DETERMINANTS OF BANKS PROFITABILITY :

A STUDY ON COMMERCIAL BANKS IN ETHIOPIA

A Thesis Submitted to the School of Graduate Studies of Jimma University in Partial Fulfillment of the Requirements for the Award of the Degree of Masters of Science in Accounting and Finance (MSC)

BY:

GETINET FEDLU

JIMMA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

MSC PROGRAM

MAY 29, 2015

JIMMA, ETHIOPIA

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CERTIFICATE

This is to certify that the thesis entitles "Determinants of profitability: A study on Commercial Banks in Ethiopia", submitted to Jimma University for the award of the Degree of Master of Science (MSC) in Accounting and Finance and is a record of bonafide research work carried out by Mr. Getinet Fedilu, under our guidance and supervision.

Therefore, we hereby declare that no part of this thesis has been submitted to any other university or institution for the award of any degree or diploma.

Main Adviser's Name	Date	Signature
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Co-Advisor's Name	Date	Signature
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DECLARATION

I hereby declare that this thesis entitled "Determinants of Banks Profitability: A study on Commercial Banks in Ethiopia", has been carried out by me under the guidance and supervision of Dr. Arega Seyoum and Mr. Yonas Mekonnen.

The thesis is original and has not been submitted for the award of any degree or diploma to any university or institutions.

Researcher's Name   Date   Signature

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ABSTRACT

This study was aimed at investigating the key determinants of commercial banks profitability in Ethiopia. The factors which determine banks profitability are categorized in to, internal and external determinants. Variables which were chosen to represent internal determinants were: liquidity, deposit ratio, asset size, capital adequacy, non performing loan ratio, income expenditure structure non income , noninterest expense ratio, and the variables which were used in this study as external determinants include: annual inflation, interest rate and gross domestic product growth. In addition the study used Return on Asset (ROA) as dependent variable.

The study applied the balanced panel data of eight Ethiopian commercial banks, that covers the period, 2004 - 2013. The data were analyzed using ordinary least square (OLS) technique to investigate the impact on major profitability indicator i.e. return on asset (ROA). Beside this the study used ten years secondary data which are included in the study have been operating for the last 10 years excluding 2014, from the year 2004 up to 2013. The findings revealed bank internal determinants especially loan, affect positivity and significant, deposit, and noninterest expense influence Negativity and significant bank profitability, and Capital, Liquidity, NPL, Non interest income are positively affected bank profitability but not statistically significant. External determinants (real annual gross domestic product growth, and real interest rate,) are significantly and positively affect bank profitability. Inflation rate doesn't influence the performance of Ethiopian commercial banks since, their relationship with bank performance was not statistical significant. Thus, management bodies of that commercial banks should focus on increasing public awareness to mobilize more saving deposits and this will enhance their performance in provision of loans to customers.

Key Words: *Profitability, 0rdinary least square (OLS), Return on asset (ROA).*

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CHAPTER ONE

1. INTRODUCTION

1.1 Background of the study

Profit is the excess of revenue over expense in any field of study especially in accounting and economics. The amount of profit is determined by the volume of revenue generated and the way the expense is minimized. Beside many profit making organization is struggling to maximize profit so as to exist in market, to meet their vision, meet the need of their customer, to meet the need of their shareholder and to meet the need of their country economy. Since bank industry is one of the backbone of a country economy, the existence as profitable unquestionable issue. Therefore, studying determinate factor for profitability of a bank industry is an important issue for developing country like Ethiopia.

Bank profitability is given a strong attention after the great economic depression is shown in the United States of America in 1940s. As a result of US mortgage crisis that happed recently in 2007-2009, the banking sector of many countries suffer a huge losses, specially USA and European Union countries (Naude,W.A.2009). This poor performance of the bank industry has being slowed down the economic growth of many countries until current period. Since the bank is the heart of the world economy, the profitability of bank industry is not question of a single nation rather a question of all nations in the globe. If the banking industry does not perform well, the effect to the economy could be huge and broad. Because, banks are the critical part of financial system, play a pivotal role in contributing to a country's economic development (Rasidah and Mohd 2011). However, there is a general agreement that bank profitability is a function of internal and external factors.

The internal factor determinants refers to the factors originate from bank financial statements, and therefore, could be termed micro or bank specific determinants of profitability (Tobias and Themba, 2011). The external factors or macroeconomic factors are variables that are not related to bank management but reflect the economic and legal environment that affects the operation and profitability of banks. Athanasoglou *et al*. (2006) stated that the importance of banks is more

pronounced in developing countries because financial markets are usually underdeveloped, and banks are typically the only major source of finance for the majority of firms and are usually the main depository of economic savings. Thus, this study focused on the profit determinants of commercial banks of Ethiopia.

1.2 **An overview of banking in Ethiopia**

Traditional financial system in Ethiopia has long history and paramount contribution to economic betterment and social wellbeing of the society. Traditional institutions organized with a sense of cooperation and risk sharing has enabled Ethiopians to experience saving and financial management within its cultural context. Eqqub and Edir are some of the informal financial institutions that shaped the social bond and interaction (Aychile G.2008).

Modern banking in Ethiopia was introduced after the agreement that was reached in 1905 between Emperor Menelik II and Mr.MaGillivray, representative of the British owned National Bank of Egypt. Following the agreement, the first bank called Bank of Abyssinia was inaugurated in Feb.16, 1906 by the Emperor. Within the first fifteen years of its operation, Bank of Abyssinia opened branches in different areas of the country in Harar (Eastern Ethiopia), Dire Dawa, Dessie and Djibouti. By 1931 Bank of Abyssinia legally replaced by Bank of Ethiopia shortly after Emperor Haile Selassie came to power (Fentaw.A & Gurmu.K 2009).

The new Bank, Bank of Ethiopia, was a purely Ethiopian institution, was the first indigenous bank in Africa, and established by an official decree on August 29, 1931 with capital of £750,000. In 1941, another foreign bank, Barclays Bank, came to Ethiopia with the British troops and organized banking services in Addis Ababa, until its withdrawal in 1943. Then on 15 April 1943, the State Bank of Ethiopia commenced full operation after 8 months of preparatory activities. In 1945 and 1949, the Bank was granted the sole right of issuing currency and deal in foreign currency. The Bank also functioned as the principal commercial bank in the country and engaged in all commercial banking activities. The National Bank of Ethiopia with more power and duties started its operation in January 1964. Following the incorporation as a share company on December 16, 1963 as per proclamation No.207/1955 of October 1963, Commercial Bank of

Ethiopia took over the commercial banking activities of the former State Bank of Ethiopia. It started operation on January 1, 1964 with a capital of ETB 20 million. In the new Commercial Bank of Ethiopia, in contrast with the former State Bank of Ethiopia, all employees were Ethiopians, There were two other banks in operation namely Banco di Roma S.C and Banco di Napoli S.C. that later reapplied for license according to the new proclamation each having a paid up capital of Eth. Birr 2 million. The first privately owned bank, Addis Ababa Bank Share Company, was established on Ethiopians initiative and started operation in 1964 with a capital of 2 million in association with National and Grindlay Bank, London which had 40 percent of the total share. In 1968, the original capital of the Bank rose to 50%. There were other financial institutions operating in the country like: Imperial Savings and Home Ownership public Association (ISHOPA), which specialized in providing loans for the construction of residential houses and to individuals under the guarantee of their savings (Fentaw A. & Gurmu K., 2009).

Savings and Mortgage Corporation of Ethiopia (SMCE) whose aims and duties were to accept savings and trust deposits account and provide loans for the construction, repair and improvement of residential houses, commercial and industrial buildings and carry out all activities related to mortgage. Operations million and until it ceased operation, it had 300 staff at 26 branches

Agricultural Bank that provides loan for the agricultural and other relevant projects established in 1945. But in 1951 the Investment Bank of Ethiopia (IBE) replaced it. In 1965, the name of the bank once again hanged to Ethiopian Investment Corporation Share Company (EIC) and the capital rose to ETB 20 million, which was fully paid up (Fentaw A. & Gurmu K., 2009).

Following the declaration of socialism in 1974, the government extended its control over the whole economy and nationalized all large corporations. Organizational setups were taken in order to create stronger institutions by merging those that perform similar functions. Accordingly, the three private owned banks, Addis Ababa Bank, Banco di Roma and Banco di Napoli merged in 1976 to form the second largest Bank in Ethiopia called Addis Bank with a capital of ETB 20 million and had a staff of 480 and 34 branches. Then Addis Bank and Commercial Bank of Ethiopia S.C were merged by Proclamation No.184 of August 2, 1980 to

form the sole commercial bank in the country until the establishment of private commercial banks in 1994.

The Savings and Mortgage Corporation S.C.(SMC) and Imperial Saving and Home Ownership Public Association (ISHOPA) were also merged to form the Housing and Saving

Bank (HSB) with working capital of Birr 6.0 million and all rights, privileges, assets and liabilities were transferred by Proclamation No.60, 1975 to the new bank. The financial sector that the socialist oriented government left behind constituted only three banks and each enjoying monopoly in its respective market, the following was the structure of the sector at the end of the era: the National Bank of Ethiopia (NBE), the Commercial Bank of Ethiopia (CBE), and Agricultural and Industrial Development Bank (AIDB). Following the demise of the Dergue regime in 1991 that ruled the country for 17 years under the rule of command economy, the Ethiopian People's Revolutionary Democratic Front (EPRDF) declared a liberal economy system. In line with this, Monetary and Banking Proclamation of 1994 established the National Bank of Ethiopia (NBE) as a judicial entity, separated from the government and outlined its main function. Monetary and Banking Proclamation No.83/1994 and the Licensing and Supervision of Banking Business No.84/1994 laid down the legal basis for investment in the banking sector. Currently commercial banks in Ethiopia reached to nineteen.

1.3 Statement of the Problem

Strong financial institution is very important for one country's development. Developed countries have well structured financial institutions which play immense role in connecting those people with surplus to people who are in deficit. Commercial banks are one of the financial institutions which play intermediary role between peoples that have surplus and peoples who are in deficit. Ethiopia is one of developing countries in east Africa, so this development has to be backed up by strong financial institutions, more particularly by commercial banks. This is due to the reason that the country requires enormous amount of finance that is used for construction of infrastructures, facilitate trade, helping the agricultural sector to mechanized form and linking it with industry and so on. For commercial banks to be strong there has to be different researches that provide how banks should maximize their profit.

In the past decade, Ethiopian commercial banks (both private and state) were shown a progressive expansions and growth. As recognized by economists and finance specialists, the role of banks is essential for the development of an economy. In addition, commercial banks always play an important role in the economic development of every country. During the last decade, the banking sector of Ethiopia has experienced major transformation in terms of investment and geographic distribution due to the financial sector reform and liberalization act of 84/1994 (Hailegiorgis B.,2012).

According to 2014/15 reports on numbers of branches' of total commercial banks reached 2365, of this share of government owned commercial bank is 939. This insights us, this time commercial bank have remarkable economic role on the development of Ethiopia. As empirical evidence indicated the banking sector is absorbing many graduates of the country as compared with other sectors. This means that the sector plays an important role in reducing unemployment in the country. Because of the above facts the researcher highly motivated to assess the sustainability and profitability of the commercial bank of Ethiopian and its determinants. There are few researches made specifically on commercial banking sector in Ethiopia, but considered only some of the independent variables and ROA or NIM is taken as measurement of profitability. Empirical evidence from studies of internal and external determinants of profitability of commercial banks showed that there are different factors that determine profitability of commercial banks. So, the researcher is interested to consider ten year data, which were revealed long relationship between the variables.

The internal determinants include management controllable factors such as asset size, loan ratio, liquidity ratio, bank deposit, capital adequacy, income expenditure structures, none interest income, noninterest expense ratio and non performing loan ratio. Similarly, external determinants include those factors which are beyond the control of management of the bank such as interest rate, inflation rate, and GDP growth.

Generally, internal profitability determinants can be accounted and analyzed as bank specific determinants of profitability because they are controllable by the specific bank management. On the other hand, external determinants under macroeconomic determinants, such as countrywide economic growth.

Therefore, the study attempted to examine, in single equation framework, bank specific and macroeconomic determinants of Ethiopian commercial banks profitability using time series data ranging from 2004 – 2013, (Ten years audited financial statement of commercial bank of Ethiopia obtained from the respective commercial banks annual report.)

1.4 Research Question

- ➢ Is there any relationship between banks internal factors and profitability of commercial banks in Ethiopia?
- ➢ Is there any relationship between banks external factors and profitability of commercial banks in Ethiopia?

1.5 Objectives of the Study

1.5.1 General Objective of the Study

The general objective of the research is to investigate and identify the major bank specific and macroeconomic variables determining profitability of commercial banks in Ethiopia.

1.5.2 Specific Objectives of the Study

Specifically, this study addresses the following objectives;

- ➢ To identify the impact of the bank specific determinants on the profitability of commercial banks in Ethiopia.
- ➢ To see the effect of macroeconomic variables on the profitability of Ethiopian commercial banking sector.

1.6 Hypothesis

Hypothesis of the study stand on the theories related to determinants of profitability in Ethiopia commercial bank, based on different empirical research and theoretical reviewed made. a number of hypotheses was tested regarding the determinants of profitability on banking sector.

Therefore, the followings two research hypothesis about the determinants of bank profitability are specified based on theories and past empirical studies related to a bank's profitability.

- The relationship between capital and portability is explained by signaling theory (Berger, 1995), expected bankruptcy cost hypothesis and risk return hypothesis (Athanasoglou), he signaling hypothesis suggests that a higher capital is a positive signal to the market of the value of a bank (see Ommeren, 2011).

- Capital ratios are positively related to profitability under the assumption that well capitalize banks may enjoy access to cheaper and less risky sources of funds and better quality asset markets. Moreover, Berger (1995) argues that there are two potential explanations for a positive relationship between the bank's profits and the capital ratio. On the one hand, the expected bankruptcy costs hypothesis, according to which the greater the exogenous factors increasing its expected bankruptcy costs, the higher the optimal capital ratio for a bank will be.

- Bank's size. According to Goddard et al. (2004), scale economies are evident at low asset size levels but become exhausted as size increases. In this case, the bank's size can account for existing economies, or diseconomies, of scale. Berger and Humphrey (1997) argue that, on average, large banks are more efficient than small banks, but it is less clear whether large banks benefit significantly from scale economies. Profitability is more likely to improve by emulating industry best practice in terms of technology and management structure than by increasing the size parse. If the number of banks is large, the collusion is more difficult to carry out (Goddard et al.,2004). The efficient-structure (ES) hypothesis says that firms (banks) with superior management or production technologies have lower costs and therefore higher profits. These firms are also assumed to gain large market shares, which may result in high levels of concentration, basically because highly concentrated markets will lower the cost of collusion and foster tacit and/or explicit collusion (Demsetz, 1973, Smirlock, 1985). Consequently, collusion has a positive effect on profitability.

- Nonperforming loan is another variable which can explain banking profitability. In this respect, the financial institutions as a whole are more vulnerable to high-risk credit than

non-financial institutions. Issues related to high-risk loans, such as the accumulation of unpaid loans, imply that these loan losses have produced lower returns (Bourke, 1989). Additionally, Miller and Noulas (1997) also state a negative relationship between credit risk and profitability. This negative relationship indicates that higher risk associated with loans makes the level of loan loss provisions higher, which thereby makes it more difficult for a bank to follow the profit-maximization rule. In consequence, it is valid to expect that the higher the credit risk, the lower the profitability.

- Operational efficiency: Proper management of costs shows how efficient a firm is running, that is to say by minimizing costs and increasing profits. Similar to Pasiouras and Kosmidou (2007), Athanasoglou et al. (2008).

- Liquidity risk management: Liquidity risk measurements in most cases are expressed as a ratio of liquid assets to short term funding. The studies that examine liquidity risk, namely Curak et al. (2012) find a positive relationship between increased liquidity and profitability mainly because more liquid banks were found to have more cash on hand to finance their day-to-day operations.3 Other studies, often those working with panel datasets, have found it to be an insignificant determinant (Ommeren 2011), and Kosak and Cok (2008).

- In regards to Macroeconomic determinants of profitability, previous studies examine many macroeconomic variables including interest rates, inflation, GDP growth, when examining on a cross-country basis, and proxies for market characteristics. Most studies (Athanasoglou et al. 2008; Ommeren, 2011; Dietrich and Wanzenried, 2010) show a positive relationship between these external variables and profitability. Specifically, Dietrich and Wanzenried (2011), Athanasoglou et al. (2008).

1.7 Scope and Limitation of the Study

The determinants of commercial banks in Ethiopia profitability that is used in this study are those frequently described in conventional banking studies and literatures. Accordingly, the data required for defining bank specific variables is limited to ten years (2004-2013) balance sheet and profit and loss statements of commercial banks in Ethiopia, which has been operating until 2013. In addition, the study has used bank sector data and countrywide macroeconomic data that have been driven from National Bank of Ethiopia and MOFED in order to define macroeconomic variables. This study was mainly based on quantitative studies. Secondary data are obtained directly from banks financial statement; therefore it may have potential bias from the data source.

1.8 Significance of the study

Banks play unquestionable role in sustainable economic development of a country through providing the required financial services to the economy. Commercial banks, in particular, can be taken as a lung for every business activities. Hence, a well organized and structured commercial bank services are required to have a better business activity and sustainable economic development. As described in the previous sections, this study is designed to investigate the significance of all types of bank profitability determinants in commercial Banking sector in Ethiopia. As a result, identifying the determinants of banks profitability and understanding their level of significance in Ethiopian context could have a great importance to both internal and external stakeholders of the banks. This study have a great importance for the management of Ethiopian commercial banks through identifying significant determining factors of profitability from worldwide experience. On the other hand, the study have a great significance for external stakeholders customers/clients or depositor) such as depositor those put their money on the banks, the community for which the financial service is provided, and the government which regulate the sector for the sake of the safety of the public resource and sustainable economic development.

1.9 Structure of the study

This study consists of five chapters with different sections and sub-sections and it was structure as follows. Chapter one presents the introduction for the main part of the paper. Chapter Two reviews the most significant theoretical and empirical studies including Ethiopian banking sector. Chapter three focuses to presents methodology of the study. Chapter four also provide the interpretation and analysis of econometric model outcomes. Chapter five as usual gives conclusion and recommendation with policy implication and further research direction.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE.

In this chapter, the theoretical and empirical evidence focusing on the determinants of profitability are presented. The chapter is sub divided in two sections, the first section presents theoretical overview of banking system in general, and the second section presents empirical evidence on internal and external determinants of bank profitability from developed countries, developing countries including Ethiopia. Furthermore, empirical evidence on internal determinants of bank profitability is also reviewed.

2.1 Theoretical underpinnings

2.1.1 Sources of Bank's Income

The followings are the various sources of bank's profit: *(Mishikin 2008).*

1. Interest on Loans: The main function of a commercial bank is to borrow money for the purpose of lending at a higher rate of interest. Bank grants various types of loans to the industrialists and traders. The yields from loans constitute the major portion of the income of a bank. The banks grant loans generally for short periods. But now the banks also advance call loans which can be called at a very short notice. Such loans are granted to share brokers and other banks. These assets are highly liquid because they can be called at any time. Moreover, they are source of income to the bank.

2. Interest on Investments: Banks also invest an important portion of their resources in government and other first class industrial securities. The interest and dividend received from time to time on these investments is a source of income for the banks. Bank also earns some income when the market prices of these securities rise.

3. Discounts: Commercial banks invest a part of their funds in bills of exchange by discounting them. Banks discount both foreign and inland bills of exchange, and in other words, they purchase the bills at discount and receive the full amount at the date of maturity.

4. Commission, Brokerage: Banks perform numerous services to their customers and charge commission, etc., for such services. Banks collect cheques, rents, dividends, etc. accepts bills of exchange, issue drafts and letters of credit and collects pensions and salaries on behalf of their customers. They pay insurance premiums, rents, taxes etc., on behalf of their customers. For all these services banks charge their commission. They also earn locker rents for providing safety vaults to their customers. Recently the banks have also started underwriting the shares and debentures issued by the joint stock companies for which they receive underwriting commission. Commercial banks also deal in foreign exchange. They sell demand drafts, issue letters of credit and help remittance of funds in foreign countries. They also act as brokers in foreign exchange. Banks earn income out of these operations.

2.1.2 Investment policy of Banks

The financial position of a commercial bank is reflected in its balance sheet. The balance sheet is a statement of the assets and liabilities of the bank. The assets of the bank are distributed in accordance with certain guiding principles. These principles underline the investment policy of the bank. They are discussed below:

1. Liquidity: Traditionally the current ratio and the quick (acid test) ratio were used to analyses the short term liquidity of a business. However, these ratios relied exclusively on the values derived from the Statement of Financial Position, also known as the Balance Sheet. In the context of the balance sheet of a bank the term liquidity has two interpretations. First, it refers to the ability of the bank to honor the claims of the depositors. Second, it connotes the ability of the bank to convert its non-cash assets into cash easily and without loss. It is a well-known fact that a bank deals in funds belonging to the public. Hence, the bank should always be on its guard in handling these funds. The bank should always have enough cash to meet the demands of the depositors. In fact, the success of a bank depends to a considerable extent upon the degree of confidence it can installing the minds of its depositors. If the depositors lose confidence in the integrity of their bank, the very existence of the bank will be at stake. So, the bank should always be prepared to meet the claims of the depositors by having enough cash. Among the various items on the assets side of the balance sheet, cash on hand represents the most liquid asset. Next

comes, cash with other banks and the central bank. The order of liquidity goes on descending. Liquidity also means the ability of the bank to convert its non-cash assets into cash easily and without loss. The bank cannot have all its assets in the form of cash because each is an idle asset which does not fetch any return to the bank. So some of the assets of the bank, money at call and short notice, bills discounted, etc. could be made liquid easily and without loss *(Kirkham R.,2012)*.

2. Profitability: A commercial bank by definition is a profit hunting institution. The bank has to earn profit to earn income to pay salaries to the staff, interest to the depositors, dividend to the shareholders and to meet the day-to-day expenditure. Since cash is the least profitable asset to the bank, there is no point in keeping all the assets in the form of cash on hand. The bank has got to earn income. Hence, some of the items on the assets side are profit yielding assets. They include money at call and short notice, bills discounted, investments, loans and advances, etc. Loans and advances, though the least liquid asset, constitute the most profitable asset to the bank. Much of the income of the bank accrues by way of interest charged on loans and advances. But, the bank has to be highly discreet while advancing loan *(Mishikin 2008)*.

3. Safety or Security: Apart from liquidity and profitability, the bank should look to the principle of safety of its funds also for its smooth working. While advancing loans, it is necessary that the bank should consider the three 'C's of credit character, capacity and the collateral of the borrower. The bank cannot afford to invest its funds recklessly without considering the principle of safety. The loans and investments made by the bank should be adequately secured. For this purpose, the bank should always insist on security of the borrower.

4. Diversity: In choosing its investment portfolio, a commercial bank should follow the principle of diversity. It should not invest its surplus funds in a particular type of security but in different types of securities. It should choose the shares and debentures of different types of industries situated in different regions of the country. The same principle should be followed in the case of state governments and local bodies. Diversification aims at minimizing risk of the investment portfolio of a bank. The bank should invest its funds in such a way as to secure for itself an adequate and permanent return. And while investing its funds, the bank should not keep all its eggs in the same basket. Diversification of investment is necessary to avoid the dangerous

consequences of investing in one or two channels. If the bank invest its funds in different types of securities or makes loans and advances to different objectives and enterprises, it shall ensure for itself a regular flow of income *(N.T.Somasheka,2009).*

5. Salability of Securities: Further, the bank should invest its funds in such types of securities as can be easily marketed at a time of emergency. The bank cannot afford to invest its funds in very long term securities or those securities which are unsalable. It is necessary for the bank to invest its funds in government or in first class securities or in debentures of reputed firms. It should also advance loans against stocks which can be easily sold *(N.T.Somasheka,2009).*

6. Stability in the Value of Investments: The bank should invest its funds in those stocks and securities the prices of which are more or less stable. The bank cannot afford to invest its funds in securities, the prices of which are subject to frequent fluctuations *(Mishikin 2008).*

7. Principles of Tax-Exemption of Investments: Finally, the investment policy of a bank should be based on the principle of tax exemption of investments. The bank should invest in those government securities which are exempted from income and other taxes. This will help the bank to increase its profits. Of late, there has been a controversy regarding the relative importance of the various principles influencing the investment policy of a bank particularly between liquidity and profitability. It is interesting to examine this controversy (.N.T Somashekar, 2009 pp.1-26).

2.1.3 Banking Dilemma

Banking dilemma is called profitability and liquidity dilemma. Banks to sustain their existence, they should satisfy the interest of three stakeholders; the depositors, the central bank and the shareholders of the bank. To satisfy the interest of the depositors, the bank should hold much idle cash on their volt and whenever the depositors come they can meet the depositor's interest. But the main interest of the bank's shareholders is to maximize profit. Banks profit is mainly done through loan and advances which is interest income difference between the loan they provided and the interest payment for deposited amount. For the search of much profit if they give largest proportion of their deposit as loan, of course they can make profit and satisfy the shareholders.

On the other hand, they will not have enough deposit to meet the depositors need as they come for withdrawing their money. In this regard, depositors lack trust on the bank and will no more be the customer and deposit on the bank .If this happen banks lack sufficient loan able fund to make profit. Then its existence comes to the question, plus to the depositor's movement, the national bank takes action on the bank management   to protect the public. Then the bank will be collapsed. The mission and vision of the bank being will be stopped. To insure sustainable existence and meet its goal, bank mangers always work to satisfy the three party's interest equitably Mishikin (2008).

2.1.4 Meaning of Profit

Profit is a simple concept but its level is determined by the complex interaction of a multitude of factors (Nugent, 1998). If we begin at the level of the firm the typical firm's profit (denoted by Π) in a simple competitive market model is defined by:

$$\Pi = TR - \omega. N - \rho. K$$

Where, TR is the total revenue (or total sales) of the firm. The firm's costs are represented by the wage bill (the wage rate, ω, times the workforce, N, of the firm) and the cost of capital (the rental cost of capital, ρ, multiplied by the capital stock of the firm, K).

2.1.5 Commercial Bank Profit

A commercial bank is a profit-seeking business firm, functions in money and credit. It is a financial institution dealing with money in the sense that it collects deposits of money from the public to keep for them in its custody for safety. Also, it provides credit, i.e., creates credit by making loan and advances out of the funds received as deposits to those in need. Thus, bank is mobilize of money in the economy. A bank is, therefore, like a reservoir of idle surplus money of households and from which loans are given on interest to businessmen and others who need them for investment or productive uses (N.T. Somashekar, 2009, p.1).

This section examines how banking is conducted to earn the highest profits possible and assures its sustainability .How can and why banks make loans? How they acquire funds and manage

their assets and liabilities (debts), and how they earn income? Commercial bank is the most important financial intermediary. Many of the principles applied to commercial banking are also applied to the other financial types of intermediaries.

For insuring continuous profitability of bank, managers make in depth work on the banks financial statements. Financial statements of banks include balance sheet and income statements. Balance sheet contains asset (fund to which they are used), liability (source of fund) and capital (the Amount the bank owned from shareholders). Income statement contains revenue (the banks earning) and expense (the cost of earning). In general terms, bank make profit by selling liabilities with one set of characteristics (a particular combination of liquidity, risk, size, and return) and using the proceeds to buy assets with a different set of characteristic.

In order to earn the highest possible profit, the bank manager has four primary concerns. The first is to make sure that the bank has enough ready cash to pay its depositors when there is deposit outflow. To keep enough cash on hand, the bank must engage in liquidity management, the acquisition of sufficiently liquid assets to meet the bank's obligations to depositors. Second, the bank manager must pursue an acceptably low level of risk by acquiring assets that have a low rate of default and by diversifying asset holdings (asset management).The third concern is to acquire funds at low cost (liability management).Finally, the manager must decide the amount of capital the bank should maintain and then acquire the needed capital (capital adequacy management). In addition the bank managers give emphasize to credit risk, the risk arising because borrowers may default, and how it manages interest-rate risk, the riskiness of earnings and returns on bank assets those results from interest-rate changes (Mishken, 2008).

Bank profitability determinants are distinguish as either being internal or external. Internal factors are those that effect a bank's management and policy decisions. External determinants usually reflect factors that do not relate to bank management practices. Instead, they reflect macroeconomic environment factors that affect the performance of financial institutions (Schipper 2013).

2.1.6 Internal Determinants of Commercial Banks Profitability

Internal determinants of banks profitability are usually consisting of factors that are within the control of commercial banks. They are the factors which affect the revenue and the cost of the banks. Some studies classified them into two categories namely the financial statement variables and non-financial variables. The financial statement variables include factors that are directly related to the bank's balance sheet and income statement. Whiles, the nonfinancial statement variables include factors like the number of branches of a particular bank, location and size of the bank etc;(Husni 2011).

2.1.6.1 Income

Banks generate income mostly on their assets and the assets could be termed as income and non-income generating. With regards to commercial banks income Rasiah(2010) classified it into two, namely interest and non-interest income. The interest income consist of rates charge on loans, overdraft and trade finance which the banks offers to customers. Whereas, the non-interest income is consisting of fees, commissions, brokerage charges and returns on investments in subsidiaries and securities. The major source of banks revenue is interest income. It contributes about 80% of commercial banks earnings. The other source of banks revenue includes dividends and gains from dealing in the securities market. There could be also some minor sources of income for instance earnings from trust activities and service charges (Vong et al, 2009).

2.1.6.2 Loan quality

One of the major roles of banks is to offer loans to borrowers and loans serve as one of the ultimate source of earnings for commercial banks. In other words loans represent one of the highest yielding assets on banks' balances sheet. It is obvious that the more banks offer loans the more it does generate revenue and more profit; Abreu and Mendes (2000). But then banks have to be courteous in offering more loans because as they offer more loans to customers they expose themselves to liquidity and default risks which impacts negatively on banks' profits and survival; Rasiah (2010).

According to Suffian et al (2008) on the profit determinants of banks in Philippi reveals that the proportion of loan loss provisions to total loans was statistically significant. As the amount of loan loss provisions indicates the level of credit risk, the results claims that Philippines banks with higher credit risk tend to exhibit lower profitability levels. Also study conducted by Vong et al (2009) indicated that the asset quality, as measured by the loan-loss provisions, negatively impacts on the performance of banks in Macao.

Loan to total assets (LTA), Vong et al (2009) findings revealed that instead of positively affecting profitability, it rather decrease profitability and according to these authors, this result was in confirmation with the initial finding of Vong (2005). According to them the reason is that it is due to inflexible competition in the credit market and interbank placement of idle funds in foreign countries. Their finding was also in line with the citation they made on the observations of Bashir and Hassan (2003) and Staikouras and Wood (2003) which reveals that a higher loan ratio actually impacts negatively on profits because banks that depend more on non-loan earning assets are more profitable than those that rely heavily on loans. On the other the investigation of Husni (2011) reveals that interest margin on loans provided by the banks in Jordan is a significant driver of profitability and poses a positive relationship with profitability.

To measure the quality of loans on the banks' balance sheet Rasiah (2010) suggested the use of non-performing loans as an indicator of the loans quality. And. Vong et al (2009) used the amount of loan-loss provision to total loans (PRTO) as proxy to non-performing loans. In addition, in order to incorporate loans and advances (interest income) as a variable in the profit determinants model, Anna P. I. Vong et al (2009) used loans as a percentage of total assets (LOTA) as variable in the model. LOTA is measured by total loans divided by total asset.

2.1.6.3 Deposits

Banks are said to be heavily dependent on the funds mainly provided by the public as deposits to finance the loans being offered to the customers. There is a general notion that deposits are the cheapest sources of funds for banks and so to this extent deposits have positive impact on banks profitability if the demand for bank loans is very high. That is, the more deposits commercial bank is able accumulate the greater is its capacity to offer more loans and make profits; Devinaga

Rasiah (2010). However, one should be aware that if banks loans are not high in demand, having more deposits could decrease earnings and may result in low profit for the banks. This is because deposits like Fixed, Time or Term deposits attract high interest from the banks to the depositors (Devinaga Rasiah, 2010).

2.1.6.4 Capital ratio

Devinaga Rasiah (2010) and P. I. Vong et al (2009) included capital ratio (EQTA or CTRA) as a variable in their study of determinants of banks profitability and performance because capital also serve as a source of funds along with deposits and borrowings. They argue that capital structure which includes shareholders' funds, reserves and retained profit affect the profitability of commercial banks because of its effect on leverage and risk. They documented that, commercial banks assets could be also financed by either capital or debt. But debt financing could be very risky as compared to capital financing with regards to credits and liquidity risks with which commercial banks are expose to. This is because for instance, if a commercial bank experience lost of profit as result of credit default or liquidity problem the bank still has the obligation to services its debt, on the other hand a commercial bank with enough capital is able take higher risk and also absorb shocks which emanate from liquidity and credits risks. Sufian F. et al (2008) argued that banks in developing countries needs a strong capital structure, because it provides them strength to withstand financial crises and offers depositors a better safety net in times of bankruptcy and distress macroeconomic conditions. And according to Molyneux (1992) banks with high level of equity can reduce their cost of capital and that could impact positively on profitability. In addition, Both Basel II and III accord admits that most frequent bank insolvencies are mostly coursed by credit losses and for this reason it is prudent for commercial banks to have higher quality of capital in order to be able to absorb more loss hence to better withstand stress periods; (Basel Committee's response to the Financial Crises 2010). Berger (1995) also asserted that lower level of capital put the banks into risky position and impact negatively the bank's profitability; Berger (1995).

2.1.6.5 Liquidity ratio

According to Devinaga Rasiah (2010) commercial banks are required by regulators to hold a certain level of liquidity assets. And the reason behind this regulation is to make sure that the commercial banks always possess enough liquidity in order to be able to deal with bank runs. He further argue that a bank assume the status of highly liquid only if it has been able to accumulate enough cash and have in possession other liquid assets as well as having the ability to raise funds quickly from other sources to be able to meet its payment obligation and other financial commitments on time. He claims that for instance, in a situation where a commercial bank is faced with the problem of bank run, the bank may encounter liquidity problem. In such a situation the bank might be compelled to raise additional liquid funds by borrowings or selling off some of their liquid assets and it is well known that short-term borrowings are usually costive. In addition, the situation where by the bank rush to sell off the liquid assets creates an impression in the minds of investors that the bank is trying to dispose of bad assets and for this reason these liquid assets normally attracts lower prices from investors and as a result there could be loss of income from the sale of liquid assets. These two issues tend to have an adverse effect on commercial banks profitability (Bentum W.,2012).

2.1.6.6 Non-interest income

Non-interest income represents other sources besides earrings from loans of the commercial banks. This type of sources of income may include fees earned from offering unit trust services, service charge on deposit account, standard fees and charges for other bank services. Devinaga Rasiah (2010) stated that the traditional commercial bank business with regards to financial intermediation has gradually been change towards the provision of other financial services as result of on-going financial globalization and liberalization and because of that commercial banks are able to increase their income and profit. This seems to be supported by the empirical findings of Karkrah and Ameyaw (2010) which revealed that non-interest income is an important driver of commercial banks profitability in Ghana and there is a positive relationship existing between non-interest income and profitability in the Ghanaian banking sector. However P. I. Vong et al (2009) cited in their study that the findings of Gischer and Juttner (2001) prove that

non-interest income generating services impact negatively on commercial banks' profitability. According to them, Gischer and Juttner (2001) claim that the negative relationship exhibited by their observation is attributed to the fact that the non-income generating services are more prone to intense competition than the traditional income activities of the banks.

2.1.6.7 Size

Size can account for economies and diseconomies of scale in the banking marketplace. Theory states that larger banks may be able to generate higher profits through more transactions, greater marketing power, and implicit regulatory, too big to fail, protection. However, once a bank grows beyond a certain threshold, financial organizations may become too complex to manage and diseconomies of scale could arise.

Empirical evidence is mixed. Both Staikouras and Wood (2003) and Goddard et al. (2004) find a positive significant relationship between size and profitability. However, some studies, (Kosak and Cok 2008, Pasiouras and Kosmidou 2007, and Dietrich and Wanzenried, 2011), find a negative significant relationship between size and profitability, while other studies find that this relationship is statistically insignificant (Ommeren, 2011, Athanasoglou et al 2008, and Curak et al. 2012). The majority of the 2011, Athanasoglou et al 2008, and Curak et al. 2012). The majority of the studies, Ommeren (2011), Goddard et al. (2004), and Athanasoglou et al. (2008).

2.1.7 External Determinants of Commercial Banks Profitability

External factors are said to be the factors that are beyond the control of the management of commercial banks. The external determinants of commercial banks profitability are indirect factors, which are uncontrollable, but have an enormous impact on bank's profitability. According to Karkrah and Ameyaw (2010) macroeconomic variables has been a major components of the external profit determinants in most studies. The most external factors that have been presented in most studies includes competition/market share/firm size, inflation, GDP growth, and interest rate; Haron,Sudin (2004).

2.1.7.1 RGDP

According to P. I. Vong et al (2009) the economic growth, which is measured by the real GDP growth rate (RGDP), was expected to affect banking profitability positively by its inclusion in the profit determinants model. And according to the author there is a perception that loan defaults are normally lower in times of favorable economic growth and vice versa. Besides, higher economic growth may lead to a greater demand for loans which will result in both interest and non-interest incomes hence increase in the profits of commercial banks. However, empirical studies have revealed a mixed effect on the relationship between economic growth rate and banks profitability.

As some studies support the general expectation of positive relation between these two variables others too exhibits a contradictory findings in terms of negative or insignificant relation between the two. Karkrah and Ameyaw (2010) cited that study done by Sufian et al. (2008) on the relationship between macroeconomic and return on assets (ROA) regarding Philippian banks revealed a positive relationship between GDP and banks profitability. According the authors this result was in line with the findings of Kosmidou and Staikouras et al. (2008).

Furthermore, The results of the research done by Fotios Pasiouras and Kyriaki Kosmidou (2007) on factors influencing the profitability of domestic and foreign commercial banks in the European Union shows a positive correlation between GDP growth rate and banks profitability and to the Authors the findings was in consistent with the results of Kosmidou et al. (2005), Kosmidou (2006) and Hassan and Bashir (2003) among others, which is in support to the argument of positive association between economic growth and financial sector performance.

2.1.7.2 Interest rate

Interest rate have been captured in most studies as profitability determinant of commercial banks because net interest income which results from the deference between interest income and interest expenses has enormous impact on banks profitability. Most research papers on banks' profit determinants present the interest rate as external variable because changes in interest rates is mostly cause by government economic policies and supply and demand market conditions.

Moreover, the impact of interest rate changes on the commercial banks profitability depend on the extent and speed at which the change have on short and long term period of banks portfolio. And also the speed and flexibility with which the bank can amend its revenue sources and cost of funds to match up to the change. In addition, it is also about the proportionality of the bank's assets and liabilities that are long period rather than short period. Commercial banks normally modify the rate of return on their assets to offset any differences caused by interest rates fluctuations resulting from economic policies. This is because most of the commercial banks assets for instance short term loans have short maturity and the rates on short term loans are normally flexible and because of that it easy for banks to change the rate of return to suit the changes with the interest rate. Devinaga Rasiah (2010) further stated that the interest rate fluctuations does affect the long term maturity assets of the commercial banks as well hence profitability with a view that whenever the general market interest rates falls the market value of longer assets with fixed contractual terms will increase. In this case the banks can sell some of these assets at a higher price and the short period these sales would increase the bank's profitability Rasiah.D (2010).

2.1.7.3 Inflation rate

Revell (1979) indicated that inflation is one of the factors which may cause variations in commercial banks profitability. Devinaga Rasiah (2010) in his study asserted that central banks in their capacity to control inflation increase the cost of borrowing and reduce the credit creating capacity thus the funds being given to the commercial banks as loans. As result of this the cost of borrowing becomes higher and the banks becomes more stringent in their lending policies which will subsequently lead to lower demand for funds and a fall in the volume of spending. Obviously the advent of such situation may adversely affect the profitability of the commercial banks because banks earn their revenue mostly from the loans they give to the customer so if the demand of loans falls as a result of the higher cost of borrowing then definitely earnings as well will fall hence the profit. Inflation impact negatively on commercial banks profitability by decreasing the real value of bank's assets as compared to their liabilities. This is because commercial banks nominal assets might be larger than their nominal liability due to their nature of being net monetary creditors and because of this in times of high inflation the value of the

nominal assets would decrease more relative to the increase in the value of nominal liability. Some empirical evidence seems to support this notion that inflation impact negatively on the profitability of commercial banks. This has been confirmed by the observation of Husni (2011) which revealed a significant and negative relationship between the ROA of Jordanian commercial banks and inflation rate. This finding is in line with the result of Sufian et al. (2008) investigation on profits determinants of commercial banks Philippi (Bentum W.2012).

2.1.8 Commercial Bank Profit Measurements

The profitability variable is represented by two alternative measures: the ratio of profits to assets, i.e. the return on assets (ROA) and the profits to equity ratio, i.e. the return on equity (ROE). In principle, ROA reflects the ability of a bank's management to generate profits from the bank's assets, although it may be biased due to off-balance-sheet activities. ROE indicates the return to shareholders on their equity and equals ROA times the total assets-to-equity ratio. The latter is often referred to as the bank's equity multiplier, which measures financial leverage. Banks with lower leverage (higher equity) will generally report higher ROA, but lower ROE. Since an analysis of ROE disregards the greater risks associated with high leverage and financial leverage is often determined by regulation, ROA emerges as the key ratio for the evaluation of bank profitability (IMF, 2002).

Return on asset (ROA): it is the net profit after taxes per dollar of assets, (ROA= net profit /total asset). The return on assets provides information on how efficiently a bank is being run, because it indicates how much profits are generated on average by each dollar of assets.

Return on equity (ROE): is the net profit after taxes per dollar of equity (bank capital) (ROE= net profit/equity capital). It shows how much the bank is earning on owners' equity investment.

Net interest margin (NIM): is the difference between interest income and interest expenses as percentage of total assets (NIM =(interest income –interest expense) / total asset).

2.2 Empirical Literature Review

This section reviews the research conducted on internal and external determinants of bank profitability of developed countries, developing countries, home country Ethiopia and internal determinants of bank profitability respectively.

2.2.1 Sample Empirical Evidence From Developed Countries

A study conducted by Kyriaki Kosmidou, Sailesh Tanna, Fotios Pasiourason Determinants of profitability of domestic UK commercial banks: Panel evidence from the period 1995-2002 by grouping the determinants in to two as: internal determinants (expenses management, capital strength, liquidity, asset quality and size) and external determinants. The external determinants were also sub divided in to financial structure (relative development of the banking industry and the stock market using stock market capitalization divided by total assets of deposit money banks (MACPASS) and banking industry concentration (CONC)) and   macroeconomic variables(GDP and inflation) . They measured profitability in terms of   net interest margin (NIM) and return on average asset (ROAA)) in the UK commercial banking industry over the period 1995-2002. They Revealed that the ratio cost to income (expense management) is negative and statistically significant to both profitability measure, Liquidity is negatively related to NIM but positively related to ROAA. The impact of loan loss reserves has a positive impact on NIM and ROAA, Capital strength (the ratio of equity to asset) was positively related to banks profit, negative relation is observed between bank size and profitability of bank, the macroeconomic variables, they observed   both inflation and GDP have a positive and significant impact on performance. Finally, the variables used as proxies of the relative development of the banking industry and the stock market are both positive and statistically significant to performance, irrelevant of the measure that they used as an independent variable

A research done by Guven Sevil (2008) on the   determinants of Turkish banking sector profitability considered, bank's net interest margin and profitability in the Turkish banking sector for the period 2001-2006 by using panel data approach; he took that personnel Number, non-interest income, interest expenditure, operational expenditure, banks size, default loans, personal expenditure, personnel number, liquid assets, loans, equity and interest expenditure   as

determents of banks profitability. The result of his study indicated that personnel number, non-interest income, and interest expenditure have positive effect on profitability; While operational expenditure, banks size and default loans have negative effect on profitability; Personal expenditure, personnel number, liquid assets, loans, equity, interest expenditure have positive effect on the net interest margin; non-interest income has negative effect on the net interest margin.

2.2.2 Empirical Evidences from developing countries

The study by Guru B. J. Staunton and Balashanmugam(2002), On the determinants of commercial banks profitability in Malaysia over the periods 1986-1995. The profitability determinants were divided in two main categories, namely the internal determinants (liquidity, capital adequacy and expenses management) and the external determinants (ownership, firm size and external economic conditions). The findings of their study revealed that efficient expenses management was one of the most significant in explaining high bank profitability. Among the macro indicators, high interest ratio was associated with low bank profitability and inflation was found to have a positive effect on bank performance.

The research by Samy Ben Naceur (2003) on the determinant of Tunisian banking industry profitability investigated the impact of bank's characteristics, financial structure and macroeconomic indicators on bank's net interest margins and profitability in the Tunisian banking industry for the 1980-2000 period. He considered internal determinants (overhead to total asset (overhead), equity capital to total asset (CAP), banks loan to total asset (BLOAN), non-interest bearing asset to total asset (NIBA) and log of bank size asset (LNSIZE)), external determinants (inflation and growth) and financial structure (concentration, competition and stock market development). His results revealed that, positive interest margin and profitability is associated with banks that hold a relatively high amount of capital to total asset, with large overheads and bank loan to total asset. The size has mostly negative and significant coefficients on the net interest margins: the macro-economic indicators such as inflation and growth rates have no impact on bank's interest margins and profitability; under financial structure and its impact on bank's interest margin and profitability, he found that Concentration, & competition

have negative effect on bank profitability and Stock market development has a positive effect on bank profitability.

A study conducted by Vincent Okoth Ongore (2013) on Determinants of Financial Performance of Commercial Banks in Kenya investigated by dividing determinants of profitability into two categories namely internal determinants (Capital Adequacy, Asset Quality, Management Efficiency, Earning ability and Liquidity) and external determinants (GDP & inflation). He measured profitability of bank by return on asset (ROA), return on equity(ROE) and net interest margin(NIM). Taking ten years panel data for 37 commercial banks was analyzed using linear multiple regression model. His founding s were capital ratio and management efficiency has positive effect on banks performance, asset quality has negative effect on banks profit ,liquidity management has no effect , external variables, GDP has weak positive effect and inflation has also weak negative impact on profitability.

The study by Dr. Srinivas Madishett, Kamugisha Alfred Rwechungura (2013) on determinants of bank profitability on developing economy empirical evidence from Tanzania. He investigated the key determinants which influence bank's profitability by categorizing in to two, namely ; internal determinants(Liquidity risk, operating efficiency, credit risk, business mix, bank assets and capital adequacy) and external determinants (were annual Gross Domestic Product growth rate and annual inflation rate). They used seven years annual report data for the period from 2006-2012 and analyzed using SPSS software. Their findings revealed that banks' internal determinants especially capital adequacy, operating efficiency, liquidity risk, affect bank profitability positively and credit risk and bank size influence banks' profitability negatively and all banks' external determinants (annual Gross Domestic Product growth rate and annual inflation rate) do not influence the performance of Tanzanian Commercial banks since their relationship with banks' performance were not statistically significant.

The study by Tomola Marshal Obamuyi (2013) on determinant of bank's profitability on developing economy evidence from Nigeria investigated the determinants by categorizing into two as bank specific variables (bank capital, size and expense management) and macroeconomic variables (interest rate and GDP as proxy for business cycle). He conducted his study, using a

panel data (comprising cross sectional and time-series data) of 20 banks in Nigeria between 2006 and 2012. The results indicated that improved tank capital and interest income, as well as efficient management of banks' expenses and favorable economic condition contributes to higher banks' performance and Growth in Nigeria.

2.2.3 Empirical Evidence from Ethiopia

The study conducted by Belayneh Hailegeorgis on determinants of commercial banks profitability ;empirical study on Ethiopian commercial banks (2011) studied the impact of bank-specific (number of bank branch, efficiency and productivity, bank age, management quality ,market share, expense management ,fee based service ,credit risk , deposit fund , bank size, capital and asset composition), industry specific(ownership, regulation and market concentration) and macroeconomic determinants (economic growth ,interest rate and inflation) of Ethiopian commercial banks profitability. he considered panel data of seven Ethiopian commercial banks that covers the period 2001- 2010 and used ordinary least square method for investigating   the impact of capital, size, loan, deposits, noninterest income, noninterest expense, credit risk, market concentration, economic growth, inflation and saving interest rate on major profitability indicator i.e., return on asset (ROA). The estimation results showed that all bank-specific determinants, with the exception of saving deposit and non-interest expense have positive significant effect on commercial banks profitability in Ethiopia. While Market concentration has negative significant effect on banking sector profitability in Ethiopia. With regard to macroeconomic variables, only economic growth exhibits a significant relationship with Banks' profitability.

The study by Tamiru Belete (2010) on eight commercial banks over the periods 2005-2010 examined the effect of asset liability management (ALM) on commercial banks profitability in the Ethiopian financial market. And he measured profitability by ROA as a function of balance sheet (deposit in bank other investment and debit balance, loan and advance, fixed asset, demand deposit, saving and fixed deposit, other liability and credit balance) and macroeconomic explanatory variables(real growth rate of GDP and inflation). He used ordinary least square (OLS) for the pooled data. His study result indicated that deposit in bank, other investment and

debit balance, loan and advance affect profitability positively. Demand deposit saving and fixed deposit, other liability and credit balance and real GDP affect profitability negatively. In addition, inflation affect negatively but insignificant.

The study by Birhanu Tsehay Amare (2012) on determinants of commercial bank profitability for periods 2000-2011 on commercial bank of Ethiopia. He considered the bank specific (capital adequacy (CA), credit risk (CR), liquidity risk (LR), loan and advance to total ratio (LOATR), deposit liability (DTR), expense management (EXM), efficiency and productivity (EP), bank size (BSIZ), non-interest income (NII)), industry specific (market concentration, macroeconomic (GDP and interest rate) determinants as major impacts of Commercial Banks Profitability in terms of ROA and NIM. He used OLS estimation method for his analysis. His results in sighted, bank size, expense management and credit risk 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 affect only on interest margin.

The study by Habtamu Nigussie (2012) on the determinants of banks profitability for period 2002-2011 on private commercial banks of Ethiopia; considered internal determinants (capital adequacy, asset quality, managerial efficiency, liquidly and bank size) and external determinants(GDP, and regulation). The research used panel secondary data across seven private banks and analyzed in quantitative approach using multiple linear regressions model. It considered ROA, ROE and NIM as measurements of banks profit. The empirical results showed that bank specific factors; capital adequacy, managerial efficiency, bank size affect bank profit profitability and macro-economic factors; level of GDP, liquidity has negative impact on profitability and regulation have a strong positive influence on the profitability of private commercial banks in Ethiopia

A research made by Tibebu Tefera (2011) on Credit risk Management and Profitability of Commercial banks in Ethiopia revealed empirical result on the impact level of credit risk management towards the profitability of commercial banks (commercial bank of Ethiopia ,nib

international bank , dashed bank ,awash international bank ,banks of Abyssinia, Wegagen bank and united bank) in Ethiopia from year 2001-2010. Using multiple regression models, by taking 10 years dependent variable (return on equity (roe)) and independent variable(non-performing loan(NPL), capital asset ratio (CAR)). He found that both nonperforming loan ratio and capital adequacy ratio has a negative impact on profitability's of commercial banks in Ethiopia. In addition he distributed questionnaires to the authorized bodies in the risk management position of each banks and found that credit risk management of commercial bank of Ethiopia is poor.

2.2.4 Empirical Evidence on Internal Determinants of Bank Profitability

The study by SairaJavaid, Jamil Anwar, Khalid Zaman and Abdul Ghafoor (2011) on determinants of bank's profitability on Pakistan ;internal factor analysis by considering ordinary least square method to investigate the impact of internal variables(asset(lag(asset)) ,loan(total loan to total asset), equity(total equity to total asset) and deposit(total deposit to total asset)) on profitability indicator ROA by taking ten top banks from year 2004-2008. The size of the bank has significant negative effect on profitability, total equity to total asset, total deposit to total asset has positive significant effect on profitability and total liability to total asset has insignificant positive effect on profitability.

A study conducted by Eliona Gremi (2013), PhD Candidate on Internal Factors Affecting Albanian Banking Profitability taking ROA as profitability measure and internal determinants(bank size, bank loan(TL/TA), credit risk(NPL/TL), bank deposit (TD/TA), net interest(TNI/TA) from the year 2005 to 2012 for 12 commercial banks in Albania organize by 95 observations. He used regression analysis and found bank size, bank liability, bank deposit, net interest effect on banks profitability and credit risk has negative has positive impact on profitability.

A study conducted by Abdelkarim ALMUMANI (2013) on impact of managerial factors on commercial bank profitability ; empirical evidence from Jordan considered cost efficiency(cost/income), liquidity(liquid asset/consumer loan), credit composition(net credit/total asset), capital adequacy(total equity/total asset), size of bank(log total asset) internal variable to determinant profitability measured interns of ROA. He investigated his determinant on thirteen

Jordanian commercial banks from year 2005-2011 using regression analysis and revealed that cost efficiency, liquidity, capital adequacy, and bank size affected profitability negatively while credit composition has negative impact.

A research conducted by Fatemehnahang, Maryam KhaliliAraghi (2013) on internal factor affecting the profitability of city bank in Iran during years 2012-2009 considering internal determinant (deposit amount, the payment facilities, credit risk management, cost management and the amount of liquidity) and ROA as measure of profitability. His research revealed that amount of bank deposit, amount of loan paid, credit risk management, cost management and liquidity affected profitability.

So far studies done on different countries are explained. There were different results obtained on same variable on same country and different country on   bank profitability by taking external and internal factors. The studies done on Ethiopia considered both internal and external factors. On external factor some studies revealed positive result, while another studies revealed either negative or no impact on banks profitability. But, there are studies done outside of Ethiopia on only internal or bank specific determinants have been conducted and amazingly contradicting results has been explained on the literature review section . External factors are not controlled by bank managers , but the managers act according to external factor prevailing .The researcher is highly interested to investigate how the managers of commercial banks in Ethiopia are doing to increase the bank performance using bank policy and their decision.

 In order to investigate the factors which affect the profitability of Ethiopian commercial banks, the researcher conducting this study by using quantitative research approach by collecting ten year secondary data, and time span and by including sufficient numbers of variables. This makes complete difference from the previous researches, because they used limited observation.

CHAPTER THREE

3. RESEARCH DESIGN & METHOLOGY

The research was conducted on the bank specific (internal) and macroeconomic (external) determinants of profitability of Commercial Banks in Ethiopia, by collecting 10 years secondary data (2004-2013) from the selected commercial banks in Ethiopia. The researcher has used the bank's annual reports of the financial statements and analyzed the data both qualitatively and quantitatively. In qualitative analysis the researcher used the known theoretical and empirical evidence then compared the findings with the expected standards. For quantitative analysis the researcher used ROA as dependent variable and the bank specific determinants as the explanatory variables and macroeconomic determinants. The determinants (explanatory variables) that were considered include asset size, loan ratio, liquidity ratio, bank deposits ratio, capital adequacy, income expenditure structures and non-interest income ratio, and non-performing loan ratio, noninterest expense ratio and macroeconomic determinants that were considered in the current study include: inflation rate, interest rate and GDP growth rate.

3.2 Sources & Type of Data

The secondary data were acquired from internal and external sources. The internal sources are the 10 years (2004 -2013) balance sheet and income statement data related to sample commercial bank s in Ethiopia. The 10 year (2004-2013) external sources data were collected from National Bank of Ethiopia (NBE) which regulates the banking sector of the country, Ministries of Finance and Economic Development (MOFD) which regulate the macroeconomic issues of the country and Central Statistics Authority Agency (CSAA) annual reports.

3.3 Data collection

The secondary data have been obtained from the annual financial reports of the respective commercial Banks in Ethiopia at certain parameter that are asset size, loan ratio, liquidity ratio, bank deposits ratio, capital adequacy, income expenditure structures and non-interest income ratio, noninterest expense ratio and non-performing loan ratio for the internal variables but

directly taken the external variables such as inflation rate, real interest rate and real GDP growth rate were obtained from the annual reports of NBE, MOFD and CSAA respectively .

3.4 Population, Sample Size and Sampling Technique

The population of the study is all banks that are currently operating in the country. As per the reports of National Bank of Ethiopia (NBE), Ministry of Finance and Economic Development (MOFD)**, and** Central Statistics Authority Agency (CSAA), currently there are about 19 banks operating in the country (16 private and 3 public) as shown in table 3.1 below. The bank specific variables of the study have been driven from the balance sheet and profit and loss statement of Eight Ethiopian commercial banks such as Commercial Bank of Ethiopia, Awash Bank, Dashen Bank, Bank of Abyssinia, Wegagen Bank, United Bank, Nib International Bank, and Construction and Business Bank. The above banks which are included in the study have been operating for the last 10 years excluding 2014, from the year 2004 up to 2013. In this regard, 10 years (2004-2013) financial statement of the selected banks have been used in the analysis and all the financial statements are consolidated on June 23 of each year. Commercial banks in Ethiopia broadens its service by providing electronic banking service which is internet as well as mobile banking. The electronic banking service makes life easier by reducing time to deposit and transfer money from one   account to another (nazrete.com)

Table 3.1 List of Public and Private Commercial
Banks in Ethiopia

| S.no | Commercial Banks | Branches | | | | In millions | | |
	Public Banks	Est. Year	A.A	Region	Total	% Share	Savings	Loan size	Asset size
1	Commercial Bank of Ethiopia	1963	269	670	939	51%	152,386	69,674.	197,150
2	Construction and Business Bank	1983	40	65	105	6%	4,097	1,878.71	6,699.50
	Private Banks								
1	Bank of Abyssinia S.C	1996	68	54	122	7%	8,496	4,608.59	10,160
2	Awash International Bank S.C	1194	92	100	192	10%	12,545	17,783	17,783
3	Wegagen Bank S.C	1997	51	65	116	6%	7,550	4,585	10,393
4	Dashen Bank S.C	2003	67	85	152	8%	15,851	8,663	18,949
5	United Bank S.C	1998	54	60	114	6%	9,402	4,996	11,876
6	NIB International Bank S.C	1999	65	40	105	6%	6,655	7,532	9,144

Source: National Bank of Ethiopia Annual report 2013/2004 (http:/ /www.nbe.gov. et

3.5 Variable Measurement

Research on the determinants of bank profitability made using Returns on Assets (ROA) as dependent variable and asset size, loan ratio, liquidity ratio, bank deposits ratio, capital adequacy, income expenditure structures and non-interest income ratio, noninterest expense ratio and non-performing loan ratio, interest rate, GDP and inflation as independent variables. ROA emerges as the key profitability measure for the evaluation of bank performance (IMF, 2002). Therefore, this study was conducted by considering return on asset as explained variable.

3.5.1 Dependent Variable

The dependent variable i.e. profitability of Commercial banks in Ethiopia can be measured in different ways. According to Miskhin (1998), there are two basic measures of profitability. These are ROA and ROE where

ROA = Net profit
              Total assets

And   ROE= Net profit
                    Equity capital

ROA provides information on how efficiently a bank is being run because it indicates how much profit it generates on average by each dollar of assets. However, what the banks` owners (equity holders) care about is how much the bank is earning on their equity investment. This is provided by the other measure of banks profitability, which is the return equity (ROE).

Miskhin (1998) also argued that there is a direct relationship between ROA (which measures how efficiently the bank is run) and the ROE which measures how well the owners of the equity are doing on their investments. This relationship is determined by the so-called equity multiplier (EM) which is the amount of assets per dollar of equity capital.

Thus, EM= Assets   ROE= ROA X EM
              Equity capital

Where   ROA= <u>Net profit</u>

            Total assts

For this study, ROA used the measure of profitability of Commercial Banks because it has been argued that ROA measures the profit earned per dollar of assets and reflect how well bank management use the banks real investment resources to generate profits (Naceur, 2003).

3.5.2 Independent Variables

The independent variables in this study included both internal determinant factors and external determinant factors such as internal determinant factors include asset size, loan ratio, liquidity ratio, bank deposits ratio, capital adequacy, income expenditure structures, non interest expense , non-interest income ratio and non-performing loan ratio and external determinant factors interest rate, real GDP and inflation.

3.6 Data Analysis

To make detailed investigation, both descriptive statistics and OLS regression using STATA 12 software was performed.

3.7 Model Specification

The researcher used the following model for identifying the determinants of commercial banks profitability in Ethiopia.

$$profit(p) = B0 + B1(AS) + B2(LIQ) + B3(BD) + B4(CA) + B5(IES) + B6(LNTA) + B7(NIR) + B8(NPL) + B9(NIETA) + B10(IFR) + B11(INR) + B12(GDPGR + U$$

Where,

Profit is measured in terms of return on asset (ROA)

        AS: asset size

        NIR: noninterest income to total income ratio

LIQ: liquidity ratio

BD: bank deposit ratio

CA: capital adequacy

IES: Income expenditure structure

LNTA: Loan to total Asset

NPL: Non performing loan

NIETA: Noninterest expense total asset

IFR= inflation rate

INR=Interest rate

GDPGR=GDP growth rate

3.8 **Definition of Variables and Hypotheses of the Study**

- **Return on asset (ROA)**: It is an indicator of bank profitability. It is calculated by dividing net income to total asset. ROA shows the profit earned per dollar of asset which reflects banks management ability to utilize the banks financial and real resource to generate profit (Miskhin 1998).

- **Capital adequacy** ; that measures the capacity of the banking sector to absorb any losses generated by risk occurrence of certain significant macroeconomic imbalances. capital adequacy is the ratio of total equity to total asset (CA =total equity/total asset), which shows what proportion of the total assets of the bank is financed by its shareholders. Regarding the relationship of this indicator with profitability, the results in the literature are mixed. According to the conventional risk-return hypothesis, a lower equity-to-asset ratio leads to a higher expected return. On the other side, a higher equity-to-asset ratio has a positive impact upon profitability because the bank's financing costs are reduced.

Subsequently, the expected sign of the equity-to-asset ratio is unpredictable. (Financial Management and Analysis of Projects, 2006).

- **Non-performing loan ratio (NPL)**: is a variable proxy for credit risk and, at the same time, one of the most representative indicators that measure the quality of the bank assets and implicitly the soundness of the credit portfolio. A higher level of the ratio of nonperforming loans to total loans and implicitly a deterioration of the credit portfolio quality has a positive effect upon bank profitability (Tomuleasa .I & Roman. A, 2011).

- **Deposits ratio (DR)**: is measured by the amount of deposits held by a bank to total assets (DR=total deposit/total asset). This rate reflects in what measure the deposits attracted by the bank contribute to financing its assets. The deposits are the main funding and cheap source for a bank, thus a Negative relation is expected between the deposit rates and bank profitability (Tomuleasa .I & Roman. A, 2011).

- **The ratio of loans to total assets (LA)**: is the ratio of total loan to total asset (LA=total loan / total asset). At a bank's level, the loans are assets with risk, and their large share in the bank assets means a growth of the bank's exposure to risks, especially the credit risk. Thus, a high value of the indicator could also mean a possible deterioration of the bank assets' quality with a negative effect upon profitability. On the other side, I consider the fact that the banking loans are the main income source for a bank, thus, a high level of this indicator is expected to have a positive impact up on profitability, since the bank registers a growth of interest income. The ratio of loans to total assets can be used as important variable for liquidity risk. If this rate is very high, the liquidity is reduced and it will increase the number of marginal borrowers that default (Tomuleasa .I & Roman. A, 2011).

- **Liquidity (L)**: to measure the liquidity we use as important variable the ratio of liquid assets to total assets (L=liquid asset /total asset). Generally, the banks that hold a reduced level of liquid assets are confronted with the risk of not being able to finance daily operations. On the other side, liquid assets generate lower return, so a Positive relationship to bank profitability is expected.

- **Non-interest income to total income ratio** (NIR): is none interest income /total income**)**; it measures the noninterest income collected by banks relative to total income earned by the bank. As the non-interest income increases, it affects banks profit positively is expected.

- **Bank size(BS)**: is measured in our study by the natural logarithm of the accounting value of the total assets of bank (BS=Ln(total asset)).Bank size (BS According to the literature, the relationship between the bank size and profitability is mixed (Sufian, 2009; Pasiouras and Kosmidou, 2007; Dietrich and Wanzenried, 2010). This is by the mere fact that as bank size increase profitability increases in its economies of scale beyond that bank size negatively affects profitability. Therefore the sign of bank size is unpredictable.

- **The management quality (MQ)**: is of major importance for the profitability and soundness of a bank. According to the literature, among the representative indicators of expressing the banking management quality, the non-interest expense over total assets ratio (NIEA) and cost to income ratio (CIR) are noticed. The first rate underlines the ability of the management to operate the daily activities of the banks at a lower cost. Thus, a reduced level of this indicator has a positive impact upon the bank's profitability. The second rate, cost to income ratio, (Expense to income ratio) reflects the capacity of the bank to cover its operating expenses from the income generated and is calculated as the operating costs over total income. Thus, I expect a negative relationship between cost to income ratio and bank profitability

Macroeconomic Determinants

- ❖ **Economic Growth (RGDPGR):** This is measured by the real GDP growth rate and it is hypothesized to affect banking profitability positively. This is because the default risk is lower in upturn than in downturn economy. In addition, higher economic growth may lead to a greater demand for both interest bearing and non-interest bearing financial services, thereby improving the profitability of banks.

❖ **Lending Interest Rate (RINT):** The real interest rate is expected to have a positive relationship with profitability in the essence of lend-long and borrow-short argument. That means banks may increase lending rates sooner by more percentage points than their deposit rates. On the other hand, the rise in real interest rates may increase the real debt burden on borrowers and this may lower asset quality, thereby interest rate may have a negative impact on profitability. (Vong and Hoi Si Chan, 2008).

❖ **Inflation (RINF):** High inflation rate is associated with higher costs as well as higher income. If a bank's income rises more rapidly than its costs, inflation is expected to exert a positive effect on profitability. On the other hand, a negative coefficient is expected when its costs increase faster than its income. (ALMUMANI A. 2013)

Table 3.2. List of variable and their Respective Characteristics

		Variables	Notation	Measurement	Expected Sign
Dependent variable		**Profitability**	**ROA**	Net income / total asset	NA
Independent Variables	Bank Specific Determinants (BSD)	Capital ratio	CA	Capital / Total Asset	+
		Liquidity ratio	LIQ	Liquid asset / total asset	+
		Nonperforming loan ratio	NPL	Nonperforming loan / total loan	+
		Noninterest income ratio	NIR	Noninterest income / total income	+
		Deposit ratio	DR	Total deposit / total asset	-
		No interest expense	NIETA	Noninterest expense / total asset	-
		Loan ratio	LOAN	Total loan / total asset	+
		Bank size	BS	Log of total asset	?
		Income expenditure structure	IES	Total expense / total income	-
	Macroeconomic Variables (MEV)	Economic growth	RDGP	Real GDP Growth	+
		Saving interest rate	INT	Real interest rate	+
		Inflation	INF	Inflation	?

CHAPER FOUR

4. RESULT AND DISCUSTION

4.1 Econometric Analysis

The empirical evidence on the determinants of Ethiopian commercial banks' profitability is studied based on balanced panel data, where all the variables are observed for each cross-section and each time period. The study has a time series segment spanning from the period 2004 up to 2013 and a cross section segment which considered Eight Ethiopian commercial banks such as Awash International Bank, Dashen Bank, Wegagen Bank, United Bank, NIB international Bank, Bank of Abyssinia, Commercial Bank of Ethiopia (CBE), Construction and Business Bank relationship between these commercial banks profitability (return on asset) and identified profitability determinants the following linear regression model is developed.

The equation that account for individual explanatory variable which are specified for this particular study is given as follow.

$$\pi = \beta0 + \beta1(CA) + \beta2 (LIQA) + \beta3(DRA) + \beta4(LNTA) + \beta5 (NPL) + \beta6(BS) + \beta7(NIETA) + \beta8(IES) + \beta9(NIR) + \beta10(INTR) + \beta11(RIFR) + \beta12(RGDP) + Uit.$$

The preceding analysis itself, it shall be performed the descriptive statistics procedures for the variable taken in to the study, with the purpose of correlation results for dependent and explanatory variables . describing the main feature of a data collection, using some common measures of central tendency, namely the mean and some measures of variability, which includes the standard deviation the diagnosis test for the regression models, the regression analysis for profitability measures return on asset the discussion of the results. secondly data analysis was done by using ordinary least squire (OLS) STATA 12 software.

After the delimitation of the sample, the researcher continue by studying the type of panel regression in this case noticing balanced panel. in what follows researcher have defined the mathematical model and after researcher proceeded to test for the type of effects applicable, namely fixed or random, for the purpose of using hausman test. The Hausman specification test examines if the individual effects are uncorrelated with other regressors in the model. If

individual effects are correlated with any other regressor, the random effect model violates a Gauss-Markov assumption and is no longer Best Linear Unbiased Estimate (BLUE). It is because individual effects are parts of the error term in a random effect model. Therefore, if the null hypothesis is rejected, a fixed effect model is favored over the random counterpart. In a fixed effect model, individual effects are parts of the intercept and the correlation between the intercept and regressors does not violate any Gauss-Markov assumption; a fixed effect model is still BLUE (Hun Myoung Park, 2011). The result of hausman test, showed that in the case Ethiopian commercial Banks are the most suitable fixed effect model.

Continuing, it had been tested the normality assumption with Ramsey reset test using power of the fitted value of ROA, the test of heteroskedasticity for fixed effects models was done by using whites test and for serial correlation were applied vce test has been used.

The analysis starts with the broad statistical description of both dependent and explanatory variable of the study and it provides description of each variable. The correlation among explanatory variable also discussed in the analysis. Finally, econometric estimated, the estimation is performed by the ordinary least squares (OLS) techniques.

Table 4.1 Descriptive Statistics of Variables

	Mean	Std. Dev.	Minimum	Maximum
ROA	0.0269977	0.0073876	0.00341	0.04021
CA	0.1083333	0.0325819	0.04201	0.192177
LIQA	0.3636299	0.1021677	0.158049	0.594066
DR	0.7300616	0.0968196	0.446907	0.871518
LNTA	0.4884571	0.1298387	0.224572	0.727676
NPL	0.0507612	0.046661	0	0.24372
BS	23.55775	4.020801	20.3287	37.5218
NIETA	0.0254116	0.008455	0.008718	0.058232
IES	0.6532384	0.2960901	0.294212	1.93402
NIR	0.5572805	0.163498	0.276596	1.34996
INTR	3.317193	1.609899	-1.00913	7.68705
RIFR	17.00721	11.05492	*2.8*	36.4
RGDP	12.7899	0.3023136	12.3035	13.2495

Source Stata12, Commercial Banks Financial statement

As stated in the table above, from the total 80 observation, the maximum value of return on asset is 0.04021 and the minimum return is .00341, the maximum profit commercial banks earned was 4 cents of net income from a single birr of investment and the minimum profit earned is .034 cents. That means, the most profitable bank of the sample banks earned 4.21 cents of net income from a single birr of asset investment. the mean of ROA equals 2.7 with a minimum of 0.34 cents on each birr of asset investment and also most the remaining banks from the sample earned an average of 2.7 cents from each birr investment by the bank.

Of the total asset invested by commercial banks the minimum and maximum raised by owner as equity capital were .04201 and .1922 respectively which means of the total asset invested on the commercial banks capital takes the minimum portion of 4.2% and maximum portion 19.22%.

On average, CA equals 10.83 percent. this shows that, more of commercial banks form sample banks meets the minimum requirement of capital to risk weighted asset ratio set by NBE on Directive No. SBB/50/2011, under article 4. this indicate sound financial condition of Ethiopian commercial banks. A minimum 4 percent indicate that, form the sample banks one or two commercial banks in loss in the last 10 years.

Liquidity ratio .594066 which means the maximum liquid asset to meet the obligation is 59.4% of the total asset and minimum liquid asset is 15.8%. The minimum and the maximum value of deposits accepted by commercial banks are 44.69 and 87.15 cents respectively which means commercial banks is at least 44.69 cents liable for each birr deposited and at most 87.15 cents liable. Deposit to asset ratio, there is large variation indicted by the rage between 44.69 percent and 87.15 percent. The mean of deposit to asset ratio is 73 percent. This shows that, the large portion of the asset of most commercial banks composed of from customer deposit. This have a negative implication when large numbers of financial institution liability holders, depositors seek to withdraw their money at the same time.

Of the total asset the minimum loan able fund is 22.45% and the maximum loan able fund is 72.7%. The minimum and the maximum value of deposit accepted by commercial banks 22.45 and 72.76 percent respectively. This shows that, there is a very large variation in the total loan to total asset ratio indicated by the range between 22.46 percent and 72.7 percent. The mean of the total loan to total asset of the bank 48.8 percent is kept interims of loan. The maximum range the

minimum and value implies that the most efficient bank has a quite substantial loan compared to least efficient bank. Because , loan is the main source of interest income for Ethiopian commercial banks.

Nonperforming loan ratio has the average value of 5.76 percent and the standard deviations value of 4.67 percent. The minimum and maximum is Zero and 24.37 percent respectively. The mean value of nonperforming loan indicate that about 5.76 percent of total loan of commercial banks was comprises non performing loan. Thus commercial banks of Ethiopia have a good asset quality, because the result is not far from the average value (5.7 percent) of NPL their loan.

The minimum and maximum earned by investing on securities and other non interest income earning asset were .2765 and 1.3499 respectively which means, for 1 birr invested on non interest earning asset, commercial banks could earn a minimum of 27.67 cents and a maximum of 1.349 cents and on average it could make 55.7 cents per each birr invested. This indicate that, the mean of non interest income is 55.72 percent, most banks form the sample earn 55.72 cents as non interest income from one birr income. the maximum value of (134 percent) indicate some banks from the industry use noninterest income as the source of income rather than interest income. The minimum value 27.65 percent indicate the more banks in the industry still use interest income as the main source of income.

On the other hand, bank size which is measured by logarithm of total asset has the highest standard deviation (4.021) that means it is the most deviated variable from its mean as compared to others. The maximum and the minimum value of bank size are 37.52 percent and 20.32 percent respectively.

Furthermore, income expenditure structure has the mean value of 29.42 percent and the maximum range of 193.4 percent. which shows the lowest variability. The standard deviation value of 29.6 percent . which is the lowest variability as compared to other explanatory variables. The mean value indicted Ethiopian commercial banks are efficient because their operating expense per unit of operating return is low, which means for 29.42 cents operating expense there is one birr operating income.   The smallest standard deviation is reported in saving interest rate (1.61) and return on asset (0.0073876) variables.

Table 4.2 Correlation matrix among explanatory variables

	CA	LIQA	DR	LNTA	NPL	BS	NIE	IES	NIR	INTR	RIFR	RGDP
CA	1.0000											
LIQA	-0.4228	1.0000										
DR	0.4365	-0.6958	1.0000									
LNTA	-0.4358	0.6567	-0.7001	-1.0000								
NPL	0.3020	-0.3382	0.2405	-0.0025	1.0000							
BS	-0.2423	0.3420	-0.3825	0.2547	-0.3104	1.0000						
NIETA	0.0861	-0.1818	0.4090	-0.3889	0.0010	-0.1971	1.0000					
IES	0.1260	-0.3428	0.3640	-0.4413	-0.2884	0.1192	-0.1321	1.0000				
NIR	0.0566	-0.3063	0.2194	-0.0405	-0.0006	0.0298	0.0277	0.1740	1.0000			
INTR	-0.0665	-0.3343	0.2304	-0.3864	0.1752	-0.0629	-0.1112	0.2764	0.2392	1.0000		
RIFR	0.0343	-0.1021	0.1288	-0.0359	-0.0607	-0.0278	0.0750	0.0834	0.1515	-0.1775	1.0000	
RGDP	-0.2546	0.3512	-0.3561	0.6303-	0.3847	-0.2590	-0.1287	-0.5550	-0.2132	-0.2162	-0.2856	1.0000
CONS	0.2237	-0.3482	0.2872	-0.6442	-0.4110	0.2062	0.0945	0.5239	0.1367	0.2112	0.2577	-0.9867

Source: SATA 12 output from Commercial banks financial statements

Correlation is a single number that describes the degree of relationship between two variables. The correlation value rangres -1<=cr<=1. If its value is closer to 1 and positive, it means that the two variables are strongly positively related. Correlation. = -1 and value closer to -1 implies the two variables are strongly negatively related. If correlation = 0 and closer to zero the two variables are unrelated. Otherwise there is week association between variables. As indicated in the above correlation matrix, liquidity has strong Negative relationship with Deposit and positive relationship with Loan to total Asset for the past 10 years. And Deposit has strong

negative relationship with loan to total asset ratio. Loan to total asset also revealed that a strong relationship with real GDP growth.

Correlations that have occurred among explanatory variables are most weak, positive and negative correlations. During the last 10 years the size of all banks (ln of total asset) which are included in this study shows improvement. Increase in the size of the bank shows a higher negative correlation with Liquidity to deposit ratio (-0.70), deposit to loan (-.70) and higher positive correlation with liquidity to loan (.66) and loan to real GDP growth (.63)

Multicolliniarity test: detects interdependence among explanatory variable. It is tested using VIF (variance inflation factor). By rule of thumb VIF>10 implies multicolliniarty is a series problem .That is, there is interdependence among explanatory variable (one explanatory variable is a function of others). If VIF value is < 10 multicliniarty is not a problem implies there is no interdependence among explanatory variables. Table 4.3 below shows the multicolliniarity test result. Since all the VIF values are less than 10 then, the data used has no multicolliniarty problem.

Table 4.3 Muliticolliniarity

Variables	VIF	1/VIF	Variables	VIF	1/VIF
LNTA	6.08	0.164519	INTR	2.03	0.493674
RDGP	4.24	0.235674	CA	1.91	0.524669
DR	3.25	0.307531	BS	1.87	0.536136
LIQA	3.09	0.0323308	NIETA	1.84	0.544234
NPL	2.46	0.40645	NIR	1.52	0.659966
IES	2.04	0.489476	RIFR	1.36	0.733739
Mean VIF/	2.64	Source Stata	12		

Hetroskedasitic; means the variance of error term is not constant. The test; shows weather the variance of the error term is constant or not. If it is constant, it becomes

homoscedastic (constant ant variance) and can be used for the OLS estimation if not it can't be used. It can be standardized by regressing the dependent and independent variables by white test. The model is standardized by imtest.

- Ramsey test detects weather the model specified omits important variables or not and presence of specification problem. If the probability is greater than 0.05 , it is failed to reject the hypothesis that important variable is omitted from the model and has no specification problem. If not important variables are omitted and the model will have specification problem.

Ramsey RESET test using powers of the fitted values of ROA

Ho: model has no omitted variables

$$F(3, 64) = \quad 2.00$$
$$Prob > F = \quad 0.1224$$

Since the ov test result shows the probability greater than .05 then, there is no omitted variable in the specified model and the model will not have specification problem.

Normality test

It tests the normal distribution of the residual terms. if the w of the test value is large and the p value greater than 0.05 the null hypothesis for normal distribution is accepted .data are normally distributed then the model will be unbiased. If not   the distribution is not normal and biased either due to unsymmetrical outliers or presence of outliers.

Unit root test; is used to detect weather the model is stationary or not. If stationary it can be used for forecasting. If not stationary, test for the residual term will be conducted. If the residual term is stationary the model can also be used for forecasting.

Decision rule: if the t value is less than the tabulated values the null hypothesis   that the function is stationary will be rejected and it becomes none stationary. If the t value is less than the

tabulated value at 1%, 5% and 10% level of significance stationary will be accepted then used for forecasting.

Table 4.4 Fixed Effect Regression Result of All Determining Variables

Variable	Coefficient	Std. Error	t-Statistic	P>|t|	[95% Conf. Interval]	
CA	0.0479944	0.0312836	1.53	0.13	-0.0145822	0.110571
LIQ	0.0120088	0.0110806	1.08	0.283	-0.0101558	0.0341734
DR	-0.0317521	0.0144004	-2.2	0.031	-0.0605571	-0.002947
LNT	0.0476679	0.0132823	3.59	0.001	0.0210993	0.0742365
NPL	0.0063855	0.0255911	0.25	0.804	-0.0448044	0.0575753
BS	-0.000123	0.0002019	-0.61	0.545	-0.0005268	0.0002809
NIET	-0.471107	0.0957092	-4.92	0.000	-0.662644	-0.27975
IES	-0.0056641	0.0038373	-1.48	0.145	-0.0133399	0.0020117
NIR	0.0074271	0.0062949	1.18	0.243	-0.0051646	0.0200188
INTR	0.0013014	0.0005262	2.47	0.016	0.0002489	0.002354
RIFR	-0.0000452	0.0000538	-0.84	0.404	-0.0001528	0.0000625
RGDP	0.019733	0.0039833	4.95	0.000	0.0117651	0.0277008
CONS	-0.224495	0.050729	4.42	0.000	-0.326056	-0.1229341

R-squared = 0.6561   **F-statistic 9.54**
Adjusted R- Squared 0.5790   **Prob(F-statistic) 0.0000**

The above table (table 4.4) which are summarized in the appendices shows the empirical results of the estimation of model 2 using fixed effect. As indicated in the table the two regression results (table 4.4) shows the highest explanatory power (R^2) of approximately 0.65 when both bank specific, and macroeconomic variables are included in the models. The R- squared result of 0.65 endorse that 65% of the variation in the dependent variable (return on asset) is explained

by the independent variables of the model. The remaining 35% of the variation in the dependent variable is left unexplained by explanatory variables of the study.

According to the model stata result of the study, there is no autocorrelation which occurred between the variables and their respective lagged value.

 The p values revealed that   Loan to total asset are individually significant to affect return on asset and they affected ROA Positively during the past 10 years. The coefficients of loan to

asset are .0476679 which mean that 1birr raised by bank owners to invest on commercial banks earned 4.77cents as a profit. And among a bank specific, deposit ratio, and non interest expense, significantly affect return on asset. From External or macroeconomic determinant interest expense and real GDP growth significant and positively affect commercial banks of Ethiopia in the past 10 years. But Liquidity , Capital , noninterest income and ,nonperforming loan affected ROA positively and are not individually significant to determine ROA and Bank size, Income expenditure structure and Inflation negatively affected return on asset and they are not individually significant for the past 10 years.

Table,4.5			Summary of Results			
S.no	**Bank Specific Variables**	**Measurement**	**Positive**	**Negative**	**Significant**	**Insignificant**
1	Capital ratio	Capital / Total Asset	√			√
2	Liquidity ratio	Liquid asset / total asset	√			√
3	NPL ratio	Nonperforming loan / total loan	√			√
4	Noninterest income ratio	Noninterest income / total income	√			√
5	Deposit ratio	Total deposit / total asset		√	√	
6	Noninterest expense	Noninterest expense / total asset		√	√	
7	Loan ratio	Total loan / total asset	√		√	
8	Bank size	Ln to total asset		√		√
9	Income expenditure structure	Total expense / total income		√		√
	Macroeconomic Variables					
1	Real Interest rate ratio	Saving interest rate	√		√	
2	RDGP	logarithm	√		√	
3	Real inflation rate	logarithm		√		√

Source from table 5 stata result

Capital adequacy (CA) : standard for banks especially for those that operate internationally is a major concern for bank regulatory worldwide . In this case the researcher can notice that capital adequacy has a positive impact on the profitability of bank of Abyssinia, Dashen bank, Wegagen bank, United bank, NIB international bank, Construction and Business Bank, Awash international bank, and Commercial Bank of Ethiopia , in line with the expectation and similar to

the results obtained by Belayneh (2011), Habtamu (2012), Athanasoglou et al. (2008), and Birhanu (2012).

Asset quality is represented in the researcher model by non performing loan ratio variable (NPL) , the ratio of nonperforming loan to total loan (NPL) is a variable proxy for credit risk and at the same time one of the most representative indictors that measure the quality of the bank asset and implicitly the soundness of the credit portfolio, which as it was expected, has a positive impact on banking profitability and does not have a statistically significant effect on in all banks. The positive relationship indicates that banks with high level of credit risk, will have high level of profitability in line with Dietricha and Wanzenried (2009).

Deposit to total Asset ratio (DR): the researcher can observe a negative and statistically significant in line with the expectation. However, the coefficient is negative and statistically significant for the banks of Awash International bank, NIB international bank, United Bank, Bank of Abyssinia, Wegagen Bank, Dashen Bank, Construction and Business Bank, Commercial Bank of Ethiopia Belayneh (2011).

The coefficient of the income expenditure structure, the efficiency measure, is statistically not significant and negative in all specifications, which meets the expectation. The more efficient a bank, the higher is its profitability. This result, which stands in line with the results of Athanasoglou et al. (2008), Income expenditure structure (IES) affects ROA negatively. In this study it affected negatively but it is not significant in determining in the past 10 years. expense to income ratio, reflects the capacity of the bank to cover its operating expenses from the income generated.

Loan to total asset (LNTA) : as the researcher tried to mention in the theoretical part of the study the impact of this variable on profitability is unpredictable, the result showed highly positive and statically significant coefficient Belayneh (2011). The more the deposit that are transformed in to loan the higher the profitability of banks due to interest rate on loan are much higher than interest expense on deposits. Interest income from loan and advance are the major source of revenue for commercial banks in Ethiopia.

Liquidity (LIQA): the coefficient for liquidity is positive in accordance with researcher expectation. This indicates that an increase in liquidity will lead to as increased in profitability

and the results obtained emphasize a significant relationship in the case of Ethiopian banks, long term the relationship between liquidity and profitability could be positive , suggesting that a low liquidity would lead to a lower profitability due to a higher need for loans, so a higher profitability would generate enough cash flow to support the expansion of its needs and of ends up compromising liquidity.

In case of non interest income to total asset (NIIR): the empirical results showed a statistically insignificant relationship and positive relationship with profitability in line with Sufian (2011). In addition to this, in the banking industry of Ethiopia as checked by (Belayneh, 2011) there is a positive relation between non-interest income and profitability.

Bank Size (BS): as the researcher tried to mention in the theoretical part of the study, the bank size impact on profitability is unpredictable, Empirical result showed that this variable is statistically insignificant. Most of the studies revealed positive result, but the coefficient indicates a negative relationship with profitability. Hence, there is inverse relationship between bank size and profitability, This is consistent with prior empirical evidence suggesting that the negative relationship could be that, as the banks are becoming extremely large, the bureaucratic procedures have negatively affected their performances (e.g. Berihanu, (2012), Athanasoglou et al., 2005 on Greece banks, Aburime, 2008 on Nigeria banks and Ngo, 2006 Australian bank).

Noninterest expense to total asset ratio (NIETA): the coefficient of the noninterest expense to total asset ratio effectiveness measure, is statistically highly significant and negative in all specification, which meet the expectation. the more efficient a banks, a higher is its profitability. This result, which stands in line with the result of Athanasoglou et al., (2008), clearly shows that efficient cost management is a prerequisite for improved profitability of Ethiopian banks.

The real GDP growth rate affects bank profitability positively, with the coefficients being significant at the 5% level. This result stands in line with the findings of Athanasoglou et al.(2008), obviously, there is a positive effect of more business opportunities induced by economic growth on banking profitability.

Inflation (RIFR): The relationship was found to be negative. This shows that inflation has a negative consequence on the performance of commercial banks in Ethiopia. The negative and insignificant relation between profitability and rate of inflation exist either because bank

managements may not be able to well anticipate the future rate of inflation or it may be happened unexpectedly. This inflation has insignificant negative relationship with financial performance of commercial banks in Ethiopia. this might be because bank management's ability to predict inflation accurately can positively affect the profitability of the bank as the bank can adjust interest rates in the desired direction in order to increase profit, where as failure to accurately predict inflation could raise costs due to imperfect adjustment of interest rates and thus adversely affect bank's profit. In line with Tamiru B. (2013), & Okoth Ongore (2013).

CHAPTER FIVE

5. CONCLUSION AND RECOMADATION

5.1, Conclusions

For ensuring a strong, solid and stable banking sector the evaluation and analysis of banks profitability is vital so that the possible weak points and vulnerabilities can be corrected and disposed. Therefore, my research aimed to assess the impact of major factors (bank-specific, and macroeconomic) on banks profitability, for a sample of 8 commercial banks that operate in the Ethiopia for the period 2004-2013.

The study was conducted investigates the effect of capital, size, liquidity, deposit to total asset , loan to total asset ,non performing loan ratio, non interest expense to total asset ratio, income expenditure structure, non interest income to total asset, real inflation rate, rdgp, and interest rate. these factor affecting banks profitability ware categorized as bank specific variable and macroeconomic variable.

Several source of theoretical and empirical ware used to support the relationship between profitability and each of its determinants. the econometric model of fixed effect regression was employed for the study , using panel data (comprising cross - sectional and time - series data).

As indicted in the table 5 of regression results, bank specific and macroeconomic determinant are able to explain a important part of banks profitability in Ethiopia 57.9% (R. square of 57.9%).

Higher total asset may not necessarily lead to higher profit the negative coefficient of bank size and not significant at the 5% percent level. indicates that this relation might be negative due to diseconomies of scale. i.e. possible bureaucratic battlement and managerial inefficiencies suffered by banks having too large size network.

Non-interest income of Ethiopian commercial banks is positive factors of profitability (table 5). Hence, the bank should strive to have strong investment position and high amount of fee based activities in order to be more profitable.

Nonperforming loan is as a measurement of credit quality, as i can see from the estimation results this variables does not have a statistically significant effect but positive relationship with on bank profitability.

This study a confirms a negative and highly significant relationship between total deposit to total asset, and none interest expense to total asset and profitability in Ethiopia commercial banking sector ROA models at 5% significance level. This implies that poor expenses management is among the main contributors of poor performance, therefore, efficient cost management is a prerequisite for improving profitability of domestic commercial banks in Ethiopia.

There is a negative relationship between the amount of bank deposits and profitability of commercial Banks. Because the correlation coefficient at the significance. Thus There is a strong significant negative correlation between the amount and deposits and bank profitability. According to negative relationship between the amount of deposits and commercial Banks profitability and since in this study, the ratio of total deposits to total assets have been used to measure this variable.

Regarding to Capital and Liquidity, the coefficient of capital and liquidity are positive, when the estimation is made by using bank specific and macroeconomic variables (table 5 and 6). Such result may indicate Ethiopian banks that increase their equity have a lower cost of capital and thus are more profitable.

On the macroeconomic variables, the most important factors are the GDP growth and real interest rate variable, which affects the bank profitability positively , as measured by ROA. Higher economic growth may lead to a greater demand for loans which will result in both interest and non-interest incomes hence increase in the profits of commercial banks. When real interest rates are higher, return on equity of banks rises. This implies that the profit of banks tend to increase with increasing rate of interest. And according to the regression result, the current real economic growth of the country makes commercial banks to be more profitable. Contrary real inflation rate negatively affect profitability and insignificant role in Ethiopian commercial banks.

Overall it is concluded that Total Assets, Equity/Total Assets, Deposits/Total Assets, and Loans/Total Assets, non interest expense/total asset, non performing loan/ total loan are the major internal determinants of profitability of banks in Ethiopia. Interest rate and real growth domestic product are also the most important external determinants of banks profitability.

5.2 Recommendation,

As a matter of policy implications, the researcher need to draw several proposals at the bank and nation levels:

- At the bank level, the improvement of the profitability of Ethiopian commercial banks need to be conducted by a reinforcement of the capitalization of banks through national regulation programs, by reducing the proportion of non-interest bearing assets to the benefit of bank loans.

- The number of banks is large, the collusion is more difficult to carry out. Large banks are more efficient than small banks, but it is less clear whether large banks benefit significantly from scale economies. Profitability is more likely to improve by emulate industry best practice in terms of technology and management structure than by increasing the size. The efficient-structure (ES) that banks with superior management or production technologies have lower costs and therefore higher profits.

- Management bodies of Ethiopian commercial banks should strive to strengthen the bank specific factors like deposit, and non interest expense. Well-organized management of banks' expenses, by reducing the cost of operations, improves the performance of the banks. The most important policy lesson to the banks is that reducing the cost of operations reduces the incidence of failure of the banks and hence strengthens the confidence of the shareholders and the public through improved financial performance of the banks.

- The management bodies of commercial banks in Ethiopia should give more emphasis to increasing on the volume of deposit. The more deposits commercial bank is able accumulate the greater is its capacity to offer more loans and make profits.

- Liquidity risk has positive relationship with profitability on commercial banks in Ethiopia. This implies the presence of less liquidity assets. So, banks those have less liquidity asset should have effective and efficient liquidity management system. If not, the cost of short term borrowing may affect profitability negatively for future.

- Further research can be extended to explore the above findings and to include some other internal factors and it could be fruitful to integrate specific characteristics about the management and board members, e.g., education, skill level, experience, independence, all of which are increasingly important factors to understand bank profitability.

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