# ST. MARY'S UNIVERSITY
# SCHOOL OF GRADUATE STUDIES
# MBA IN GENERAL MANAGEMENT PROGRAM

## FACTORS AFFECTING THE PROFITABILITY OF PRIVATE COMMERCIAL BANKS IN ETHIOPIA

**BY**

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**St. Mary's University**

**JANUARY, 2016**

**SMU**

**ADDIS ABABA, ETHIOPIA**

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# ST MARY'S UNIVERSTY
# SCHOOL OF GRADUATE STUDIES
# FACULTY OF BUSINESS

# FACTORS AFFECTING THE PROFITABILITY OF PRIVATE COMMERCIAL BANKS IN ETHIOPIA

## BY

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## CERTIFICATE

This is to certify that Tizazu Amare has worked his thesis on the topic ―factors affecting the profitability of private commercial banks in Ethiopia under my supervision. To my belief, this work undertaken by Tizazu Amare and it is original and qualifies for submission in partial fulfillment of the requirements for the award of MBA in general management.

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## *ABSTRACT*

*This study examines internal factors affecting the profitability of private commercial banks in Ethiopia by using panel data of banks over the period of 2005-2015 for the total of six private commercial banks. Since the data is secondary data in nature, the quantitative research approach was considered. A multiple linear regression model and t-static was used to determine the relative effect of each independent variable on profitability. The key measures of profitability (dependent variables) used to analyze in this study was Return on Asset (ROA). Bank-specific factors, which were incorporated into the regression models, were deposit amount, loan amount, credit risk management, cost efficiency, capital, size of the bank and liquidity. The findings of the study show that loan amount have statistically significant and positive relationship with banks' profitability. On the other hand, variables like deposit amount, cost efficiency and liquidity have a negative and statistically significant relationship with banks' profitability. However, the relationship for capital, credit risk management and size of the bank is found to be statistically insignificant. The study suggests that focusing and reengineering the banks alongside the key internal drivers could enhance the profitability as well as the performance of the private commercial banks in Ethiopia.*

***Key words****: internal factors, profitability, commercial banks, return on asset (ROA)*

## ACKNOWLEDGEMENTS

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# ACRONYMS

**AIB**- awash international bank S.C

**BoA**- bank of Abyssinia

**CAMEL**- Capital adequacy, Asset quality, Management efficiency, Earnings performance and

Liquidity

**CAP**- capital adequacy

**CBE** -commercial bank of Ethiopia

**COE**- cost efficiency

**CRL**- credit risk management

**DB**- Dashen bank S.c

**DPA**- deposit amount

**FDIC**- Federal Deposit Insurance Corporation

**GDP**- gross domestic production

**IMF**-international money finance

**LIQ**- liquidity

**LOA**- loan amount

**NIB**- nib international bank S.c

**OLS**-Ordinary Least Square

**ROA**- returns on asset

**ROE**- returns on equity

**SIZ**- size of the bank

**SSA**- sub-Saharan Africa

**UB**- united bank S.c

**WB**- Wogagen bank S.c

# CHAPTER ONE

## 1. INTRODUCTION

## 1.1. BACKGROUND

Commercial banks play a vital role in the economic resource allocation of countries (Ongore, 2013). They contribute to economic growth of the country by making funds available for investors to borrow as well as financial deepening in the country (Otuori, 2013)

Today banks offer a variety of services to its clients, including deposits, granting loans and new services that are offered through the World Wide Web. Increasing efficiency and providing a variety of services in the minimum of time are some of the expectation which banking network always had faced, in this regard the initiate action such as Interbank Information Network and electronic banking in the country's banking system has been designed and implemented. Banking system directing resources to manufacturing and service sectors to fulfill their social responsibility, this can create production; employment and economic growth in the country (Leitner, 2014) .The field of activity in banking are divided into three parts resource mobilization, allocation of resources and services. Thus identification of banks performance in the implementation of each of its tasks can present a range of strengths and weaknesses in banks. Since banks just like the other firms seek economic profitability to achieve this important goal, it is necessary to identify effective variables (Sufian & Chong, 2008).

Determinants of bank profitability can be divided in to internal and external factors. Internal factors of bank profitability can be defined as those factors that are influenced by the bank's management policy objectives and decisions (Mishkin et al., 2009). Management effects are the results of differences in bank management policies, decisions, objectives, and actions reflected in differences in bank operating results, including profitability. Pasiouras and Kosmidou (2007) mentioned that management decisions, particularly regarding loan portfolio concentration, were an important factor contributing in bank performance.

In most literatures, banking profitability was evaluated from two perspective which are microeconomic view (bank-specific determinants) and macroeconomic view (industry-specific

determinants). As for the profitability measures, Return on Asset (ROA) and Return on Equity (ROE) are the most common profitability's indicators that used by large group of researchers. ROA is generally the best indicators of bank performance as it reflects that how effective the bank management in producing income from the management of its assets (Sharma & Ravichandran, 2013).

From microeconomic point of view, banks profitability is an essential element to sustain in the increasingly competition banking industry as it provides liquidity, promotes bank expansion as well as improve prospect and stakeholder's confidence on the banking industry (Jamal et al, 2012). Considering the microeconomic variables, capital adequacy, bank size and operational efficiency is the primary bank-specific factors that adopted in the previous studies (Ameur & Mhiri, 2013). Capital adequacy is the major internal determinants of the bank's profitability as it serves a reserve for the bank to maintain their banking business, even resists any unpredictable event in the banking industry. This performance indicator is often used by previous researchers like Gavila et al (2009), and Beckmann (2007) to evaluate the capital strength of banking industry. Bank size is also a significant performance indicator which is adopted to capture the economies of scale effect. According to Bikker et al. (2002) and Pasiouras et al. (2007), larger bank is able to achieve cost advantage from economies of scale and in turn generates greater profitability. On the other hand, operational efficiency is widely used by Flamini et al. (2009), Beck and Fuchs (2004) in determining the performance of banks.

Due to the variation of the environment and data included in the analysis the results of various studies differ significantly. Moreover, the literature review also reveals the existence of controversial conclusions that results from different studies made so far (Amdemikael, 2012). Furthermore, so far as the review of the literature discloses, very scanty work has been done with the objective of identifying the determinants of profitability of banks in Sub Sahara Africa in general and Ethiopia in particular.

 The objective of this study is to identify factors affecting the profitability of private commercial banks in Ethiopia, for the period of 2005 to 2015. In this study only bank characteristics or internal factors will be used to check their impact on profitability of private banks in Ethiopia. The dependant variable is ROA and independent variables are; efficiency (cost management),

liquidity, deposits, loan amount (asset composition), credit risk management, capital and size of bank. Regression analysis, descriptive analysis, and correlation analysis were used in the study.

## 1.2. STATEMENT OF THE PROBLEM

Banking industry serves as the most essential financial intermediary by conducting the primary functions in the global economy (Alper & Anbar, 2011). In most countries, banks are channeling the funds from depositors (surplus fund units) to the borrowers (deficit fund units) and offering various banking products to satisfy the economic demands. The profitability of banking industry is the major concern as it maintains the safety and robustness of the banks, preserves the financial system's stability as well as promotes the economic growth in the country. Thus, it is critical to examine the bank profitability determinants for maintaining the stability of the economy and for the interest of bank management, stakeholders, government and other policy makers (Jamal et al., 2012).

The basic goal of any business and economic bank is profitability (Muda et al., 2013). Banks use all of their efforts to achieve the objectives and meet the economic needs of the community they serve and they are considered as one of the main tools of monetary policy in each country's economic system for one hand gather small savings and wandering funds in the hands of the people and on the other hand in line with the implementation of economic policies and credit which has been set, direct the financial resources to steering the wheel of manufacturing and industrial sectors(Sufian & Chong, 2008). But alongside these, banks in order to achieve their objectives, they have to identify and know effective factors that help to have positive performance and profitability, thus identification of banks performance in the implementation of each of its tasks can present a range of strengths and weaknesses in banks.

Today it becomes extremely essential for Commercial banks to examine their performance because their survival in the dynamic economic environment will be dependent upon their good performance. So, its wellbeing and successful operation captures the interest of different researchers and other professionals. Thus, a number of studies have examined the determinants of banks' performance in many countries around the world. For instance, (Abreu and Mendes 2002; Barros et al. 2007; Chiorazzo et al. 2008; Goddard et al. 2004a; Iannotta et al. 2007;

Pasiouras and Kosmidou 2007; Dietrich et al. 2011; Belayneh 2011; Birhanu 2012; Semu 2010 and Amdemikael 2012) undertook studies on financial performance of bank.

Even though a lot of literatures are developed to examine the determinants of banks performance, those studies show different and even contradictory results. For instance, the impact of bank size on banks performance is hotly debated among researchers. While (Alexiou and Sofoklis 2009; Iannotta et al. 2007 and Mercieca et al. 2007) have found economies of scale for large banks, (Athanasoglou et al. 2008; Barros et al. 2007, and De Jonghe 2010) have found diseconomies of scale for large banks. In addition to this two, (Goddard et al. 2004; Micco et al. 2007 and Athanasoglou et al. 2008) found that there is no statistically significant impact of size on the performance of banks. Regarding capital adequacy which is measured by equity to total asset, different researchers found different Results. Beckmann (2007) argue that high capital leads to low profits since banks with a high capital ratio are risk-averse, However Gavila et al. (2009) argues that, although capital is expensive in terms of expected return, highly capitalized banks face lower cost of bankruptcy, lower need for external funding especially in emerging economies where external borrowing is difficult.

In Ethiopia, studies were made by Belayneh (2011), Semu (2010) and Amdemikael (2012) on the determinants of commercial banks profitability. Moreover studies on profitability of private banks were made by Birhanu (2012) and Habtamu (2012) but they didn't include loan amount (asset composition), and credit risk management which is important variables that affect profitability. Loan amount is the main source of income and is expected to have a positive impact on bank performance. Other things constant, the more deposits are transformed into loans, the higher the interest margin and profits. However, if a bank needs to increase risk to have a higher loan-to-asset ratio, then profits may decrease (Sehrish. and Khalid, 2011).

According to Cooper et al. (2003) Changes in credit risk may reflect changes in the health of a bank's loan portfolio, which may affect the performance of the institution. Duca and McLaughlin (1990), among others, conclude that variations in bank profitability are largely attributable to variations in credit risk, since increased exposure to credit risk is normally associated with decreased firm profitability. So, this study considers both loan amount and credit risk. In addition to this previous study are made with three or four internal variables only, but in this study, to

identify internal factors affect profitability, seven variable will be include. So, this study considers asset composition (loan amount) and credit risk, deposit amount, cost efficiency, capital, size and liquidity for this study as a variable that determines banks performance.

In light of the above, in relation to bank industry of Ethiopia and profitability in particular along with the gap in the literature review, with respect to profitability and the link between profitability and internal determinant factors call for detailed investigation, Since banks just like the other firms seek economic profitability to achieve this important goal, it is necessary to identify effective variables. In this study among the countries bank private commercial banks was investigated and the variables that affect the development and activities of the bank was examined. This study attempt to answer the question what are the internal factors affecting the profitability of private commercial banks and what role to play each of the attained variables in achieving the higher goals of the bank. The objective of this study is to identify internal factors affecting the profitability of private commercial banks in Ethiopia.

## 1.3.   GENERAL OBJECTIVES

The general objective of this study was to examine internal factors affecting the profitability of private commercial banks in Ethiopia for the period of 2005 to 2015 by using data from audited financial reports.

## 1.4.   SPECIFIC OBJECTIVES

The specific objectives of the research includes:-

➢ To investigate the relationship between deposit amount, loan amount, credit risk management and ROA (profitability) of private commercial banks in Ethiopia.
➢ To investigate the relationship between cost management, liquidity and ROA (profitability) of private commercial banks in Ethiopia.
➢ To investigate the relationship between capital, size and ROA (profitability) of private commercial banks in Ethiopia.

## 1.5.    SIGNIFICANCE OF THE STUDY

Banking sector acts as the back bone of an economy where it plays a vital role in providing source of financing and supporting economic activities (Dawood, 2014). Therefore, its health and soundness is very critical to the health of overall economy at large as the well-being of the banking sector is directly linked to the growth of the economy (Sufian & Chong, 2008). For that reason, it is necessary for bank manager, central bank, policy maker, and other financial authorities to have knowledge of the underlying factors that affect the financial sector's performance (Sufian & Chong, 2008).

This study particularly contributes to the literatures on the determinants of banks performance and focuses only on the contribution of internal factors. This study is expected to provide evidence on to what extent the bank-specific factors will affect the bank performance, thereby allow the authors to discover the factor that would bring greatest impact and that does not has significant impact. Hence, this result can be used as a reference in further researches as it helps other researchers to better understand and provide a clearer picture on the banks" performance determinants.

This study also could contribute significantly to the formulation of policies. It is useful to the policymakers and regulators in making decision and formulating policies that will indeed maintain the soundness of banking system and benefit the economy. In addition, the outcome of this study also can be treated as extra information to the investors. By knowing the factors that could influence performance of banks, investors could make their investment decision wisely.

## 1.6.    SCOPE AND LIMITATIONS OF THE STUDY

The objective of this study was limited to examine internal factors affecting the profitability of private commercial banks operating in Ethiopia, using data from audited financial report starting from 2005 to the year 2015. The scope of this study was restricted to the relationship between Return on Asset with its determinants.

Even if there are so many factors such as capital adequacy, asset quality, management efficiency, earning quality, liquidity, bank size, credit risk, cost efficiency, deposit amount, technology, human capital, loan performance, gross domestic product(GDP), bank concentration, inflation, regulation, income diversification, effective tax rate among others that affects commercial banks performance, this study is limited to bank specific factors such as, deposit amount, loan amount, credit risk, cost management, capital, size and liquidity that determine profitability of private commercial banks in Ethiopia. From those who made their research on internal factors; (Fatmah and Maryam 2013; Saira. J et al. 2011 and Usman 2014) are some of them. External factor has not been included in this study because the main objective of this study is to identify internal factors affecting the profitability of private commercial banks in Ethiopia.

Even if currently nineteen commercial banks operating in Ethiopia, only sixteen private commercial banks were used as population, six banks ( Dashen bank, Awash bank, bank of Abyssinia, United bank, Nib bank and Wegagen bank) were used as a sample, because the other banks have not eleven years date for the study. Based on the sample banks number of observation was 66 and this is one of the limitation of this study. Even if number of observation is relatively small with respect to sample population, study with less than 66 observations have been done by researchers like; Fatemah and maryam (2013), with36 observation and Saira.J (2012) with umber of observation of 50. Commercial bank of Ethiopia is not included in this study, because CBE is the leading and dominant bank in Ethiopia and generalizes the result to the whole bank may become mislead.

In this study ROA was used as a main performance measure. The reason for using ROA as the measurement of bank performance was because The ROA reflects the ability of a bank's management to generate profits from the bank's assets and also indicates how effectively the bank's assets are managed to generate revenues. Moreover, performance is best measured by ROA (Tan et al., 2012).

## 1.7. ORGANIZATION OF THE STUDY

This paper has been structured into five main chapters as follow:

**Chapter 1: Research Overview**

This chapter is an introductory chapter which provides an overview of this study. It comprises of research background, description of problem statement, research objectives, hypothesis to be tested, and significance of study, scope and limitation of the study and organization of the study.

**Chapter 2: Literature Review**

This chapter reviews the relevant literatures and theoretical models done by previous researchers. Proposed framework and hypotheses development on banks" performance determinants will be discussed in this chapter too. Basically, this chapter provides a foundation of theoretical framework to justify the relationship between the selected variables.

**Chapter 3: Methodology**

This chapter mainly describe on how this study is carry out in term of the designation of the research, methodology in collecting data and methodology in analyzing the collected data. Particularly, this chapter gives a whole picture on how this study is perform by starting from the stage of research design to the final stage of transforming the data into useful information (data analysis).

**Chapter 4: Data Analysis and discussion**

This chapter is said to be the climax of this study in which it associated with the results and findings. The overall result on the performance of private commercial banks are first to be analyzed and discussed and follow with the climax in which the interpretation and discussion on the regression result regarding the relationship between the dependant and independent variables is explained in detail.

**Chapter 5: Finding, Conclusion, and recommendations**

This chapter is the last chapter of this study where it summarizes and concludes all the main findings and discussions relating to the hypotheses developed. This chapter also provides some possible implications which are useful to the bank management and policy maker. Added to that, recommendation based on the result well recommended.

<div align="center">**CHAPTER TWO**</div>

**LITERATURE REVIEW**

## 2. INTRODUCTION

The study of profits is important not only because of the information it provides about the health of the bank in any given year, but also because profits are a key determinant of growth and employment in the medium-term (Sufian & Chong, 2008). Changes in profitability are an important contributor to economic progress via the influence profits have on the investment and savings decisions of companies. This is because a rise in profits improves the cash flow position of companies and offers greater flexibility in the source of finance for corporate investment (i.e. through retained earnings). Easier access to finance facilitates greater investment which boosts productivity, productive capacity, competitiveness and employment.

In order for a business entity (whether public or privately owned) to continue to prosper, there is need for its earnings to be relatively stable for its expansion and growth over time. In addition to its level of earnings, its external environment must also be carefully understood and reliably anticipated. The business organization must ensure that right technology is pursued so as to achieve organizational objectives (Aremu and Mejabi, 2013).

Subsequent sections will build on concepts and definitions described here. In light of the above the purpose of this chapter is to review the literatures related to bank profitability and its determinants, and the chapters have two parts the fist will cover literature related to theory and the next part will be cover empirical study literature related to the study finally summary and knowledge gap will be made on both theoretical and empirical literatures.

## 2.1. INTERNAL FACTORS (THE EFFECT OF BANK-SPECIFIC FACTORS ON BANK PROFITABILITY)

Factors influencing the profitability of banks are classified in to two; internal and external categories (Mishkin et al., 2009). In this study only bank specific or internal factor are included as variable and internal Factors are under management control. This are like deposit, loan

amount (asset composition), credit risk management, liquidity, efficiency (cost management), capital and size of the bank and other which is not included in this study.

Several studies have used Capital adequacy, Asset quality, Management efficiency, Earnings performance and Liquidity (CAMEL) to examine factors affecting bank profitability with success. The system was developed by the US Federal Deposit Insurance Corporation (FDIC) for "early identification of problems in banks" operations" (Uzhegova, 2010). Though some alternative bank performance evaluation models have been proposed, the CAMEL framework is the most widely used model and it is recommended by Basle Committee on Bank Supervision and IMF (Baral, 2005).

## 2.1.1. DEPENDENT VARIABLES' (RETURN ON ASSET)

According to Mishkin et al. (2009) The Net income provides information on how well the bank is doing, but the constraint on using it is that it is not adjusted for the size of the bank. This makes it difficult to compare how well a bank is doing compared to one other. In this way a basic measure of bank profitability is the return on asset (ROA) which corrects for the size of the bank. It is true that ROA provides useful and necessary information on bank profitability but this is not on the major interest of the bank's owners (equity holders). They are more concerned about how much the bank is earning on their equity investment, an amount that is measured by the return on equity (ROE), the net income per currency of equity capital. Golin (2001) pointed out the ROA has recognized as the key ratio for the estimation of bank profitability and has become the most basic measure of bank performance in the literature.

Sufian (2011) also states that ROA is often expressed as a function of internal and external determinants. He agreed with past researchers that ROA shows the profit earned per dollar of assets and also the reflection of bank's management's ability to utilize the bank's resources in order to generate profits. At the same time, Cavallo and Majnoni (2001) also suggested that ROA is the best choice to measure a bank's profitability because it will not be affected by high equity multipliers. On the other hand, the relationship between bank performances and ROA, as the indicator of bank's profitability measurement, is argued by Cavallo and Majnoni (2001), and Laeven and Majnoni (2003).

## 2.1.2. CAPITAL (CAPITAL ADEQUACY AND ITS EFFECT ON PROFITABILITY)

Capital adequacy refers to the sufficiency of the amount of equity to absorb any shocks that the bank may experience (Kosmidou, 2009). The capital structure of banks is highly regulated. This is because capital plays a crucial role in reducing the number of bank failures and losses to depositors when a bank fails as highly leveraged firms are likely to take excessive risk in order to maximize shareholder value at the expense of finance providers (Kamau, 2009).

Although there is general agreement that statutory capital requirements are necessary to reduce moral hazard, the debate is on how much capital is enough. Regulators would like to have higher minimum requirements to reduce cases of bank failures, whilst bankers in contrast argue that it is expensive and difficult to obtain additional equity and higher requirements restrict their competitiveness (Koch, 1995). Beckmann (2007) argue that high capital leads to low profits since banks with a high capital ratio are risk-averse, they ignore potential [risky] investment opportunities and, as a result, investors demand a lower return on their capital in exchange for lower risk.

However Gavila et al (2009) argues that, although capital is expensive in terms of expected return, highly capitalized banks face lower cost of bankruptcy, lower need for external funding especially in emerging economies where external borrowing is difficult. Thus well capitalized banks should be profitable than lowly capitalized banks.

In the economy capital investment is the right or interests of the owners of an institution in the assets. This amount is achieved by decreasing the debt of the institution from the total assets (Berger, 1995). One of the main reasons for high ratio of banks investment is to enable them to deal with the risk of non-repayment of credits by the borrowers, because banks use their own investment as a buffer against insolvency (Ahmadzade, 2005). Adequate and sufficient investment is one of the necessary conditions for maintaining the banking system healthy, and each of the banks and credit institutions to ensure stability of its operations must always adequate the investment and the risk of assets. For this purpose, one of the parameters of interest is capital adequacy ratio of banks and financial institutions (Panayiotis P, 2008).

### 2.1.3. CREDIT RISK MANAGEMENT (ASSETS QUALITY AND ITS EFFECT ON PROFITABILITY)

Credit risk is the probability of not returning resource of banks by debtors. And banks are faced with this risk when the recipient of the credits due to inability to repay the loans cannot commit their obligation on the due date toward the banks.

Credit risk is one of the factors that affect the health of an individual bank. The extent of the credit risk depends on the quality of assets held by an individual bank. The quality of assets held by a bank depends on exposure to specific risks, trends in non-performing loans, and the health and profitability of bank borrowers (Baral, 2005). Aburime (2008) asserts that the profitability of a bank depends on its ability to foresee, avoid and monitor risks, possibly to cover losses brought about by risks arisen. Hence, in making decisions on the allocation of resources to asset deals, a bank must take into account the level of risk to the assets.

According to Waweru and Kalani (2009) many of the financial institutions that collapse in 1986 failed due to non-performing loans (NPLs) and that most of the larger bank-failures, involved extensive insider lending, often to politicians. Koch (1995) suggest  that a good measure of credit risk or asset quality is the ratio of loan loss reserve to gross loans because it captures the expectation of management with regard to the performance of loans. Hempel et al. (1994) observed that banks with high loan growth often assume more risk as credit analysis and review procedures are less rigorous, however returns are high in such loans indicating a risk and return trade-off.

### 2.1.4. LIQUIDITY (LIQUIDITY MANAGEMENT AND ITS EFFECT ON PROFITABILITY)

Another important decision that the managers of commercial banks take refers to the liquidity management and specifically to the measurement of their needs related to the process of deposits and loans. It is argued that when banks hold high liquidity, they do so at the opportunity cost of some investment, which could generate high returns (Kamau, 2009).

The trade-offs that generally exist between return and liquidity risk are demonstrated by observing that a shift from short term securities to long term securities or loans raises a bank's return but also increases its liquidity risks and the inverse in is true. Thus a high liquidity ratio indicates a less risky and less profitable bank (Hempel et al., 1994). Thus management is faced with the dilemma of liquidity and profitability.

Uzhegova (2010) emphasized the adverse effect of increased liquidity for financial Institutions, and he state that, although more liquid assets increase the ability to raise cash on short-notice, they also reduce management's ability to commit credibly to an investment strategy that protects investors which, finally, can result in reduction of the firm's capacity to raise external finance in some cases.

Liquidity is the bank ability to obtain cash, in order to meet current and necessary needs. Banks should have sufficient liquidity to meet the demands of depositors and loan holder so in this way gain the public assurance. Therefore financial institutions need effective assets and liabilities management system to decrease the noncompliance of assets and liabilities and to optimize returning. Also, due to the inverse relationship between liquidity and profitability, creating a perfect balance between these two variables is also important (Ahmadzade, 2005).

## 2.1.5. COST MANAGEMENT (OPERATIONAL COSTS EFFICIENCY AND ITS EFFECT ON PROFITABILITY)

Poor expenses management is the main contributors to poor profitability (Sufian and Chong 2008). In the literature on bank performance, operational expense efficiency is usually used to assess managerial efficiency in banks. Beck and Fuchs (2004) examined the various factors that contribute to high interests spread in Kenyan banks. Overheads were found to be one of the most important components of the high interests rate spreads. An analysis of the overheads showed that they were driven by staff wage costs which were comparatively higher than other banks in the SSA countries.

Although the relationship between expenditure and profits appears straightforward implying that higher expenses mean lower profits and the opposite, this may not always be the case. The reason is that higher amounts of expenses may be associated with higher volume of banking activities and therefore higher revenues. In relatively uncompetitive markets where banks enjoy market power, costs are passed on to customers; hence there would be a positive correlation between overheads costs and profitability (Flamini et al., 2009).

The ultimate goal of any business is to increase shareholder value. Indeed, in modern condition of business, institution sustainable success depends on producing value for shareholders, for the owners of the equity invest where the expected output can be achieved. There are several different ways to increase the profitability and thus producing value for shareholders. Although creating appropriate capital structure and enhancing the firm's portfolio is the most common action to increase value but another important resource for profitability is derived from the cost of management by different units of the organization (Francis M. E, 2013). In simple and brief definition cost management is the collection of measures which is done by the management to ensure customers satisfaction while controlling and continuous reducing of the cost (Athanasoglou et al., 2006).

## 2.1.6. BANK DEPOSITS

All deposits are divided into the following three groups (Indranarain R, 2009):

 **Current loan*deposits (demand)**:

The legal nature and quality of this account is like demand deposit in traditional banks. Real and legal persons and entity, corporate body with a current account, deposit their additional funds to the bank, receive check book to use it on checking accounts in monetary transactions in appropriate time and since the incentive of depositors of this account is preserving and facilitating the exchange of monetary funds through the banking service, the use of loanwords is not correct. It seems that the phrase applied to this account is due to the opinion that any interest-free loan is a loan while it is wrong. According to the Quran's verses and ahadith, a loan fund (money loaned without interest) is where lender to earn spiritual reward helps the person who

needs and gives him an interest-free loan. So if a lender lends money to the banks or the other with purposes like keeping money, facilitating transactions, transfer funds and so on, although the loan is interest free and is legitimate and permissible in Islam but it does not apply as a (loan*) and as mentioned above most of the current account depositors invest with such purposes.

**Saving interest-free loan deposit**:

Saving account is the most common deposit in banking system. This is the characteristic of this account which the real persons and sometimes legal persons or entity deposit their extra funds of their cost to this accounts for along indefinite time and for that receive a booklet so when they need get back the mentioned funds. The nature of such deposit is loan and generally in traditional banks interest will accrue to them. In banking without usury payment of interest is prohibited but to encourage the depositors consider some rewards. These rewards will be paid without prior contract or commitment by non-fixed option (cash or ware) and will be distributed by lottery to the owners of accounts. Since the owners of these types of deposits usually in addition to saving money intent to help the banks in granting interest-free loan and gain the holy and spiritual reward of this act, the application of interest-free loan word in appropriate.

**Time investment deposits**:

They have many cash assets which for different reason do not employing them. So they are seeking institutions which in addition to preserving the investment give them more benefits. Traditional banks in the form of fixed deposits absorb the funds and in addition to the obligation of repaying the money, appropriate to the duration of investing pay interest to the owners. Because of the legal nature of this type of loan was obviously lending with interest and usury, the laws of banking has basically changed in banking without interest. As in three to six usury-free banking law is mentioned, banks take the term investment deposit from the owners in the form of delegation contract and as the agent of depositors and apply them in participations, bailment of a capital (Mudaraba), rent on the condition of possession, installment transactions, contract of farm letting, sharecropping, direct investment, no interest loan for the lender and borrower will then repay the same value (Salaf), minor building works contract with a bank for a loan (Ja'ale). Banks can guarantee or insure the main time investment deposits and according to the contract

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the profits derived from the mentioned operation, appropriate to the duration and amount of deposits, with regard of the bank's resources share, after decreasing the cost and the fee of delegation, are divided between the owners of deposits. Although the interest rate on this account is not clear initially but due to the extent and variety of secure transaction which the benefits will income so that before full auditing bank can pay them in part account.

Time investment deposits exist in two forms short and long term. Short term investment deposit is maintained in booklet and is opened with at least ten thousand Riyals for the first time, in three month to stay in account. Account owner by presenting the booklet at any time can accesses to their fun or add money to it with considering this point that the first three month and also taking into account that to the minimum balance each month will be accrued benefit ratio. These deposits extend monthly and automatically contract in accordance with the initial contract after the first three months and there is no need to go back to renew the contract. Long-term investment deposits will be accepted in Banks in form of deposit sheet with at least fifty thousand Riyals and for a period of one year, two years, three years and five years. After the due date, extending of deposit will be easy with regard to the function of coefficient three month (Ramlall, I, 2009).

## 2.1.7.  PAY LOAN

Payment of credit loan is the main activity and the main source of Banks revenue. Economic growth, without increasing the quantity of capital as a factor of production is not possible and for various reasons is impossible for all person in all cases and stages of their activities to meet their needs by just using their own financial resources and in addition, the receipts and payments of economic units are rarely applicable so they are forced to use loans and money resources of financial and credit institutions which the banks are the most important one (Ramlall, I,  2009).

## 2.1.8. SIZE OF THE BANK

As with many variables, the impact of size on bank performance is hotly debated among researchers. It is possible to divide them into three groups: those who believe that size has a

positive impact on performance, those who find a negative impact, and those for whom the impact is not significant. Start with the studies in the first group, who find a positive impact on performance. It includes Bikker, J.A (2002) and Pasiouras et al. (2007).

They advance several arguments to justify their results: A large reduces costs due to economies of scale that this entails, large banks can also raise capital at a lower cost in the second group, Stiroh et al. (2006) show the negative effects of the size and emphasize that the more a bank is, the more difficult it is to manage. In addition, the authors point out that the size may result from aggressive growth strategy, obtained at the expense of margins and performance. In the same vein, Kasman (2010) finds a statistically significant and negative impact on the size of the net interest margin (net interest margin) watching a panel of 431 banks in 39 countries. De Jonghe (2010) concludes that small banks are better able to withstand difficult economic conditions, while Barros et al. (2007) argue that small banks are more likely to get good performance and less chances of getting bad performance. Conversely, large banks are less likely to obtain good performance and a greater chance of getting bad results.

Many other authors, such as Berger et al. (1987) respond to the argument of economies of scale and argue that some costs can be reduced simply by increasing the size. Finally, the third groups are not statistically significant impacts of size on the performance of banks are (Goddard et al. 2004; Micco et al. 2007 and Athanasoglou et al. 2008).

## 2.1.9. PERSONNEL

Successful senior managers of service organizations have found that in new economy service, corporate employees and customers should be the center of management attention. Successful managers in the services sector consider factors which in modern era will result profitability (Johnson, 1995).

## 2.2. THE NATURE OF COMMERCIAL BANKS

A commercial bank is a type of bank that provides services such as accepting deposits, making business loans, and offering basic investment products. Commercial bank can also refer to a bank

or a division of a bank that mostly deals with deposits and loans from corporations or large businesses, as opposed to individual members of the public (retail banking). In the United States the term "commercial bank" was often used to distinguish it from an investment bank due to differences in bank regulation. After the great depression, through the Glass–Steagall Act, the U.S. Congress required that commercial banks only engage in banking activities, whereas investment banks were limited to capital market activities. This separation was mostly repealed in the 1990s.

## 2.2.1. THE ACTIVITIES OF COMMERCIAL BANKS

Commercial banks engage in the following activities, processing payments via telegraphic transfer, electronic fund transfer, point of sales, internet banking, or other, issuing bank drafts and bank cheques, accepting money on term deposit, lending money by overdraft, installment loan, or other, providing documentary and study guarantees, performance bonds, securities underwriting commitments and other forms of off balance sheet exposure, cash management and treasury, merchant banking and private equity financing. Traditionally, large commercial banks also underwrite bonds, and make markets in currency, interest rates, and credit-related securities, but today large commercial banks usually have an investment bank arm that is involved in the aforementioned activities

## 2.2.2.  FUNCTIONS OF COMMERCIAL BANK

Commercial banks perform many functions. They satisfy the financial needs of the sectors such as agriculture, industry, trade, communication, so they play very significant role in a process of economic social needs. The functions performed by banks, since recently, are becoming customer-centered and are widening their functions. Generally, the functions of commercial banks are divided into two categories: primary functions and the secondary functions.

**Primary functions include:**

Commercial banks accept various types of deposits from public especially from its clients, including saving account deposits, recurring account deposits, and fixed deposits. These deposits are payable after a certain time period

Commercial banks provide loans and advances of various forms, including an overdraft facility, cash credit, bill discounting, money at call etc. They also give demand and demand and term loans to all types of clients against proper security.

Credit creation is most significant function of commercial banks. While sanctioning a loan to a customer, they do not provide cash to the borrower. Instead, they open a deposit account from which the borrower can withdraw. In other words, while sanctioning a loan, they automatically create deposits, known as a credit creation from commercial banks.

Along with primary functions, commercial banks perform several secondary functions, including many agency functions or general utility functions. The secondary functions of commercial banks can be divided into agency functions and utility functions.

**Agency functions include:**
- ✓ To collect and clear checks, dividends and interest warrant.
- ✓ To make payments of rent, insurance premium, etc.
- ✓ To make deal in foreign exchange transactions.
- ✓ To purchase and sell securities.
- ✓ To act as trustee, attorney, correspondent and executor.
- ✓ To accept tax proceeds and tax returns.

**Utility functions include:**
- ✓ To provide safety locker facility to customers.
- ✓ To provide money transfer facility.
- ✓ To issue travelers cheques.
- ✓ To act as referees.
- ✓ To accept various bills for payment: phone bills, gas bills, water bills, etc.
- ✓ To provide merchant banking facility.
- ✓ To provide various cards: credit cards, debit cards, smart cards, etc.

## 2.2.3. THE ROLE OF BANKS

To start very basic, this paragraph discusses the role of banks in the economy and examines the question why banks exist. At first sight, the answer to this question is very intuitive and simple; banks act as an intermediary between those who are in need for money and those who have excess of money. Looking more closely to this question there could be a more detailed

explanation. Namely, in a perfect capital market of Modigliani-Miller (1958), financial institutions are superfluous. Santos (2001); namely, entities can borrow and save directly through the capital market. In reality, such perfect market does not exist; transaction costs and monitoring costs distort capital markets. Furthermore, capital markets suffer from the information asymmetry and the agency problem. The agency problem refers to the dissimilar incentives of borrowers and savers, in a broader context it refers to the dissimilar incentives of principles and agents (Jensen & Meckling, 1976). In a case of financial distress, borrowers are limited liable; implying that they have incentives to alter their behavior by taking on more risk than savers are willing to accept. Monitoring the borrower's behavior is time consuming, complex and expensive for individuals. In general, in inefficient markets, financial intermediation is beneficial since banks have lower monitoring and transaction costs than individuals, due to economies of scale and scope.

Another important aspect of banking is the function of maturity transformation. Banks receive short-term savings from depositors and transform those savings into long-term loans to borrowers. By holding a part of the short-term savings in liquid assets and cash, banks could withstand daily withdrawals from depositors. Banks offer a unique service; lending long term while guaranteeing the liquidity of their liabilities to depositors, which can withdraw their money at any time without a decline in nominal value Schooner & Talyor (2010) cited on (van Ommeren , 2011). Capital markets cannot achieve maturity transformation with the same benefits as banks can. Individual investors face liquidity, price and credit risk, which they cannot diversify to the extent banks can. As savers do not withdraw their deposits at the same time, banks hold only a minor part of the savings in liquid cash. Thus, banks diversify liquidity risks over a large pool of savers. Individual savers can also diversify their investments in terms of credit and price risks but it remains unlikely that they could withdraw the investments at any time without facing liquidity issues.

Nowadays, bank activities are more diverse than ever. In the past decades, competition has increased and new activities have emerged. The traditional form of banking, receiving deposits and extending credits, has become less important. Ever since the complexity of balance sheet has increased, as did balance sheet and risk management van Greuning & Bratanovic (2009) cited in

(van Ommeren, 2011). Besides the incorporations of liquidity, price and credit risks in banking activities, banks increasingly faces market risks (e.g. interest rate risk and currency risk). One may assume that bank's risk managers properly diversify these risks and closely monitor borrower's behavior to avoid bank failure or financial distress. Nevertheless, monitoring bank behavior is required to safeguard the continuity and stability of the banking sector due to moral hazard issues.

## 2.3.  EMPIRICAL STUDY

One of the internal indirect affecting factors of bank profitability is improving personnel knowledge through holding training courses. In a study conducted by Ben Naceur S (2003), as determinant factors of profitability in the Tunisian banking industry, profitability of 10 major banks which accept deposits in Tunisia during 1980-2000 are evaluated. The results showed that among internal factors, high capital, overhead costs and bank lending rates to customers have no direct impact on increasing profitability and among the indicators of financial structure, concentration of free competition has less positive effect on profitability and banks net profit Indicator of stock market development has a positive impact on banks' profitability, which shows the dependence of the stock market and banks and non-interference of government in banking industry is consistent with profitability of this part.

A research conducted by Athanasoglou (2006), as determinant factors of Industry Special Bank profitability and Special Microeconomic Bank during 1985 to 2001. Results showed that variables including investment, efficiency growth, cost management, has a positive relationship with profitability and bank size and ownership variable have little effect on profitability. Industry special variable shave significant impact on bank profitability and density variable has a slightlynegativeimpactonbankprofitability.Theeconomicimpactisasymmetricandonlywhengrowth isgreaterthantheprocess has positive impact on bank profitability.

A study was performed by Kosmidou (2008) determinant factors of banks' profits in Greece during the period of financial integration of Europe Union in which affecting factors on 23 bank's profits in Greece during the period1990 to 2002 have been examined. The results indicate that quality of capital has significant positive effect on bank profitability and if entering only bank special variables the size has slightly positive impact and if entering micro variables and

financial market structure has significant positive effect on bank profitability and among the macro economic variables, the annual change in GDP (Gross Domestic Product), has appositive and significant effect and inflation has negative and significant effect on bank profitability

According to the study conducted by Bashir  (2004), as determinant factors on the profitability of Islamic banks which are based on the balance sheets and income statements of 43 Islamic banks in 21countriesduring 1994 to 2001, the results show that profitability scale is directly related to increase ratio of capital and is inversely related to the increase ratio of loan. Bank profit margins ascend with the increasing ratio of capital to total assets but profit margins descend with the increasing ratio of loans to GDP. High proportion of short-term and consuming funds to total assets is lead to deduction of margin benefits. In contrast, the incoming which associated with the state of the industry and overhead costs, implies that the high profits earned by the banks is may be due to the payment of wages and salaries. High legal reserves due to the cost lost opportunity of holding reserves are to reduce profitability. GDP, higher poll tax and higher real interest rates are profit stimulus and finally the size of the banking system has a negative impact on its profitability.

 A study was conducted by Guru (2002) investigated the determinants of bank profitability in Malaysia, using a sample of 17 commercial banks during the 1986 to 1995 period. The profitability determinants were divided into two main categories, namely the internal determinants (liquidity, capital adequacy, and expenses management) and the external determinants (ownership, firm size and economic conditions). His finding revealed that efficient expenses management was one of the most significant factors explaining high bank profitability. Among the macro indicators a high interest rate ratio was associated with low bank profitability and inflation was found to have a positive effect on bank performance.

A study by Sufian & Chong, (2008) examined the determinants of Philippines banks profitability during the period 1990–2005. The empirical findings suggested that all the bank-specific determinant variables had a statistically significantly impact on bank profitability. The empirical findings also suggested that size, credit risk, and expense preference behavior are negatively related to banks‟ profitability, while non-interest income and capitalization had a positive impact. During the period under study, the results suggested that inflation had a negative impact on bank profitability, while the impact of economic growth, money supply, and stock market

capitalization had not significantly explained the variations in the profitability of the Philippines banks.

Another panel study by Athanasoglou et al. (2006) on determinants of bank profitability in the South eastern European region, considering the credit institutions for the period 1988-2002, suggested some implementation of the findings. They found that all bank specific determinants (the internal factors) have significant effect on bank's profitability. No positive result was found between banking reforms and profitability and macroeconomic determinants shows mixed affect. The internal factors include capital ratio, credit risk, productivity growth and size of the bank. In the study of (Bourke, 1989), he found an important positive relation between the capital adequacy and profitability. He illustrated that higher the capital ratio, more the bank will be profitable.

Neceur (2003) using a sample of 10 Tunisian banks from 1980 to 2000 and a panel linear regression model, reported a strong positive impact of capitalization to ROA. Sufian and Chong (2008) also reported the same results after examining the impact of capital to the performance of banks in Philippines from 1990 to 2005.

Kosmidou (2008) applied a linear regression model on Greece 23 commercial banks data for 1990 to 2002, using ROA and the ratio of loan loss reserve to gross loans to proxy profitability and asset quality respectively. The results showed a negative significant impact of asset quality to bank profitability. This was in line with the theory that increased exposure to credit risk is normally associated with decreased firm profitability. Indicating that banks would improve profitability by improving screening and monitoring of credit risk. Neceur (2003) found a positive and significant impact of overheads costs to profitability indicating that such cost are passed on to depositors and lenders in terms of lower deposits rates/ or higher lending rates.

## 2.4.    STUDIES IN ETHIOPIA

In the context of Ethiopia, to the knowledge of the researcher, there appears to be very limited work on the assessment of determinants of profitability of banks. These studies include the recent studies of (Semu, 2010) and (Damena, 2011). Those studies examined the impact of

reducing loan by Ethiopian banks on their own performance and the determinants of commercial banks profitability in Ethiopia respectively. Thus, this particular section provides a detailed review of the two related studies conducted in the context of Ethiopia.

A study made by (Semu, 2010) assessed the impact of reducing or restricting loan disbursement on the performance of banks in Ethiopia. It also attempted to examine the possible factors that compel the banks to reduce or restrict lending, covering the period of 2005-2009. Quantitative method particularly survey design approach was adopted for the study. The findings of the study showed that net deposit and paid up capital have statistically significant relationship with banks" performance measured in terms of return on equity. New loan disbursement and liquidity had relationship with banks" performance measured in terms of both return on asset and Return on Equity (ROE). However, the relationship was found to be statistically insignificant Net deposit and paid up capital had no statistically significant relationship with banks" performance in terms of Return on Asset (ROA).

On the other hand, Damena (2011) examined the determinants of Ethiopian commercial banks profitability. The study applied the balanced panel data of seven Ethiopian commercial banks that covers the period 2001- 2010. The paper used Ordinary Least Square (OLS) technique to investigate the impact of some internal as well as external variables on major profitability indicator i.e., ROA. The estimation results showed that all bank-specific determinants, with the exception of saving deposit, significantly affect commercial banks profitability in Ethiopia. Market concentration was also a significant determining factor of profitability. Finally, with regard to macroeconomic variables, only economic growth exhibits a significant relationship with banks" profitability.

Belayneh (2011) examine the impact of bank-specific, industry specific and macroeconomic determinants of Ethiopian commercial banks profitability that covers the period 2001- 2010 by applying the balanced panel data of seven Ethiopian commercial banks. He used the ROA as a dependent variable and capital, size, deposits, noninterest income, noninterest expense, credit risk, market concentration, economic growth, inflation and saving interest rate as independent variables. The estimation results show that all bank-specific determinants, with the exception of

saving deposit, significantly affect commercial banks profitability in Ethiopia. Market concentration is also a significant determining factor of profitability. Finally, with regard to macroeconomic variables, only economic growth exhibits a significant relationship with banks' profitability.

The main objective of the study made by Birhanu (2012) is to examine the effect of bank specific, industry-specific and macroeconomic determinants of Ethiopian commercial banking industry profitability from the period 2000 – 2011 by using OLS estimation method to measure the effects of internal and external determinants on profitability in terms of average return on asset and net interest margin. The result reveals that, all bank-specific determinants, with the exception of bank size, and expense management, affect bank profitability significantly and positively in the anticipated way. However, bank size, and expense management affect the commercial banks profitability significantly and negatively. In addition to this, no evidence is found in support of the presence of market concentration. Finally, from macroeconomic determinants GDP has positive and significant effect on both asset return and interest margin of the bank. But interest rate policy has significant and positive effect only on interest margin.

The purpose of the study made by Habtamu (2012) is to investigate determinants of private commercial banks profitability in Ethiopia by using panel data of six private commercial banks from year 2002 to 2011. He used quantitative research approach and secondary financial data are analyzed by using multiple linear regressions models for the three bank profitability measures; Return on Asset (ROA), Return on Equity (ROE), and Net Interest Margin (NIM). He applied Fixed effect regression model to investigate the impact of capital adequacy, asset quality, managerial efficiency, liquidly, bank size, and real GDP growth rate on major bank profitability measures i.e., (ROA), (ROE), and (NIM) separately. Beside this, he used primary data analysis to solicit mangers perception towards the determinants of private commercial banks profitability. The empirical results shows that bank specific factors; capital adequacy, managerial efficiency, bank size and macro-economic factors; level of GDP, and regulation have a strong influence on the profitability of private commercial banks in Ethiopia.

## 2.5.   RESEARCH HYPOTHESIS

In line with the broad purpose statement the following hypotheses are formulated for investigation. Hypotheses of the study stands on the theories related to a bank's profitability that has been developed over the years by banking area researcher's and past empirical studies related to a bank's profitability. Hence, based on the objective, the present study seeks to test the following seven hypotheses:

## 2.5.1. AMOUNT OF BANK DEPOSITS

It is not easy to estimate the impact of the level of bank deposits on bank performance. Indeed, two arguments can be opposed on the one hand, a high level of deposits can increase performance, because they are more stable funding and less expensive than borrowed funds, but on the other hand, such deposits require large teams and specialist departments to manage, causing many expenses (Sehrish.et al, 2011). It seems that Kunt and Huizinga (1999) were interested in this issue. Their results support the second argument that the high costs generated by these deposits lead to weigh negatively on the performance of banks.

**Hypothesis**: There is a significant negative relationship between deposit amount and Profitability of    private Commercial banks in Ethiopia.

## 2.5.2. LOAN AMOUNT(ASSET COMPOSITION)

Most of the banking literature agrees that a bank's profitability is expected to increase as its portfolio of loans grows in relation to other more secure assets (such as government securities), taking into account the known relationship between risks and return (the so-called risk-return trade-off).

Despite the higher operating costs of holding a large portfolio of loans, bank profitability should increase with a higher ratio of loans to assets as long as interest rates on loans are liberalized and the bank applies markup pricing (García-Herrero et al., 2009). This greater relative proportion of loans in the portfolio of the bank is usually coupled with a greater liquidity risk arising from the

inability of banks to accommodate decreases in liabilities or to fund increases on the assets side of the balance sheet; consequently, a bank holding a low proportion of liquid assets (with greater liquidity risk) is more likely to earn high profits.

Among the studies that report a direct relationship between relative percentage of loans in bank assets and profitability or, similarly, an inverse relationship between liquidity and profitability are;(Abreu and Mendes 2002; Barros et al. 2007; Chiorazzo et al. 2008; DeYoung and Rice 2004; Goddard et al. 2004a; Iannotta et al. 2007 and Pasiouras and Kosmidou 2007). This finding leads us to our hypotheses to be tested.

**Hypothesis:** There is a significant positive relationship between loan amount (asset structure) and Profitability of private commercial banks in Ethiopia.

## 2.5.3. CREDIT RISK MANAGEMENT

Credit quality, fairly close to the concept of credit risk, is usually measured by two ratios: the ratio of provisions for credit losses to total loans and the ratio of provisions for doubtful debts on total loans. As can be expected, Athanasoglou et al. (2008) and Liu H. et al. (2010) find that a deterioration of the credit quality reduces the ROA and ROE.

The impact on the net interest margin (NIM) seems positive as banks seek to increase their margins to compensate the one hand the risk of default, and other additional costs necessary to monitor these credits. The study of Dietrich et al. (2011) on the performance of banks in Switzerland is particularly interesting because the authors study the impact of many variables on the performance of both pre crisis and during the crisis. Sometimes they notice changes in these impacts with the arrival of the crisis, and this is especially the case for credit quality.

Thus, pre-crisis credit quality had no statistically significant impact on the performance of banks, perhaps authors suggest, because Swiss banks at that time had very few provisions for losses or bad debts. The arrival of the crisis changed the situation and significantly increased the number of such provisions recorded by Swiss banks. The authors note now a strong positive impact on the credit quality of their performance.

**Hypothesis**: There is a significant positive/negative relationship between credit risk management and profitability of Private commercial banks in Ethiopia.

## 2.5.4. EFFICIENCY (COST MANAGEMENT)

Since 1990s, advances in information, communications and financial technologies have allowed banks to perform many of their traditional services more efficiently. Consequently, the cost-to-income ratio, a proxy for cost efficiency, has been declining almost everywhere to different degrees Albertazzi and Gambacorta (2009), meaning that banks have lower expenses for a given level of output.

Previous studies suggest a positive and highly significant effect of efficiency on profitability see, for example; (Athanasoglou et al. 2008; Dietrich and Wanzenried 2011, and Pasiouras and Kosmidou 2007) among others. This relation would imply that operational efficiency is a prerequisite for improving the profitability of the banking system, with the most profitable banks having the lowest efficiency ratios.

**Hypothesis**: There is a significant relationship between efficiency (cost management) and Profitability of private commercial banks in Ethiopia.

## 2.5.5. LIQUIDITY

Liquidity measures the ability of banks to meet short-term obligation or commitments when they fall due. Traditionally, banks take deposit from customers and give out loans. For this reason, the ratio of bank's advances to customer deposits is used as proxy for liquidity. Liquidity is a prime concern for banks and the shortage of liquidity can trigger bank failure.

Banking regulators also view liquidity as a major concern. This is because banks without sufficient liquidity to meet demands of their depositors risk experiencing bank run. Holding assets in a highly liquid form tends to reduce income as liquid asset are associated with lower rates of return. For instance, cash which is the most liquid of all assets is a non-earning asset. It

would therefore be expected that higher liquidity would negatively correlates with profitability. Indeed, Molyneux et al. (1992) and Guru and Thornton (1999) discovered that negative correlation exists between the level of liquidity and profitability. However, Bourke (1989), and Kosmidou et al. (2005) found a significant positive relationship between liquidity and bank profits. Thus, conclusion on the impact of liquidity and bank profitability is indeterminate and may require further empirical work.

**Hypothesis**: There is a significant positive/negative relationship between liquidity and profitability of private commercial banks in Ethiopia.

## 2.5.6. CAPITAL

There are several reasons to believe that a better capitalized bank should be more profitable. First, Berger (1995b) points to the expected bankruptcy costs hypothesis as a cause of all or part of the observed positive relationship between capital and profitability. For a bank with capital below its equilibrium ratio, expected bankruptcy costs are relatively high, and an increase in capital ratios raises expected profits by lowering interest expenses on uninsured debt. In this same vein, Athanasoglou et al. (2008) state that this positive impact can be due to the fact that capital acts as a safety net in the case of adverse developments. This relation would help the bank to finance its assets at more favorable interest rates, increasing expected profitability and offsetting the cost of equity, which is considered to be the most expensive bank liability in terms of expected return (García-Herrero et al., 2009).

Another alternative theory that Berger (1995b) developed to explain this direct relationship between capital and profitability is the signaling hypothesis. Under this theory, bank management signals private information that future prospects are good by increasing capital. Finally, a third interpretation relies on the effects of the Basel Accord, which requires banks to hold a minimum level of capital as a percentage of risk-weighted assets. Higher levels of capital may therefore denote banks with riskier assets, which translate, in turn, to higher revenues that increase the profitability of the bank (Iannotta et al., 2007).

The empirical studies observing this positive relationship between capital and profitability are abundant, including (Alexiou and Sofoklis 2009; Athanasoglou et al. 2008; García- Herrero et al. 2009; Iannotta et al. 2007, and Pasiouras and Kosmidou 2007). Therefore it is also expect a direct association between capital and profitability.

**Hypothesis:** There is a significant positive relationship between capital and profitability of private commercial   banks in Ethiopia.

## 2.5.7. SIZE OF THE BANK

Positive relationship expect between size and profitability based on the view that a larger size should allow the bank to obtain economies of scale. Several recent studies adopt this premise, such as Alexiou and Sofoklis (2009), and Iannotta et al. (2007). However, there is consensus in the literature that the average cost curve in banking has a relatively flat U-shape, with medium-sized banks being slightly more scale efficient than either large or small banks are. In other words, the effect of size could be non-linear, with profitability initially increasing with size and then declining for bureaucratic and other reasons (Athanasoglou et al., 2008). On the other hand, larger size may also imply economies of scope for the bank resulting from the joint provision of related services (for example, banks could sell to their customers life and/or home insurance together with mortgage loans using their branch networks). Although Elsas et al. (2010) conclude that economies of scope are pronounced in banking, increasing its profitability, Barros et al. (2007) find that bigger and more diversified banks are more likely to perform poorly, suggesting that smaller and specialized banks can reduce asymmetric information problems associated with lending.

**Hypothesis:** There is a significant positive/negative relationship between size of the bank and profitability of private commercial banks in Ethiopia.

## 2.6.    SUMMARY AND KNOWLEDGE GAP

In line with the above theoretical as well as empirical review, profitability is important to all business specially for banking industry since the stability of commercial banks depends on their profitability and the whole economy stability of the nation highly related to the stability of commercial banks. It also revealed that banks profitability can be affected by different factors such as bank specific, industry specific and macroeconomic factors, while this study focused only the bank specific factors.

Due to the variation of the environment and data included in the analysis the results of various studies differ significantly. However, several researchers identified that there are some common factors which influence profitability of a bank. Summarizing the results from numerous studies, larger bank size, good asset quality, higher proportion of equity capital to asset, greater GDP growth have generally been associated with greater profitability. Various measures of costs are usually negatively correlated with profits. Greater provisions for loan losses, higher liquidity, and more reliance on debt have been lower indicative of lower bank profit.

The review of the literature reveals the existence of many gaps of knowledge in respect of the factors affecting bank profitability, particularly in the context of Ethiopia. As per the review of the literature most of the empirical studies that have been conducted with the aim of identifying factors affecting bank profitability belong to European Union and some emerging markets such as Philippines, Malaysia and Tunisia. Moreover, the literature review also reveals the existence of controversial conclusions that results from different studies made so far. Furthermore, so far as the review of the literature discloses, very scanty work has been done with the objective of identifying the determinants of profitability of banks in Sub Sahara Africa in general and Ethiopia in particular.

The banking environment in Ethiopia has, for the past decades, undergone many regulatory and financial reforms like other African countries and the rest of developing world. These reforms have brought about many structural changes in the banking sector of the country and have also encouraged private banks to enter and expand their operations in the industry (Lelissa 2007).

Despite these changes, currently, the banking industry in Ethiopia is characterized by operational inefficiency, little and insufficient competition and perhaps can be distinguished by its market concentration towards the big government owned commercial bank and having undiversified ownership structure (Lelisa 2007). The existence of less efficiency and little & insufficient competition in the country's banking industry is a clear indicator of relatively poor performance of the sector compared to the developed world financial institutions. Thus, it is important to know the determinants of banks profitability for an efficient management of banking operations aimed at ensuring growth in profits and efficiency.

To summarize in the context of Ethiopia, the related study conducted by (Demena 2011; Belayneh 2011; Birhanu 2012 and Amdemikael 2012) examined the determinants of commercial banks profitability in Ethiopia, even if they tries to identify the impact of some bank Specific, industry specific and macro-economic variables accordingly, their study clearly failed to identify most of the factors that affect bank profitability significantly and variables that are not tested and for Ethiopian banking industry. In general, the lack of sufficient research (based on the researcher best knowledge) specially on the internal determinants of bank profitability in the context of Ethiopia and the existence of variables that are not tested in Ethiopian banking industry initiate this study. Therefore, the objective of this study is to examine the factors that affect bank profitability in private commercial banks in Ethiopia, and to fill the knowledge gap that exists in the area by including and testing new variables that are not tested by prior Ethiopian researchers.

## 2.7. CONCEPTUAL FRAME WORK

## Figure 2.1: Return on Assets and Independent Variables
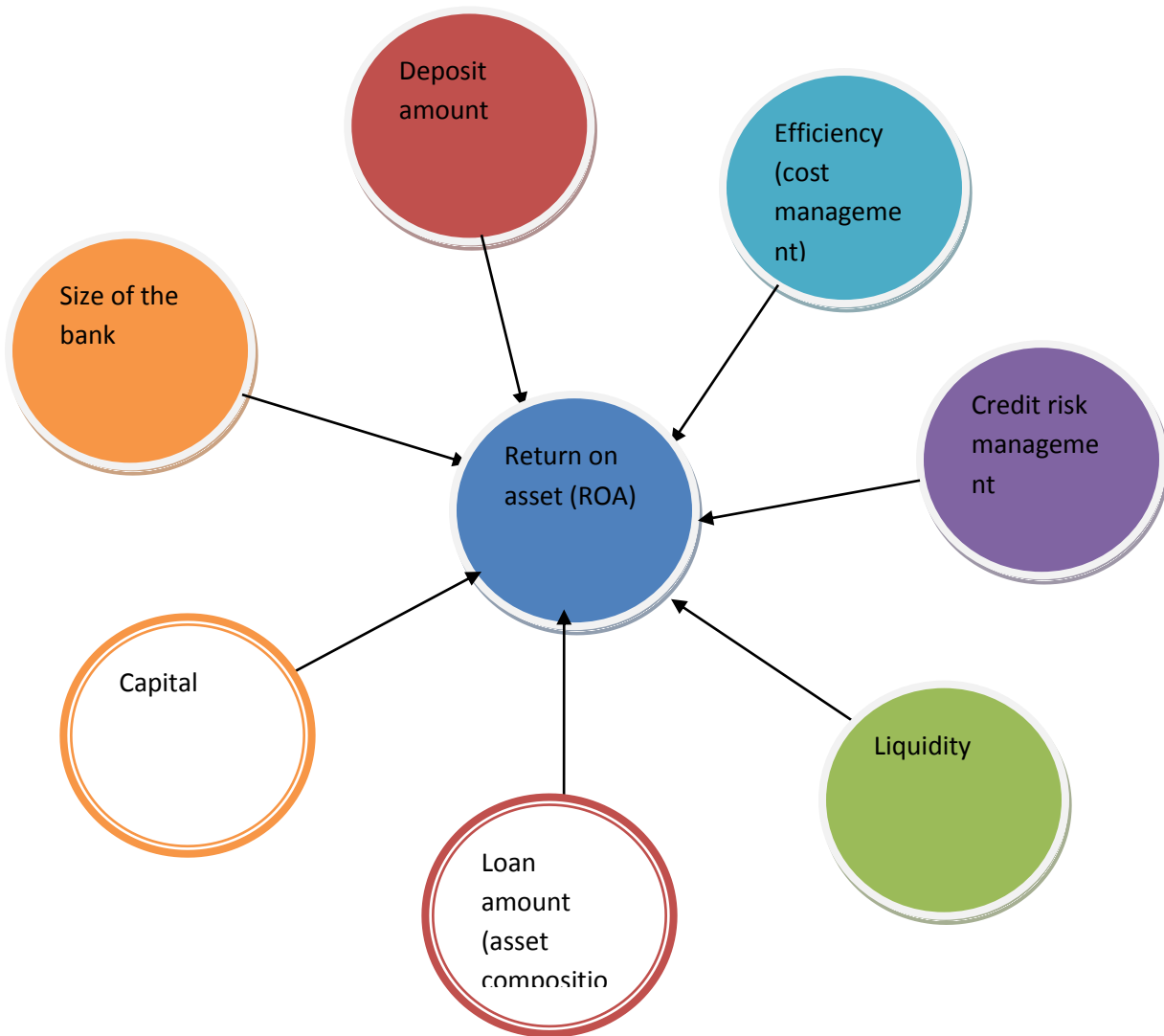


Source: Own, 2016

Figure 2.1 shows all of the variables included in this study. Return on Assets is dependent variables, while independent variables comprises of deposit amount, efficiency( cost management), liquidity ,loan amount( asset composition) ,credit risk management , capital and size of the bank.

<center>**CHAPTER THREE**</center>

## 3. RESEARCH METHODOLOGY

A research methodology guides the researcher in collecting, analyzing and interpreting observed facts (Creswell, 2009). This chapter introduces the logical framework to be followed in the process of conducting the study. It is divided into: Research approach and design, Sample size and sampling procedure, Data sources and data collection method, and Data analysis methods.

## 3.1. RESEARCH APPROACH AND DESIGN

According to Mcmillan and Schumaker (2001) a research design is a plan for selecting subjects, research sites and data collection procedures to answer the research questions. It is the conceptual framework within which research is conducted and constitutes the blueprint for the collection of data and the analysis there of the collected data.

In this study quantitative data to analyze the bank's performance (profitability) were used, since the data used is secondary data. The secondary data is collected from several published source in which the data for internal factors are obtained from the audited annually financial reports. Based on the purpose of the study and the type of data involved quantitative research designs were used. Creswell, (2009) has given a very concise definition of quantitative research as a type of research that is `explaining phenomena by collecting numerical data that are analyzed using mathematically based methods (in particular statistics).Because the objective of this study is to investigate the effect of internal factors on the bank's profitability. Specifically, explanatory variables such as deposit, loan amount (asset composition), credit risk management, liquidity, capital and size were used to analyze private commercial bank's profitability. To achieve this objective eleven years data was used from year 2005 to 2015.

## 3.2. SAMPLE SIZE AND SAMPLING PROCEDURE

A sample is a sub set of the total population that is of interest for the study topic. This total population is called the target population, to which the results of the study can be generalized (Bryman& Bell Emma, 2007). The purpose of this study is to identify factors affecting the profitability of private commercial banks in Ethiopia. Because of this the sample population of the study is all private commercial banks register by national bank of Ethiopia and operate in

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Ethiopia, and for this study 11 years data from 2005-2015 from audited financial reports were used. In this study 6 private commercial banks are selected as sample from 16 private commercial banks, because 11 years data is needed for the study and all the other 10 private commercial banks have not have ten years data. Awash bank, Dashin bank, Abyssinia bank, Nib bank, United bank, and Wegagen bank are used as sample to identify factors affecting the profitability of private commercial banks in Ethiopia, and make inference based on the finding after testing the explanatory variables (deposit, loan amount (asset composition), credit risk management, efficiency (cost management), liquidity, capital and size) to the dependent variable (ROA).

## 3.3. DATA SOURCE AND DATA COLLECTION METHOD

Data collection method is a phrase used to describe the way or manner in which a researcher gathers relevant information which he or she is going to use to answer the research questions. There are basically two main sources by which the researcher can collect data; the primary and secondary source. Primary data source is when the researcher collects new information either through observations, interviews, questionnaires and then uses this data for analysis (Saunders et al., 2000). Secondary data on the other hand is when the research uses data that was previously collected maybe for another purpose, used and stored Hakim, 1982, cited on Saunders et al., (2000). Any published or unpublished work that is one step removed from the original source, usually describing, summarizing analyzing, evaluating, and Derived from or based on primary source materials is secondary data (Creswell, 2012). Secondary data source for this study were annual reports of the bank and national bank of Ethiopia (NBE).

Based on the purpose of the study the data type that used in this study is secondary data, In order to analyze the effect of bank specific factors on profitability of banks, audited financial statements of six banks (AIB, DB, WB, BOA, UB and NIB) for 11 consecutive years .i.e., from 2005-2015 were collected. The secondary data that were collected through structured document reviews are mainly from the records held by NBE and the banks themselves.

## 3.4.   DATA ANALYSIS

According to Bryman and Bell (2003) data analysis refers to a technique used to make inferences from data collected by means of a systematic and objective identification of specific characteristics. Once data is collected it has to be edited to verify to the completeness of data, coded in order to assign numbers or symbols to the various answers for effective categorization/classification, entered in order to convert the information gathered to a medium for viewing and manipulation (e.g. excel or statistical package for social sciences SSPS) and finally displayed through the use of frequency tables and charts.

To comply with the broad objective the study was primarily based on panel data, which was collected through structured document review. As noted in Baltagi (2005) the advantage of using panel data is that it controls for individual heterogeneity, less collinearity among variables and tracks trends in the data something which simple time-series and cross-sectional data cannot provide. Thus, the collected panel data was analyzed using descriptive statistics, correlations and multiple linear regression analysis. Mean values and standard deviations were used to analyze the general trends of the data from 2005 to 2015 .based on the sector sample of 6 banks a correlation matrix was also used to examine the relationship between the dependent variable and explanatory variables.

A multiple linear regression model and t-static was used to determine the relative importance of each independent variable in influencing profitability (ROA). The multiple linear regressions model was run, and thus OLS was conducted using SPSS version 20 econometric software package, to test the casual relationship between the firm's profitability and their potential determinants and to determine the most significant and influential explanatory variables affecting the profitability of private commercial banks. The rational for choosing OLS is as noted in Petra (2007) OLS outperforms the other estimators when the following holds; the cross section is small and the time dimension is short. Therefore, as far as both the above facts hold true in this study it is rational to use OLS.

As noted in Brooks (2008) there are basic assumptions required to show that the estimation technique, OLS, had a number of desirable properties, and also so that hypothesis tests regarding the coefficient estimates could validly be conducted. If these Classical Linear Regression Model

(CLRM) assumptions hold, then the estimators determined by OLS will have a number of desirable properties, and are known as Best Linear Unbiased Estimators. Therefore, for the purpose of this study, diagnostic tests are performed to ensure whether the assumptions of the CLRM are violated or not in the model.

## 3.5. MODEL SPECIFICATION

## 3.5.1. VARIABLES

Explanation of dependant variable (ROA) and independent variables are as follows:

$$ROA_{it} = \beta_o + \beta_1 DTA_{it} + \beta_2 LOA_{it} + \beta_3 CRL_{it} + \beta_4 COE_{it} + \beta_5 CAP_{it} + \beta_6 SIZ_{it} + \beta_7 LIQ_{it} + \varepsilon_{it}$$

Whereas:
ROA= Represents Return on Asset
$\beta$ = Represents intercept
DTA= Represents deposits
LOA= Represents loan amount
CRL= Represents credit risk management
COE= Represents cost management
CAP= Represents capital
SIZ= Represents size of the bank
LIQ= Represents liquidity
$\varepsilon$ = Error term

**Return on Asset (ROA):** The ROA is a functional indicator of bank's profitability. It is calculated by dividing net income to total assets. ROA shows the profit earned per dollar of assets which reflects bank's management ability to utilize the bank's financial and real investment resources to generate profits (Ben Naceur, 2003). Khrawish (2011), state that the rate of return of a bank' total assets shows the efficiency of its management in generating net income from all of the resources committed to the institution.

**Total Deposits to Total Assets (DTA):** The ratio of deposits to total assets is another liquidity indicator but is considered as a liability. Deposits are the main source of bank funding and hence it has an impact on the profitability of the banks. Deposits to total assets ratio is included as an independent variable in this study.

**Total Loans to Total Assets (LOA):** Asset composition (TL/TA), which is explained by total loans divided by total asset, provides a measure of income source and measures the liquidity of bank assets tied to loans. TL/TA is included in the study of profitability as an independent variable to determine the impact of loans on banks' profitability.

**Cost management (COE):** Cost efficiency means the per unit income generated. Cost efficiency measures that how much it is expensive for the private commercial banks to produce per unit of output. High total cost to total income ratio causes the lower profitability for the banks and low of the ratio shows the increase in the profit. It has been used as an independent variable in this study and calculated by the following formula.

**Cost efficiency = Non -interest expense/Net income**

**Liquidity (LIQ):** Liquidity used as measurement of profitability and calculated by the following equation. Liquidity is the amount of short term responsibilities that could be met with the amount of liquid assets.

**Liquidity = Loan /Customer deposits**

**Credit risk management (CRL):** provision for doubtful debts to total loan, is an independent variable and it is chosen because it is an indicator of credit risk management. Provision for doubtful debts, in particular, indicates how banks manage their credit risk because it defines the proportion of loan losses amount in relation to Total Loan amount (Hosna *et al.*, 2009).

**Capital (CAP)**; is taken as the ratio of equity capital to total assets. It's interesting to note that higher the capital level breeds higher profitability level since by having more capital, a bank can easily adhere to regulatory capital standards so that excess capital can be provided as loans (see, Berger, 1995). Equity to total asset was used as proxy.

**Size (SIZ)**; is used to capture the fact that larger banks are better placed than smaller banks in harnessing economies of scale in transactions to the plain effect that they will tend to enjoy a higher level of profits. Consequently, a positive relationship is expected between size and profits. Bikker. H (2002) and Goddard et al. (2004) find size has a positively related to profitability. The size of the bank is also included as an independent variable to account for size related economies and diseconomies of scale. In most of the finance literature, natural logarithms of total assets of the banks are used as a proxy for bank size. So natural logarithm of total asset was used as proxy.

# CHAPTER FOUR
## 4. DATA ANALYSIS AND DISCUSSION

## 4.1. INTRODUCTION

This chapter presents the empirical test results based on the linear regression, to test the outcomes of the analysis for six commercial banks in Ethiopia during the period of 2005 to 2015. The investigation is with regard to the relationship between profitability (ROA) as dependent variable and deposit, loan amount (asset composition), credit risk management, efficiency (cost management), liquidity, capital and size ratio as independent variables. Therefore, this chapter provides the results of the analysis of data and its interpretation. This chapter is divided into five sections. The first section provides the analysis throughout, test of the normality of data; the second section presents descriptive analysis of the data and variables of the study; the third section discusses the correlation analysis between dependent and independent variables and test followed by testing the hypothesis in the fourth section; the fifth section lays down the results of regression analysis and the discussion that constitute the main findings of this study and presents the application of the model and eventually the summary of the chapter is presented in the last section.

## 4.2. TEST RESULTS FOR THE CLASSICAL LINEAR REGRESSION MODEL ASSUMPTIONS

In this study as mentioned in chapter three diagnostic tests were carried out to ensure that the data fits the basic assumptions of classical linear regression model. Consequently, the results for model misspecification tests are presented as follows:

## 4.2.1. NORMALITY OF DATA

According to Gujarati (1995) before running regression analysis, it should be noted that there are four classic assumptions in undertaking the regression analysis and one of them is normality of data. Therefore, normality test becomes relevant. Brooks. C (2008) also noted that in order to conduct hypothesis test about the model parameter, the normality assumption must be fulfilled. The normality assumption is about the mean of the residuals is zero. Therefore, the researcher used graphical methods of testing the normality of data as shown below.

From figure 4.1 below, it can be noted that the distribution is normal curve, indicating that the data confirms to the normality assumption. In addition, the normal probability plots were used to test the normality of data as shown below in figure 4.1 and figure 4.2.

**Figure 4.1: Histogram**
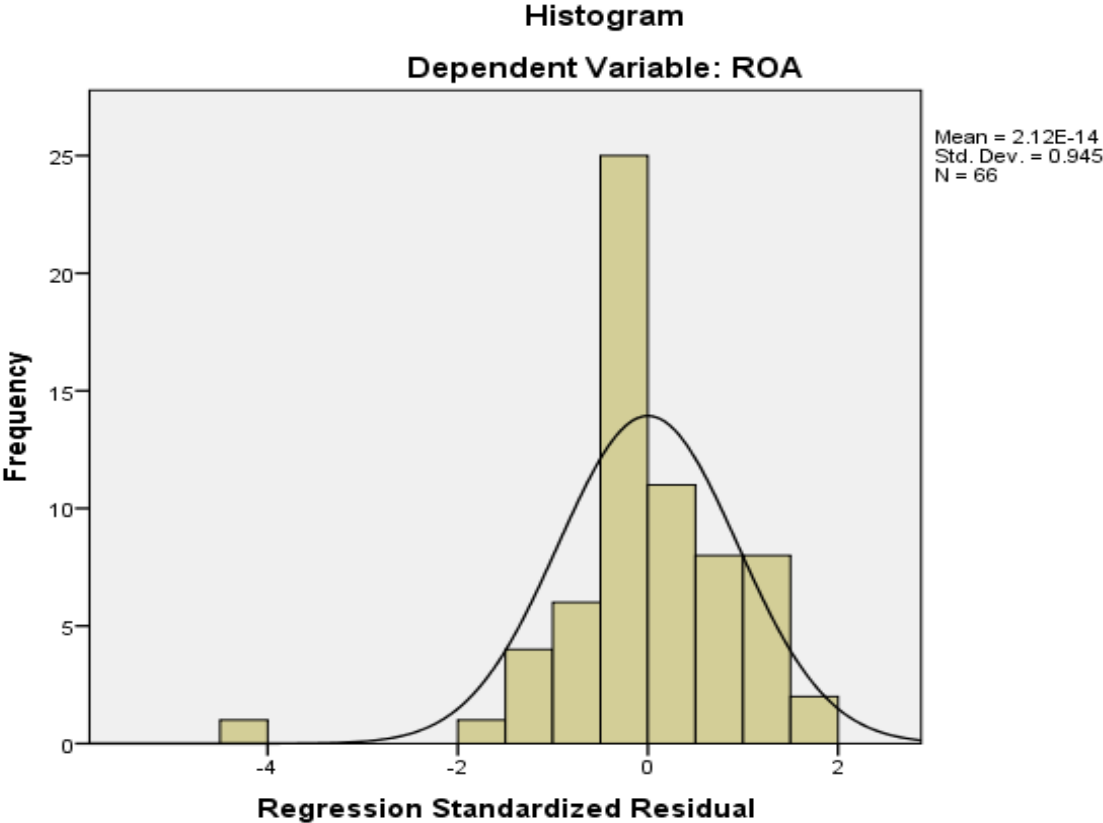


Source: SPSS regression output, 2016

If the residuals are normally distributed around its mean of zero the histogram is a bell-shaped. The shape of the histogram as shown above in figure 4.1 revealed that the residuals are normally distributed around its mean of zero.

**Figure 4.2: Normal P-P plot of regression standardized residual**
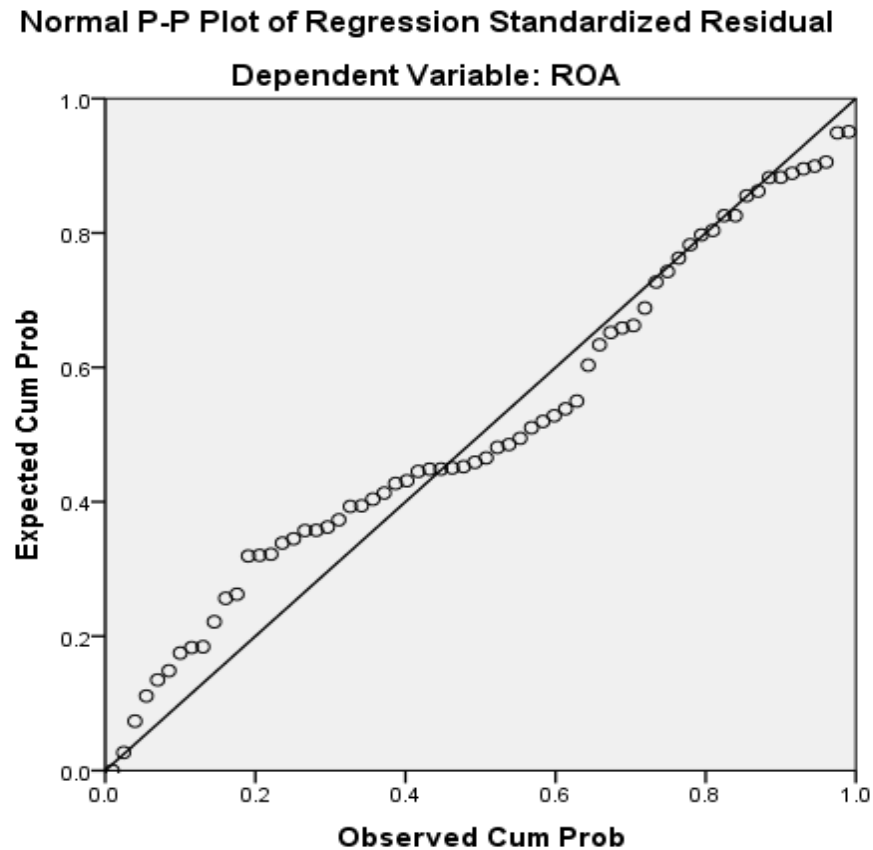


Source: SPSS regression output, 2016

Similarly, the above figure shows the normal distribution of residuals around its mean of zero. Hence the normality assumption is fulfilled as required based on the above two figures, it is possible to conclude that the inferences that the researcher will made about the population parameter from the sample is somewhat valid.

## 4.2.2. TEST FOR HETROSCEDASTICITY

In this study as shown in table 4.1, the F-statistic result shows that there is no evidence for the presence of heteroscedasticity, since the p-values were in excess of 0.05 and the F statics value is greater than zero, there is no evidence for the presence of heteroscedasticity problem, since the p-value was considerably in excess of 0.05.

**Table**: 4.1. **Test for Hetroscedasticity**

**ANOVA**

| Model | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| 1    Regression | .000 | 7 | .000 | 1.990 | .072[b] |
|      Residual | .001 | 58 | .000 | | |
|      Total | .001 | 65 | | | |

a. Dependent Variable: AbsUt

b. Predictors: (Constant), LIQ, COE, CRL, CAP, SIZ, DTA, LOA

Source: Financial statements of banks, and own computation, 2016

## 4.2.3.  TEST FOR AUTOCORRELATION

This assumption basically lies on the notion that states covariance between the error terms over time (or cross-sectional) is zero. In other words, it is assumed that the errors are uncorrelated one another. Thus, the null hypothesis is meant for checking whether the error terms are auto/serially/ correlated or not. The measurement could be by Durbin-Watson statistic (which is usually calculated automatically and is given in the general estimation output).

As it can be observed from Table 4.10, in regression section, the DW statistic result is seen to be 2.060 (near 2). According to Brooks (2008), autocorrelation value near 2 indicates non -existence of autocorrelation (though there is a no sign of autocorrelation it is not worrisome). On the other hand, a value near to zero indicates positive autocorrelation, and a value near to 4 indicates negative autocorrelation.

## 4.2.4.  TEST FOR MULTICOLLINEARITY

Correlation matrix between independent variables is presented in table 4.3. As shown in table 4.3 there were fairly low data correlations among the independent variables. These low correlation coefficients indicate that, there is no problem of multicollinearity in this study. Moreover, as noted by Hair et al. (2006) correlation coefficient below 0.9 may not cause serious multicollinearity problem. Accordingly, in this study there is no problem of multicollinearity which enhanced the reliability for regression analysis.

## 4.3.    DESCRIPTIVE STATISTICS

Table 4.2 presents the outcomes of the descriptive statistics for main variables involved in the regression model. Key figures, including mean, median, standard deviation, minimum and maximum value were reported. This was generated to give overall description about data used in the model and served as data screening tool to spot unreasonable figure.

According to table 4.2, all variables comprised 66 observations and the profitability measure used in this study namely; ROA indicates that the Ethiopian private banks attained, on average, a positive before tax profit over the last eleven years. For the total sample, the mean of ROA was 3.9% with a minimum of 0.5% and a maximum of 5.68%. That means, the most profitable bank among the sampled banks earned 5.68 cents of profit before tax for a single birr invested in the assets of the firm. On the other hand, the least profitable bank of the sampled banks earned 0.5 cents of profit before tax for each birr invested in the assets of the firm. The standard deviation statistics for ROA was 0.009 which indicates that the profitability variation between the selected banks was very small. The result implies that these banks need to optimize the use of their assets to increase the return on their assets.

**Table 4.2. Descriptive Statistics**

|  | ROA | DTA | LOA | CRL | COE | CAP | SIZ | LIQ |
|---|---|---|---|---|---|---|---|---|
| Mean | .039112 | .774352 | .516841 | .039295 | 1.030191 | .129341 | 22.579964 | .668924 |
| Median | .040950 | .783900 | .472550 | .029500 | .913400 | .121950 | 22.696550 | .618050 |
| Std. Deviation | .0093206 | .0474327 | .0988865 | .0521039 | .3757018 | .0298687 | .7438726 | .1313375 |
| Minimum | .0051 | .6767 | .3610 | 0.0000 | .5385 | .0711 | 20.7937 | .4885 |
| Maximum | .0568 | .8715 | .7277 | .4212 | 2.3912 | .1922 | 23.9327 | 1.0158 |
| N    Valid | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 |

Source: Financial statements of banks, and own computation, 2016

It is clear cut from the above table DTA (Deposit to total asset ratio) have the mean and median of 77.43% and 78.39% respectively for the study period. Minimum value of the deposit amount is 67.67% and 87.15% is the maximum value of the given data set. The data set has showed the standard deviation equal to 0.0474 which indicates that the variation between the selected banks was very high compared to ROA.

LOA (loan amount to total asset) of the private commercial banks has showed the mean and median for the given data set 51.68% and 47.25% respectively. Loan amount shows the minimum value equal to 36.10% and 72.77% is maximum value over the study period and given data set. Loan amount has experienced standard deviation equal to 0.0989 which shows the existence of relatively higher variation of loan to total asset ratio between the selected banks compared to the variation in ROA.

On the other hand CRL (Provision for Doubtful Debts to total loan) ratio has the mean and median of 3.92% and 2.95% respectively for the study period. Credit risk shows the minimum value of 0% and 42.12% respectively. Credit risk has experienced standard deviation equal to 0.0521 which shows the existence of relatively higher variation of Provision for Doubtful Debts to total loan ratio between the selected banks compared to the variation in ROA.

Furthermore, another interesting observation is that there was somewhat a higher variation in the COE (cost-to-income) ratio indicated by the range between 239.12% and 53.85%. The mean of the cost-to-income ratio equals 103.02%. The relatively higher range between the minimum and maximum value implies that the most efficient bank has a quite substantial cost advantage compared to the least efficient bank. Cost efficiency (cost management) has experienced standard deviation equal to 0.3757 which shows the existence of relatively higher variation of cost to income ratio between the selected banks.

On the other hand on average, the equity-to-asset ratio equals 12.93% with a maximum of 19.22%, which was considerably above the statutory requirement of 8% set by NBE based on Basel II recommendation, even if its minimum value was 7.11%. The standard deviation statistics for capital strength was 0.0299 which shows the existence of relatively high variation of equity to asset ratio between the selected banks compared to the variation in ROA.

Bank size which is measured by natural log of total asset had the highest standard deviation 0.7438, which means it is the most deviated variable from its mean compared to other variables. Size has an average of 22.58% and 20.79%, 23.93% minimum and maximum values respectively. On other hand LIQ (loan mount to deposit) ratio has average value of 66.89% and minimum and maximum value of 48.85% and 101.58% respectively. Liquidity (loan to deposit) has a standard deviation of 0.1313 which shows high variation from mean next to size compared to other variables.

## 4.4.    CORRELATION ANALYSIS AMONG VARIABLES

As could be seen in table 4.3, the capital was the most positively correlated variable with ROA. This correlation clearly shows that, as equity increase profitability measure (ROA) move to the same direction. In addition to capital, Provision for Doubtful Debts to total loan ratios and natural logarithm of total asset was correlated positively with return on asset (profit). This correlation shows that as provision for doubtful debts, and total asset increase profitability measure move to the same direction.

**Table 4.3. Correlations**

|      | ROA        | DTA    | LOA    | CRL    | COE    | CAP    | SIZ    | LIQ    |
|------|------------|--------|--------|--------|--------|--------|--------|--------|
| ROA  | 1          |        |        |        |        |        |        |        |
| DTA  | -.321$^{***}$ | 1      |        |        |        |        |        |        |
| LOA  | -.231$^{**}$  | .110   | 1      |        |        |        |        |        |
| CRL  | .050       | -.084  | -.036  | 1      |        |        |        |        |
| COE  | -.722$^{***}$ | .211   | .070   | -.032  | 1      |        |        |        |
| CAP  | .256$^{**}$   | -.808  | -.238  | .039   | -.102  | 1      |        |        |
| SIZ  | .073       | .087   | -.700  | -.198  | .057   | .078   | 1      |        |
| LIQ  | -.138      | -.212  | .823   | -.020  | -.003  | .021   | -.712  | 1      |

***. Correlation is significant at the 0.01 level.

**. Correlation is significant at the 0.05 level.

Source: Financial statements of banks, and own computation, 2016

As could be seen in table 4.3, the cost efficiency (cost management) was the most negatively correlated variable with ROA. This correlation clearly shows that, as non interest expense increase profitability (ROA) move to opposite direction. On the other hand deposit to total asset ratio, total loan to total asset ratio, and total loan to deposit ratio seems to be negatively correlated with the profitability measure, indicating that, when the deposit amount, and loan amount increase, profitability moves to the opposite direction.

## 4.5.    RESULTS OF REGRESSION ANALYSIS

This section presents the empirical findings from the econometric results on the internal factors affecting private commercial bank profitability in Ethiopia. The section covers the empirical regression model used in this study and the results of the regression analysis.

**Empirical model**: As presented in the third chapter the empirical model used in the study in order to identify factors that can affect Ethiopian private commercial banks profitability was provided as follows:

$ROA_{it} = \beta_o + \beta_1 DTA_{it} + \beta_2 LOA_{it} + \beta_3 CRL_{it} + \beta_4 COE_{it} + \beta_5 CAP_{it} + \beta_6 SIZ_{it} + \beta_7 LIQ_{it} + \varepsilon_{it}$

Based on the regression results in Table 4.1, the multiple regression equation of this study can be written as following:

Return on Asset (ROA) = 0.3659692 - 0.39296DTA + 0.510815LOA - 0.009793CRL - 0.017515COE - 0 .0075610CAP + 0.000374SIZ – 0.402701LIQ

**Table 4.4; Regression Results for internal factors affecting Ethiopian private commercial banks profitability**

| Model (Variables) | Coefficients | | | |
|---|---|---|---|---|
| | B | Std. Error | T | Sig. |
| (Constant) | 0.359693 | 0.083084 | 4.389 | 0.000048 |
| DTA | -0.392965 | 0.096781 | -4.134 | 0.000116*** |
| LOA | 0.510815 | 0.132225 | 3.937 | 0.000223*** |
| CRL | -0.009794 | 0.014627 | -.636 | 0.527986 |
| COE | -0.017515 | 0.001984 | -8.967 | 0.000*** |
| CAP | -0.007561 | 0.042668 | -.201 | 0.842722 |
| SIZ | 0.000375 | 0.001448 | .289 | 0.774974 |
| LIQ | -0.402703 | 0.101177 | -4.052 | 0.000172*** |
| R | 0 .8160 | | | |
| R  square | 0 .6659 | | | |
| Adjusted R square | 0 .6255 | | | |
| Std. error of the estimate | 0 .0057035 | | | |
| F  statistic | 16.512 | | | |
| Prob(F-statistic) | 0.0000 | | | |
| Durbin-Watson | 2.06 | | | |

***, **, and * denote significance at 1%, 5%, and 10% levels respectively.

Source: Financial statements of banks, and own computation, 2016

The estimation result of the panel regression model used in this study is presented in table 4.4. From table 4.4 the R-squared statistics and the adjusted-R squared statistics of the model was 66.59% and 62.55% respectively. The result indicates that the changes in the independent variables explain 62.55% of the changes in the dependent variable. That is deposit to total asset, loan amount to total asset, provision to doubtful debt to loan amount, cost to income, loan amount to deposit ,equity to total asset and natural logarithm of total asset  collectively explain

62.55% of the changes in ROA(profit). The remaining 37.45% of changes was explained by other factors which are not included in the model. Thus these variables collectively, are good explanatory variables of the profitability of private commercial banks in Ethiopia. The null hypothesis of F-statistic (the overall test of significance) that the R square is equal to zero was rejected at 1% as the p-value was sufficiently low. F value of 0.000 indicates strong statistical significance, which enhanced the reliability and validity of the model.

On the other hand, except loan amount with coefficient of 0.5108, variables like deposit ,cost efficiency, and liquidity had negative relationship with profitability as far as their respective coefficients were -0.3929, -0.01751, and -0.4027 This revealed that there was inverse relationship between the above three independent variables and ROA. In general as per the regression results provided in table 4.4 among the 7 regressors used in this study 4 of them were significant.

## 4.6. HYPOTHESIS TEST

### TEST THE FIRST HYPOTHESIS

The first hypothesis examined the relationship between deposit amount and profitability of private commercial banks. Based on regression result, deposit amount has significant negative relationship with profit, with beta coefficient of -0.3929 and significant level of P (0.0001). Because of this deposit amount has strong significant relationship with profit of private commercial banks.

### TEST THE SECOND HYPOTHESIS

The second hypothesis examined the relationship between loan amount paid and profitability of private commercial Banks. According to regression result, loan amount has strong positive significant relationship with profitability, with beta coefficient of 0.5108 and significant level of P (0.0002). Because of that, there is strong and positive significant relationship between the amount of loan and profitability.

**TEST THE THIRD HYPOTHESIS**

The third hypothesis examined the relationship between credit risk management and profitability of private commercial Banks. Even if beta coefficient of credit risk is -0.0097, there is insignificant relationship between credit risk and profitability of private commercial banks with significant level of 0.5279.

**TEST THE FORTH HYPOTHESIS**

The forth hypothesis examined the relationship between cost efficiency and profitability of private commercial Banks. Cost efficiency has negative relationship with profitability with beta coefficient of -0.0175 and significant level of P (0.0000).

**TEST THE FIFTH HYPOTHESIS**

The fifth hypothesis examined the relationship between capital and profitability of private commercial Banks. Even if Capital has negative relationship with profitability, the relationship was insignificant, because the beta coefficient is -0.0076 and significant level is 0.8427

**TEST THE SIXTH HYPOTHESIS**

The sixth hypothesis examined the relationship between size and profitability of private commercial Banks. Size of the bank has positive beta coefficient of 0.0004 and significant level of 0.2890. Because the significant level is more than 0.05 there is no significant relationship between size and profitability of commercial banks.

**TEST THE SEVENTH HYPOTHESIS**

The seventh hypothesis examined the relationship between liquidity and profitability of private commercial Banks in Ethiopia. Liquidity has a beta coefficient of -0.4027 and a significant level of 0.0001. This clearly shows that there is significant negative relationship between liquidity and profitability of commercial banks.

In the above section of this chapter the hypothesis of this research has been checked to see where there is significant relation between the independent variable (deposit amount, loan amount, credit risk management, cost efficiency, capital, size and liquidity of the bank) with dependent

variable of profitability (ROA). Based on the result loan amount has significant positive relation with profit and the other three variables; deposit amount, cost efficiency and liquidity has significant negative relation with profit. The remaining variables credit risk management, capital and size has no significant relation with profit or they have insignificant relation with profit.

## 4.7.    INCREMENTAL REGRESSION

The incremental regression is performed by removing individual independent variables from the model and checking the effect on the value of R-squared. Among all the variables removed, cost efficiency  has altered the value of R-square and adjusted R square to a highest degree (44.9% and 48.9% respectively decreases in the portion of the dependent variable explained by independent variables) as the value for the R-squared and adjusted R square changes from 66.6%, 62.6 % to 21.7% and 13.7% respectively. This substantial decrease in the value of the R-squared shows the importance of cost efficiency in the model. Even if there is some degree of variation in both R square and Adjusted R square, except cost efficiency , there is no significant variation on the R square and adjusted R square with the other remaining model in performing by removing independent variables from the model.

In general, so far, the results of the documentary analysis which includes tests for the classical linear regression model, descriptive statistics, correlation matrix & regression analysis have been presented. The results of the tests for the classical linear regression model showed as the data fit the basic assumptions of CLRMs. On the other hand, the remaining results of the documentary analysis were used to assess the link that exists between bank-specific determinants of bank and profitability (ROA).

**Table, 4.5; Incremental regression**

Dependent Variable: Return on Assets (ROA)

| Variable | OLS 1 | OLS 2 | OLS 3 | OLS4 | OLS 5 | OLS 6 | OLS 7 | OLS 8 |
|---|---|---|---|---|---|---|---|---|
| (Constant) | .360*** | .058 | .092 | .342*** | .382*** | .354*** | .368*** | .073 |
|  | .000 | .171 | .076 | .000 | .004 | .000 | .000 | .120 |
| DTA | -.393*** |  | -.035 | -.380*** | -.394*** | -.387*** | -.391*** | -.023 |
|  | .000 |  | .264 | .000 | .009 | .000 | .000 | .449 |
| LOA | .511*** | -.004 |  | .494*** | .431 | .508*** | .508*** | -.014 |
|  | .000 | .934 |  | .000 | .035 | .000 | .000 | .260*** |
| CRL | -.010 | .002 | .001 |  | -.011 | -.010 | -.011 | .002 |
|  | .506 | .880 | .966 |  | .637 | .508 | .436 | .892 |
| COE | -.018*** | -.018*** | -.017*** | -.018*** |  | -.018*** | -.017*** | -.017*** |
|  | .000 | .000 | .000 | .000 |  | .000 | .000 | .000 |
| CAP | -.008 | .056 | .015 | -.006 | -.053 |  | -.007 | .018 |
|  | .860 | .214 | .743 | .891 | .417 |  | .875 | .705 |
| SIZ | .000 | -3.290E-05 | -7.330E-05 | .001 | -.001 | .000 |  | .000 |
|  | .797 | .984 | .964 | .637 | .706 | .805 |  | .877 |
| LIQ | -.403*** | -.008 | -.013 | -.389*** | -.350** | -.400*** | -.402*** |  |
|  | .000 | .801 | .157 | .000 | .026 | .000 | .000 |  |
| R square | 0.666 | 0.571 | 0.58 | 0.663 | 0.217 | 0.666 | 0.665 | 0.575 |
| adjusted R square | 0.626 | 0.527 | 0.537 | 0.629 | 0.137 | 0.632 | 0.631 | .531 |
| F Statics | 16.512 | 13.083 | 13.574 | 19.371 | 2.725 | 19.581 | 19.563 | 13.28 |
| F Sta. Prob. | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Durbin-Watson | 2.06 | 1.502 | 1.487 | 2.023 | 1.523 | 2.055 | 2.066 | 1.46 |

***, **, and * denote significance at 1%, 5%, and 10% levels respectively.

Source: Financial statements of banks, and own computation, 2016

## 4.8.    DISCUSSIONS OF MAJOR FINDINGS

This section of the chapter discusses the analysis of the results. The analysis is based on the theoretical framework and the data collected. The data are analyzed in light of the specific objectives and hypotheses stated. Hence, the analysis focuses mainly on the results of the regression analysis for the selected bank-specific factors that have an impact on private commercial bank profitability. Among the internal factors affecting bank profitability the relationship between variables including deposit amount, loan amount, credit risk management, cost efficiency, capital, size and liquidity was examined.

### DEPOSIT AMOUNT

During the study years (2005- 2015), the results obtained from the analysis methods in the above section shows that deposit amount has significant negative relationship with the profitability of the banks. Because the regression coefficient at the significance level of 1% is – 0.392, Thus There is a strong significant negative relation between the amount of deposits and bank profitability. This finding was consistent with previous studies of Kunt and Huizinga Demirgüç (1999), their result stated that the high costs generated by deposits lead to weigh negatively on the performance of banks. But The finding of this study is contradict with the findings of Damena (2011), According to negative relationship between the amount of deposits and private commercial Bank profitability and since in this study, the ratio of deposits to total assets have been used to measure this variable, It seems that according to the results of this study, absorbing of long term deposits and the more absorption of short term and current deposits based on this study caused the decrease in profitability and rate of return on private commercial Bank's assets.

### LOAN AMOUNT

The results obtained from the analysis  in the previous  section of this chapter for the year 2005 to 2015 shows that loan amount has a strong positive relation with profitability, with beta coefficient of 0.510 and significant level of 0.000. The result indicates that the loan amount variable has a significantly positive influence on bank profitability. This finding was consistent with previous studies of (Semu, 2010). New loan disbursement had significant positive relationship with banks performance measured in terms of return on asset. This implies that high

figures for this variable mean high profitability. It seems that according to the results of this study, increasing in loan payments will increase the rate of return on assets and profitability of banks. Which means loan is main source of income for commercial banks and the more deposit is transferred to loan, the higher the interest margin and profit.

## CREDIT RISK MANAGEMENT

The variable, Provision of doubtful debt to total loan (CRL) was incorporated into the model to measure credit risks. During the study year credit risk management has negative relation with profit (ROA), but it is not significant because the significant level is 0.506 and the beta coefficient of the regression was -0.0097. This result shows that credit risk management ratio of provision to doubtful debt to total loan has not significant impact on profitability of private commercial banks in Ethiopia. according to this result in Ethiopian private bank increasing or reducing the amount of provision for doubt full debt had no effect on profitability of the bank during the sample year of 2005 to 2015. This finding was consistent with previous studies of Dietrich et al. (2011).

## COST EFFICIENCY

During the study years (2005- 2015), the beta coefficient for the ratio of cost to income (COE) was -0.0175, which provides information on the efficiency of the management regarding expenses relative to income, was negative and statistically significant at 1% significance level (p-value=0) which is in line with a prior expectation and makes the variable an important determinant of Ethiopian private commercial banks profitability. This showed that minimizing commercial banks operating costs in Ethiopia would certainly improve the banks performance in general and profitability in particular. This finding was consistent with previous studies of Athanasoglou et al. (2008), and Sufian & Chong (2008). Thus, the ratio of cost to income was statistically significant in explaining the variability in ROA of private commercial banks in Ethiopia.

## CAPITAL ADEQUACY

Capital adequacy refers to the sufficient amount of equity to absorb any shocks that the bank may experience (Kosmidou, 2009). The beta coefficient of capital strength which is measured by the equity to total asset ratio was -0.007561 and statistically insignificant with significance level

of 0.86. According to the result the amount of equity had not significant impact on profitability, this result contradicts with Gavila *et al* (2009) states that, although capital is expensive in terms of expected return, highly capitalized banks face lower cost of bankruptcy, lower need for external funding especially in emerging economies where external borrowing is difficult. Thus well capitalized banks should be profitable than lowly capitalized banks. But the study result is consistent with Beckmann (2007) high capital leads to low profits since banks with a high capital ratio are risk-averse, they ignore potential [risky] investment opportunities and, as a result, investors demand a lower return on their capital in exchange for lower risk. The result of the study for the year 2005 to 2015 implies that in Ethiopian private commercial bank, the high amount of equity has not significant impact on return on asset of the bank or profit of the bank.

## SIZE OF THE BANK

Bank size which is measured by the natural log of total assets had a positive impact on the profitability of Ethiopian banks and conforms to a prior restriction. The variable was statistically insignificant in the model with significant level of 0.79 and regression coefficient of 0.0003.This low coefficient indicates that size had little impact on the profitability of Ethiopian private commercial banks. Further, the positive coefficient between Ethiopian banks size and profitability clearly indicated that larger banks of the country are better placed than smaller banks of the country in harnessing economies of scale in transactions. The result of this study is consistent with previous study of Goddard et al. (2004), Micco et al. (2007) and Athanasoglou et al. (2008).

## LIQUDITY

The results obtained from the analysis methods in the previous section of this chapter shows that liquidity has a significant negative relationship with the profitability of the banks. The variable, total loan to Deposits (LIQ) was used as a proxy for liquidity in the model. The result indicates that the liquidity variable has a significantly negative influence on bank profitability with beta coefficient of -0.402710 and significant level of 0.000. This implies that high figures for this variable mean low profitability. Since high figures for this variable denotes low liquidity, lower liquidity is associated with lower profitability. This result is consistent with previous research of (Kamau, 2009).

# CHAPTER FIVE

## FINDING, CONCLUSION AND RECOMMENDATIONS

## 5. INTRODUCTION

The previous chapter presented mainly the outputs of the documentary analysis and discussion of the result. Accordingly, based on the outputs presented in the previous chapter, this chapter presents the finding, conclusions and recommendations. This chapter is organized in three sections, the first section, 5.1 presents the research hypotheses presented in chapter one and section 5.2 discusses the results and attempts to test hypotheses.

## 5.1. FINDING OF THE REGRESSION RESULT

As stated in chapter one the broad objective of this study was to identify factors that affect private commercial bank profitability in Ethiopia. Further, as noted in the previous chapters (chapter 1), in order to achieve this broad objective the study was developed seven hypotheses. Based on the result of the study the hypothesis result is stated in the following table 5.1.

The result in Table 5.1 shows the effect of all internal determinants to the return on assets respectively. This summarization shows that deposit amount, loan amount, cost efficiency and liquidity has significant relation with return on assets, while deposit amount, cost efficiency and liquidity has negative effect and loan amount has positive effect on return on assets. However, credit risk management and capital of the bank coefficients estimate is negative and not significant to the return on assets of banks, on the other hand size of the bank has coefficient estimates of positive and insignificant impact on return on asset. This suggests that, credit risk management, capital and size of the bank do not significantly influence the performance of bank (return on assets).

**Table 5.1, hypothesis result**

| | Hypothesis | Coefficient | Conclusion |
|---|---|---|---|
| H1 | deposit amount has significant relationship with return on assets | -0.39296*** | Significant |
| H1 | loan amount has significant relationship with return on assets | 0.510815*** | Significant |
| H1 | credit risk management has significant relationship with return on assets | -0.009793 | Insignificant |
| H1 | cost efficiency has significant relationship with return on assets | -0.017515*** | Significant |
| H1 | capital adequacy has significant relationship with return on assets | -0.007561 | Insignificant |
| H1 | size of the bank has significant relationship with return on assets | 0.000374 | Insignificant |
| H1 | Liquidity has significant relationship with return on assets | -0.402710*** | Significant |

***, denote significance at 1%, significant level.

Source: Financial statements of banks, and own computation, 2016

## 5.2. CONCLUSION

The main objective of this study was to examine factors affecting profitability of private commercial banks in Ethiopia. According to previous studies made on bank profitability determinant, profitability is affected by both internal and external factors. Internal factors are factors that are mainly influenced by a bank's management and also called bank specific factors.

Those factors include deposit amount, loan amount, cost efficiency, credit risk management, capital, size and liquidity among others.

By using internal factors such as deposit amount, loan amount, cost efficiency, credit risk management, capital, size and liquidity, this study examined the factors affecting the profitability of private commercial banks in Ethiopia over the period 2005-2015. Thus, panel data for six banks for eleven years was used for the analysis purpose. Data for the bank specific factors were obtained from NBE and from the sample banks. Before making regression analysis, diagnostic tests were made for the classical linear regression model by using SPSS version 20 software and the descriptive statistics for main variables involved in the regression model. Key figures, including mean, median, standard deviation, minimum and maximum value were reported. This was generated to give overall description about data used in the model and served as data screening tool to spot unreasonable figure.

Based on correlation analysis, deposit amount, loan amount and cost efficiency were negatively correlated, this clearly shows that, as deposit amount, loan amount and cost efficiency increase, ROA (profit) moves to the opposite direction. On the other hand capital adequacy correlate positively with ROA (profits), this shows that as capital increase profit also increase with the same direction. Credit risk management and size of the bank were positively correlated but there significant level is more than 5%, because of this those variables have no significant correlation with profit measurement of return on asset. Liquidity also correlated negatively with profit, but the significant level in greater than 5%, similar to credit risk and size, liquidity has not significant correlation with profit measurement return on asset.

Based on the empirical findings, deposit amount, cost efficiency, and liquidity has, negatively and significantly, affect profitability measured by return on asset. While loan amount has positive and significant impact, capital adequacy had negative and insignificant impact on profitability measured by return on asset. More over credit risk has negative and insignificant impact; size of the bank has positive and insignificant impact on profitability of private commercial banks.

The negative and significant impact of deposit amount measures by return on asset shows that reducing deposit amount increase profitability of private commercial banks operate in Ethiopia. This

implies that the high costs generated by deposits lead to weigh negatively on the performance of banks. According to negative relationship between the amount of deposits and private commercial Bank profitability, since in this study, the ratio of deposits to total assets have been used to measure this variable, It seems that according to the results of this study, absorbing of long term deposits and the more absorption of short term and current deposits based on this study caused the decrease in profitability and rate of return on private commercial Bank's assets.

Loan amount positively and significantly affects profitability of the bank. This direct relation reveals that increase the loan amount also increase profitability of the bank to the same direction. This implies that high figures for this variable mean high profitability. It seems that according to the results of this study, increasing in loan payments will increase the rate of return on assets and profitability of banks. Which means loan is main source of income for commercial banks and the more deposit is transferred to loan, the higher the interest margin and profit from loan.

Credit risk management which is measured by provision for doubtful debt to total loan has negative but insignificant relation with profitably measures of return on asset. This result clearly shows that even if the amounts of provision for doubtful debt increase, it has no significant impact on profitability of private commercial banks.

The negative and significant impact of cost efficiency on performance measures of return on asset shows that decrease in expenses increases the performance of the private commercial banking industry in Ethiopia. This indicates that the private commercial banks in Ethiopia have much to profit if they are able to exercise efficient cost management practices. The negative coefficient of the cost efficiency implies that there is a lack of efficiency in expense management in Ethiopian private commercial banking industry. Thus, significant and negative coefficient of cost efficiency causes poor performance in Ethiopian private commercial banks. This means that, the higher costs of operation negatively affect bank performance.

Capital adequacy measured by equity to total asset has negative but insignificant impact on profitability of private commercial banks in Ethiopia. This result shows that having high capital has no significant impact on profitability of the banks. More over size of the bank has positive and insignificant impact on profitability of private commercial banks. This result rivaled that

bank size which is measured by natural logarithm of total asset has no significant impact on Ethiopian private commercial banks.

Finally, liquidity measured by loan amount to deposit has negative and significant impact on profitability. This implies that high figures for this variable mean low profitability. Since high figures for this variable denotes low liquidity, lower liquidity is associated with lower profitability.

## 5.3.   Recommendation

Based on the findings of the study the following possible recommendations were forwarded:

Deposit amount, loan amount, cost efficiency, and liquidity, are significant key drivers of profitability of private commercials banks in Ethiopia. Indeed focusing and reengineering the institutions alongside these indicators could enhance the profitability as well as the performance of the private commercial banks in Ethiopia. Since the management of the bank has control over the bank specific factors, it's possible to improve the performance of the bank by giving more attention on the identified bank specific factors such as, Deposit amount, loan amount, cost efficiency, and liquidity.

Proper liquidity management should be adopted by bank managers to ensure that banks do not become insolvent. Since banks are less profitable when less liquid, bank managers should be encouraged to invest in more liquid assets. This will not only improve bank profitability but it will also enable banks meet their short term obligations as they fall due.

Efficient management of bank operations can alleviate the high operational cost that erodes bank profits. Managerial cost and other expenses should be at optimal level and consistent with profit maximization objectives of shareholders.

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**APPENDIX**

**Appendix -I**

**Descriptive statistics**

| | | ROA | DTA | LOA | CRL | COE | CAP | SIZ | LIQ |
|---|---|---|---|---|---|---|---|---|---|
| **N** | Valid | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 |
| | Missing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean | | .039112 | .774352 | .516841 | .039295 | 1.028856 | .129341 | 22.579964 | .668924 |
| Median | | .040950 | .783900 | .472550 | .029500 | .913400 | .121950 | 22.696550 | .618050 |
| Std. Deviation | | .0093206 | .0474327 | .0988865 | .0521039 | .3709179 | .0298687 | .7438726 | .1313375 |
| Minimum | | .0051 | .6767 | .3610 | .0000 | .5385 | .0711 | 20.7937 | .4885 |
| Maximum | | .0568 | .8715 | .7277 | .4212 | 2.3031 | .1922 | 23.9327 | 1.0158 |

**Appendix -II**
**TEST FOR NORMALITY OF THE DATA**



Histogram

Dependent Variable: ROA

Mean = -6.84E-15
Std. Dev. = 0.945
N = 66

## Normal P-P Plot of Regression Standardized Residual
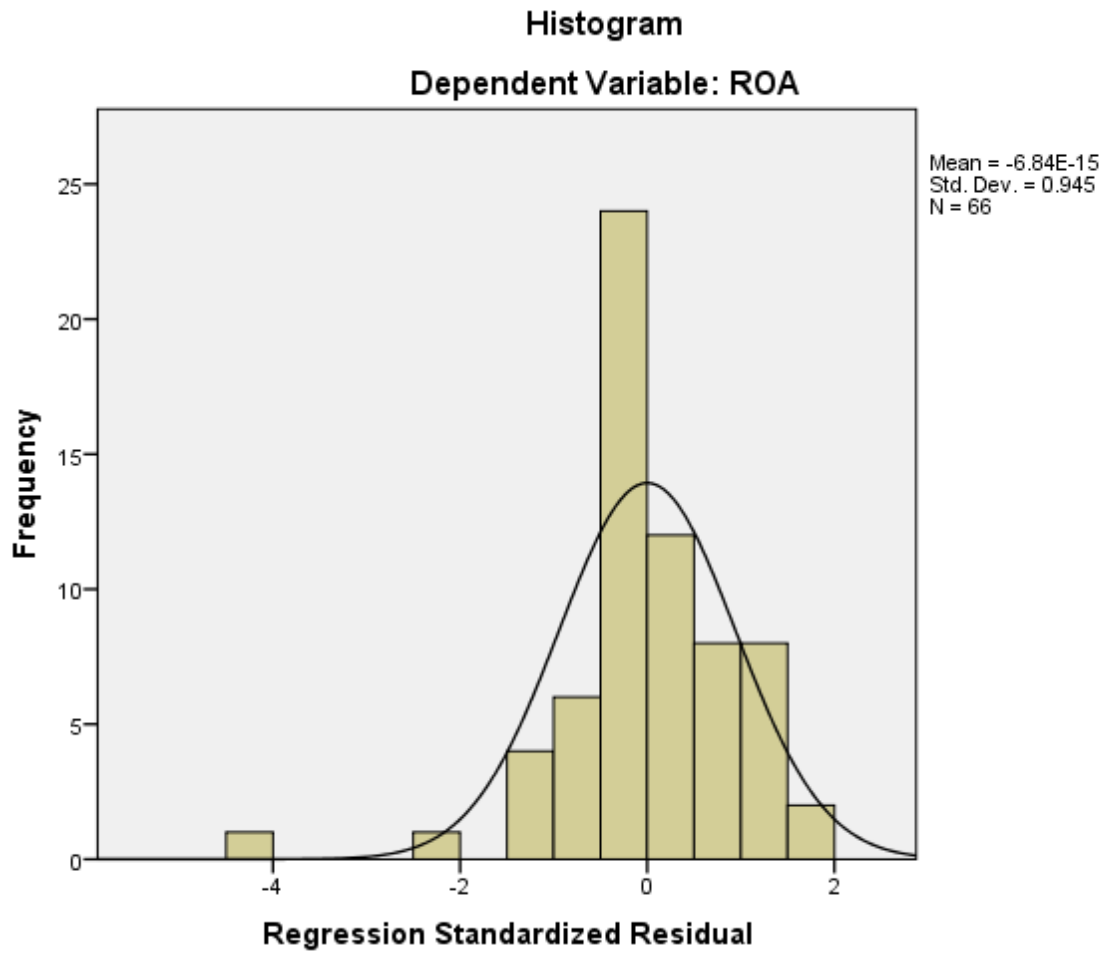
### Dependent Variable: ROA
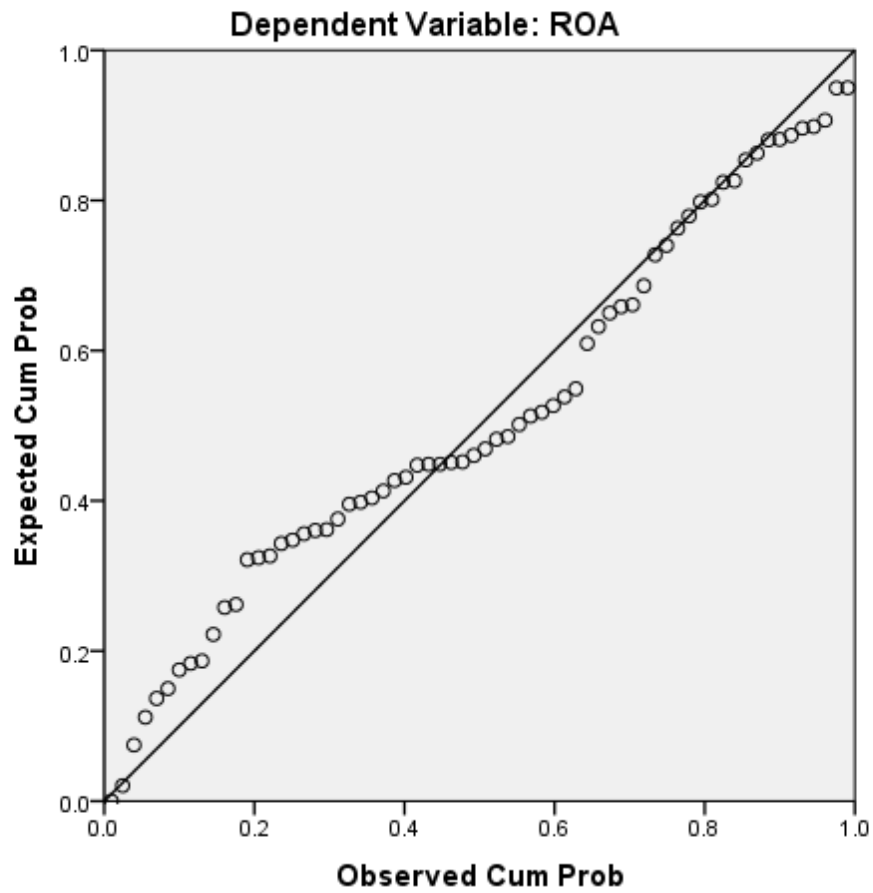


**TESTS FOR HETEROSKEDASTICITY TEST**

**ANOVAª**

| Model | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| 1 Regression | .000 | 7 | .000 | 1.990 | .072ᵇ |
| Residual | .001 | 58 | .000 | | |
| Total | .001 | 65 | | | |

a. Dependent Variable: AbsUt

b. Predictors: (Constant), LIQ, COE, CRL, CAP, SIZ, DTA, LOA

**Appendix –III**
**PEARSON CORRELATION**

**Correlations**

| | | ROA | DTA | LOA | CRL | COE | CAP | SIZ | LIQ |
|---|---|---|---|---|---|---|---|---|---|
| **ROA** | Pearson Correlation | 1 | -.321 | -.231 | .050 | -.718 | .256 | .073 | -.138 |
| | Sig. (1-tailed) | | .004 | .031 | .344 | .000 | .019 | .279 | .135 |
| | N | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 |
| **DTA** | Pearson Correlation | -.321*** | 1 | .110 | -.084 | .211 | -.808 | .087 | -.212 |
| | Sig. (1-tailed) | .004 | | .189 | .251 | .045 | .000 | .244 | .044 |
| | N | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 |
| **LOA** | Pearson Correlation | -.231** | .110 | 1 | -.036 | .065 | -.238 | -.700 | .823 |
| | Sig. (1-tailed) | .031 | .189 | | .387 | .301 | .027 | .000 | .000 |
| | N | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 |
| **CRL** | Pearson Correlation | .050 | -.084 | -.036 | 1 | -.037 | .039 | -.198 | -.020 |
| | Sig. (1-tailed) | .344 | .251 | .387 | | .385 | .379 | .055 | .437 |
| | N | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 |
| **COE** | Pearson Correlation | -.718*** | .211 | .065 | -.037 | 1 | -.099 | .059 | -.007 |
| | Sig. (1-tailed) | .000 | .045 | .301 | .385 | | .214 | .318 | .477 |
| | N | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 |
| **CAP** | Pearson Correlation | .256** | -.808 | -.238 | .039 | -.099 | 1 | .078 | .021 |
| | Sig. (1-tailed) | .019 | .000 | .027 | .379 | .214 | | .268 | .434 |
| | N | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 |
| **SIZ** | Pearson Correlation | .073 | .087 | -.700 | -.198 | .059 | .078 | 1 | -.712 |
| | Sig. (1-tailed) | .279 | .244 | .000 | .055 | .318 | .268 | | .000 |
| | N | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 |
| **LIQ** | Pearson Correlation | -.138 | -.212 | .823 | -.020 | -.007 | .021 | -.712 | 1 |
| | Sig. (1-tailed) | .135 | .044 | .000 | .437 | .477 | .434 | .000 | |
| | N | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 |

***. Correlation is significant at the 0.01 level (1-tailed).

**. Correlation is significant at the 0.05 level (1-tailed).

**Appendix -III**
**REGRESSION RESULT FOR FACTORS AFFECTING THE PROFITABILITY OF PRIVATE COMMERCIAL BANKS IN ETHIOPIA**

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|-------|-----|----------|-------------------|----------------------------|---------------|
| 1 | .816[a] | .666 | .626 | .0057035 | 2.060 |

a. Predictors: (Constant), LIQ, COE, CRL, CAP, SIZ, DTA, LOA

b. Dependent Variable: ROA

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|-----------|----------------|----|-------------|--------|-------|
| 1 | Regression | .004 | 7 | .001 | 16.512 | .000[b] |
| | Residual | .002 | 58 | .000 | | |
| | Total | .006 | 65 | | | |

a. Dependent Variable: ROA

b. Predictors: (Constant), LIQ, COE, CRL, CAP, SIZ, DTA, LOA

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|------------|------|-----------|------|--------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .360 | .083 | | 4.329 | .000 |
| | DTA | -.393 | .097 | -2.000 | -4.060 | .000 |
| | LOA | .511 | .132 | 5.419 | 3.863 | .000 |
| | CRL | -.010 | .015 | -.055 | -.670 | .506 |
| | COE | -.018 | .002 | -.697 | -8.828 | .000 |
| | CAP | -.008 | .043 | -.024 | -.177 | .860 |
| | SIZ | .000 | .001 | .030 | .259 | .797 |
| | LIQ | -.403 | .101 | -5.675 | -3.980 | .000 |

a. Dependent Variable: ROA

**Appendix -IV**
**RATIO DATA**

| BANKS | ROA | DPA | LOA | CRL | COE | CAP | SIZ | LIQ |
|---|---|---|---|---|---|---|---|---|
| DB05 | 0.0460 | 0.8284 | 0.6526 | 0.0323 | 1.1972 | 0.0711 | 21.9529 | 0.7879 |
| DB06 | 0.0407 | 0.8121 | 0.6960 | 0.0265 | 0.8647 | 0.0849 | 22.2375 | 0.8570 |
| DB07 | 0.0427 | 0.8047 | 0.6602 | 0.0248 | 0.7166 | 0.0901 | 22.5218 | 0.8204 |
| DB08 | 0.0425 | 0.7858 | 0.5597 | 0.0232 | 0.7325 | 0.0933 | 22.7810 | 0.7123 |
| DB09 | 0.0362 | 0.8143 | 0.4574 | 0.0230 | 0.8149 | 0.0934 | 22.9987 | 0.5617 |
| DB10 | 0.0371 | 0.8212 | 0.4087 | 0.0218 | 0.7958 | 0.0909 | 23.2372 | 0.4977 |
| DB11 | 0.0430 | 0.8077 | 0.4241 | 0.0199 | 0.7257 | 0.0953 | 23.4084 | 0.5251 |
| DB12 | 0.0510 | 0.8028 | 0.4637 | 0.0215 | 0.6470 | 0.1043 | 23.5866 | 0.5776 |
| DB13 | 0.0412 | 0.8027 | 0.4488 | 0.0225 | 0.8470 | 0.1036 | 23.7063 | 0.5591 |
| DB14 | 0.0436 | 0.8051 | 0.4294 | 0.0000 | 0.8621 | 0.1183 | 23.8126 | 0.5333 |
| DB15 | 0.0389 | 0.8001 | 0.4655 | 0.0168 | 1.2126 | 0.1181 | 23.9327 | 0.5818 |
| AB05 | 0.0247 | 0.8715 | 0.5795 | 0.0620 | 1.5789 | 0.1024 | 21.5235 | 0.6649 |
| AB06 | 0.0376 | 0.8690 | 0.6337 | 0.0491 | 0.8846 | 0.1029 | 21.8064 | 0.7293 |
| AB07 | 0.0533 | 0.8125 | 0.6559 | 0.0434 | 0.5385 | 0.1132 | 22.0661 | 0.8072 |
| AB08 | 0.0423 | 0.8028 | 0.5680 | 0.0464 | 0.7913 | 0.1239 | 22.2961 | 0.7075 |
| AB09 | 0.0315 | 0.7727 | 0.4224 | 0.0550 | 1.0836 | 0.1168 | 22.5831 | 0.5467 |
| AB10 | 0.0442 | 0.7685 | 0.3959 | 0.0471 | 0.7309 | 0.1184 | 22.7958 | 0.5152 |
| AB11 | 0.0445 | 0.7655 | 0.3941 | 0.0364 | 0.5906 | 0.1293 | 23.0374 | 0.5148 |
| AB12 | 0.0445 | 0.7711 | 0.4612 | 0.0270 | 0.7484 | 0.1349 | 23.2029 | 0.5980 |
| AB13 | 0.0439 | 0.8443 | 0.5189 | 0.0230 | 0.9339 | 0.1354 | 23.4219 | 0.6146 |
| AB14 | 0.0414 | 0.7509 | 0.4582 | 0.0227 | 0.9985 | 0.1261 | 23.7204 | 0.6101 |
| AB15 | 0.0361 | 0.7759 | 0.5229 | 0.0174 | 1.2411 | 0.1295 | 23.8959 | 0.6740 |
| BOA05 | 0.0399 | 0.7910 | 0.5999 | 0.0520 | 0.6066 | 0.1235 | 21.4445 | 0.7585 |
| BOA06 | 0.0430 | 0.7682 | 0.6927 | 0.0321 | 0.6706 | 0.1418 | 21.7650 | 0.9017 |
| BOA07 | 0.0280 | 0.8012 | 0.6787 | 0.0492 | 1.6716 | 0.1187 | 21.9459 | 0.8471 |
| BOA08 | 0.0051 | 0.8145 | 0.6598 | 0.0976 | 2.3031 | 0.0983 | 22.1749 | 0.8100 |
| BOA09 | 0.0266 | 0.8206 | 0.4946 | 0.1090 | 1.4657 | 0.0948 | 22.4238 | 0.6028 |
| BOA10 | 0.0313 | 0.8183 | 0.5021 | 0.0800 | 1.0335 | 0.0932 | 22.5606 | 0.6136 |
| BOA11 | 0.0355 | 0.8347 | 0.4556 | 0.0345 | 1.0831 | 0.0908 | 22.7081 | 0.5458 |
| BOA12 | 0.0350 | 0.8218 | 0.4730 | 0.0264 | 1.0450 | 0.1100 | 22.8322 | 0.5756 |
| BOA13 | 0.0285 | 0.8388 | 0.4642 | 0.0203 | 1.0450 | 0.1093 | 23.0387 | 0.5534 |
| BOA14 | 0.0464 | 0.8067 | 0.4488 | 0.0000 | 0.7718 | 0.1356 | 23.1460 | 0.5564 |
| BOA15 | 0.0274 | 0.8135 | 0.4321 | 0.0000 | 1.5847 | 0.1325 | 23.3383 | 0.5311 |
| WB05 | 0.0390 | 0.7970 | 0.6200 | 0.0536 | 1.3542 | 0.1114 | 21.2032 | 0.7780 |
| WB06 | 0.0416 | 0.7871 | 0.7052 | 0.0508 | 1.2817 | 0.1129 | 21.5382 | 0.8960 |
| WB07 | 0.0440 | 0.7826 | 0.6193 | 0.0461 | 1.0000 | 0.1158 | 21.9703 | 0.7913 |
| WB08 | 0.0461 | 0.7191 | 0.5689 | 0.0629 | 1.0845 | 0.1468 | 22.1403 | 0.7911 |
| WB09 | 0.0500 | 0.7284 | 0.4127 | 0.0648 | 0.7344 | 0.1634 | 22.3561 | 0.5666 |
| WB10 | 0.0553 | 0.6832 | 0.4308 | 0.0414 | 0.7704 | 0.1832 | 22.4711 | 0.6306 |
| WB11 | 0.0568 | 0.7390 | 0.3610 | 0.0476 | 0.7937 | 0.1659 | 22.8103 | 0.4885 |
| WB12 | 0.0549 | 0.6898 | 0.4272 | 0.0249 | 0.7495 | 0.1922 | 22.8452 | 0.6192 |

| WB13 | 0.0436 | 0.7265 | 0.4512 | 0.0229 | 0.9491 | 0.1761 | 23.0645 | 0.6212 |
| WB14 | 0.0356 | 0.7458 | 0.4096 | 0.0170 | 1.4367 | 0.1907 | 23.1430 | 0.5492 |
| WB15 | 0.0330 | 0.7199 | 0.4428 | 0.0000 | 1.6527 | 0.1761 | 23.3400 | 0.6151 |
| UB05 | 0.0401 | 0.8062 | 0.5527 | 0.0388 | 1.0000 | 0.1165 | 20.7937 | 0.6855 |
| UB06 | 0.0375 | 0.7630 | 0.6279 | 0.0289 | 0.8409 | 0.1194 | 21.1926 | 0.8230 |
| UB07 | 0.0399 | 0.7061 | 0.6560 | 0.0301 | 1.0156 | 0.1649 | 21.5037 | 0.9150 |
| UB08 | 0.0387 | 0.7518 | 0.5722 | 0.0268 | 0.9995 | 0.1439 | 21.9019 | 0.7611 |
| UB09 | 0.0287 | 0.7773 | 0.4627 | 0.0309 | 1.3221 | 0.1118 | 22.2605 | 0.5952 |
| UB10 | 0.0420 | 0.8013 | 0.4433 | 0.0365 | 0.9097 | 0.1081 | 22.4976 | 0.5532 |
| UB11 | 0.0417 | 0.7852 | 0.4242 | 0.0277 | 0.7038 | 0.1167 | 22.7678 | 0.5402 |
| UB12 | 0.0463 | 0.7690 | 0.4649 | 0.0233 | 0.7602 | 0.1254 | 22.8965 | 0.6046 |
| UB13 | 0.0307 | 0.8082 | 0.4721 | 0.0186 | 1.6510 | 0.1204 | 23.0236 | 0.5842 |
| UB14 | 0.0237 | 0.7498 | 0.4269 | 0.0144 | 2.0213 | 0.1326 | 23.1978 | 0.5693 |
| UB15 | 0.0249 | 0.8220 | 0.4777 | 0.0122 | 2.0967 | 0.1174 | 23.3878 | 0.5811 |
| NIB05 | 0.0381 | 0.7061 | 0.6542 | 0.0415 | 0.9783 | 0.1293 | 21.2725 | 0.9264 |
| NIB06 | 0.0400 | 0.7163 | 0.7277 | 0.0386 | 0.8103 | 0.1406 | 21.4298 | 1.0158 |
| NIB07 | 0.0107 | 0.7208 | 0.6970 | 0.0341 | 0.7895 | 0.1630 | 21.6815 | 0.9670 |
| NIB08 | 0.0435 | 0.6767 | 0.5791 | 0.0379 | 0.8456 | 0.1639 | 22.0180 | 0.8558 |
| NIB09 | 0.0456 | 0.6858 | 0.4619 | 0.0460 | 0.8560 | 0.1516 | 22.2932 | 0.6736 |
| NIB10 | 0.0478 | 0.6913 | 0.4265 | 0.0390 | 0.9038 | 0.1535 | 22.5101 | 0.6169 |
| NIB11 | 0.0484 | 0.7252 | 0.3890 | 0.4212 | 0.7838 | 0.1646 | 22.6850 | 0.5364 |
| NIB12 | 0.0471 | 0.7055 | 0.4482 | 0.0271 | 0.7618 | 0.1846 | 22.8366 | 0.6353 |
| NIB13 | 0.0428 | 0.7278 | 0.4968 | 0.0250 | 0.9171 | 0.1822 | 22.9364 | 0.6826 |
| NIB14 | 0.0364 | 0.7372 | 0.5034 | 0.0000 | 0.9267 | 0.1828 | 23.0979 | 0.6825 |
| NIB15 | 0.0333 | 0.7373 | 0.5201 | 0.0000 | 1.3868 | 0.1642 | 23.3077 | 0.7053 |

## DECLARATION

I declare that the thesis for the MBA in general management at the University of St.Mary's, herby submitted by me, is my original work and has not previously been submitted for a degree at this or any other University, and that all references materials contained therein have been duly acknowledged.

Name: - Tizazu Amare

_____
       Signature

**St.Mary's university, Addis Ababa**                    **January, 2016**

# ENDORSEMENT

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

Asmamaw Getie(assistant professor)

_____

Advisor                                                                                    signature

**St.Mary's university, Addis Ababa**                                        **January, 2016**