St. Mary's University

DETERMINATS OF PRIVATE COMMERCIAL BANKS PROFIT IN ETHIOPIA

Robel Wagari Refu

SGS/0340/2007A

Advisor: Abebaw Kassie (Phd)

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Addis Ababa, Ethiopia

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School of Graduate Studies

This is to certify that the thesis prepared by Robel Wagari entitled: *Determinants of Private Commercial Banks Profit in Ethiopia* and submitted in partial fulfillment of the requirements for the degree of Degree of Master of General Business Administration complies with the regulations of the university and meets the accepted standards with respect to originality and quality.

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St. Mary's University

School of Graduate Studies

I declare that this thesis is my original work and that all sources of materials used for this thesis have been fully acknowledged. This thesis has been submitted in partial fulfillment of the requirements for the degree of masters of general business administration.

Name: Robel Wagari

Signature: _____

Place: St'Marry University

Date of submission May,2017

ABSTRACT

The purpose of this study is to examine profit determinants of private commercial banks in Ethiopia by using time series data of five private commercial banks from year 2005 to 2016. The study used quantitative research approach and secondary financial data are analyzed by using multiple linear regressions models for the two bank profitability measures; Return on Asset (ROA) and Return on Equity (ROE). Multiple linear regression model was applied to investigate the impact of national bank bill(measured as percentage of their profit), asset quality(measured by provision held for bad debts and loss), cost if branch expansion(measured by rent expense, yearly interest paid on deposit (measured by interest's expense) and advertising expense on major bank profitability measures i.e., (ROA), and (ROE) separately. The empirical results show that bank specific factors; asset quality, national bank bill, and interest expense have a strong influence on the profitability of private commercial banks in Ethiopia. Therefore, concerned bodies of private commercial banks should strive to strengthen the identified significant factors and government bodies should also see the adverse effect of tight polices imposed on the existing private banks as well as for the new entrants.

Keywords: Profit, Return on asset, Return on equity

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List of Acronyms

ADF :Augmented Dickey-Fuller test

AE: Advertising Expense

AIB: Awash International Bank

BAT :Banks Association of Turkey

BOA: Bank of Abyssinia

CBE: Commercial Bank of Ethiopia

CBRT :Central Bank of the Republic of Turkey

DB : Dubube Gloabal bank

DW: Durbin-Watson

EBR: Ethiopian business Review

ETB: Ethiopian birr

GDP : Gross domestic product

GLS: Generalized Least Squares

ISE : The Istanbul Stock Exchange

INF : Annual inflation

NBE National Bank of Ethiopia

NBEB: National bank bill

NIB: Nib international bank

NPL Non Performing Loans

NIM: Net interest margin

OLS: Ordianary least square method

 PDP :Public Disclosure Platform

RC: Rental Cost

ROA Return on Asset

ROE Return on Equity

UB: United Bank

WB: Wegagen Bank

YID: Yearly interest on deposit

CONTENTS

CHAPTER ONE: INTRODUCTION

1.1. Background of the study

The banking system is an important area for economic development in any country. Its practical importance is determined by the way in which payments and settlements are done in the national system. Not only that, also growth can be achieved if the savings are effectively channeled for investments. The impressive performance of the banking industry has boosted up the Ethiopian economy. 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 in modern economy, they play a pivotal role in contributing to a country's economic development (Rasidah and Mohd, 2011).

In the current situation banks in Ethiopia are growing both in number and capacity. There increment in number and capacity has a significant effect on the sustainability of the growing economy and vice versa. In the banking industry there exists an aggressive competition among peer groups (Access Capital Research, 2010).These competitions will lead to development of new factors that will have higher impact on the existing banks. Thus, the profitability of banks is determined by both internal and external factors that can be or cannot be controlled by the banks themselves. The more the banks have control over these factors the more chance they have to minimize the impact of these factors on their profitability.

There is general understanding that banks profitability is a function of internal and external factors. The internal determinants refers to the factors originate from bank accounts (balance sheets and/or profit and loss accounts) and therefore could be termed micro or bank specific determinants of profitability (Tobias and Themba 2011). The external determinants are variables that are not related to bank management but reflect the economic, social, political, cultural and legal environment that affects the operation and profitability of banks. The importance of banks is more manifested in developing countries because financial markets are underdeveloped. Therefore this paper tries to analyze what recent factors are contributing to deterioration or increment of banks profit.

1.2.   Statement of the problem

Profitability is an important criterion for assessing operational efficiency of banks in the changing financial environment. The access capital banking sector review for the 2010 fiscal year showed; the Ethiopian private commercial banking industry enjoyed high growth, high profits, and high dividends but this situation does not hold true anymore. Currently the banks are growing at lower pace, increased profit &dividend but at decreasing rate (Kosmidou, 2010).

The reason to undertake this study currently is due to the addition of new factors both to internal and external factors that are having significant impact on the industry. Though many articles and literatures have been done in this area. The main difference that this paper has in relation to others is that the variables that are taken into account are recent comings and were not taken into account in previous studies (Habtamu, 2012) took internal and external factors such as capital adequacy, asset quality, managerial efficiency, liquidly, bank size, and real GDP. Also (Fentaw, 2015) used the Capital adequacy, Asset quality, Management quality, and Liquidity as explanatory variables. But this study took internal factors such as cost of fund which is reflected by interest payments on deposit. Currently since banks use deposit as major source of fund the minimum interest payments on deposit is minimum of 5% annually depending up on the type of deposit indicating that the cost for getting fund is increasing.

The other internal factor is cost of branch expansion specifically measured by rental cost which is high these days and it is incurred in opening of new branches, since competition is getting intense banks are opening new branch aggressively in new areas so as to help them be reachable to their customers and mobilize deposit simultaneously. Therefore the more branches that the banks open the more expenses they will incur not only that since the branches are new they will be incurring costs or will be operating at lose to the bank. It will take them time to breakeven and later generate profit. Therefore making their impact on profitability of the bank by increasing cost or expense.

The other factor is banks asset quality which is reflected by the provision held for bad debts and loss. When we say provision held for non-performing loans reduces profit it means that for each of the outstanding balance of the non-performing loans 20% or 50% or 100% provision is held as a backup depending up on the status of the loans (substandard, doubtful& loss). These 20%, 50% and 100% are

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deductible from the profits generated for the year therefore if the number of NPL is high the provision held for them will also be high therefor reducing our profit.

Currently banks are competing against each other using both price competition and non-price competition method Malhotra, N (2007). One of the most well used non price competition is advertisement, which is being practiced aggressively by using many media outlets. The type of advertisement being used by banks recently is giving gift and other packages for customers having good deposits, longtime customers or depending up on the amount of foreign currency that the customer brings to the bank. While in doing so the banks are constantly incurring expenses in advertisement and promotion and these costs are increasing from year to a year due to the strong and ever growing competition between them. Therefore the more expenses are incurred the more impact they have on the profit of the bank.

External macro factors such as regulatory pressure and directives, NBE bills directive stating that for every disbursement made by the bank 27% of it should be channeled to the National bank for national investment purposes. For every outstanding loan and advance there is a corresponding NBE bill purchased for it this bill is bought by the private banks at very low interest rate which is 3% per annum. Whereas the minimum interest rate set by the government for deposits is 5% leaving a 2% spread. Not only that most banks currently are facing liquidity problem meaning that their ability to meet short term liabilities is in question where as they are still purchasing NBE bill regardless of their liquidity position. For some banks the gap between outstanding loan and advances and NBE bill is almost equal. If that NBE bill was added to the outstanding loan and advance and given to customers at minimum interest rate of 8.5% it would have made a significant difference on their profit. So the impact of NBE bill is reflected by opportunity cost of the money tied up and is compared to the profit generated which will give us an insight into by how much the bill have been affecting the banks.

1.3. Objective of the study

1.3.1. General objective

The main objective of the study is to examine Profit determinants of private commercial banks in Ethiopia

1.3.2. Specific Objectives

1. To determine the impact of cost of fund (interest expense) on profitability of banks.

2. To examine the impact of NBE bills on banks profitability.

3. To examine the impact of cost of branch expansion (rental expense) on profitability of banks

4. To examine the effect of asset quality (provision held for nonperforming loan) on profitability of banks.

5. To examine the effect cost of advertisement on profitability of banks.

1.4.   Significance of the Study

Though many articles and literatures have been done in this area. The main difference that this paper has in relation to others is that the variables that are taken into account are recent comings and were not taken into account in previous studies. By considering the above fact, this study will help us to:

- It enables the existing banks to see the impact of these variables on their profitability.
- It provides as an insight into the banking industry for new and emerging banks.
- The study will also initiate commercial banks to give due attention on the management of identified variables.
- It will serves as a base for other researchers to undertake study and investigate furthermore on the variables considered affecting bank profit.

1.5.Scope of the study

The scope of the study was limited to see the impact of yearly interest paid on deposit, national bank bills, expense of branch expansion, advertisement expense and Asset quality on profitability of banks and their performance which is measured through ROA & ROE. The above variables are taken into the study because they are very recent comings and are having a significant impact up on the banking industry.

The banks taken as a sample for the study are Awash Bank S.C. established in the year 1994 G.C, Wegagen bank S.C established in the year 1997 G.C , NIB international bank established in the year 1999 G.C, Cooperative Bank of Oromia (2004) & Lion International bank established in the year 2006 G.C). All of which have at least a 10 years of experience which is the exact amount of time period covered by this study (2005-2016). Regarding period coverage the ten years of data was selected primarily only very few banks has served for more than ten years and secondly prior to that the banking industry in Ethiopia was at its infant stage and thirdly due to the variables under consideration their effect is clearly seen only on that specific range.

Various studies and researches have shown that profitability of banks is highly affected by both internal and external factors. This study used both internal and external determinants of bank profitability which includes National bank bills, high rate of branch expansion (rental cost), number of non-performing loans(provision held), cost of fund (yearly interest paid on deposit) ,advertising expenses .The study has seen how these variables determine the profitability of banks in Ethiopia.

1.6. Limitation of the study

The expected limitations for the study are in relation to data source since five private banks are taken as sample size so the cooperation of the banks in providing of necessary data for the study is under question. The first limitation of the study is State owned banks are not considered. Therefore, the study does not reflect the overall picture of profitability of the banking industry in Ethiopia. Not only that but also one of the variables under study is NBE bill which is a very recent phenomena having an age of six years whereas the study covers ten years of data therefore leaving a four year spread between this variable and the others. Therefore on the analysis for the first four years the national bank bill purchased is taken as zero.

1.7. Operational definitions

- ❖ **Nonperforming loan**: NBE directive number SBB/43/2008 defines none performing loan as loan or advances with pre –established repayment program in which principal and /or interest is due and uncollected for 90 consecutive days or more beyond the scheduled repayment date.
- ❖ **National bank bill**: directive number MFA/NBEBILLS/001/2011 stating that for every disbursement made by the bank 27% of it should be channeled to the National bank for national investment purposes.
- ❖ **Return on asset (ROA):** It is a ratio of net income to its total asset.
- ❖ **Return on equity (ROE)**: $Return on Equity$ (ROE) = Net profit after tax / Average equity capital, Andreas and Gabrielle (2009).

1.8.Organization of the paper

This paper is organized into five chapters. The first chapter is chapter one which incorporates the background of study, objectives, statement of the problem, significance of the paper, scope and

limitations. The second chapter provides us with a theoretical and empirical review on previous literatures and what they have considered as major factors determining banks profitability. Chapter three deals with method of the study used to undertake this study; it will describe the research method, research design, data collection, and both the descriptive statics and econometrics method used in this paper. Chapter four deals with results and discussion of both descriptive and econometric analyses results. The last Chapter, Chapter five provides us with the conclusion drawn from the analysis and interpretation of the result and recommendations based on the facts and figures so as to solve observed problems and to ensure the development of the banking sector. All the time period mentioned in this document is in Gregorian calendar.

CHAPTER TWO : REVIEW RELATED LITERATURES

In this chapter a theoretical and empirical literature that focuses on the determinants of bank profitability are presented. Accordingly, the first section, 2.1 presents Historical development of the modern banking system in Ethiopia. The second section 2.2 Theoretical review of variables under study and their relationship with profitability of commercial banks. Finally, in section 2.3 reviews of related empirical reviews and under it section 2.3.1 describes empirical study in other countries and the last section, section 2.3.2 describes an empirical study done in Ethiopia.

2.1 Historical Development of modern banking system in Ethiopia

Long before the establishment of modern financial system there has been other traditional financial system that was serving the societies need in regard to their financial requirement. These institutions were organized with a sense of cooperation and risk sharing among the society also it cleared the path and arose the need for the establishment of bigger and better financial institution hence leading to the establishment of modern banking system.

Modern banking in Ethiopia was introduced after the agreement that was reached in 1905 between Emperor Minilik II and Mr.MaGillivray, representative of the British owned National Bank of Egypt. Following the agreement, the first bank called Bank of Abysinia was inaugurated in Feb.16, 1906 by the Emperor. After first fifteen years of its operation, in 1931 Bank of Abyssinia was legally replaced by Bank of Ethiopia shortly after Emperor Haile Selassie came to power.

The new Bank, Bank of Ethiopia, was a purely Ethiopian institution, 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. (Habtamu Negussie, 2012)

The incorporation of State Bank of Ethiopia 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 and it started operation on January 1, 1964 with a capital of Eth. Birr 20 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 5.0 million and until it ceased operation, it had 300 staff at 26 branches.

In 1974 following the declaration of socialism 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 Eth. birr 20 million 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. and Imperial Saving and Home Ownership Public Association were also merged to form the Housing and Saving 12 Bank 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, following the demise of the Derg regime, the Ethiopian People's Revolutionary Democratic Front declared a liberal economy system. In line with this, Monetary and Banking proclamation of 1994 established the national bank of Ethiopia as a judicial entity. Currently private commercial banks in Ethiopia reached to sixteen as shown in the table below.

Table. 2.1 List of private commercial banks in Ethiopia

No.	Name of Banks	Year of Establishment	Total Capital in Millions of ETB	Number of Staffs
1	Awash International Bank	1994	3,209	5,847
2	Dashen Bank	1995	2924	4597
3	Abyssinia Bank	1996	1811	3290
4	Wegagen Bank	1997	2177	2622
5	United Bank	1998	1,175	2,921

6	Nib International Bank	1999	2380	2948
7	Cooperative Bank of Oromia	2004	1,716	2425
8	Lion International Bank S.C	2006	993	2425
9	Oromia International Bank	2008	765	1438
10	Zemen Bank	2008	822	1875
11	Bunna International Bank	2009	743	1503
12	Birhan International Bank	2009	716	1876
13	Abay Bank	2010	444	1195
14	Addis International Bank	2011	727	1181
15	Debub Global Bank S.C	2012	463	890
16	Enat Bank S.C	2012	224	677

Source: National bank of Ethiopia

2.2. Theoretical reviews of variables under study and their relationship with profitability of private commercial banks

One of the variables considered for the study is cost of fund. The term cost of funds refers to the interest rate paid by financial institutions for the funds that they mobilize and deploying their business. The cost of funds is one of the most important input costs for a financial institution, since a lower cost will generate better returns when the funds are deployed in the form of short-term and long-term loans to borrowers. The spread between the cost of funds and the interest rate charged to borrower's represents one of the main sources of profit for most financial. Pak, H. S. & Sung, K. H. (1995).

Cost of funds and net interest spread are conceptually the most basic way banks make money. Banks make money through the interest rates they charge on loans as well as debt securities they own and other equity products that consumers, companies and large-scale institutions need. The interest rate banks charge on such loans must be greater than that of the interest rate they pay for the use of funds the 'cost of funds' which banks obtain from a variety of different sources. These sources of funds that cost banks money fall into a number of categories. Deposits are the primary source of funds, with most people choosing to deposit their money in a bank, which the bank pays interest on the deposit, and in return uses that money for its own revenue-generating operations. Often called core deposits, these funds are typically checking or savings accounts and are obtained at generally low rates. Banks

then make money by charging interest on loans that is higher than the initial cost of funds amount. There are many different kinds of loans that banks issue such as Mortgages loans, Building construction loan, import and export loans, pre-shipment loans, merchandise loans, overdraft facility, and transport vehicle loan are all such loans that banks offer at variable, adjustable or fixed interest rates. The difference between the average yield of interest obtained from loans and the average rate of interest paid for deposits and other such funds (or the cost of funds) is called the net interest spread, and it is an indicator of a financial institution's profit. Akin to a profit margin, the greater the spread the more profit the bank realizes. Conversely, the lower the spread the less profitable the bank

The second factor considered is NBE bills and its impact on profitability of commercial private banks. As per the directive NBE bill states that for every disbursement made by the bank 27% of it should be channeled to the National bank for national investment purposes. Having in mind that the interest received from this bill is only 3% whereas the other sources of funds have minimum interest rate of 5% for saving accounts leaving a minimum of negative 2% spread. Ethiopia's finical sector is to be considered at its early stage while having only some commercial private banks operating for over 20 years such kind of finical imposition by the regulatory body has a deep and hard effect on these private banks. NBE bill has become an obstacle for these private commercial banks to reach their full potential and operate in a way that they can maximize their profits. The opportunity cost of NBE bill is very high. In most private commercial banks the NBE bill purchase has reached in billions where as it is almost equivalent with their total loan and advances, so if these banks could lend that specific amount of birr held in the form of NBE bill it would have been a game changer for the sector enabling the banks by increasing their profit an contribute in much significant way to the economy as well. Also there is another NBE memo stating an increase for private commercial banks minimum capital requirement to reach birr 2 billion so having all this in mind their comes a question of how much of a challenge is the bill by its self and its effect on their profitability.

The third variable considered for the study is cost of branch expansion the high cost of expansion especially the sky-rocketing office rent is challenging most private banks, particularly those with relatively low capital and asset bases. In regard to cost of branch expansion as an instance one of the younger private banks that increased its branches massively is Bunna International Bank S.C., which was established in 2009. Bunna, has disbursed loans and advances of 938.42 million birr and mobilized deposits of 1.55 billion birr.

"The expansion of branches is the main reason for staggering increase in loans, advances, and deposits," Solomon Jebessa, Director of Economic Research, Planning, Monitoring and Evaluation at the bank told EBR. Currently the Bank's branch reached 58 from 21 last year. This, undoubtedly, affords more access to the banking public," Indeed, last year the size of Bunna's loans and deposits have expanded by 45.58Pct and 71.6Pct, respectively. However, the cost of office rent has expanded by 31Pct to 9.5 million birr, which is 44.1Pct of the general and administrative expense and 22.5Pct of the total expenses of the Bank.

The tide is similar for most of the private banks. Lion International Bank S.C., which was a pioneer to extend the bank service hours to 11 hours a day and for six days of a week two years ago, managed to increase its branches to sixty. Until last fiscal year, the Bank, which was established in 2006, had 39 branches. Its office rent expenses also soared to 9.9 million birr last fiscal year, accounting 31.5Pct of the general and administrative expense as well as 14.3Pct of the operating expense of the Bank.

As a response, commercial banks in Ethiopia have continued their plans to open significant number of branches across the country. The number of commercial bank branches in operation increased by 141.5Pct in the last three years from 691 in 2012/13 to 1,669 in 2014/15. For private banks, branch expansion has become a question of survival in the banking sector in which the state's giant CBE is opening branches every other day, on average. Despite this aggressive move of CBE, however, private banks, especially the oldest ones, continued to expand their branches year after year but at slower rate, which is a reflection of their smaller size and ability as compared to the state owned banks.

Awash International Bank (AIB), the first private bank in Ethiopia after the re-endorsement of establishing private banks in 1991, also underwent the same road as the youngest private banks but at higher cost. Established in 1994, Awash's office rent expense climb to 45.2 million birr last fiscal year, showing a 29.9Pct increment compared with the previous fiscal year. Since Awash is a big bank with an assets worth of 20.4 billion birr as of June 2016, its office rent expense accounts only for 5Pct of the total expense but 26.7Pct of the general and administrative cost. The same goes for Dashen Bank. In 2014/15, Dashen spent 49.6 million birr for office rent.

Banks such as Awash and Dashen are trying to cope up with the increasing cost of office rent by constructing their own buildings. The lease price of space in commercial buildings has shown a significant increase over the prices of the previous fiscal year. In the past, rental prices used to increase between 5Pct and 10Pct annually. However, currently the rate of increase is above 25Pct in

some cases he said. Rental prices in commercial buildings not only differ between locations but also between floors in the same building. The increasing rental price will undoubtedly reduce the profitability of the branch hence affecting profitability of the bank. (Ethiopian business review August ,2015. No.17)

The fourth factor considered is Asset quality, According to Angbazo and Lazarus, (1997), non-performing loans (NPL) has an inverse relationship with banks' profitability. Hence, they suggested that it is of crucial importance that banks practice prudent credit risk management and safeguarding the assets of the banks and protect the investors 'interests. Similarly, Bessis, J (2009) contended that for banks to continue operations; they must make enough money through lending and fiduciary activities or services to cover their operational and financing costs, plough back retained earnings to finance future operations. This will enhance not only the survival but also their growth and profitability.

Currently banks are competing against each other using both price competition and non-price competition method. One of the most well used non price competition is Advertisement, which is being practiced aggressively by using many media outlets. The type of advertisement being used recently is giving gift and other packages for customers having good deposits, longtime customers or depending up on the amount of foreign currency that the customer brings to the bank. While in doing so the banks are constantly incurring expenses in advertisement and promotion and these costs are increasing from year to a year due to the strong and ever growing competition between them. Therefore the more expenses are incurred the more impact they have on the profit of the bank.

2.3. Review of related empirical studies

2.3.1. Empirical Studies in other countries

The paper under review was done on Commercial Banks Profitability Indicators: Empirical Evidence from Latvia by Jana Erina, J. & Lace, N. (2011). The researcher considered two kinds of factors that determinants commercial banks profitability. These factors are internal and external factors. The internal factors considered for the paper are bank size, operating efficiency, capital, credit risk, portfolio composition and asset management. External indicators include macroeconomic changes, and the banks are unable to exert control over them, since their impact occurs on the macro-level. Three main macroeconomic indicators that are used to determine a bank's earning capacity are growth

of annual gross domestic product (GDP) and annual inflation (INF).Specific indicators of the banks, such as return on assets (ROA) and return on equity (ROE) were also used. For the methodology aspect in order to determine profitability of the banks and macroeconomic indicators, the authors have evaluated performance indicators of return on assets (ROA) and return on equity (ROE) of the Latvian commercial banks. For assessment of the profitability indicators the authors have used descriptive method and by using the SPSS data determination methods, correlation and regression analyses of the obtained data have been performed. The researchers have also used a linear regression model for determination of the profitability indicators. Also Descriptive statistical such as minimum and maximum values and standard deviation are used for analysis. average earnings of equity (ROE) in Latvian commercial banks during the period from 2006 till 2011 increased by 0.39%, while return on assets (ROA) is 0.05% , While the average capital adequacy ratio is 11.12%, corresponding to the bank's requirements - 8%, the average credit - 18.82%, deposit rate – 62.76%, inflation rate – 7.13%. On the basis of the obtained results, the researcher concluded that profitability has had a positive effect on operational efficiency, portfolio composition and management, while it has had a negative effect on the capital and credit risks, as measured according to ROA, while according to ROE, positive influence is exerted on composition of the capital portfolio and negative – on operational efficiency and credit risk. With regard to macroeconomic indicators, the authors have revealed that GDP has a positive impact on profitability as measured by ROA and ROE.

The other paper was done on the Analysis of Profitability of Kenya`s Top Six Commercial Banks: Internal Factor Analysis By Susan MoraaOnuonga, By December 2013, Kenya had one Central Bank as a regulatory authority, 44 banking institutions, 7 representative offices of foreign banks, 9 microfinance banks, 2 credit reference bureaus and 101 forex bureaus. Based on their size (in terms of assets), of the 44 banking institutions, 6 are classified as top six commercial banks From the literature, bank profitability is measured by: return on equity or the net interest margin. Bank profits are explained by both internal and external determinants. The determinants of bank profitability are divided into two: those which can be controlled by the management, and those which are beyond the control of bank management. The factors that can be controlled by the management are called internal factors while those outside their control are called external factors. The internal determinants of bank profitability reflect the banks` management policies and decisions made on sources and uses of funds, capital, liquidity management and expenses management. The external determinants of bank profits are related to both the economic and legal environment in which the banks operates. The

environmental factors include market structure, regulation, inflation, interest rates, market growth, and the general economic conditions such as economic booms or recessions.

The data set covers a period of six years from 2008 to 2013, involving all the top six commercial banks in Kenya. The data was sourced from the Central Bank of Kenya Annual Supervision Reports, Kenya Economic Surveys and World Development Indicators. The model used balanced panel data and was estimated by use of the Generalized Least Squares (GLS) method so as to reduce autocorrelation and heteroskedasticity of the data. Panel regression analysis was used. The independent variables are Size, Capital adequacy, Ownership, Expenses management and Diversification. From the results, the significant determinants of the profitability of the top six Kenya banks are size which was measured by total assets, capital strength which was measured by the ratio of capital to assets, ownership, loans to assets and operating costs. The size of the banks as measured by natural log of total assets has a significant positive (0.014) effect on Kenyan top bank profitability over the period 2008 to 2013.The findings revealed that bank size, capital strength, bank operation expenses, ownership, and the ratio of loans to assets are the major significant determinants of the profitability of the top six Kenya commercial banks.

The other paper was done on factors that affect profitability of Turkish Banking Sector by Songül Kakilli Acaravci,2013.The number of banks operating in Turkey was 48 at the end of March 2012 with 31 in deposit banks group and 13 in non-deposit banks group, while there were also 4 participation banks. Among deposit banks, there were 3 state-owned banks, 11 privately-owned banks and 16 foreign banks. Data source wise in this study, three different models are used to determine factors that affect the profitability of commercial banks in Turkish banking sector. The data are collected from the three biggest state owned, privately-owned and foreign banks. The sample period spans from 1998 to 2011. Annual balance sheet, income statement and macroeconomic data are gathered from the Banks Association of Turkey (BAT), the Istanbul Stock Exchange (ISE), and Central Bank of the Republic of Turkey (CBRT), Public Disclosure Platform (PDP), OECD and IFS. The Dependent Variables considered for researches are Return on Assets, Return on equity, Net Interest Margin whereas the independent variables are Deposit, Liquidity, Income Structure, Expenditure Structure, Capital Adequacy and Asset Size. The long-run relationship between the bank specific and macroeconomic explanatory variables and profitability variables are examined by using

time series econometric methods. First he defined the order of integration in series by using unit root test. This is accomplished by performing the augmented Dickey-Fuller (ADF) test.

As per the researcher empirical evidence he was abel to conclude that The state-owned bank has high liquid assets to decrease liquidity risk of bank. The privately-owned and the foreign banks have more opportunities to invest in various short term liquid assets. The state-owned bank normally should strive to attract more deposits as a source of funds. But, deposits for the privately-owned and the foreign banks have an insignificant impact on profitability. Loans are a measure of income source of banks. In the privately-owned bank, bad loans reduce profitability while loans for the foreign bank have positive impact on profitability. Fees and commission expenses have an insignificant impact on profitability for all banks. Greater bank activity diversification negatively influences returns. The lower the need for external funding, the higher the profitability of the state-owned and the privately-owned banks. But, in the foreign bank, lower capital leads to higher bank revenues. The banking sector is sensitive to the overall development of the economy. With the real sector growing, banks can successfully collect their loans and extend new ones. In the state-owned and the foreign banks, real exchange rate has a significant impact on profitability.

2.3.2. Empirical Studies in Ethiopia

There have been many literatures done on this topic. Most literatures used banks specific, industry specific, macro-economic factors, and examined financial statements variables and tried to established relationship between those factors and profitability of banks. Empirical evidence which included in this study are determinants of banks profitability: an empirical review of Ethiopian commercial banks by Habtamu (2011), the financial performance of the Ethiopian commercial banks by Belayneh (2011), and meta-analysis on the determinates of commercial banks profitability Fentaw (2015).

The paper was undertaken to see to factors that are determinate of private commercial banks profitability. Its sample design was he took four private banks out of existing fourteen banks. Time scope wise the researcher took ten years of data. Data collection wise the researcher used primary data such as questionnaire and interview and secondary data such as National Bank of Ethiopia, website of the private banks, annual reports, financial statements and other published and unpublished documents. The data analysis method used for the paper was descriptive statics, correlation and multi

linear regression analysis. The variables taken under consideration are categorized into two internal factors and external factors the internal factors used for analysis are Capital adequacy, Asset quality , Managerial efficiency , Earning quality , Liquidity , Bank size ,Loan Performance , Technology and Human capital whereas for external factors he used Saving habit of the society , Regulation ,inflation and level of GDP.

Also developed an econometric model that is used to show the kind and magnitude of relationship between the independent and dependent variables. As per his research he was able to come up with this findings. The capital adequacy mean value results suggest that about 60% of the total assets of private commercial banks were financed by shareholders funds while the remaining 40% was financed by deposit liabilities. Since all the banks under the study apply the same interest rate there was only slight change so they didn't affect much the profit. The mean value of liquidity shows that the Ethiopian private commercial banks was very liquid, two times more than the minimum statutory liquidity ratio of 20 percent set by National Bank of Ethiopia (NBE).

The mean value of managerial efficiency indicates that private commercial banks are efficient because their operating expense per unit of operating return is low, which means for 0.48 birr operating expense there is one birr operating income. All explanatory variables have a positive relationship with return on asset in agreement with the hypothesis except liquidity, low coefficient shows that liquidity has weak relationship with profitability. Asset quality and liquidity level of private commercial banks included in this study has no significant relationship with ROA. The explanatory variables included in this study jointly explain about 72 percent of the variation in return on asset.

Based on the his findings he was abel to concluded that managerial efficiency, bank size, level of GDP, and capital adequacy have significant impact on ROA; which means any increase (decrease) on the value of these variables leads to an increase (decrease) on profitability of private commercial banks in Ethiopia. Managerial efficiency, liquidity, bank size and GDP have significant influence on ROE and except with the liquidity all these variables have positive relationship with profitability of private banks. Lastly, capital adequacy, asset quality and GDP have considerable relationship with NIM, except level of GDP all these variables have a negative correlation with profitability.

The other paper was undertaken to see the three major determinants of commercial banks profitability; bank specific factors and macroeconomic variables. With regard to banks specific factors such as, equity capital Belayneh (2011), showed that Ethiopian commercial banks that increase their equity have a lower cost of capital and thus are more profitable. Bank size, loan, and non-interest income of Ethiopian commercial banks are also positive and highly significant factors of profitability. Credit risk is the main significant factor, which challenges the profitability of banks in Ethiopia. Fixed deposit and non-interest expenses are also the major causes that hinder Ethiopian banks profitability. In relation to industry specific factors, he used market concentration as the only industry specific determinants for Ethiopian commercial banks. He stated that market concentration has a negative and highly significant impact on Ethiopian banks profitability. The researcher used Hefindihal Hirchman index and the result shows that a better competition in the market and erodes the price making power of a single bank (Commercial Bank of Ethiopia) and in turn reduces the banking sector profitability. Finally concerning with the macroeconomic variables Belayneh (2011), said that the only significant factor of Ethiopian commercial banks profitability is real GDP growth. According to the author, the current real economic growth of the country makes commercial banks to be more profitable. Contrary, inflation rate and lending interest rate played insignificant role in Ethiopian commercial banks profitability.

The other paper was done with the objective of examining the determinants of commercial banks' profitability. The researcher used Meta-analysis which involves the combining summary information from related but independent studies. The objectives of a meta-analysis include increasing power to detect an overall treatment effect, estimation of the degree of benefit associated with a particular study treatment, assessment of the amount of variability between studies, or identification of study characteristics associated with particularly effective treatments (Normand1999). For the methodology the application of Meta-analysis techniques enabled the researcher to compare and contrast the findings of different studies and to come up with certain conclusions and reflections that need further examination.

Based on the above objective the researcher formulated the following null hypothesis for his research.
- Bank Size does not significantly determine Bank Profitability
- Capital Adequacy does not significantly determine Bank Profitability
- Credit Risk does not significantly determine Bank Profitability

- Liquidity Risk does not significantly determine Bank Profitability
- Labor Efficiency does not significantly determine Bank Profitability
- Management Efficiency does not significantly determine Bank Profitability
- Inflation does not significantly determine Bank Profitability
- Real GDP does not significantly determine Bank Profitability

The researcher used (ROA), Return on Average Equity (ROE), and Net Interest Margin (NIM) as dependent variables and Capital adequacy, Asset quality, Management quality, and Liquidity as independent variables. By using multiple linear regression model and by E-views 6 software. Results of the Descriptive statistics for all variables Return on Asset, Return on Equity, and Net Interest Margin all have a positive mean value 2.39, 21.31, and 4.85 respectively. There is greater variation in the data set of Return on Equity, because some banks are employed more capital, which increases banks ROE. Bank size, liquidity and GDP show high mean value of 9.15, 47.43, and 9.26 respectively.

Three regression analyses were done to examine the relationship between profitability measures and independent variables. The first regression analysis was undertaken to investigate the relationship between ROA and independent variables Based on his calculation the researcher was abel to find out that all the variables considered under the study are significantly and positively related to banks profitability.

The other paper reviewed for the research was done by Samuel the research had an objective of The main objective of this study is to identify the internal and external factors that influence profitability of Commercial Banks in Ethiopia Once the researcher stated his objective he gathered appropriate data needed for his research by using primary data which was gathered by open - ended questionnaire and was analyzed by described the responses of the respondents and use it as supportive of the survey of documents after that, data entry and process was made using the E-views 7 software programme. Analysis of data was undertaken to show important relationships of variables in the study. Also he used descriptive statistics, Pearson correlation coefficient and regression analysis. Scope wise the researcher used two large governmental owned banks and other six private commercial banks, AIB, DB, WB, BOA, UB and NIB. He had two kinds of variables the independent and dependent variables. The independent variable for the study is Return on Asset and the dependent variables are Capital adequacy, bank size, and Liquidity risk, Operating Efficiency, Management

Efficiency, Employee Efficiency and Funding Cost. To explain the relationship between the above variables multiple linear regressions model was run, and thus OLS was conducted using E-views 7 econometric software package, to test the casual relationship between the firms profitability and their potential determinants and to determine the most significant and influential explanatory variables affecting the profitability of Ethiopian banks.

The result of the regression analysis indicates that the changes in the independent variables explain 75.65% of the changes in the dependent variable. That is Size, equity to total asset ratio, liquidity risk, operational efficiency, management efficiency, employee efficiency, funding cost, banking sector development, gross domestic product, inflation rate and foreign exchange rate collectively explain 75.65% of the changes in ROA. The remaining 24.35% of changes was explained by other factors which are not included in the model. Thus these variables collectively, are good explanatory variables of the profitability of commercial banks in Ethiopia. The null hypothesis of F-statistic (the overall test of significance) that the R2 is equal to zero was rejected at 1% as the p-value was sufficiently low. F value of 0.000 indicates strong statistical significance, which enhanced the reliability and validity of the model.

The other paper was undertaken to see the three major determinants of commercial banks profitability; bank specific factors, industry specific determinants and macroeconomic variables. With regard to banks specific factors such as, equity capital Belayneh (2011), pointed out Ethiopian commercial banks that increase their equity have a lower cost of capital and thus are more profitable. Bank size, loan, and non-interest income of Ethiopian commercial banks are also positive and highly significant factors of profitability. Credit risk is the main significant factor, which challenges the profitability of banks in Ethiopia. Fixed deposit and non-interest expenses are also the major causes that hinder Ethiopian banks profitability. In relation to industry specific factors, he used market concentration as the only industry specific determinants for Ethiopian commercial banks. He stated that market concentration has a negative and highly significant impact on Ethiopian banks profitability. He used Hefindihal Hirchman index and the result shows that a better competition in the market and erodes the price making power of a single bank (Commercial Bank of Ethiopia) and in turn reduces the banking sector profitability. Finally concerning with the macroeconomic variables Belayneh (2011), said that the only significant factor of Ethiopian commercial banks profitability is real GDP growth. According to the author, the current real economic growth of the country makes commercial banks to be more profitable. Contrary, inflation rate and lending interest rate played insignificant role in Ethiopian commercial banks profitability.

The other paper was done on the financial performance of commercial banks in Ethiopia. According to Habtamu (2004), the profitability status of commercial banks, tested by the profitability ratios, evidenced that the banks are operating at profit. Particularly, the efficiency of the private banks is by far better than the government owned bank, Commercial Bank of Ethiopia. Besides their performance, he stated that a competition in the banking sector was started when private banks enter in to the market. The private banks become more competitive as evidenced by a larger share they gain in the deposits. The prevalence of competition in commercial banks in Ethiopia is also evidenced when the commercial bank of Ethiopia, the 60 years old, lost its share in total assets possession and its share in total deposits concentration. However, the form of competition was initially on non-price (service) that means providing better services and followed by limited price competition when national bank of Ethiopia sets only the ceiling and floor for interest rate. In Habtamu (2004) recommendations, he stated that both price and non-price competition in the banking system should be strengthened.

The third paper by Abebaw and Depaack (2011) was also investigate the impact of bank-specific characteristics, macroeconomic conditions and financial market structure on Ethiopian commercial banks" profits, measured by return on average assets (ROA). A balanced panel data set of 62 observations, covering the period 2001-2008, provided the basis for the econometric analysis. The results under this study show that capital strength, represented by the equity to assets ratio, bank intermediation ratio represented by banks loans to total assets and bank size represented by assets, are the main determinants of Ethiopian banks profits.

With regard to Size measures, Abebaw and Depaack (2011) size of bank has a positive effect on profitability supporting the economies of scale argument. The impact of overhead to net interest income and nonperforming loan ratios are negative and significant. When he assesses the external factors, they have a relatively small impact on the profitability of Ethiopian banks. He concluded that none of these measures was significant. Thus, overhead, capital strength and bank intermediation 16 and size measures are important determinants of bank profits in Ethiopia. This shows that the key for success in profit for banks rely on individual bank characteristics implying proper management of activities by individual banks is indispensable to be profitable.

2.4.1. Conceptual framework

The conceptual framework tries to show the relationship by creating diagrammatic association between banks profitability and the factors that are excepted to affect banks profitability (bank concentration, number of NPL, cost of advertisement, cost of branch expansion, NBE bills, interest on deposit).
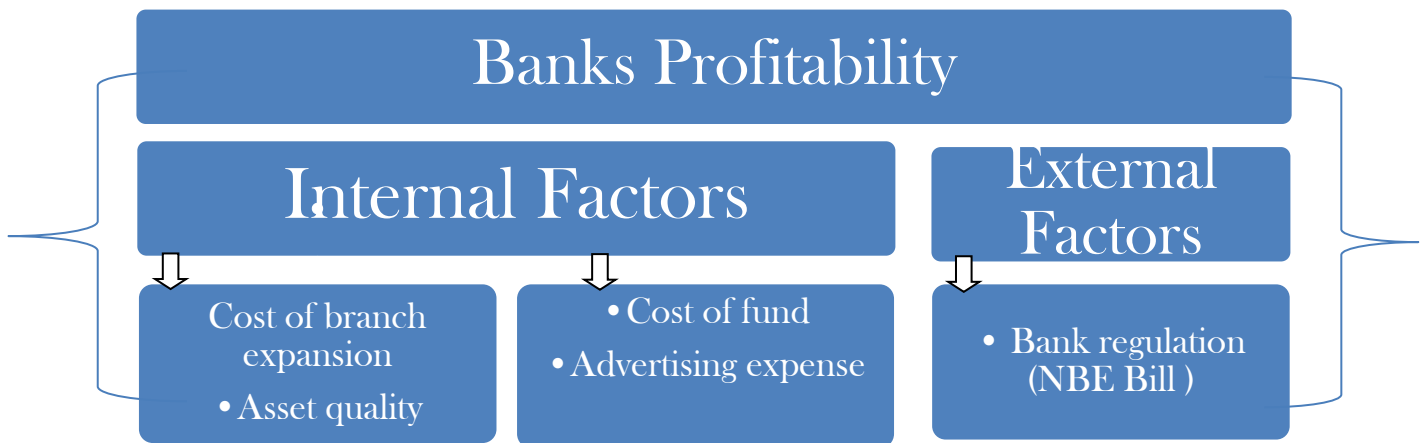
Source: *Extracted from literature Review*
Figure 1.1: linkage of internal and external factors on the profitability of banks

CHAPTER THREE: METHODS OF THE STUDY

The purpose of this chapter is to present the research design and hypotheses and the research approach adopted by the study. The chapter is arranged as follows. Section 3.1 presents the research design. Sampling design is described under section 3.2. This is followed by data source used for the study under section 3.3. Description of variables is presented under section 3.4Then; Hypothesis for the study is discussed under section 3.5. Section 3.6. Describes about method of analysis and under 3.7 model assumption and data properties are presented under the last section 3.8. Model specification is presented.

3.1. Research design

The main objective of this study was to investigate the profit determinants of private commercial banks profitability in Ethiopia and this study adopted an explanatory approach to comprehend the stated objective. The study was employed quantitative research approach by using secondary data gathered from financial statement of private commercial banks respectively.

3.2. Sampling design

The population of this study included all private commercial banks in Ethiopia. However, commercial banks which started their operation after 2005 were not considered because the year taken for the study is ten years and the banks selected for the study have served minimum of ten years. As results, out of the 16 private commercial banks, five commercial banks Awash Bank S.C. established in the year 1994 G.C, Wegagen bank S.C established in the year1997 G.C , NIB international bank established in the year 1999 G.C, Cooperative Bank of Oromia (2004) &Lion International bank established in the year 2006 G.C)are selected. The reaming banks were not collected since the data used is for ten years the other banks have not served for ten years.

3.3. Data source

The data's that are collected to examine the factors that determine banks profitability completely depends on secondary types of data. The source of data regarding the bank's profitability which is affected by cost of fund, NBE bills, cost of branch expansion, cost of advertisement and number of non-performing loans. Quantitative data that were collected from various sources, including five private banks (Awash Bank S.C., Wegagen bank S.C, NIB international bank, Cooperative Bank of Oromia & Lion International bank), the base for selection of these banks being that All five banks have given service for a minimum of 10 years which is the exact amount of time period covered by this study(2005-2016) not only that also out of the five banks the first three Awash, Wegagen, Nib

international banks and united bank) are regarded as peer group banks whereas lion is in another peer groups.

Only secondary data were used for the study. Consistent and reliable research indicates that research conducted by using appropriate data collection instruments increase the credibility and value of research findings (Koul 2006). Accordingly data were collected from audited financial statements (balance sheet and income statement) of each commercial bank included in the sample . All data were collected on annual base and the figures for the variables were on Jun 30 of each year under study.

3.4. Description of variables

The variable under the study are divided as dependent and independent variables. The dependent variable is profitability of commercial banks whereas the independent variables are cost of fund, NBE bills, cost of branch expansion, cost of advertisement and number of non-performing loans. The base for selection of these variables is due to these factors being very recent and having high impact on profitability of banks. Below each will be described in detail not only that it also be explained how these variables would affect profitability of commercial banks.

- ✓ Yearly interest paid on deposit.(Cost of fund/interest expense): for the purpose of this paper cost of fund refers to the gap or the spread between total deposit which is cost for the bank in terms of interest paid and the interest changed for total loan and advances so the higher the GAP between the two the higher impact it has on profitability of the banks,
- ✓ NBE bill: directive number MFA/NBEBILLS/001/2011 stating that for every disbursement made by the bank 27% of it should be channeled to the National bank for national investment purposes.
- ✓ Cost of branch expansion: refers to the expenses incurred by the banks when opening new branches. These cost may be rental cost or other costs which are incurred so as to facilitate the new branch.
- ✓ Non-performing loans: NBE directive number SBB/43/2008 defines none performing loan as loan or advances with pre –established repayment program in which principal and /or interest is due and uncollected for 90 consecutive days or more beyond the scheduled repayment date.
- ✓ Return on Asset (ROA):It is a ratio of net income to its total average asset
- ✓ Return on Equity (ROE):$Return\ on\ Equity\ (ROE)$ = Net profit after tax / Average equity capital, Andreas and Gabrielle (2009).

3.5. Hypothesis

In many quantitative proposals, writers use research questions. However, a more formal statement of research employs hypotheses (Creswell 2009). These hypotheses are predictions about the outcome of the results the following hypotheses are developed to break down the research objectives. Since The relationship between the dependent and independent variables is unknown the hypotheses stated below are going to be tested for this study:

H1: There is a positively determine between interest paid on deposit and banks profitability

H2: There is a negatively determine between interest paid on deposit and banks profitability

H3: There is a positively determine between NBE bills and banks profitability

H4: There is a negatively determine between NBE bills and banks profitability

H5: There is a positively determine between cost of branch expansion and banks profitability

H6: There is a negatively determine between cost of branch expansion and banks profitability

H7: There is a positively determine between number of NPL and banks profitability

H8: There is a negatively determine between number of NPL and banks profitability

H9: There is a negatively determine between advertisement expense and banks profitability

H10: There is a positively determine between advertisement expense and banks profitability

3.6. Method of data Analysis

On this study both descriptive and econometric data analysis are used. The collected data was analyzed by using descriptive statistics and panel data regression analysis. Secondary data's were analyzed by using SPSS data analyzing software's.

3.6.1 Descriptive data analysis

The descriptive one uses time series performance evaluation from 2005 to 2016 G.C. Mean, minimum, maximum and standard deviation values are used to analyze the general trends of the data for the variables which included in the study.

3.6.2. Panel Data Regression Analysis

The first step in applying econometric method is selecting appropriate econometric model and formulating the model with relevant variables. Thus, for choosing appropriate model in attaining the specified objective of this study vital care was made.

As a result we use the classical regression analysis (The panel data regression model). In panel data regression a dependent variable y can depend on a whole serious of explanatory variables or more than two variables. It studies the relationship between the dependent variable and the independent variables. Using this model we will examine the dynamic long term relation between the variables.

There are many other factors expected to determine profitability of banks. However in this study, the focus is only on those factors that that arise in recent time. Such as: NBE bills, high rate of branch expansion cost(rental expense), increasing number of NPL(provision held for bad debts), yearly interest paid on deposits(interest expense), ROA and ROE.

- The dependent or the left hand side variable is the bank profit measured through ROA & ROE (Banks profitability at time t) and
- The independent (explanatory) or the right hand side variables are NBEB, RC ,NNPL YID,& AE which are National bank bills, branch expansion cost (rental cost), non-performing loan, yearly interest paid on deposits and advertising expenses. Respectively. The above explanatory variables are expected to have positive or negative influence on the performance of the banking industry.

3.7. Model Specification
In the study panel data regression is used, it helps to analyze two dimensional panel data. The data are usually collected over time and. fixed effect model is used. Of the three types of panel data analysis fixed effect model is used. It is a model that represents the observed quantities in terms of explanatory variables that are treated as if the quantities were non-random.
The determinants of profitability of banks or the regression equation used in this paper for empirical testing is,

$ROA = \beta o + \beta 1NBEB + \beta 2RC + \beta 3NNPL + \beta 4YID + \beta 5AE + \varepsilon,$ ... ... (**1**)

$ROE = \beta o + \beta 1NBEB + \beta 2RC + \beta 3NNPL + \beta 4YID + \beta 5AE + \varepsilon,$ ... ... (**2**)

Where, it is assumed that all explanatory variables are independent. The term ε is the disturbance term.

βo Is constant/ intercept, β1 – β5 are parameters of the model and ε is error (unobserved) terms

Description of variables,

ROA: Return on asset at time t

ROEt: Return on equity at time t

NBEB: National bank of Ethiopia Bill

RC: Rental cost

NNPL: Number of non-performing loans (provision held for NPL)

YID: Yearly interest paid on deposits (cost of fund)

AE: Advertising Expense

Using matrix approach to panel data regression model, we can summarize the model as the following:-

Model $\boxed{BP = NBEB\beta + RC\beta + NNPL\beta + YITD\beta + AE\beta + e}$ .... (1.1)

The order of matrix and vectors involved are:

$$BP = 10 \quad NBEB, RC, NNPL, YITD, AE = \{(10 \times 5\}, \quad \beta = \{(5) \times 1\} \quad and \quad e = 10$$

Estimators:- $\hat{\beta}$ is estimator of $\hat{\beta}_1, \hat{\beta}_2, \hat{\beta}_3, \hat{\beta}_4, \hat{\beta}_5$

Where

$$\hat{\beta} = \begin{pmatrix} \hat{\beta}_1 \\ \hat{\beta}_2 \\ \hat{\beta}_3 \\ \hat{\beta}_4 \\ \hat{\beta}_5 \end{pmatrix} = \begin{bmatrix} \Sigma\,NBEB^2 & \Sigma\,RCNBEB & \Sigma\,NNPLNBEB & \Sigma\,NBEBYITD & \Sigma\,NBEBAE \\ \Sigma\,RCNBEB & \Sigma\,RC^2 & \Sigma\,RCNNPL & \Sigma\,RCTITD & \Sigma\,RCAE \\ \Sigma\,NBEBNNPL & \Sigma\,NNPLRC & \Sigma\,NNPL^2 & \Sigma\,NNPLYITD & \Sigma\,NNPLAE \\ \Sigma\,YITDNBB & \Sigma\,YITDRC & \Sigma\,YITDNNPL & \Sigma\,YITD^2 & \Sigma\,YITDAE \\ \Sigma AENBEB & \Sigma AERC & \Sigma AENNPL & AEYITD & \Sigma\,AE2 \end{bmatrix} \begin{bmatrix} \Sigma BPt(NBEB) \\ \Sigma BPt(RC) \\ \Sigma BPt(NNPL) \\ \Sigma BPt(YITD) \\ \Sigma BPt(AE) \end{bmatrix} .(1.2)$$

The above column matrix $\hat{\beta}$ does not include the constant term $\hat{\beta}_0$. Under such conditions we can, obtain the variance of any estimator say $\hat{\beta}_1$ by taking the tth term from the inverse of principal diagonal and then multiplying it by σ_u^2.

$$\text{var}(\hat{\beta}) = \sigma_u^2 \begin{bmatrix} \Sigma\,\text{NBEB}^2 \\ \Sigma\,RC^2 \\ \Sigma\,\text{NNPL}^2 \\ \Sigma\,\text{YITD}^2 \\ \Sigma\,\text{AE}^2 \end{bmatrix}^{-1} \quad\ldots\ldots\ldots\ldots\ldots.1.3$$

The only unknown part in variances is σ_u^2. In the this model we have six parameters including the constant term

$$\hat{\sigma}^2 = \left\{ \frac{\Sigma e_i^2}{t-6} \right\} \ldots\ldots\ldots\ldots.1.4$$

$$\sum e_t^2 = \sum BP_t^2 - \beta_1 \sum NBEBBP - \beta_2 \sum RCBP - \beta_3 \sum NNPLBP + \beta_4 \sum YITDBP + \beta5 \sum AEBP \quad (1.5)$$

Based on the above formulas and models the data that is collected has been analyzed and interpreted in chapter four.

3.8. Model assumptions and data properties

The following diagnostic tests were carried out to ensure that the data fits the basic assumptions of panel data regression model.

Normality: Descriptive statistics was undertaken to examine the distribution of data. Upon examination the Shapiro-Wilk test uses to know the property of a normally distributed random variable that the entire distribution is characterized by the first two moments the mean and the variance.

Multicollinearity: different empirical studies show different argument towards the mulitcolinarity problem. Mashotra (2007) stated that mulitcolinarity problems exist when the correlation coefficient among variables greater than 0.75. Cooper & Schindler (2009) suggested that a correlation above 0.8 between explanatory variables should be corrected for problem of multicollinearity. Lastly, Hair et al. (2006) argued that also correlation coefficient below 0.9 may not cause serious mulitcolinarity

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problem. A correlation matrix used to ensure the correlation between explanatory variables. Then balanced panel data models are applied to control for mulitcolinarity.

Heteroskedasticity: Finally, the model was estimated in SPSS assuming cross-section heteroskedasticity to control for the possible effects heteroskedasticity in the error variance. Durbin-Watson (DW) test was used to evaluate the problem of heteroskedasticity

CHAPTER FOUR: RESULT AND DISCUSSION

This chapter deals with the results of study which include descriptive statistics of variables, correlation results for dependent and independent variables, diagnosis test for the regression models, and regression analysis on five private commercial bank against the variables which are national bank bill, rental cost, asset quality, interest expense and advertisement expense. Secondary data analysis was done by using SPSS software.

4.1. Descriptive data analysis

In this section descriptive statistics for the dependent; profit and explanatory variables; National bank bill, Asset quality, rental cost , interest expense and advertisement expense involved in the regression model are presented. Mean, maximum, minimum and standard deviation values are included in the table below. These figures are gives overall description about data used in the regression models.

The table below shows descriptive statistics for all variables. Return on Asset and Return on Equity which both has a positive mean value of 45.01 and 32.67 respectively. National bank bill, rental cost, interest expense and asset quality show high mean value of 10.68, 46.50, 72.15 and 113.25 respectively. National bank bill has the highest mean 10.68 value, interpreted as on average comparing to their profit the bill is greater than their profit by 1068.49 percent, indicating that the banks has been purchasing high amount of the bill.

Table 4.1 descriptive statistics of dependent and independent variable

	N	Minimum	Maximum	Mean	Std. Deviation	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
ROA	10	21.07	56.48	32.67	8.19691	1.003	1.334
ROE	10	33.97	57.70	45.01	11.97433	2.256	1.334
NBEB	10	0	22.95	10.68	9.897	2.022	1.334
RC	10	34.26	59.40	46.50	39.32005	2.274	1.334
YID	10	56.22	89.92	72.15	35.76679	1.261	1.334
AE	10	27.74	50.54	38.65	8.91828	1.892	1.334
NNPL	10	55.84	323.85	113.25	75.98478	8.645	1.334

Source: SPSS output from private banks financial statements

The Minimum result for ROA and ROE are 21.07 and 33.97 respectively whereas the maximum results are 56.48 and 57.70showing that since the range is small there is not much data spread in

between the variable. On a minimum the bank has 21.07 and 33.97 return on their assets and equities respectively where as they have maximum of 56.48 and 57.70 return on their assets and equities respectively. The standard deviation 8.19 and 11.97 showed that there was low variability in the data for the profitability measures. Regarding national bank bill the min is zero because the bill was started on 2008 G.C therefore two years of data on the bill is zero but the maximum value is 22.95 meaning that the maximum amount of bill they purchased during the eight years of existence of the bill is 22.29. Also it has a standard deviation of 9.89 indicating that it is not far from the mean.

The bank rental expense (cost) has a minimum value of 34.26 and the maximum is 46.50 and also has a standard deviation of 39.32, which is a moderate standard deviation as compared to other independent variables. This shows that the data was consistent because the standard deviation value is not much far from the mean value. For the banks out of the total general expenses on the minimum 34.26 percent is composed of rental cost and maximum of 46.50 is composed of rental cost. The reason for banks to incur this much amount of rental expense is due to the accompanied by sky rocating rental prices.

Yearly interest expense on deposits has a minimum and maximum value of 56.22 and 89.92 respectively which is interpreted as in comparison to the total expenses that the banks incur, interest paid on deposits accounts for 56.22 percent whereas on the maximum the interest paid comprises of 89.92 percent of the total expense. This because since banks are competing against each other to mobilize the deposit as large as possible because those who have the larger deposits have the ability to disburse large amount of loans and insure the sustainability of their business. Advertisement expense has a minimum and maximum of 27.74 and 50.54 respectively with standard deviation of 8.91 which is moderately deviated from the mean value of 38.65 and it is interpreted on the minimum 27.74 percent of the general expenses is composed of advertising expense whereas on the maximum of 5.54% of the general expense is composed of advertising expense yet Again This because since banks are competing against each other to mobilize the deposit and be the most preferred and customer centric bank as possible therefore the common way to do that is through continuous advertisement and mass promotion which will lead to increase in their advertisement expenses. Asset quality which is measured by the provisions held for outstanding loan and advances has a minimum and maximum value 55.84 and 323.85 respectively with a mean of 113.25. Regarding asset quality the data shows that the provision held for loan and advance is constantly increasing and sometimes even exceeding above the limit.

4.2. Correlation analysis between study variables

In this section the correlation between profitability measures; return on asset and return on equity and explanatory variables; national bank bill, asset quality, rental cost, advertisement expense and interest expense have been presented and analyzed. A correlation matrix used to ensure the correlation between explanatory variables. Cooper & Schindler (2009) suggested that a correlation coefficient above 0.8 between explanatory variables should be corrected for because it is a sign for multicolinearity problem. Mashotra (2007) argued that the correlation coefficient can be 0.75. Lastly, Hair *et al.* (2006) argued that also correlation coefficient below 0.9 may not cause serious multicolinary problem. *(Habtamu ,2012)*.Thus, one explanatory variable, all variables earning quality is less than 0.8 correlation coefficient therefore no variable was exclude from the regression model to control multicolinearity problem.

4.2.1. Correlation Analysis Between Return on Asset and Explanatory Variables

The ROA reflects the ability of a bank's management to generate profits from the bank's assets and this profitability measure is correlated with other explanatory variables either positively or negatively. In table 4.1 below, the correlation analysis was undertaken between profitability measure; return on asset and explanatory variables; national bank bill, asset quality, rental cost, advertisement expense and interest expense

Table 4.2. Correlation analysis between ROA and explanatory Variables

		ROA	NBEB	NNPL	RC	YID	AE
	ROA	1.000	.664	.037	.097	.539	.754
	NBEB	.664	1.000	.445	.564	.729	.938
Pearson Correlation	NPL	-.037	-.445	1.000	-.417	-.468	-.323
	RC	.097	.564	.417	1.000	.211	.356
	YID	.539	.729	.468	.211	1.000	.861
	AE	.754	.938	.323	.356	.861	1.000
Sig. (1-tailed)	ROA	.	.018	.460	.395	.054	.006

	NBEB	.018	.	.099	.045	.008	.000
	NNPL	.460	.099	.	.115	.086	.181
	RC	.395	.045	.115	.	.279	.156
	YID	.054	.008	.086	.279	.	
	AE	.006	.000	.181	.156	.001	.001
N	ROA	10	10	10	10	10	10
	NBEB	10	10	10	10	10	10
	NNPL	10	10	10	10	10	10
	RC	10	10	10	10	10	10
	YID	10	10	10	10	10	10
	AE	10	10	10	10	10	10

Source: SPSS output from private banks financial statements

As per the table above, the correlation coefficient between return on asset and national bank bill was 0.664 which is positive coefficient meaning that private commercial banks national bank bill purchase has significant association with profitability also the correlation coefficient between return on asset and advertisement expense was 0.75 which is the large and positive coefficient as compared to other variables, this mean that private commercial banks advertisement expense is highly correlated with profitability. But, asset quality has a negative coefficient of -0.87 meaning that there is an inverse relationship with return on asset. Whereas rent expense and interest expense in relation to return on asset has high positive correlation coefficient which is, 0.97 and 0.539 respectively. This result shows that rent expense and interest expense have significant relationship with the profitability measured by return on asset.

4.2.2. Correlation Analysis between Return on Equity and Explanatory Variables

Return on Equity (ROE), the net income per birr of equity capital, which is more concerned about how much the bank is earning on their equity investment. The correlation analysis was done between

profitability measures; national bank bill, asset quality, rental cost, advertisement expense and interest expense.

Table 4.3. Correlation analysis between ROE and explanatory Variables

		ROE	NBEB	NNPL	RC	YID	AE
Pearson Correlation	ROE	1.000	.808	-.290	.263	.656	.871
	NBEB	.808	1.000	-.445	.564	.729	.938
	NNPL	-.290	-.445	1.000	-.417	-.468	-.323
	RC	.263	.564	-.417	1.000	.211	.356
	YID	.656	.729	-.468	.211	1.000	.861
	AE	.871	.938	-.323	.356	.861	1.000
Sig. (1-tailed)	ROE	.	.002	.208	.231	.020	.001
	NBEB	.002	.	.099	.045	.008	.000
	NNPL	.208	.099	.	.115	.086	.181
	RC	.231	.045	.115	.	.279	.156
	YID	.020	.008	.086	.279	.	.001
	AE	.001	.000	.181	.156	.001	.
N	ROE	10	10	10	10	10	10
	NBEB	10	10	10	10	10	10
	NNPL	10	10	10	10	10	10
	RC	10	10	10	10	10	10
	YID	10	10	10	10	10	10
	AE	10	10	10	10	10	10

Source: SPSS output from private banks financial statements

As described in the above table there is a positive relationship between return on equity and national bank bill, asset quality, rental cost, advertisement expense and interest expense. National bank bill has a considerable relationship with ROE (a coefficient of 0.88), since private banks are more concerned to increase their capital investment their net profit per birr of equity capital increases. Advertisement expense also strongly correlated with ROE (a coefficient of 0.754). Interpreted as when advertisement expense increases by 0.754 return on equity i.e. profitability will also increase by

the same amount. While, there is a negative correlation of –0.29 between return on equity and asset quality. Meaning that as the number of NPL increases ROE decreases. Also the coefficient for rental expense and interest expense are 0.26 and 0.65 respectively which both are positive the coefficient for interest expense is 0.65 showing a strong correlation, though the coefficient for rental expense is 0.26 which is small but still positive whereas when we look at interest expense has a coeffient of 0.65 which is highly significantly. Meaning that as interest expense increase by 0.65 the return on equity also increase by the same amount i.e. profitability also when rental expense increase by 0.26 percent the return on equity also increases by 0.26 percent.

4.3. Diagnosis tests

4.3.1. Auto Correlation Analysis (Dubrin-Watson)

Correlation is a way to index the degree to which two or more variables are associated with or related to each other. Dubrin-Watson method was used to determine the type of correlation between the variables. It is a statistic test used to detect the presence of autocorrelation (a relationship between values separated from each other by a given time lag) in the residuals (prediction errors) from a regression analysis.

Figure. 4.1. Rejection and Non-Rejection Regions for DW Test
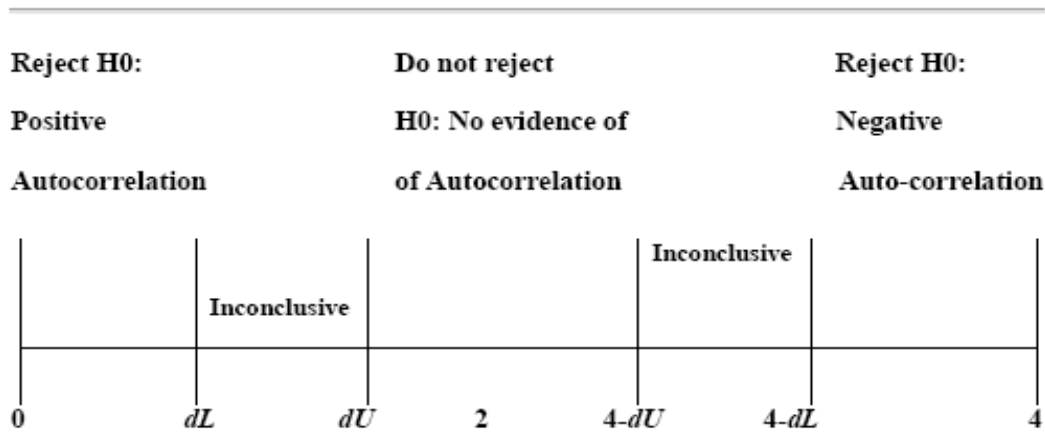
The value of d always lies between 0 and 4. If the Durbin–Watson statistic is substantially less than 2, there is evidence of positive serial correlation. As a rough rule of thumb, if Durbin–Watson is less than 1.0, there may be cause for alarm. Small values of d indicate successive error terms are, on average, close in value to one another, or positively correlated. If d > 2, successive error terms are, on average,

much different in value from one another, i.e., negatively correlated. In regressions, this can imply an underestimation of the level of statistical significance.

Table 4.4. DW Auto Correlation Test

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.946ᵃ	.986	.969	5.19346	.822	3.684	5	4	.015	1.577

a. Predictors: (Constant), AE, NNPL, RC, YID, NBEB

b. Dependent Variable: ROA

Source: SPSS output from private banks financial statements

In the case of profitability with five independent variables the DW value of Profitability (i.e. 1.577) lies in the non-rejection region and indicates the absence of autocorrelation.

4.3.2. Test for Normality (Shapiro Wilks, W Test)

Shapiro Wilk's, W test works by comparing the shape of your sample distribution to the shape of a normal curve.

Assumes, if your sample is normal shaped, the population from which it came is normally distributed so that it can be can be assumed normality.

- Shapiro Wilk's W test is recommended for small and medium samples up to n = 2000
- W ≈ the correlation between given data and ideal normal scores.
- W = 1 when your sample variable data are perfectly normal (perfect H0).
- When W is significantly smaller than 1 = non normal (Ha is accepted)

Therefore in the test result shows that since p is greater than 0.05 we reject hypothesis Ha and accept the null hypothesis, which states that if the p value is greater than the selected alpha the data distribution is normal.

Table 4.5. Test of Normality

NBEB	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Profit .0	.346	4		.869	4	.695

Source: SPSS output from private banks financial statements

4.3.3. Test for absence of series heteroskedasticity

It has been assumed thus far that the variance of the errors is constant. This is known as the assumption of heteroskedasticity. If the errors do not have a constant variance, they are said to be heteroskedasticity. To test this assumption the Glejser test was used having the null hypothesis of heteroskedasticity. If the value Sig 0.05, then there is no problem of heteroskedasticity. If the value Sig.<0.05 then there is a problem of heteroskedasticity.

Based on output coefficients the obtained value of sig. NBEB variable of 0.966, sig.NNPL variable of 0.832 , sig. variable of RC 0.969 , sig. variable of YID 0.792 and the sig.AE variable of 0.829 meaning that since the value of the variables is greater than 0.05 it can be concluded that there is no heteroskedasticity problem.

Table 4.6. Test for heteroskedasticity

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	16.257	14.801		1.098	0.695
	NBEB	.002	.006	.827	.345	0.966
	NNPL	-.013	.021	-.423	-.614	0.832
	RC	-.021	.036	-.361	-.575	0.969
	YID	.001	.083	.016	.012	0.792
	AE	-.290	.740	-1.137	-.391	0.829

a. Dependent Variable: ROA,ROE

Source: SPSS output from private banks financial statements

4.4. Results of the Regression analysis

Under the following regression outputs the beta coefficient may be negative or positive; beta indicates that each variable's level of influence on the dependent variable. P-value indicates at what percentage or precession level of each variable is significant. R^2 values indicate the explanatory power of the model. Two regression analyses were done to examine the relationship between profitability measures and independent variables.

The Fixed Effect model assumes that the marginal effects of the explanatory variables on the dependent unit are the same for all units (i.e. banks). The constant term is allowed to vary among the banks to account for the differences between units. These constant terms capture all unobserved characteristics that differentiate the units from each other. Since, for example, unique differences and cross sectional variation between banks can play an important role in explaining the variation in ROA or ROE among banks. The model also assumes that the error terms are homoskedastic and uncorrelated both over time and across banks. An advantage of the Fixed Effect method is that it leads to consistent estimates even if the time-invariant component of the error term is correlated with the regressors. It has also been shown that the Fixed Effect estimator is consistent even when the Random Effect model is valid or even if the time-invariant component of the error term is correlated with the regressors (as James Nguyen (2006) quoted from Johnston and Dinardo (1998)).

4.4.1 Regression Analysis between Return on Asset and Explanatory Variables

To examine the relationship between profitability measures and explanatory variables two regression analysis were run. The first regression analysis was undertaken to investigate the relationship between ROA and independent variables. This regression model was applied:

$$ROAt = 50.12 - 0.3NBEB + 0.123RC - 0.2NNPL - 0.122YID + 0.95AE + \varepsilon \ldots\ldots\ldots(1)$$

In the following table coefficients, standard errors, t-values, and p-values for explanatory variables, and R-squared, Adjusted R-squared, Standard Error of regression, F-statistic, Prob (F-statistic) for the regression, and number of observations included in the study are presented.

Table 4.7. Model summary of ROA and explanatory variables

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.906[a]	.822	.799	5.19346

a. Predictors: (Constant), AE, NNPL, RC, YID, NBEB

Source: SPSS output from private banks financial statements

As seen from the above table significance level for the variables is below the significance level of five percent meaning that all the variables are statically significant. We find that the adjusted R^2 of our model is 0.799 with the $R^2 = .822$. This means that the linear regression explains 82.2% of the variance in the data.

Table 4.8. Coefficient of ROa and explanatory variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	50.125	27.834		1.801	.0146
	NBEB	-.003	.010	.407	-.325	.0016
	NNPL	-.002	.039	-.016	-.045	.0026
	RC	.123	.068	.590	1.800	.0015
	YID	-.122	.157	-.531	-.777	.0031
	AE	.951	1.392	1.034	.683	.0024

a. Dependent Variable: ROA

Source: SPSS output from private banks financial statements

For the explanatory variable with a negative coefficient of -0.002 shows that asset quality has an inverse relationship with profitability of private commercial banks and any increase in non-performing loans leads to a decrease in profitability. A negative coefficient of national bank bill (0.003) implies that an increase in bill purchase leads to decrease in profitability. The rental cost has a positive coefficient of 0.123; this means that as the banks open more and more branches it will lead

them to a better profitability. Similarly, advertisement expense has a positive coefficient of 0.951. This means any increase in these variables leads to increase in profitability of private banks in Ethiopia. Lastly the coefficient of interest expense is negative 0.122 which means that an increase in interest expense leads to a decrease in profitability, hence not all banks that have high deposit generate higher profit.

Table 4.9. Annova for 'F' test

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	496.815	5	99.363	68.43	.012[b]
	Residual	107.888	4	26.972		
	Total	604.703	9			

a. Dependent Variable: ROA

b. Predictors: (Constant), AE, NNPL, RC, YID, NBEB

Source: SPSS output from private banks financial statements

The above output table is the F-test. The linear regression's F-test has the null hypothesis that the model explains zero variance in the dependent variable (in other words $R^2 = 0$). The F-test is highly significant, thus we can assume that the model explains a significant amount of the variance in ROA.

R-squared is measures the goodness of fit of the explanatory variables in explaining the variations in banks profitability measure ROA. As clearly described in Table 4.7 R-squared value for the regression model was 0.822. This indicates the explanatory variables in this study jointly explain about 82.2 percent of the variation in the profitability measure, return on asset. The remaining 17.8 percent of the variation in the profitability of private banks explained by other variables which are not included the model. Therefore, these explanatory variables together, are good explanatory variables of the profitability of private commercial banks in Ethiopia. Beside this F-statistics (68.43) which is the used to measure the overall test of significance of the model was presented, and null hypothesis can be clearly rejected since the p-value is 0.012 which is sufficiently low, the model is well fitted at 5 percent level of significance.

4.4.2. Regression Analysis Between Return on Equity and Explanatory variables

The second regression analysis was done to know how much the bank is earning on their equity investment, an amount that is measured by the return on equity (ROE) in relation with explanatory variables included in this study. This regression model was used:

$$ROEt = -19.338 - 0.16NBEB + 0.93RC - 0.070NNPL - 0.364YID + 3.925AE + \varepsilon \ldots \ldots (2)$$

Table 4.10. Regression result between ROE and explanatory variable

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-19.338	33.958		-.569	.599
	NBEB	-.016	.013	-1.354	-1.296	.025
	NNPL	-.070	.047	-.444	-1.478	.021
	RC	.009	.083	.031	.114	.015
	YID	-.364	.191	-1.088	-1.906	.012
	AE	3.925	1.698	2.924	2.312	.028

a. Dependent Variable: ROE

Source: SPSS output from private banks financial statements

As per table 4.10 above, rental expense and advertising expense has a positive relationship with profitability measure, meaning that when one increase profitability also increases; return on equity, and both are statistically significant at 5 percent significance level. National bank bill and asset quality are also statistically significant at 5 percent level of significance with return on equity. According to the above table, against to the hypothesis stated in chapter one the regression analysis result indicated that asset quality and profitability have a negative relationship with the bank profitability measure; return on equity. the negative relationship between return on equity and asset quality, it is significant at 5 percent significance level, which means the more non-performing loan the bank has, the lower the profitability. While, with regard to negative coefficient of interest expense of private banks; it indicates that the more they incur interest expense leads to lower profitability,

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Table 4.11 model summary of ROE and explanatory variables

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.936ª	.876	.720	6.33604

a. Predictors: (Constant), AE, NNPL, RC, YID, NBEB

Source: SPSS output from private banks financial statements

Table 4.11 also shows that variations in the dependent variable for the profitability, as measured by return on equity, are explained satisfactorily by variations in the selected explanatory variables, Because R-squared 0.87, which indicates that explanatory variables included in the study together explain about 87 percent of the variation in the profitability. The remaining 13 percent variation in the profitability of private commercial banks in Ethiopia is explained by other variables which are not included in the study.

Tabel 4.12 Annova for 'F' test of ROE

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1129.880	5	225.976	5.629	.003ᵇ
	Residual	160.581	4	40.145		
	Total	1290.462	9			

a. Dependent Variable: ROE

b. Predictors: (Constant), AE, NNPL, RC, YID, NBEB

Source: SPSS output from private banks financial statements

Table 4.12 also presented, the value F-statistics is 5.6 with p-value of 0.003, which used to measure the overall significance of the regression model. The null hypothesis can be clearly rejected since the p-value is 0.003 which is sufficiently low and we can say that the model is well fitted at 5 percent level of significance.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

In this chapter the major findings of the study are summarized; conclusions are drawn based on the findings and recommendations are forwarded for the concerned bodies.

5.1. Summary and conclusions

The main objective of this study was to investigate the determinants of profit of private commercial banks in Ethiopia. Specific objectives were to determine and evaluate the effects of bank-specific factors that were recent coming had significant impact up on the performance of the banks. Balanced time series data of fifty observations from 2005 to 2016 of five private commercial banks was analyzed using multiple linear regressions method. In this study, secondary data analysis was used to investigate the major determinant factors of profitability of private commercial banks in Ethiopia .Secondary data analysis based on the financial statement of private banks and two regression models were used for two profitability measures; (ROA) and (ROE). The major findings of the study results from secondary is presented as follows:

Descriptive analysis results revealed that Return on Asset and Return on Equity which both has a positive mean value 45.01 and 32.67 respectively meaning that the bank on an average they get 45.01 percent return on their asset and 32.67 returns on their equity. The national bank bill mean value results suggest that the bill in comparison to their profit is 10.68 bigger. The mean value of rental cost indicates that about 46.50 percent of general expense is composed of rental cost. The mean value of interest expense which 72.15 indicates that for private commercial banks out of their total expenses interest expense hold the majority 72.15 percent. The mean value of asset quality for Ethiopian private commercial banks shows that out of the total profit earned about 35.85 percent of their profit is held for provision of bad debts.

In relation to ROA, national bank bill, asset quality and rental cost have significant impact on the profitability of private banks. All explanatory variables have a positive relationship with return on asset in agreement with the hypothesis except national bank bill, asset quality and interest expense shows that they have an inverse relationship with profitability, meaning that as provision for bad debt increases profit decreases, as the national bank bill purchase increases profit decreases and as interest expense increases profitability decreases. Advertising expense of private commercial banks included in this study has the least significant relationship with ROA. The explanatory variables included in this study jointly explain about 72 percent of the variation in return on asset.

Regarding to ROE as a profitability measure for the study, asset quality, interest expense rental cost have strong significance. Where has rental cost has a positive relationship and significant at 5 percent significance level. Advertisement expense is also statistically significant with return on equity at 5 percent significance level. Against to the hypothesis the regression analysis result indicated that asset quality and profitability have a negative relationship with return on equity. Although, there is negative relationship between return on equity and profitability, it is significant, which means the more NPLs the bank has, the lower the profitability.

The Rsquare value for regression of ROA and ROE with profitability were 0.822 and 0.87 which means that the independent variables has the power of explaining dependent variable 82.22 and 87.6 percent respectively.

Also based on the correlation analysis done on return on asset and return on equity I was able to see that the factors used for the analyses are highly influential. For example coefficients of correlation between ROE and NBEB which was 0.808 , between ROE and YID which was 0.656 again between ROA and AE which was 0.871 shows a strongly positive and significant relationship between the variables. Not only that it is also clearly indicated between ROA and the other variables having a correlation coefficient of 0.87,0.97 and 0.754.

National bank bill is seen as by how much does it overwhelm the profit of the banks. The mean value of NBEB shows that on the average NBEB is 1068 percent greater than the profit of the banks. Also the correlation analysis between return on asset and the national bank bill shows a positive and significant relationship of 66.4 percent. Regarding the correlation the analysis between return on equity and national bank bill shows that a positive and significant relationship but when we see the regression result for ROA and ROE the results for beta coefficient of NBEB are -0.003 and -0.016 which means that the more national bank bill they purchase it will have a negative impact upon profit of private commercial banks ,Therefore proving H4 .

The correlation result for asset quality and return on asset which is measured by the provision held for bad debt was negative having a coefficient of -0.87 showing an inverse relationship. Also with regard to return on equity the correlation coefficient of asset quality was negative 0.29 which again shows an inverse relationship with return on equity. The regression result for return on asset and return on equity was negative -0.02 and -0.07 respectively. Which indicates an inverse relationship between and interpreted as the provision for bad debt increase return on asset and return on equity decreases respectively, therefore proving H8.

The correlation result between return on asset and rental expense or cost has a coefficient value of 0.097 which is direct and significant. Also the correlation result between return on equity and rental cost is 0.263 which is small but still significant. Regarding the regression result for rental expense with return on asset it has a positive coefficient of 0.123 which is interpreted as profit increase rental expense for the commercial banks also increase . Also the regression result between return on equity and rental expense has a positive coefficient of 0.009 which indicates that as rental expense (which the banks incur due to increase in number of branches) increase the profit also increase, therefore proving H5.

The correlation coeeficnet for return on asset and interest expense is 0.539 which is positive and significant. Not only with return on asset also the correlation coefficient for return on equity and interest expense is 0.656 which shows direct and positive correlation. Also the regression result between return on asset and interest expense shows an inverse relationship between interest expense and profit with a coefficient of -0.122. Meaning that as the interest expense for commercial banks increase their profitability decreases. The regression result between return on equity and interst expense has also a negative coefficient of -0.346 which again shows a negative relationship. Therefore proving H2.

Lastly the correlation coefincet between return on asset and advertising expense is 0.754. which is positive and significant. For advertising expense and return on equity is 0.871 which is still positive and significant. The regression result for return on asset and advertisement is 0.951 meanng that as the banks increase there advertisement expense simultaneously their profit will also increase. The regression result between return on equity and advertisement expense shows a coefficnet of 3.92 meaning that as advertisement expense increases the profit level also increase. Therefore proving H10.

Based on the findings it can be concluded that national bank bill , asset quality, rental expense , interest expense and advertisement expense have significant impact on ROA; which means any increase (decrease) on the value of these variables leads to an increase (decrease) on profitability of private commercial banks in Ethiopia. National bank bill , asset quality, rental expense , interest expense and advertisement expense have significant influence on ROE.

Based on the analysis bank expense level and governing body regulation towards the banking industry has very significant impact on the profitability of private commercial banks.. Thus, it can be

concluded that profitability in the Ethiopian banking sector is largely driven by asset quality and regulation than other internal and external factors.

5.2. Recommendations

In order to hold up risky surprises and maintaining the ever growing financial stability, it is vital to identify the new factors that determine and influence the overall performance of private commercial banks in Ethiopia. Therefore, based on the study results the following recommendations are forwarded for the concerned bodies.

Management bodies of private commercial banks should strive to strengthen the bank specific factors like asset quality, rental costs, and advertising expense. Though the banks can't do nothing about external macro factors Having control over these internal factors gives the banks a fighting chance for growth and porosity.

Tight government regulations towards the banking sector were one of the major determinants factors for the profitability of private commercial banks. Accordingly, government bodies should see the adverse effect of the policies imposed on the banks for existing private banks as well for the new entrants. For instance, the directive of NBE we can see its effect clearly on many aspect it holds the banks by shorting their liquidity, affecting loans and advance which generate profit and the negative 2 percent interest spread.

Considering the changes in macroeconomic indicators, the banks should be able to anticipate potential crises in order to avoid negative consequences for the bank specific indicators. This issue is topical not only for researchers but also for the bankers themselves, including bank management and shareholders.

It is suggested that managers in banks need to keep a special eye on credit-enquiring effectiveness. Although more thorough credit-enquiring activities consume more costs in order to identify the credit of the accommodators in advance, it can reduce the non-value-added activities of coping with a large number of trouble loans afterwards.

In general, as many literatures supports financial intermediation in Ethiopia is still in its early stages even by the standards of other low-income countries: more than 90 percent of the population is unbanked (versus an average of 60-70 percent elsewhere in Africa); and many other metrics such as

the total number of banks, banks contribution to GDP, bank accounts per person, branches per person, and bank credit per person are lower in Ethiopia compared to other African countries. Thus, private commercial banks should focus to reach this unmet demand of finance by adjusting their strategy with the government regulation.

At last, this study investigates the profit determinants of private commercial banks in Ethiopia. But, the variables included in the study were not exhaustive. Future researchers could include other bank specific and macroeconomic variables.

References

Access Capital Research, 2010. Ethiopian Banking Sector Review'

Andreas Dietricha and Gabrielle Wanzenriedb, 2009, „What Determines the Profitability of Commercial Banks? New Evidence from Switzerland" Institute of Financial Services IFZ, Lucerne University of Applied Sciences, Grafenauweg 10, 6304 Zug, Switzerland

Angbazo and Lazarus, 1997, „Commercial Bank Net Interest Margins, Default Risk, Interest-Rate Risk, and Off-Balance Sheet Banking" Journal of Banking and Finance 21, no. 1:55-87. Bank Scope 2005, Bureau Van Dijk, New York.

Belayneh Hailegeorgis, 2011 Determinants of Commercial Banks Profitability: An empirical study on Ethiopian Commercial Banks" Addis Ababa University.

Bessis, J 2009, Risk Management in Banking, 3rd ed., John Wiley & Sons: Chichester

Creswell John, 2009, 'Research Design' Qualitative, Quantitative, and Mixed Methods Approaches), third edition by SAGE publications.inc.2009

Cooper, D. C., & Schindler, P. S., 2009, „Business Research Methods' 9th edn.Tata McGraw-Hill. New Delhi

Ethiopian business review August, 2015 . No.17 pp35-37

Erina, J. & Lace, N. (2011). "Latvian Commercial Bank Profitability Indicators," Proceedings of the 17th International Business Information Management Association (IBIMA), ISBN: 978-0-9821489-6-9, 14-15 November 2011, Italy, Milan.

Fentaw leykun,(2015) meta analysis on the determinants of commercial banks profitability. Eupopean scientific journal, volume:11 issue no. 19

Habtamu Negusse,2012, "Determinants of Bank Profitability: An Empirical Study on Ethiopian Private Commercial Banks"

Hair, J F, Black, W C, Babin, B J, Anderson, R E, and Tatham, R L (2006). Multivariate Data Analysis, 6 th edn., New Jersey: Pearson Education.

Kosmidou, K, Tanna, S and Pasiouras, F 2005, „Determinants of Profitability of Domestic UK Commercial Banks: Panel Evidence from the Period 1995-2002‟, Money Macro and Finance (MMF) Research Group Conference

Malhotra, N (2007). Marketing Research: An applied Orientation, 5th ed., PHI, New Delhi.

Normand, T. (1999). Tutorial in Biostatistics Meta-Analysis: Formulating, Evaluating, combining, and Reporting Statistics in Medicine Statist. Med. 18, 321–359

Pak, H. S. & Sung, K. H. (1995). Comparative analysis of Korean bank‟s performance. Journal of Accounting, California State University, Vol. Fall 1995, pp. 143-150.

Rasidah Mohd Said and Mohd Hanafi Tumin (2011). Performance and Financial Ratios of Commercial Banks in Malaysia and China, *International Review of Business Research Papers* Vol. 7. No. 2. Pp. 157-169

Susan Moraa Onuonga, October 2014 , The Analysis of Profitability of Kenya`s Top Six Commercial Banks: Internal Factor Analysis ,Kenyatta University ,School of economics, Nairobi, Kenya

Songül KAKİLLİ ACARAVCI (2013)International Journal of Economics and Financial Issues Vol. 3, No. 1, 2013, pp.27-41

Tobias Olweny and Themba Mamba Shipho (2011). Effects of Banking Sectoral Factors on the Profitability of Commercial Banks in Kenya, Economics and Finance Review Vol. 1(5) pp. 01 – 30, July, ISSN: 2047 – 0401