the level of significance 5% i.e. 0.05. Hence the data is normal. Or Since the P-value was significant the researcher failed to not accept the null hypothesis. So that the data was reliable in a normal distribution hypothesis.

Table 4.7: Shapiro-Wilk W test for normality

		------ joint -----			
Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	Prob>chi2
resid	26	0.7422	0.6895	0.27	0.8746

Source: - annual report of Awash bank computed using stata output version 14.2.

4.4.5 Test of multicollinearity

When the correlation between two or more independent variables is (too) high, the problem of multicollinearity occurs Wooldrige (2000). According to Gujarati (2004) Multicollinearity is the state in which the explanatory variables are extremely correlated. When predictors variables are multi collinear, there is overlap power. This condition may direct to the paradoxical effect, whereby the regression model fits the data well, but none of the independent variables has a significant impact in predicting the response variable .This is because when the predictor variables are highly correlated with one another, they share essentially the same information. Thus, together, they may explain a great deal of the dependent variable, but may not individually contribute significantly to the model. Thus, the impact of multicollinearity is to reduce any individual explanatory variable's predictive power by the extent to which it is associated with the other explanatory variables. In addition to this the problem of multicollinearity may lead to less accurate results in the analyses; the coefficients may have very high standard errors and perhaps even incorrect signs or implausibly large magnitudes Baddeley & Barrowclough (2009) and Baum (2006).

Multicollinearity can be detected by calculating the variance inflation factors (VIF) for each independent variable. Multicollinearity is present when VIF values are larger than 10. Furthermore, the critical value can be calculated by 1/VIF, if this value is below 0.1, this would mean that more than 90% of the variation in the variable is explained by the other variables. The variable(s) with VIF values larger than 10 or 1/VIF values below 0.1 should be excluded from the analyses Rabe & Everitt (2004).

Depend on the finding in the following table, the study variable have no a multicollinearity problem as the VIF value is below 10 and also the tolerance is above 0.1 i.e. for this study, the VIF mean values are less than 10 i.e. 1.90 in average. In other hand table 4.6 result shows that the maximum VIF result for the explanatory variables in this study was 1.90, it is far less than 10 and the minimum tolerance was 0.432719, far greater than 0.10. Thus, value of VIF indicated that, there was no issue of multicollinearity in this model.

Table 4.8: multicollinearity test

Variable	VIF	1/VIF
UNER	2.31	0.432719
DIR	1.90	0.526228
PROFinB	1.78	0.562509
LTDRinM	1.63	0.614689
Mean VIF	1.90	

Source: - annual report of Awash bank computed using stata output version 14.2.

4.5 Descriptive analysis

Descriptive statistics is used to assess the central value of the observations, minimum and maximum to indicate the lowest and highest values respectively. The standard deviation also used to evaluate the dispersion the values of all the dependent and independent variables. Table 4.9 reports the mean, standard deviation, minimum and maximum of each variable in the sample. This study has used eight variables for the analysis and interpretation, from those variables one is dependent variable, total bank deposit. Among these independent variables, two of them were internal variables (LTDR, and PROF) and the remaining two variables were external variables (UNER and DIR) that have influence on total deposit of Awash Bank.

The following table 4.9 indicates the summary statics for banks deposit and four selected independent variables.

Table 4.9: Descriptive Statistics Result and Discussion

Variable	Obs	Mean	Std. Dev.	Min	Max
lnDEPO	26	1.333058	1.794345	-1.924149	4.307653
LTDRinM	26	.6852381	.1261575	.495463	.9465021
DIR	26	.0526923	.0195054	.03	.1
PROFinB	26	.6204231	.9679247	.005	3.6
UNER	26	.2145	.0468984	.165	.286

Source: - annual report of Awash bank computed using stata output version 14.2.

As revealed in the Table 4.9, the descriptive statistics of the study, the mean for natural logarithm of total deposits of awash bank is 1.333058 percent, and the standard deviation was 1.794345 percent with a minimum of -1.924149 percent, and a maximum of 4.307653 percent. The maximum deposit is recorded by awah bank in the year 2020 and the minimum deposit is recorded in 1995. Depend on minimum and maximum values it can be concluded that the awash bank deposit fluctuates between -1.924149 and 4.307653 respectively. The standard deviation also stated that there is the variation of deposit amount in awash bank during the study period.

The mean of the loan to deposit was 68.52381 % with std. dev 1.794345 %. The minimum and maximum values of the loan were 49.5463 and 94.65021% respectively. The extreme loan to deposit ratio of 94.65021% was registered in the year 1996 by bank. While the minimum amount of loan to deposit ratio recorded by bank in 2011. Based on this descriptive result, loans to deposit ratio was fluctuated between 49.5463 and 94.65021 percent.

Regarding the deposit interest rate of awash bank, the mean value of deposit interest rate is 5.26923 and with maximum of 10% and minimum 3%. This implied that the deposit

interest rate was paid to depositors 3% from the year 2002 to 2007 and 10% from year 1995 to 1996. From the above result it was possible to understand that the was large deviation of deposit interest rate in the direction of its mean value over the periods with the value of Standard deviation 1.95054%. From this result it is possible to say that large deposit interest rate dispersion during the consequential last year. The fluctuate condition on deposit interest rate is seen. The average profit of awash bank for the last 26 years for is 62.04231 and standard deviation 96.79247 %. The minimum is .05% and the maximum is 3.6. The minimum amount of 0.005 was generated by Bank in 1995 and the maximum profit of 3.6 was generated during the study period in 2020 by bank. This indicates there is large fluctuation over the study period.

Finally, explanatory variable for the study was unemployment rate which is measured by annual unemployment rate in Ethiopia on which the mean was 21.45 % with standard deviation of 4.68984 percent. The maximum value and minimum value was 28.6% and 16.5% respectively for the study period. This implies that there is the incremental and high level of unemployment rate in Ethiopia during the study period.

4.6 Correlation analysis

For expressing the degree of relationship quantitatively between two sets of measures of variables it is regularly taken the help of an index that is known as coefficient of correlation. It is a kind of ratio which expresses the extent to which changes in one variable are accompanied with changes in the other variable. It involves no units and varies from -1 (indicating perfect negative correlation) to + 1 (indicating perfect positive correlation). In case the coefficient of correlation is zero, it indicates zero correlation between two sets of measures sing (2006). Cooper & Schindler (2009) Recommended that a correlation above 0.8 should be adjusted such variables, since it is a sign for multicollinearity problem. Also, Hair, Tatham, Andeson, & Black (2006) debated that correlation coefficient under 0.9 may not reason for serious multicollinearity issue.

The following correlation matrix table 4.10 presents the correlation matrix for all explanatory variables and independent variables used in the analysis. The test result

indicates there are fairly low data correlations among the independent variables. This means that the correlations between the variables within the study not exceed 0.8.

The correlation coefficient of commercial bank deposit and loan to deposit ratio was --0.4559, which is a negative relation. The coefficient of correlation between bank deposit and deposit interest rate was -0.2174, the result shows that the negative relationship with total deposit of awash banks and deposits interest rate. The coefficient of correlation between total deposit and profitability was 0.7817. The result shows that high and positive correlation between banks deposits and profitability.

The last variables coefficient of correlation between awash bank deposit and unemployment rate was -0.8522. This means that there is a strong negative correlation between deposit and unemployment rate.

Moreover, unemployment rate was positively correlated with loan to deposit ratio, deposit interest rate by having correlation coefficient of 0.5090 and 0.4296 respectively whereas it was negatively correlated with number of profitability by having correlation coefficient of -0.4423.

Furthermore from the above correlation matrix profitability has a positive relation with loan to deposit ratio and deposit interest rate by having correlation coefficient of 0.0067 and 0.2478 respectively.

Deposit interest rate was positively correlated with loan to deposit ratio by correlation coefficient of 0.5300.

Table 4.10: Correlation Matrix of Dependent and Explanatory Variables.

Matrix of correlations

Variables	(1)	(2)	(3)	(4)	(5)
(1) lnDEPO	1.000				
(2) LTDRinM	-0.456	1.000			
(3) DIR	-0.217	0.530	1.000		
(4) PROFinB	0.782	0.007	0.248	1.000	
(5) UNER	-0.852	0.509	0.430	-0.442	1.000

Source: - annual report of Awash bank computed using stata output version 14.2.

Totally, from the correlation matrix table, table 4.8 we see that the most significant factors for deposit amount is profit and unemployment rate. However deposit interest rate and loan to deposit rate have also a lesser influences or have a lesser correlation with banks deposit volume.

4.7 Regression Model

Stata output has shown that, Prob > F = 0.0000, R-squared = 0.9607,Adj R-squared = 0.9532. Meaning that the overall regression model is significant. And also specifically, LTDR, UNER & PROF are significant @ 1%. But, DIR is insignificant and negative impact on bank deposit.

And now from the regression result we can substitute the values of coefficients and found the following equation:

lnDEPO=6.630576-2.680965LTDRt-1-5.847654DIRt-2+1.097647PROFt-3-17.87085 UNERt-4+ μit

From the regression model result, the R-squared for DEPO was 96.07%; this indicates that indicates how much variation of a dependent variable is explained by the independent variable(s) in a regression model. The overall R-square (coefficient of determination) also measures the proportion of the total dispersion in dependent variable explained by the regression model. This implied that the variations in the explanatory variables explain 96.07% of the deviations in the response variables i.e. of the DEPO. In other hand, loan to deposit ratio, deposit interest rate, profitability and unemployment rate collectively explain 96.07% of the changes on DEPO in very good manner. The remaining 3.93% of the changes of the total deposit in this study was described by further factors which were not comprised in the study. From the regression model result the researcher conclude that the overall model is significant (P-value = 0.000) with R^2 of 96.07% in the model.

From regression result of the above table, table 4.11 Constant = 6.630576 shows that if all the independent variables (deposit interest rate, loan to deposit ratio, profitability, and unemployment rate) all are rated a zero, DEPO rated as 6.630576 .And also the result

shows that and PROF has positive impact on the total deposit of Awash bank; while LTDR DIR, UNER have negative impact on bank deposit.

lnDEPO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
LTDRinM	-2.681	0.785	-3.42	0.003	-4.314	-1.048	***
DIR	-5.848	5.488	-1.07	0.299	-17.260	5.565	
PROFinB	1.098	0.107	10.26	0.000	0.875	1.320	***
UNER	-17.871	2.517	-7.10	0.000	-23.105	-12.637	***
Constant	6.631	0.505	13.13	0.000	5.581	7.681	***
Mean dependent var		1.333	SD dependent var			1.794	
R-squared		0.961	Number of obs			26.000	
F-test		128.253	Prob > F			0.000	
Akaike crit. (AIC)		29.033	Bayesian crit. (BIC)			35.323	

**** p<0.01, ** p<0.05, * p<0.1*

Source: - annual report of Awash bank computed using stata output version 14.2.

4.8 Results interpretations

In this section, detail analysis results of each explanatory variable and their impact awash bank deposit was discussed. Therefore, the following result interpretation states the relationship between independent variables and total deposit.

4.8.1 Deposit interest rate:

The results of the regression output regarding deposit interest rate show that there is no significant relationship between deposit interest rate and total deposits of commercial bank. As shown in above table 4.10, the regression coefficient of deposit interest rate was -5.847654 with a significance value of 0.299. This result indicates that when deposit interest rate change by 1% total deposits of awash decreased by 5.847654% in opposite direction. The insignificance of deposit interest rate for commercial bank deposit is a controversial result and of against the reality. As indicated by previous researcher's Deposit interest rate also a main variable in determining the total deposits of commercial banks. According to economic theories increase in bank interest rate has either positive or negative impact on bank deposit mobilization. In addition to this author Fry (1994) & McKinnon (1991) suggest a negative relationship between interest rate and saving. Furthermore, from some empirical studies by Hassan (2016), Gragn (2015) and Fisseha (2017) also founds that deposit interest rate has a negative relationship with banks

deposit, so this study result in terms of negative sign is consistent with those researchers findings .And however. This negative insignificant association between total deposit and deposit interest rate was contradicted with the assumption of permanent income theory, which states that an increase in interest rate has a direct impact on income meaning that the people save because of future return expectation. And the result is different from the research of Harald & Heiko(2009), Sudin & Wan (2006), Mashamba & Gumbo (2014).The regression result reveals that deposit interest rate is not a major significant variable in explaining total deposits of commercial bank. This indicates that whether decrease or increase in deposit interest rate is not much determine the amount of deposit in Awash bank. This implies that in Ethiopia, customers of awash bank are make deposits with a banks not because of the banks deposit interest rate but due to other influence such as bank service quality, safety, differentiation of products offered by bank, usual beliefs that is bank will not bankrupted or liquidated may also attract depositors, in other way the level of awareness created by bank might be attract deposits to a bank as customers attempt to take advantage which promoted by bank. In other hand the insignificance of deposit interest rate on banks deposit observed in the regression, might be because of interest rate in Ethiopia assigned by national bank of Ethiopia because of this there is no high competition between private commercial banks in terms of interest rate on deposit for the purpose of deposit mobilization.

4.8.2 Loan to deposit ratio:

Regarding the impact of loan to deposit ratio on total deposit, the estimated coefficient for loan to deposit ratio is statistically significant and negative for awash bank at 1% significance level. Which is LTDR has a coefficient of -2.680965 and p-value 0.003. The result indicates that when loan to deposit ratio increased by one birr total deposit of awash bank would decreased by 2.680965 unit in opposite direction. This study result consistent with the empirical study results of Andinet (2016) in Ethiopia,Bahiredin (2016) in Ethiopia and Devinaga (2010) in Malaysia the researchers study result stated that Loan to deposit ratio was significantly and negatively affect bank deposit growth. However this study is inconsistent with the study result of Mamo (2017) & Fisseha (2017) the researcher examined and found out loan to deposit ratio has a positive

significant impact on banks deposit. Generally depend on this study result, the high liquidity position of the bank shows that the banks have higher tied money in their account, which also creates that low level of deposit mobilization specifically for the future life of the bank.

4.8.3 Profit

The regression result of model of this study shows that profitability has significant and positive relationship with awash bank that was summarized in table 4.10. The positive sign of the coefficient indicates an increase in profit leads to an increase commercial bank deposit. Thus, the hypothesis is agreed with the actual regression result and then hypothesis is accepted. The positive sign of this study finding inconsistent with the empirical findings of Sufian (2011) and Harald & Heiko (2009), the researcher's states profitability has negative and insignificant effects on the Savings/deposit as measured by total deposits at the 5% level of significance. They concluded that impact of profitability bank deposit was lower when compared with other variables explanatory. However, the result was consistent with findings of previous studies Erna and Ekki (2004) that there was association between the profitability of the banks and deposits of banks. The writer recommended that greater bank profitability was indicating the increased bank soundness; this has made it easier for these banks to collect more deposits. The current study found that profitability is positively affect the total deposits of commercial bank and thus the conclusion about the impact of profitability remains ambiguous and further research is required.

4.8.4 Unemployment rate:

Besides, from macroeconomic factors, unemployment rate had negative impact on total deposits of awash bank in Ethiopia by having a coefficient of -17.87085 and p-value 0.000. Which indicates a 1% change (increase/decrease) unemployment rate can result a change on total deposit of awash bank 17.87085 in opposite direction. The result of regression model was agreed with the hypothesis constructed by the researcher. The study hypothesized that there was a negative relationship between awash banks deposit and unemployment rate. Based on the result, the researcher accepts the hypothesis and it

can conclude that unemployment rate has had a negative and significant effect on deposits of commercial bank. The negative relationship between unemployment rate and bank deposit could be attributed to the fact that unemployment rate increases the cost of living and decrease the individual income. Then, the customers/depositors want to forgo current savings this condition also decreases the amount of deposits of the bank. In other case the regression result of this study regarding the effect of unemployment rate on commercial bank deposit is similar with empirical evidences by (Serneels, 2004) in Ethiopia. The researcher says "a negative relationship between unemployment rate and the country's economy indicates that high unemployment rate in the given country directly reduce the individuals saving rate (amount)", depend on this reality when the individual or depositors saving amount is come down the banks deposit growth amount also declined. Therefore, significant effect of unemployment rate on the total deposit was also consistent with the finding of Lomuto (2008) in Kenya and El (2017) in morocco. In general the significant and negative effect of unemployment rate shows that when there is high unemployment rate in Ethiopia the level of income distributed to individual person is very low and most of unemployed people also coming to depend on the families or in to other body it also create the opportunity to decrease individual saving or deposit this situation also directly reduce the deposit volume of the banking industry. Generally this chapter presented the results of regression model result by comparing with some empirical studies of different researchers from different countries. Table below summarizes the comparison of the test result for determinants of awsh bank deposit with the hypothesized expectations. As shown in the table below, the test result of the variables was summarized in the following table.

Table 4.11: Comparison of the Test Result with the Expectation

Independent variables	**Expected Relationships with DEPO**	**Actual result Relationships**	**Decision for Statistical Significance test**
Loan to deposit ratio	+	-	Fail to rejected @ 5%

Deposit interest rate	+	-	Rejected @ 5%
Profitability	+	+	Fail to rejected @ 5%
Unemployment rate	_	-	Fail to Reject @ 5%

Source: Developed by researcher

CHAPTER 5

SUMMARY, CONCLUSIONS, RECOMMENDATIONS

The above chapter presented and analyzed the result of the study, while this chapter connects with the summarizations, conclusions, recommendations and suggestions produced based on the empirical findings of this thesis. This chapter is classified into four major sections. The first section contains the summary of the study. The second part also presents the conclusions by summarizing the most important findings of the study. The third section provides some possible and useful recommendations depend on the conclusion reached and at the last forwards some suggestions that future research need to investigate.

5.1 Summary

Deposit is the heart for commercial banks. A deposit is liabilities of the bank and it was very important to discover factors influencing the bank deposit and examine the association between dependent variable and explanatory variables. The purpose of this study was to investigate the determinant factors that affect the total deposit of awash bank by using time series of 26 years data (from 1995 up to 2020). In order to achieve this objective, four driven hypotheses have been developed .To test these hypotheses, answer research question and achieve the broad objective of this study; the study used the quantitative research approach and explanatory research design. OLS Regression model was used to estimate the regression equation. The unit root test was tested and also granger causality was applied to check the causal effect.

The paper has investigated the impact of internal factors determinant namely loan to deposit ratio, profitability, and also deposit interest rate and unemployment rate on the deposits of awash bank, awash bank over the study period (1995-2020). To test the effect of such variables on bank deposit, the researcher has used both descriptive and econometrics method of data analysis.

The regression result showed that loan to deposit ratio, unemployment rate and profitability are significantly influence the deposit of commercial bank. However, deposit interest rate has insignificant impact (lack of impact) on total deposit of awash bank.

5.2 Conclusion.

Loan to deposit ratio is used to measure the liquidity of the bank and has a negative and statistically significant relationship with total deposit commercial bank. Depend on the study results this implies that the high liquidity position of the bank has a negative impact and inverse relation with commercial bank deposit and vice versa.

The results also showed that insignificant and negative association between deposit interest rate and bank deposit. Meaning that in awash bank; deposit interest rate has no influential pressure on the bank deposit.

Unemployment rate has a negative and significant effect on deposits of commercial banks. This regression model result has told us, the unemployment rate was has negative impact on the awash bank deposit.

Finally, regarding the impact of Profitability on total deposit, the estimated coefficient for Profitability is statistically significant and positive for Awash bank at 5% significance level. Therefore, it has significant positive impact on bank deposit. From the discussion of the findings above, it can be concluded that the all independent variables have significant factors to influencing the deposits of awash bank except deposit interest rate

5.3 Recommendations

The primary functions of a commercial bank are accepting deposits and also lending funds. Deposits are savings, current, or time deposits. Also, a commercial bank lends funds to its customers in the form of loans and advances. So, it advisable if awash bank give strong emphasis on deposits and its determinant factors. And also it had better if bank take a remedial action periodically for those influential factors which affect banks deposit through significantly with positive and negative impact.

As regression result reveals that profit is the most important factors for the growth of bank deposit. Thus, it had better if the bank gives attention by making necessary strategy in which more profitable manner. And also it is advisable if the government body create new job opportunities to reduce unemployment rate

Deposits are the starting point to the bank, but there was limited studies have been made to investigate determinants of commercial bank deposit.so, researcher suggested that further similar study to be conducted by another researchers through covering both primary and secondary source of data that might be determinant factors of commercial bank like factors such as: technology, number of customer, service quality, number of staff, and other variables which have a qualitative and quantitative in nature.

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APPENDIXES

Appendix 1 Unit root test

Table 4.1 Augmented Dickey-Fuller Test Summary

	Test Statistic	1% Interpolated Critical Value	Dickey-Fuller 5% Critical Value	10% Critical Value
Z(t)	-4.335	-4.38	-3.6	-3.24

Source: - annual report of Awash bank computed using stata output version 14.2.

Appendix 2 Optimal lag selection

Table 4.2 Lag Order Selection Criteria

.

lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-39.4823				2.32192	3.68021	3.69189	3.7298
1	23.5275	126.02*	1	0.000	.008276*	-1.95705*	-1.93368*	-1.85786*
2	23.6244	.19371	1	0.660	.008995	-1.87494	-1.83989	-1.72616
3	24.7919	2.3351	1	0.126	.00888	-1.89018	-1.84345	-1.6918
4	24.8843	.18476	1	0.667	.009682	-1.80766	-1.74925	-1.5597

Source: - annual report of Awash bank computed using stata output version 14.2.

Appendix 3 Granger causality test

Table 4.3 Granger causality Wald tests

Table 4.3 Granger causality Wald tests

Equation	Excluded	chi2	Df	Prob > chi2
lnDEPO	LTDRinM	10.215	2	0.006
lnDEPO	PROFinB	7.2955	2	0.026
PROFinB	lnDEPO	16.637	2	0.000
PROFinB	LTDRinM	19.704	2	0.000
PROFinB	DIR	4.853	2	0.088

PROFinB	UNER	19.462	2	0.000
PROFinB	ALL	34.39	8	0.000

source: - annual report of Awash bank computed using stata output version 14.2.

Appendix 4: Diagnostic tests for CLRM Assumption

Test for heteroskedasticity:Breush-Pagan and whites test for heteroskedasticity

Table 4.4: Breush-Pagan/Cook-Weisberg test for Heteroskedasticity

Table 4.4: Breush-Pagan/Cook-Weisberg test for Heteroskedasticity

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
      Ho: Constant variance
      Variables: fitted values of lnDEPO

      chi2(1)     =    1.86
      Prob > chi2 =   0.1731
```

Source: - annual report of Awash bank computed using stata output version 14.2.

Table 4.5: white `test for Hetroscedasticsity

```
White's test for Ho: homoskedasticity
         against Ha: unrestricted heteroskedasticity

         chi2(14)      =     22.76
         Prob > chi2   =    0.0643

Cameron & Trivedi's decomposition of IM-test

---------------------------------------------------
              Source |       chi2     df       p
---------------------+-----------------------------
  Heteroskedasticity |      22.76     14    0.0643
            Skewness |       5.18      4    0.2692
            Kurtosis |       0.85      1    0.3565
---------------------+-----------------------------
               Total |      28.79     19    0.0693
---------------------------------------------------
```

Source: - annual report of Awash bank computed using stata output version 14.2.

Table 4.6 Breush-Godfrey LM Test for Autocorrelation

Breusch-Godfrey LM test for autocorrelation

lags(p)	chi2	df	Prob > chi2
1	7.492	4	0.1121

H0: no serial correlation

Source: - annual report of Awash bank computed using stata output version 14.2.

Normality test

Table 4.7: Shapiro-Wilk W test for normality

		------ joint -----			
Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	Prob>chi2
resid	26	0.7422	0.6895	0.27	0.8746

Source: - annual report of Awash bank computed using stata output version 14.2.

Table 4.8: multicollinearity test

Variable	VIF	1/VIF
UNER	2.31	0.432719
DIR	1.90	0.526228
PROFinB	1.78	0.562509
LTDRinM	1.63	0.614689
Mean VIF	1.90	

Source: - annual report of Awash bank computed using stata output version 14.2.

Appendix 5 Descriptive Statistics

Table 4.9: Descriptive Statistics Result and Discussion

Table 4.9: Descriptive Statistics Result and Discussion

Variable	Obs	Mean	Std. Dev.	Min	Max
lnDEPO	26	1.333058	1.794345	-1.924149	4.307653
LTDRinM	26	.6852381	.1261575	.495463	.9465021
DIR	26	.0526923	.0195054	.03	.1
PROFinB	26	.6204231	.9679247	.005	3.6
UNER	26	.2145	.0468984	.165	.286

Source: - annual report of Awash bank computed using stata output version 14.2.

Appendix 6 correlation matrix

Appendix 7 correlation matrix

Table 4.10: Correlation Matrix of Dependent and Explanatory Variables.

Matrix of correlations

Variables	(1)	(2)	(3)	(4)	(5)
(1) lnDEPO	1.000				
(2) LTDRinM	-0.456	1.000			
(3) DIR	-0.217	0.530	1.000		
(4) PROFinB	0.782	0.007	0.248	1.000	
(5) UNER	-0.852	0.509	0.430	-0.442	1.000

Source: - annual report of Awash bank computed using stata output version 14.2

Table 4.11: regression results of Dependent and Explanatory Variables.

reg lnDEPO LTDRinM DIR PROFinB UNER

lnDEPO	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
LTDRinM	-2.681	0.785	-3.42	0.003	-4.314	-1.048	***
DIR	-5.848	5.488	-1.07	0.299	-17.260	5.565	
PROFinB	1.098	0.107	10.26	0.000	0.875	1.320	***
UNER	-17.871	2.517	-7.10	0.000	-23.105	-12.637	***
Constant	6.631	0.505	13.13	0.000	5.581	7.681	***
Mean dependent var		1.333	SD dependent var			1.794	

R-squared	0.961	Number of obs	26.000
F-test	128.253	Prob > F	0.000
Akaike crit. (AIC)	29.033	Bayesian crit. (BIC)	35.323

*** p<0.01, ** p<0.05, * p<0.1

Source: - annual report of Awash bank computed using stata output version 14.2.

Appendix 8: Raw Data

	YEARS	lnDEPO	LTDR(in M)	DIR	PROF(in B)	UNER
AB	1995	-1.9241	0.842	0.10	0.005	0.286
AB	1996	-1.4147	0.947	0.10	0.011	0.285
AB	1997	-1.0356	0.794	0.07	0.011	0.276
AB	1998	-0.8965	0.936	0.06	0.018	0.282
AB	1999	-0.652	0.781	0.06	0.017	0.280
AB	2000	-0.2705	0.620	0.06	0.021	0.269
AB	2001	-0.1744	0.729	0.06	0.028	0.267
AB	2002	0.063	0.663	0.03	0.013	0.263
AB	2003	0.3199	0.605	0.03	0.022	0.262
AB	2004	0.5766	0.646	0.03	0.048	0.229
AB	2005	0.8198	0.681	0.03	0.063	0.206
AB	2006	1.0296	0.880	0.03	0.134	0.167
AB	2007	1.255	0.721	0.03	0.179	0.168
AB	2008	1.6681	0.512	0.04	0.303	0.172
AB	2009	1.8093	0.515	0.04	0.351	0.204
AB	2010	1.865	0.544	0.04	0.390	0.189
AB	2011	2.0851	0.495	0.05	0.505	0.180
AB	2012	2.2581	0.576	0.05	0.531	0.175
AB	2013	2.573	0.588	0.05	0.583	0.165
AB	2014	2.7799	0.569	0.05	0.829	0.174
AB	2015	2.9707	0.640	0.05	0.861	0.168
AB	2016	3.1921	0.635	0.05	0.986	0.169
AB	2017	3.4933	0.688	0.05	1.314	0.174
AB	2018	3.8266	0.682	0.07	1.964	0.191
AB	2019	4.1346	0.757	0.07	3.344	0.189
AB	2020	4.3077	0.771	0.07	3.600	0.187