



ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES
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**FACTORS AFFECTING THE PROFITABILITY OF PRIVATE COMMERCIAL
BANKS IN ETHIOPIA**

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July, 2018

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**THE THESIS SUBMITTED FOR THE REASON OF PARTIAL FULFILLMENT
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This is to certify that the thesis prepared by Simachew Shiferaw, entitled: “factors affecting the profitability of private commercial banks in Ethiopia and submitted in partial fulfillment of the requirements for MBA in general management complies with the regulations of the university and meets the accepted standards with respect to originality and quality.

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List of Acronyms

AIB- Awash International Bank S.C

BOA- Bank of Abyssinia

CAR- Capital Adequacy Ratio

CBE -Commercial Bank of Ethiopia

CLRM-Classical Linear Regression Model

COE- Cost Of Efficiency

CR- Credit Risk Management

DB- Dashen Bank S.C

DPTA- Deposit amount

GDP- Gross Domestic Production

IR-Inflation Rate

LIQ- Liquidity

LOA- Loan amount

NIB- Nib International Bank S.C

OLS-Ordinary Least Square

ROA- Returns on Asset

ROE- Returns on Equity

SIZ- Size of the Bank

SSA- Sub-Saharan Africa

UB- United Bank S.C

WB- Wogagen Bank S.C

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Abstract

Due to significant contribution of private commercial banks in the economic progress of Ethiopia, this study examines factors affecting the profitability of private commercial banks in Ethiopia by using panel data of banks over the period of 2005-2015 for the total of six private commercial banks. The explanatory research design and quantitative research approach was applied in the study. Using multiple linear regression model and t-static analysis on yearly data collected from the annual reports of those sample private commercial banks in Ethiopia. Profitability is measured by return on assets (ROA). The bank-specific factors, which were incorporated into the models, were credit risk management, cost efficiency, capital adequacy, size of the bank, liquidity, deposit amount and loan amount; and external variables included in the model were inflation rate and GDP growth. It was found that loan amount with positive relation, and deposit amount, cost efficiency and liquidity has statistically significant effect on banks' profitability in a negative relationship. On the other hand, variables like capital adequacy, bank size, credit risk management, inflation and GDP were found to have statistically insignificant. As a result, the study recommended that private commercial banks should on focusing and reengineering the banks alongside the key internal and external drivers and this will enhance their performance and to improve their profitability.

Key words: *profitability, ROA, determinants of profitability, private commercial banks.*

CHAPTER ONE

1. INTRODUCTION

1.1 Background of the Study

Every good economic system of a country is highly dependent on a sound financial system. No good financial system can do without well-structured and efficient financial institutions specifically the banking industry. Poor performance of these institutions does not only affect the economic growth and structure of the particular country but also affects the entire world. Good performance of these financial institutions is represented by affluence and economic growth in any country or region (Khan and Senhadji, 2001).

It is widely believed that financial system plays a vital role in the economic growth and development of a country. The importance of an efficient financial sector lies in the fact that, it ensures domestic resources mobilization, generation of savings, and investments in productive sectors (Ongore, 2013)

Banks play a very important role in the economic development of every nation. They have control over a large part of the supply of money circulation and stimulus for the economic progress of a country. The financial sectors contribution to growth lies in the central role, they play in mobilizing savings and allocating the resources efficiently to the most productive uses and investments in the real sector (Beck and Fuchs 2004).

Banks contribute to economic growth of the country by making funds available for investors to borrow as well as financial deepening in the country (Otuori, 2013). The financial system of the South Eastern European (SEE) countries is characterized by the dominant role of the banking sector, with the capital market segment for long-term finance being illiquid and, in some cases, underdeveloped, while non-bank financial intermediaries, such as life insurance companies and private pension funds, are still at an embryonic stage of development (Athanasoglou et al., 2006). The net income provides information on how well the bank is doing but the constraint on using it is that it not adjusted for the size of the bank. This makes it difficult to compare how well a bank is doing compared to one other.

In this way a basic measure of bank profitability is the return on asset (ROA) which corrects for the size of the bank. It is true that ROA provides useful and necessary information on bank profitability but this is not on the major interest of the bank's owners (equity holders). They are more concerned about how much the bank is earning on their equity investment, an amount that is measured by the return on equity (ROE), the net income per currency of equity capital (Mishkin Frederic et al., 2009).

Good performance of the bank is usually measured as per its profitability levels and has been essential to shareholders, customers as well as for banks continued survival and expansion (Nkegbe and Yazidu, 2015). The banking sector profitability is also central as the well-being of the industry is closely associated with the wellness of the whole economy in general (Alkhazaleh and Almsafir, 2014).

Profitability of banks is important since the soundness of an industry is closely connected to the soundness of the whole economy (Lipunga, 2014). The financial strength of a banking institution is unquestionably associated to its profitability. Thus, the most important need of any banks management and leadership is to make profits on a continuous basis since this will guarantee banks continuous existence.

The financial sector of Ethiopia, like most in developing countries, is dominated by banking industry. The Ethiopian banking industry is vital to the Ethiopian economy and plays a crucial financial intermediary function. Banking institutions in Ethiopia play a crucial role in national growth and such roles are growing day-by-day. Those banking sector plays the function of financial intermediation between borrowers and savers that entails the mobilization of capital from individuals with surplus cash and channeling the funds to the deficit economic units.

This research were carried out to find out the external and bank-specific factors that affect the profitability of private commercial banks in Ethiopia for the period of 2005-2015. The variable that was select as a dependent variable is ROA. ROA simply connotes the management efficiency and depicts how effective and efficiently the bank management operate as they employ the organizations assets into the earnings. This reflects the efficiency with which the banks managers use banks investment resources or assets in generation of income (Sehrish, Irshad& Khalid, 2010).

A high ROA ratio is a clear indicator of a good performance or profitability of a banking entity (Bentum, 2012). Another alternative of profitability measurement method is return on equity (ROE), defined as the net profits over average equity. Bank profitability is best measured by ROA, because it represents the best measure of the ability of a firm to generate returns on its portfolio assets (Kosmidou, 2008; Naceur and Goaid, 2008). ROA indicates the profit earned per unit asset and which is most important, it shows the management's ability to utilize the bank's financial and real investment resources to generate profits. Therefore, ROA is considered as more significant and a better profitability measure and dependent variable.

The objective of this study is to identify factors affecting the profitability of private commercial banks in Ethiopia, for the period of 2005 to 2015. The dependant variable is ROA and the explanatory variables were: inflation rate, growth domestic product (GDP), cost efficiency management, liquidity, credit risk management, capital adequacy, loan amount, deposit amount and size of bank and Regression analysis, descriptive analysis, and correlation analysis were used in the study.

1.2. Statement of the Problem

Banking industry especially in the developing countries has witnessed momentous changes over the past few years (Al-Jarrah, Ziadat and El-Rimawi, 2010). However, compared to other sectors the banking sector has experienced weighty changes mostly due to technological innovations and the unstoppable forces of globalization have continued to create expansion opportunities as well as challenges to banks managers to ensure their bank remain profitable and competitive (Scott & Arias, 2011). As such, banks face more high degree of risks compared to other business. Such risks are capable of adversely affecting the bank's profitability (Adeusi, Kolapo&Aluko, 2014).

The basic goal of any business and economic bank is profitability. Banks use all of their efforts to achieve the objectives and meet the economic needs of the community they serve and they are considered as one of the main tools of monetary policy in each country's economic system for one hand gather small savings and wandering funds in the hands of the people and on the other hand in line with the implementation of economic policies and credit which has been set, direct the financial resources to steering the wheel of manufacturing and industrial sectors(Sufian& Chong, 2008).

But alongside these, banks in order to achieve their objectives, they have to identify and know effective factors that help to have a positive performance and profitability, thus identification of banks performance in the implementation of each of its tasks can present a range of strengths and weaknesses in banks.

The profitability and efficiency also become one of the challenges faced by the banks to strengthen their financial positions in order to meet the risks associated with openness and globalization. An efficient management of the banking operations aimed at ensuring growth in profits and efficiency requires up to date knowledge of all those factors on which bank efficient deepens (Chiorazzo et al. 2008).

There was a study that shows different and contradictory results. From those studies regarding to the impact of bank size on banks performance is hotly debated among researchers. While (Alexiou and Sofoklis 2009 and Iannotta et al. 2007) have found economies of scale for large banks, (Athanasoglou et al. 2008 and Barros et al. 2007) have found diseconomies of scale for large banks.

The studies about capital adequacy, different researchers found different Results. Beckmann (2007) argues that high capital leads to low profits since banks with a high capital ratio are risk-averse. Opposed to this hypothesis, Berger (1995) examined that a higher equity to asset ratio increases profitability due to lower costs of financial distress.

Previous studies made in Ethiopia used some variables to measure profitability, while this study used more variables to find out the effect of the factors on the profitability of the sector. Very little empirical studies have been carried out in the same area, so an empirical investigation is required which could be of interest to academics, bankers, and policy makers. Birhanu (2012) and Habtamu (2012) doing the research on the factors affecting profitability of commercial banks, but they did not include the variables like credit risk management and which this is important variables that affect profitability.

Changes in credit risk may reflect changes in the health of a bank's loan portfolio, which may affect the performance of the institution. Duca and McLaughlin (1990), among others, conclude that variations in bank profitability are largely attributable to variations in credit risk, since increased exposure to credit risk is normally associated with decreased firm profitability.

They also didn't include loan amount as a variable in the study. Loan amount is the main source of income and is expected to have a positive impact on bank performance. Other things constant, the more deposits are transformed into loans, the higher the interest margin and profits. However, if a bank needs to increase risk to have a higher loan-to-asset ratio, then profits may decrease (Sehrish. and Khalid, 2011).

In regard to the above, in relation to banking industry of Ethiopia and profitability in particular along with the gap in the literature review, with respect to profitability and the link between profitability and determinant factors were considered to detailed investigation. Since banks just like the other firms seek economic profitability to achieve this important goal, it is necessary to identify effective variables.

So the objective of this paper is to examine the external and internal factors that affect the profitability of the private commercial banks in Ethiopia. Profitability is the most appropriate indicator to measure the performance of a bank and also profitability is measured by Return on Asset (ROA), while the independent variables used in the study were CAR (Capital Adequacy Ratio), operational cost efficiency, liquidity, credit risk management, Banks loan amount, Banks deposit amount and size of the bank as an internal and inflation rate and GDP (Growth Domestic Product) rate as an external variables.

1.3. General Objectives of the Study

The general objective of the study is to examine factors affecting the profitability of private commercial banks in Ethiopia for the period covering of 2005 to 2015 by using the data of annual financial reports.

1.4. Specific Objectives of the Study.

- To examine the relationship between credit risk management and profitability of private commercial banks in Ethiopia.
- To examine the relationship between liquidity and profitability of private commercial banks in Ethiopia.
- To examine the relationship between cost efficiency management and profitability of private commercial banks in Ethiopia
- To examine the relationship between capital adequacy and profitability of private commercial banks in Ethiopia.
- To examine the relationship between size of the bank and profitability of private commercial banks in Ethiopia.
- To examine the relationship between loan amount and profitability of private commercial banks in Ethiopia.
- To examine the relationship between deposit amount and profitability of private commercial banks in Ethiopia.
- To examine the relationship between growth domestic product and profitability of private commercial banks in Ethiopia.
- To examine the relationship between inflation rate and profitability of private commercial banks in Ethiopia.

1.5 Research Hypothesis

According to the specific objectives, the following hypotheses were formulated based on the factors taken into consideration in this study. Hypothesis of the study stands on the theories related to a bank's profitability and related to the previous empirical studies done by different researchers. Thus, based on the objective, the study seeks to test the following hypotheses:

Capital Adequacy

The equity to asset ratio measures how much of banks assets are funded with owners funds. According to literature review, academic research is mixed regarding to the relationship between the capital ratio and banks profitability. Berger (1995) examined the signaling hypothesis and bankruptcy cost hypothesis; suggesting that a higher equity to asset ratio increase profitability due to lower costs of financial distress. Therefore, there is an ambiguous relationship between capital ratio and banks profitability.

- *HP1: There is a significant positive relationship between the capital adequacy and commercial bank's profitability.*

Cost Efficiency Management

The cost-to-income ratio, a proxy for cost efficiency, has been declining almost everywhere to different degrees Albertazzi and Gambacorta (2009), meaning that banks have lower expenses for a given level of output. Previous studies suggest a positive and highly significant effect of efficiency on profitability see, for example; (Athanasoglou et al. 2008; Dietrich and Wanzenried 2011, and Pasiouras and Kosmidou 2007) among others. This relation would imply that operational efficiency is a prerequisite for improving the profitability of the banking system, with the most profitable banks having the lowest efficiency ratios. Therefore it is also expected a direct association between cost efficiency management and profitability.

- *HP2: There is a significant positive relationship between the cost management (efficiency) and commercial bank's profitability.*

Liquidity

Liquidity considers a major concern in banks, because without sufficient liquidity to meet demands of their depositors risk experiencing bank run. Holding assets in a highly liquid form tends to reduce income as liquid asset are associated with lower rates of return. For instance, cash which is the most liquid of all assets is a non-earning asset. It would therefore be expected that higher liquidity would negatively correlates with profitability.

- *HP3: There is a significant negative relationship between the liquidity and commercial bank's profitability.*

Bank Size

Bank size is measured by total assets. One of the most important questions in the literature is if there exists an optimal bank size in order to maximize bank profitability. It has been argued that a growing bank size is positively related to bank profitability (Smirlock, 1985; Pasiouras and Kosmidou, 2007). If the bank becomes extremely large in size, a negative effect could be between size and bank profitability, because the bank is harder to be managed due to bureaucratic and other reasons.

Therefore, the size-profitability relationship is expected to be non-linear (Eichengreen and Gibson, 2001). In order to emphasize this possible non-linear relationship, as a proxy use the logarithm of banks total assets.

- *HP4: There is a significant positive relationship between the bank size and commercial bank's profitability.*

Credit Risk Management

The study of Dietrich et al. (2011) on the performance of banks in Switzerland is particularly interesting because the authors study the impact of many variables on the performance of both pre crisis and during the crisis. Sometimes they notice changes in these impacts with the arrival of the crisis, and this is especially the case for credit quality.

- *HP5: There is a significant positive relationship between the credit risk management and commercial bank's profitability.*

Deposit Amount

Deposits are the main source of bank funding and hence it has an impact on the profitability of the banks. High growth rates might attract additional competitors and this may cause the decrease of the profits for all market participants. Thus, the sign of this variable is either positive or negative.

- *HP6: There is a significant negative relationship between the gross domestic product growth and bank's profitability.*

Loan Amount

One of the most important roles of banks is to offer loans to borrowers and loans serves as the main source of earnings for commercial banks. In different words, loans are the highest yielding asset on banks balance sheet. According to Abreu and Mendes (2002) the more the banks offer loans the more they do generate revenue and more profit they make. Therefore, loans should affect profitability as the bank is working vigilantly and not taking excessive risk.

- *HP7: There is a significant positive relationship between the gross domestic product growth and bank's profitability.*

Gross Domestic Product

GDP growth is expected to have a positive impact on bank profitability according to the literature on the association between economic growth and financial sector profitability (Demirguc-Kunt and Huizinga, 1999; Bikker and Hu, 2002; Athanasoglou et al., 2008). In addition, there is expectation that a positive relationship between bank profitability and GDP development as the demand for lending increases or decreases.

HP8: There is a significant positive relationship between the gross domestic product growth and bank's profitability.

Inflation Rate

The effect of inflation on bank profitability depends on how inflation affects both salaries and other operating costs of the bank (Ponce 2012). Perry (1992) also suggested that the effects of inflation on bank performance depend on whether inflation is anticipated or unanticipated. In the anticipated case, the interest rates are adjusted properly, bringing a faster increase in revenues rather than costs and therefore having a positive impact on bank profitability. Conversely, in the unanticipated case, banks may be slow in adjusting interest rates resulting in a faster increase of costs than revenues and therefore having a negative impact on bank profitability.

- *HP9: There is a significant positive relationship between the inflation rate and bank's profitability.*

1.6 Significance of the Study

The investigation to establish the underlying factors responsible for private commercial banks performance in Ethiopia is paramount, given the recent reforms of the commercial banking sector. The study provides insight for bank owners and policy makers, on factors that determine bank performance. Thus, this study contributes to more understanding of the factors that have an impact on commercial bank performance in Ethiopia. Commercial banks in Ethiopia have to review the way they have been conducting business. Understanding factors that have great impact on bank performance is essential for survival and also useful in sustaining profitability in the dynamic and competitive business.

This study made to provide more literature on to what extent the bank-specific and external factors will affect the bank performance, there by allow the authors to discover the factor that would bring greatest impact and that does not has significant impact. Hence, this result can be used as a reference in further researches as it helps other researchers to better understand and provide a clearer picture on the banks performance determinants.

1.7 Scope of the Study

The study focuses on performance of private commercial banks in Ethiopia, purposely to establish the key underling factors responsible for private commercial banks performance in Ethiopia.

Even if there are so many factors such as capital adequacy, management efficiency, earning quality, liquidity, bank size, credit risk, cost efficiency, technology, human capital, loan performance, gross domestic product(GDP), inflation, regulation, income diversification, effective tax rate among others that affects commercial banks performance, this study is limited to some factors such as, deposit amount, loan amount, credit risk management, cost management, capital adequacy, bank size and liquidity as a bank specific factor and inflation and GDP as an external determinants of profitability of private commercial banks in Ethiopia.

Even if currently there are nineteen commercial banks operating in Ethiopia, only sixteen private commercial banks were used as population and as a sample six banks (Awash bank, Dashen bank, bank of Abyssinia, Nib bank, United bank and Wegagen bank) were selected as a sample, because the other banks don't have eleven years data for the study. Commercial bank of Ethiopia is not included in this study, because CBE is the leading and dominant bank in Ethiopia and generalizes the result to the whole bank may become misleading. So, the researcher believed that including CBE in this study will affect the result and it might mislead the conclusion.

This study is limited to quantitative aspects of the factor that affect the financial performance of banks though those factors have an impact on qualitative aspects of banks' performances. In this study ROA was used as a main performance measure. The reason for using ROA as the measurement of bank performance was because ROA reflects the ability of a bank's management to generate profits from the bank's assets and also indicates how effectively the bank's assets are managed to generate revenues. The findings of this research also cannot be considered globally because this research is confined to Ethiopian private commercial banking sector only.

1.8 Organization of the Paper

This paper was structured into five main chapters as follow:

The second chapter focuses on the review of the literature. Literature is about reviewed according to the specific objectives used in the study. The conceptual framework of the study is outlined.

The third chapter is about the methodology. It explains the research design. It also gives details about the population, sample and sampling procedures that were used in the study. It explains the research instruments, methods of data collection, data analysis. The fourth chapter is said to be the climax of this study in which it associated with the results and findings. This chapter was focuses on the data presentation, analysis and discussion. The last chapter is chapter five and this chapter is about summarizes and concludes all the main findings and discussions relating to the hypotheses developed. Added to that, recommendations based on the result were presented.

CHAPTER TWO

LITERATURE REVIEW

2 INTRODUCTION

Literature review is a written summary of journal articles, books and other documents (both published and unpublished) that describes the past and current state of information, organizes the literature into topics and documents a need for a proposed study. The chapter needs to review of various studies that are relevant to different factors that would be determining the profitability of banks and involves a critical examination of important issues so as to determine the current facts.

Commercial banks are important financial institutions in the financial system and the economy. They have played an important role in the tremendous economic development that has taken place in the region in recent years. Banks mobilize, allocate and invest the greatest part of the economic agent's savings. In addition, their performance has important consequences on capital allocation, firm expansion, industrial growth and economic development. Therefore, profitability of banks is very important not only at the individual bank level, but also in the macroeconomic level. Profitability is a reflection of how banks are run, in a given environment in which they operate.

Profitability is vital in maintaining the stability of the banking system and contributes to the state of the financial system (Goddard et al., 2004). Therefore, the determinants of bank performance have attracted the interest of academic research, financial markets and bank supervisors.

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

2.1. The Role of Banks

Why do banks exist? The first answer that comes in mind is that banks act as an intermediary between those who are in need for money and those who have excess of money. Based on the perfect capital market of Modigliani-Miller (1958), financial institutions are unnecessary because entities can borrow and save directly through capital markets. But in reality, such a perfect market does not exist; transaction costs and monitoring costs deform capital markets.

Moreover, monitoring the borrower's behavior is required to safeguard the continuity and stability of banking sector due to moral hazard issues. To sum up, in inefficient markets, financial intermediation is helpful because banks have lower monitoring and transaction costs than individuals, due to economies of scale.

In addition, another important aspect of banking is the function of maturity transformation. Banks receive short-term savings from depositors and on the other hand transform those into long-term loans to borrowers. Therefore, by holding a part of short-term savings in liquid assets or cash, they can withstand daily withdrawals from depositors. Different from banks, capital markets cannot achieve maturity transformation with such benefits. Individual investors face liquidity, price and credit risk and they cannot diversify as banks can do.

Furthermore, banks diversify their liquidity risk, since savers do not withdraw their deposits at the same time and they only keep a part of deposits in liquid cash. Also, individual savers can diversify their investment in terms of credit and price risks but it remains doubtful that they could withdraw the investment without facing liquidity issues at any time.

The banking system of Ethiopia demonstrates a vital role in contributing to national economy by intermediating between the savers and productive investors. The financial performance of banks affects the interests of depositors, share holders, regulators, potential investors and corporate owners. As banks dominate the financial sector in Ethiopia, ensuring the financial health of these institutions is likely going to ensure the health of the performance of the financial system of the country (Abebaw and Kapur, 2011).

2.2. Theoretical Review

This section was built on concepts and definitions. In light of this purpose, this chapter is to review the literatures related to bank profitability and its determinants. The theoretical framework shows the relationship that exists among dependent and independent variables.

2.3. Commercial Banks profitability (Return on Asset)

Profitability of the banking sector is a subject that has received a lot of attention in recent years and there is now a large literature which has examined the role played by management of resources in determining bank profitability. Profitability connotes a situation where the income generated during a given period exceeds the expenses incurred over the same length of time for the sole purpose of generating income (Sanni, 2006).

Profitability can be expressed either accounting profits or economic profits and it is the main goal of a business venture. Profitability portrays the efficiency of the management in converting the firm's resources to profits. Thus, firms are likely to gain a lot of benefits related increased profitability (Anwar, 2014). One important precondition for any long-term survival and success of a firm is profitability. It is profitability that attracts investors and the business is likely to survive for a long period of time. Many firms strive to improve their profitability and they do spend countless hours on meetings trying to come up with a way of reducing operating costs as well as on how to increase their sales (Schreibfeder, 2006).

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

Golin (2001) pointed out the ROA has recognized as the key ratio for the estimation of bank profitability and has become the most basic measure of bank performance in the literature.

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

2.4 Factors Influencing Banks Profitability

A number of factors have influenced profitability of commercial banks ranging from to those which are under the control of bank management and policy objectives (internal factors) to those factors which are beyond bank management level (external factors).The internal determinants include management controllable factors such as liquidity, investment in securities, investment in subsidiaries, loans, non-performing loans, and overhead expenditure. Other determinants such as savings, current account deposits, fixed deposits, total capital and capital reserves, and money supply also play a major role in influencing the profitability. Similarly, external determinants include those factors which are beyond the control of management of these institutions such as interest rates, inflation rates, market growth, Gross Domestic Product (GDP) and market share.

The internal factors reflect the management policies of the banks and decisions made about the sources of funds, expenses and liquidity management (Onuonga, 2014). Internal factors of bank profitability can be defined as those factors that are influenced by the bank's management policy objectives and decisions. Management effects are the results of differences in bank management policies, decisions, objectives, and actions reflected in differences in bank operating results, including profitability. Zimmerman (1996) has mentioned that management decisions, particularly regarding loan portfolio concentration, were an important factor contributing in bank performance.

External determinants include those factors which are beyond the control of management of these institutions such as, inflation rates, gross domestic product. The bank-specific variables are internal factors and controllable by bank's managers while the industry-specific and macroeconomic variables are external factors and uncontrollable. In this study all factors which affect bank profitability are not included, but are focused on the analysis of the relationship between ROA (dependent variable) and 7 variables as internal independent variables and 2 variables as macroeconomic independent variables taken into consideration.

2.4.1 Capital Adequacy

Capital adequacy refers to the sufficiency of the amount of equity to absorb any shocks that the bank may experience (Kosmidou, 2008). The ratio of Equity to total Asset is employed as a measure for bank Capital Adequacy. This measures the percentage of the total asset that is financed with equity capital. Capital adequacy therefore describes the sufficiency of the amount of equity that can absorb shocks that banks may experience. Capital adequacy requirements generally aim to increase the stability of the banking system by decreasing the likelihood of a bank's failure and to resist unexpected negative externalities that exist in banking system.

Capital Adequacy Ratio (CAR) shows the banks' ability to maintain sufficient capital. The main activity of the bank is to collect funds and channel them back in the form of loans. If a bank has enough capital or meet the requirements, it can operate to create profit. In addition, the bank can provide large loans and it has enough assets as collateral for third party funds deposited in the bank so that it will increase public trust. So when the ratio of capital is higher, the performance of the bank is better(Saeed 2014).

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

A bank should be required to have adequate capital to support its risk assets in accordance with the risk-weighted capital ratio framework. Research studies indicated that capital strength have a positive and dominant influence on profitability of commercial banks in Ethiopia. Indranarain (2009); Imad, Qais, &Thair . (2011) and Berger (1995) also stated that banks with high capital ratio tend to earn more profit through translating the safety advantage into profit.

Research studies conducted in Ethiopian commercial banks also revealed a positive relationship between banks capital and profitability. Research studies indicated that capital strength have a positive and dominant influence on profitability of commercial banks in Ethiopia (Belayneh, 2011). A higher capital level brings higher profitability for Ethiopian commercial banks since by having more capital; a bank can easily adhere to regulatory capital standards and the excess capital also can be provided as loans. Capital adequacy is therefore considered to have effect on profitability of commercial banks.

According to risk-return tradeoff, a higher equity to asset ratio leads to a lower expected return. Opposed to risk-return hypothesis, Berger (1995) examined the signaling hypothesis and bankruptcy cost hypothesis; suggesting that a higher equity to asset ratio increase profitability due to lower costs of financial distress. Therefore, there is an ambiguous relationship between capital ratio and bank's profitability.

2.4.2 Operational Cost Efficiency

Bank operating expenses should be considered as a determinant and prerequisite for improving bank performance, since expenditures are controllable expenses and if efficiently managed can contribute positively to the performance of commercial banks. The experience from South Eastern Europe banks is that SEE banks lacked substantial competence in expenses management to the extent of failing to pass over the increased costs to customers so that banks maintain their profits (Athanasoglou et al., 2006).

In addition, Interest expenses are part of bank expenses which implies that the higher the interest costs, the lower the rate of return on equity, which means that interest expenses are bank expenses which should be managed efficiently to improve on bank profitability. The implication is that higher funding costs have a negative impact on bank profitability. (Molyneux and Thornton, 1992).

Beck and Fuchs (2004) examined the various factors that contribute to high interests spread in Kenyan banks. Overheads were found to be one of the most important components of the high interests rate spreads. An analysis of the overheads showed that they were driven by staff wage costs which were comparatively higher than other banks in the SSA countries.

Cost efficiency and profit efficiency correspond respectively to two economic objectives of cost minimization and profit maximization. Cost efficiency is the ratio between the minimum cost at which it is possible to attain a given volume of production and the realized cost. The Expense to Income ratio is used as proxy for operating efficiency and it is used to measure the impact of efficiency on bank profitability.

2.4.3 Bank Size

One of the most important questions in the literature is if there exists an optimal bank size in order to maximize bank profitability. It has been argued that a growing bank size is positively related to bank profitability (Smirlock, 1985; Pasiouras and Kosmidou, 2007).

Bank's size specifies that the size of a bank influence performance such that larger banks perform well compared to a small-sized banks through harnessing the economies of scale in their transactions such that big banks will enjoy high profits (Sehrish, Irshad& Khalid, 2010). Large banks are assumed to have more advantages as compared to their smaller rivals and have a stronger bargaining capability and making it easier for them to get benefits from specialization and from economies of scale and scope (Alkhazaleh&Almsafir, 2014). In addition, empirical evidence indicates that size of a bank directly affects profitability by reducing the cost of raising capital for big banks (Tariq et al., 2014). Size captures the economies or diseconomies of scale of an institution and normally the natural logarithm of bank's assets is normally used as a proxy of size (Cull et al., 2007).

2.4.4 Credit Risk management

Credit risk is one of the factors that affect the health of an individual bank. The extent of the credit risk depends on the quality of assets held by an individual bank. The quality of assets held by a bank depends on exposure to specific risks, trends in non-performing loans, and the health and profitability of bank borrowers (Baral, 2005).

Credit risk indicator can be represented by different measurements including loans loss provision to total loans ratio as well as growth in bank deposits. Higher provisions for loan losses could signal a possibility of future loss on loans, and could also be a sign of a timely recognition of bad loan by cautious banks (Munyambonera, 2011). A higher ratio of nonperforming loans to total loans and an absolute deterioration of credit portfolio quality negatively affect commercial bank's profitability (Roman and Tomuleasa, 2013).

The study of Dietrich et al. (2011) on the performance of banks in Switzerland is particularly interesting because the authors study the impact of many variables on the performance of both pre crisis and during the crisis. Sometimes they notice changes in these impacts with the arrival of the crisis, and this is especially the case for credit quality.

2.4.5 Liquidity

Inadequate liquidity is one of the main reasons of crisis and bankruptcy of banks. However, maintaining high cash reserves creates an opportunity cost, and the existence of free cash flow reduces the profitability of banks. But in periods of high volatility and those of high uncertainty, it is possible that banks maintain high cash reserves in order to avoid liquidity risk. In this regard, Burke(1989) and Molyneux and Thornton(1993) concluded that there is an inverse relation between liquidity and profitability of banks (Davydenko, 2010).

Liquidity on the other hand is defined as the bank's ability in meet its obligations, mainly those of depositors of funds to the bank (Ongore & Kusa, 2014). The availability of liquidity is influences profitability since it enhances the capacity of the bank to acquire cash, in order to fulfill present and essential needs. For the commercial banks to gain public assurance, they should have sufficient liquidity to meet the demands loan holders and depositors needs (Chinoda, 2014).

Small liquidity level serves as ground reality of failure of a bank. Liquidity problems also lead to issues in generating funds and failure to fulfill current and unanticipated variations in the sources of financing (Tariq et al., 2014). Loan to assets ratio is normally used to calculate the liquidity position of a bank and the ratio indicates percentage of total assets used to provide loans. Liquidity measures the ability of banks to meet short-term obligation or commitments when they fall due.

Traditionally, banks take deposit from customers and give out loans. For this reason, the ratio of bank's advances to customer deposits is used as proxy for liquidity. Liquidity is a prime concern for banks and the shortage of liquidity can trigger bank failure.

2.4.6 Bank loans

Loan is the main source of income and is expected to have a positive impact on bank performance. Other things constant, the more deposits are transformed into loans, the higher the interest margin and profits. However, if a bank needs to increase risk to have a higher loan-to-asset ratio, then profits may decrease. In addition, as bank loans are the principal source of income, we expect that noninterest bearing assets impact negatively on profits.

Bank loans which is explained by total loans divided by total asset provides a measure of income source and measures the liquidity of bank assets tied to loans. Total Loan/Total Asst is included in the study of profitability as an independent variable to determine the impact of loans on banks' profitability. This variable is obtained through the ratio of bank loans to total assets.

Loan = loans to total assets

One of the most important roles of banks is to offer loans to borrowers and loans serves as the main source of earnings for commercial banks. In different words, loans are the highest yielding asset on bank's balance sheet. According to Abreu and Mendes (2002) the more the banks offer loans the more they do generate revenue and more profit they make. Therefore, loans should positively affect profitability as the bank is working vigilantly and not taking excessive risk.

2.4.7 Bank deposits

Deposits to assets ratio is another indicator of measuring profitability of commercial banks. DPTA is considered as liability of banks. Customers make current, fixed or saving deposits in banks. These deposits are considered as Bank liabilities because they have to be repaid back to the depositors. Banks invest these deposits in other projects and generate profits on them. Therefore, these deposits are considered as the main sources of banks' funding and hence they influence the profitability of banks. This ratio can be calculated as dividing total deposits by total assets. Mathematically: $DPTA = \text{Total Deposits} / \text{Total Assets}$.

Deposits are the main source of bank funding and hence it has an impact on the profitability of the banks. Even though, the contribution of increasing amount of deposits to the profitability depends upon a number of factors. Firstly, it depends on the capability of the bank to convert deposit liabilities into earnings. Increasing those means that a bank has more funds available to use in different profitable ways and that should increase ROA (Holden and El-Bannany, 2006). But on the other hand, high growth rates might attract additional competitors and this may cause the decrease of the profits for all market participants. Thus, the sign of this variable is either positive or negative.

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

2.4.8 GDP Growth Rate

Poor economic conditions can worsen the quality of the loan portfolio, generating credit losses and increasing the provisions that banks need to hold, thereby reducing bank profitability. In contrast, an improvement in economic conditions, in addition to improving the solvency of borrowers, increases demand for credit by households and firms with positive effects on the profitability of banks (Athanasoglou et al. 2008).

GDP growth is expected to have a positive impact on bank profitability according to the literature on the association between economic growth and financial sector profitability (Demirguc-Kunt and Huizinga, 1999; Bikker and Hu, 2002; Athanasoglou et al., 2008). In addition, there is expectation that have a positive relationship between bank profitability and GDP development as the demand for lending increases or decreases in cyclical upswings or downswings.

2.4.9 Inflation Rate

Inflation is a supported build in the normal cost of all merchandise and administrations processed in an economy. Money loses buying force throughout inflationary periods since every unit of money purchases dynamically fewer merchandise. Swelling is an ascent in the general value level. Ponce (2012) stated that the effect of inflation on bank profitability depends on how inflation affects both salaries and other operating costs of the bank.

Perry (1992) also suggests that as the effects of inflation on bank performance depend on whether the inflation is anticipated or unanticipated. In the anticipated case, the interest rates are adjusted accordingly, resulting in revenues to increase faster than costs and subsequently, having positive impact on bank profitability.

Inflation affects companies' pricing behavior. For instance, if companies expect general inflation to be higher in the future, they may believe that they can increase their prices without suffering a drop in demand for their output (Driver and Windram 2007, 2009).

Moreover, Staikouras and Wood (2003) revealed that an increase in the price of labor and indirect effects bring changes in interest rates and assets prices on the profitability of banks. Also, Perry (1992) suggested that the effects of inflation on bank performance depend on whether inflation is anticipated or unanticipated. In the anticipated case, the interest rates are adjusted properly, bringing a faster increase in revenues rather than costs and therefore having a positive impact on bank profitability. Conversely, in the unanticipated case, banks may be slow in adjusting interest rates resulting in a faster increase of costs than revenues and therefore having a negative impact on bank profitability.

2.5 Empirical Study

Abdullah, Parvez and Ayreen (2014) probed the macroeconomic determinants of 26 commercial bank's profitability in Bangladesh for 2008 to 2011. They found that there is positive relationship between profitability, capital adequacy, and bank size. Jabbar (2014) examined banks profitability in 31 commercial banks for 2009-2012. He found that capital and banks size are positively related with profitability. His results also showed that the effect of loan loss provision, deposit growth, and interest expense on profitability is statistically insignificant.

Schiniotakis (2012) analyzed the factors that affect the profitability of commercial and cooperative banks of Greece. The results showed that profit is greatly influenced by the type of bank and return on assets is positively related with bank capitalization. Ani, Ugwunta, Ezeudu and Ugwuanyi, (2012) studied determinants of banks profitability in Nigeria by taking a sample of 15 banks for the period of 2001 to 2010. Using Pooled Ordinary Least Square the results showed that it is not necessary that higher total assets result in higher profitability because of diseconomies of scale. Equity to total assets, debts to total assets and deposits to total assets ratios contributes to profitability. As these ratios increase or decrease profitability will also increase or decrease.

Berger (1995) stated that banks with high capital ratio tend to earn more profit through translating the safety advantage into profit. Most studies also demonstrated that capital adequacy has positive and significant effect on profitability. The researcher also identified that capital adequacy ratio affected ROA of USA banks positively in 1983-1989 and negatively in 1989-1992. Berger argued that the relationship between capital adequacy ratio and profitability depends on the specific circumstances of the time period observed. According to the results of the study, a high capital adequacy ratio positively affects profitability when financial situation of banks is perceived as risky and it negatively affects profitability in normal situations due to alternative cost of capital.

In their study Demerguc-Kunt and Huizingha (1999) examined the determinants of bank interest margins and profitability using a bank level data for 80 countries in the period of 1988- 1995. The set of variables included several factors accounting for bank characteristics, macro-economic conditions, taxation, regulations, financial structure and legal indicators.

They reported that a larger ratio of bank assets to GDP and a lower market concentration ratio lead to lower margins and profits. Foreign banks have higher margins and profits than domestic banks on developing countries, while the opposite prevail in developed countries.

Abreu and Mendes (2000) investigated the determinants of bank's interest margins and profitability for some European countries in the last decade. They indicated that well-capitalized banks face lower expected bankruptcy costs and this advantage translates into better profitability. Although with a negative sign in all regressions, the unemployment rate was relevant in explaining bank profitability. The inflation rate was also relevant in their study.

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

Obamuyi (2013) examined profitability elements for 20 Nigerian commercial banks for 2006-2012. The results showed that high capital, interest income as well as favorable economic conditions contributes positively to banks performance. Whilst size of bank has a significant negative effect on profitability. Riaz (2013) studied the profitability determinants of 32 commercial banks in Pakistan during 2006-2010. The results showed that bank size are significantly related to return on asset and have a significant impact on profitability

A study conducted by Guru (2002) investigated the determinants of bank profitability in Malaysia, using a sample of 17 commercial banks during the 1986 to 1995 period. The profitability determinants were divided into two main categories, namely the internal determinants (liquidity, capital adequacy, and expenses management) and the external determinants (ownership, firm size and economic conditions). His finding revealed that efficient expenses management was one of the most significant factors explaining high bank profitability.

Among the macro indicators a high interest rate ratio was associated with low bank profitability and inflation was found to have a positive effect on bank performance.

Lipunga (2014) evaluated the determinants of profitability of listed banks in Malawi for a period of 5 years from 2009 and 2012 using external (market) and internal measures of profitability. The study employed multivariate regression and correlation analysis where Earning Yield and return on assets (ROA) were used to determine the internal and external determinants of profitability. Regression analysis results established that size of the bank, management efficiency and liquidity had a statistically significant effect on return on assets whereas capital adequacy had insignificant impact. Additionally, the research established that earnings yield significantly influences by size of the banks, management efficiency and capital adequacy while liquidity had an insignificant impact on earnings yield.

Said and Tumin (2011) analyzed performance and financial ratios of commercial banks in Malaysia and China. The paper investigated the impact of bank-specific factors which include liquidity, credit, capital, operating expenses and the size of commercial banks on their performance, which is measured by return on asset and return on equity. The results indicate that ratios have different impact on the performance of banks in both countries, except credit and capital ratios.

Ponce (2012) also analyzed the factors that determine the profitability of Spanish banks for the period of 1999–2009. The study concluded that the high bank profitability during these years is related with a large percentage of loans, an increase of customer deposits and good efficiency. The finding also provides that there is no evidence of either economies or diseconomies of scale existing in the Spanish banking sector.

Bashir (2003) examined the determinants of profitability of Islamic banks evidence from some Middle East countries for the period of 1993 to 1998. He found that high capital to asset and loan to asset ratios lead higher profitability in study area. The results also revealed that implicit and explicit taxes affect the bank performance and profitability negatively while macroeconomic conditions impact performance measures positively.

2.6 Studies in Ethiopia

Research studies conducted in Ethiopian commercial banks also revealed a positive relationship between banks capital and profitability (Habtamu, 2012; Belayneh, 2011). A higher capital level brings higher profitability for Ethiopian commercial banks since by having more capital; a bank can easily adhere to regulatory capital standards and the excess capital also can be provided as loans.

Abebe (2014) assessed the internal and external determinants of financial performance of Ethiopia's banks using panel data of banks for a period between the year 2002 and the year 2013. The study employed the fixed effect regression model. The regression results established that capital structure, income diversification, operating cost had a significant negative relationship with performance while bank size had a positive significant relationship with profitability measured by using ROA.

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

Damena (2011) examined the determinants of Ethiopian commercial banks profitability. The study applied the balanced panel data of seven Ethiopian commercial banks that covers the period 2001- 2010. The paper used Ordinary Least Square (OLS) technique to investigate the impact of some internal as well as external variables on major profitability indicator i.e., ROA. The estimation results showed that all bank-specific determinants, with the exception of saving deposit, significantly affect commercial banks profitability in Ethiopia.

Market concentration was also a significant determining factor of profitability. Finally, with regard to macroeconomic variables, only economic growth exhibits a significant relationship with banks profitability.

The study made by Amdemikael (2012) examined the determinants of Ethiopian commercial banks profitability. The study applied the balanced panel data of eight Ethiopian commercial banks that covers the period 2001- 2011. The study adopts a mixed methods research approach by combining documentary analysis and in-depth interviews to investigate the impact of some internal as well as external variables on major profitability that are measured by ROA. The findings of the study show that capital strength, income diversification, bank size and gross domestic product have statistically significant and positive relationship with bank's profitability. On the other hand, variables like operational efficiency and asset quality have a negative and statistically significant relationship with bank's profitability. However, the relationship for liquidity risk, concentration and inflation is found to be statistically insignificant.

Alemu (2015) examined determinants of commercial banks profitability of eight banks in Ethiopia for 10 years from 2002 - 2013. The study used multiple linear regressions and the fixed effect regression model to analyze data. The study established that size of banks; capital adequacy and gross domestic product have a positive and statistically significant relationship with profitability of banks. The findings of the study also revealed that liquidity risk, operational efficiency, funding cost and banking sector development have a negative and statistically significant relation with profitability of banks. Finally, the study found that the relationship between efficiency of management, efficiency of employee, inflation and foreign exchange rate was statistically insignificant.

2.7 Summary and Knowledge Gap

Commercial Banks play an important role in economic development and they are the base of financial systems in all countries. Hence to achieve this healthy and sustainable profitability is essential issue. As the review of literature discussed in this chapter reveals efficient composition of assets and liabilities of commercial banks is crucial for their sound financial performance.

This chapter focused on the various authors' opinion researched and the general treatise on the area of study highlighting factors influencing profitability of private commercial banks. Those factors discussed included capital adequacy, bank size, liquidity, cost management (efficiency), bank loan, bank deposit and credit risk management as internal and gross domestic product and inflation rate as external variables. The relationship of the variables was discussed in the conceptual framework as dependent and independent variables.

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

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

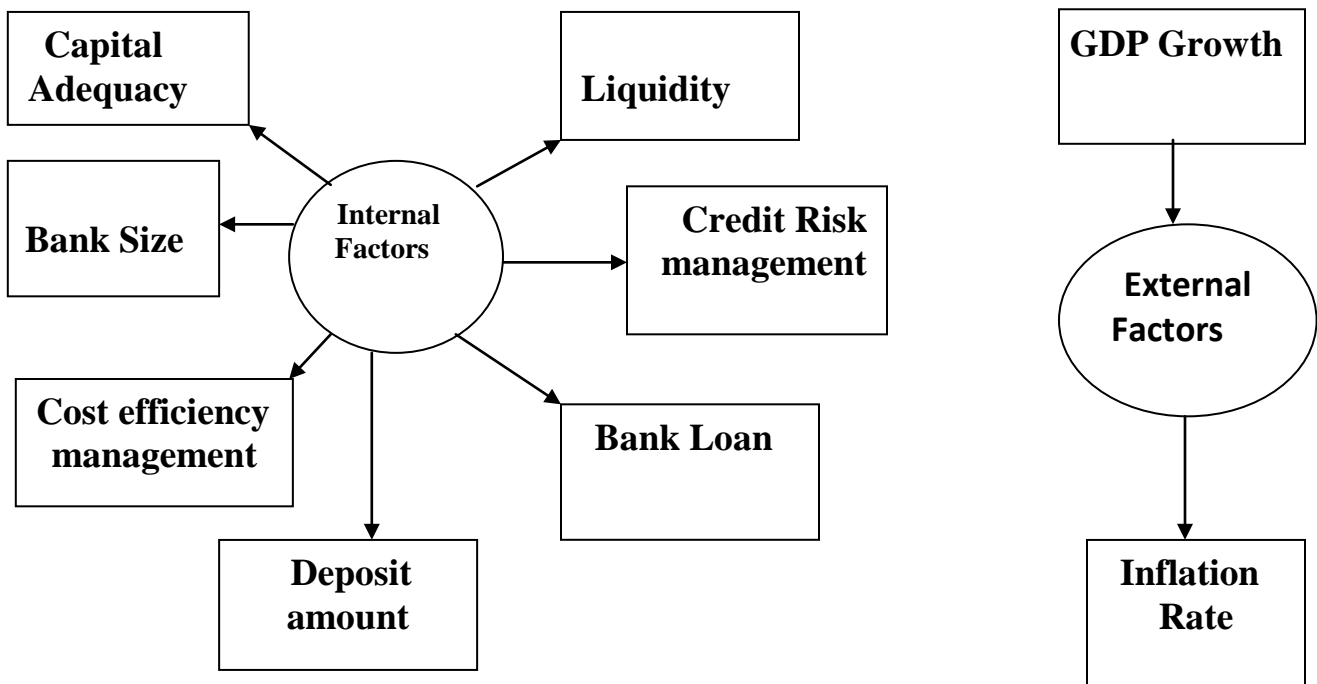
To summarize in the context of Ethiopia, the related study conducted by (Demena 2011; Belayneh 2011; Birhanu 2012 and Amdemikael 2012) examined the determinants of commercial banks profitability in Ethiopia, even if they tries to identify the impact of some bank specific, industry specific and macro-economic variables.

In general, the lack of sufficient research (based on the researcher best knowledge) that determines the bank profitability in the context of Ethiopia and the existence of variables that are not tested in Ethiopian banking industry initiate this study. Therefore, the objective of this study is to examine the factors that affect bank profitability in private commercial banks in Ethiopia, and to fill the knowledge gap that exists in the area.

2.8 Conceptual Frameworks

A conceptual framework depicts a relation that exists between the study variables (dependent and independent).

Figure.1 conceptual framework



Source: own design from different literatures

Figure 1 shows all of the variables included in this study. Return on Assets is dependent variable, while bank specific variables comprises of deposit amount, efficiency(cost management), liquidity ,loan amount, credit risk management , capital and size of the bank and inflation rate and GDP growth as external independent variables.

CHAPTER THREE

RESEARCH METHODOLOGY

3 INTRODUCTION

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

3.1. Research Approach and Design

Research design is a plan for selecting subjects, research sites and data collection procedures to answer the research questions. The plan is the overall scheme or program of the research. The purpose of this study is to identify the factors that affect the profitability of private commercial banks in Ethiopia for the period of year 2005 to year 2015. The study was adopted an explanatory research design that used a quantitative research approach through the use of secondary data.

Schindler and cooper (2001) discussed that explanatory studies unlike descriptive studies, go beyond observing and describing the condition and tries to explain the reasons of the phenomenon. According to Grover (2003) explanatory research is devoted to finding causal relationships among dependent and independent variables. The quantitative data gathering methods are useful especially when a study needs to measure the cause and effect relationships evident between pre-selected and discrete variables.

3.2. Sample Size and Sampling Procedures

A sample is a sub set of the total population that is of interest for the study topic. This total population is called the target population, to which the results of the study can be generalized (Bryman and Bell, 2007).

The purpose of this study is to identify the factors that affect the profitability of private commercial banks in Ethiopia. Because of this, the sample population for the study is all private commercial banks that operate in Ethiopia and register by national bank of Ethiopia, and for this study 11 years data from 2005-2015 were used from annual financial reports. In this study 6 private commercial banks were selected as a sample from 16 private commercial banks, because 11 years data is needed for the study and there is no eleven years of data for the rest 10 private commercial banks. Awash bank, Abyssinia bank, Dashen bank, Nib international bank, Wegagen bank, and United bank were considered as a sample to identify the effect of bank specific and external factors on the profitability of private commercial banks in Ethiopia.

3.3. Data Source and Collection Method

Data collection method is a phrase used to describe the way or manner in which a researcher gathers relevant information which is going to use to answer the research questions. There are basically two main sources by which the researcher can collect data; the primary and secondary source. Primary data source is when the researcher collects new information either through observations, interviews, questionnaires and then uses this data for analysis (Saunders, 2000). The author also stated that secondary data on the other hand is when the research uses data that was previously collected maybe for another purpose, used and stored.

Secondary data were the sources that are used in this study. It comprised of return on assets as dependent variable for this research since the ROA was selected to measure profit, different ratios that affect profitability computed from the financial statements of the commercial banks for the period of a year from 2005 to 2015. Beside this, the ratios for computing capital adequacy, operational cost efficiency, bank size, credit risk management, banks loan amount, banks deposit amount and Liquidity was computed from the financial statements of those commercial banks for the period under study and inflation rate and GDP growth from national bank annual report.

For the analysis of the effect of several factors on profitability, the financial statement of six commercial banks i.e. (WB, AIB, DB, NIB, BOA and UB) for 11 consecutive years i.e., from 2005-2015 were collected. This secondary data that were collected are mainly from the records held by NBE and the banks themselves through structural document reviews.

3.4. Data Analysis

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

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

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

As noted in Brooks (2008) there are basic assumptions required to show that the estimation technique, OLS had a number of desirable properties and also hypothesis tests regarding the coefficient estimates were validly conducted. If these Classical Linear Regression Model (CLRM) assumptions hold, then the estimators determined by OLS have a number of desirable properties, and are known as best unbiased linear estimators. Therefore, for the purpose of this study, diagnostic tests were performed to ensure whether the assumptions of the CLRM are violated or not in the model.

3.4.1 Analytical Model

Profitability measured by return on Asset was taken as dependent variable, and its relation with the independent variables are express in the multi-linear regression as follows;

$$Y = \beta_0 + \beta_1 CR + \beta_2 COE + \beta_3 CAP + \beta_4 SIZ + \beta_5 LIQ + \beta_6 DPTA + \beta_7 LOA + \beta_8 IR + \beta_9 GDP + \varepsilon$$

Where:

Y= represents ROA and it is profitability measurement method. The ROA is a functional indicator of bank's profitability. It is calculated by dividing net income to total assets. The ROA shows the profit earned per dollar of assets which reflects bank's management ability to utilize the bank's financial and real investment resources to generate profits.

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

Cost Efficiency Management (COE): Cost efficiency means the per unit income generated. Cost efficiency measures that how much it is expensive for the private commercial banks to produce per unit of output. High total cost to total income ratio causes the lower profitability for the banks and low of the ratio shows the increase in the profit. It has been used as an independent variable in this study and calculated by cost income ratio and computed as; (Non interest expenses/Total Revenue).

Capital (CAR); in this study Capital adequacy was measured by a ratio of total equity over total assets. The study employed this ratio to proxy the capital variable because ROA has been used as a measure of financial performance. Bank's capital is widely used as one of the determinants of bank profitability since it indicates the financial strength of the bank (Athanasoglo et al., 2005).

Size of the Bank (SIZ): Large banks are assumed to have more advantages as compared to their smaller rivals and have a stronger bargaining capability and making it easier for them to get benefits from specialization and from economies of scale and scope (Alkhazaleh&Almsafir, 2014). So natural logarithm of total asset was used as proxy to determine the effect of size.

Liquidity (LIQ): Liquidity used as measurement of profitability and calculated as Loan /Customer deposits. Liquidity is the amount of short term responsibilities that could be met with the amount of liquid assets.

DPTA (Deposit to Asset): Debt to assets ratio shows the amount of assets that are financed with debts rather than owners equity. It shows the riskiness of the business. This ratio is calculated as dividing total liabilities by total assets. Mathematically: $DPTA = \text{Total Deposits} / \text{Total Assets}$.

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

IR (inflation rate) it is a situation in which the economies overall price level is rising. It represents sustained and pervasive increment in aggregate price of goods and services resulting decline in purchasing power of money.

GDP (gross domestic product) it is the natural logarithm of gross domestic products.

ϵ = error term

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4. INTRODUCTION

This chapter is divided into four sections. The first section provides tests of the classical linear regression assumptions, the second section presents about descriptive analysis of the data and variables of the study, and the third section discusses the correlation analysis between dependent and independent variables and followed by testing the hypothesis in the fourth section.

4.1 Diagnostic Tests of CLRM Assumptions

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

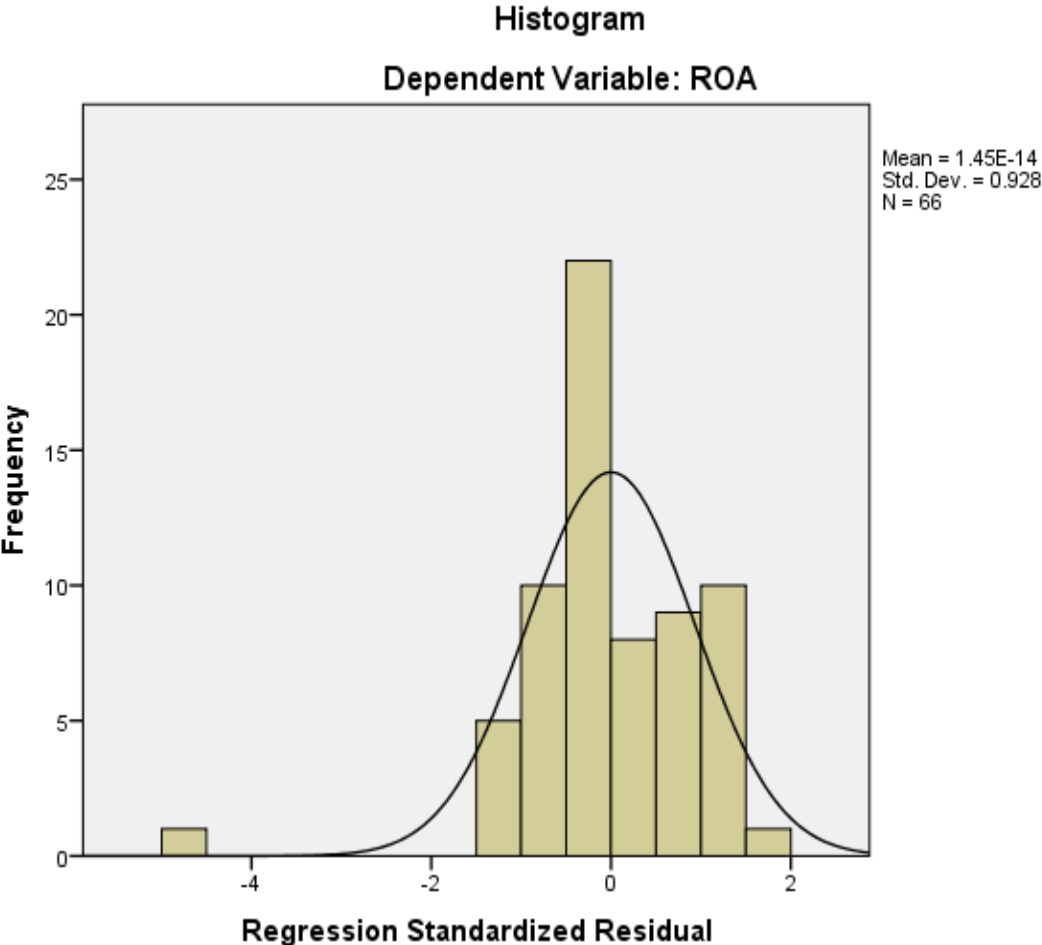
4.1.1 Normality of Data

According to Gujarati (1995) before running regression analysis, it should be noted that there are four classic assumptions in undertaking the regression analysis and one of them is normality of data. Therefore, normality test becomes relevant. Brooks. C (2008) also noted that in order to conduct hypothesis test about the model parameter, the normality assumption must be fulfilled. It measures the extent to which a distribution is not symmetric about its mean value and kurtosis measures how far the tails of the distribution are. If the residuals are normally distributed, the histogram should be bell shaped.

The residuals scatter plots allow checking whether the residuals should be normally distributed about the predicted dependent variable scores. The residual are normally distributed with a mean of zero and standard deviation of one. Therefore, the researcher used graphical methods of testing the normality of data as shown below.

As we can understand from the histogram the residuals seem normally distributed and the residuals are distributed with a mean of 0 and standard deviation of 0.928 which is the value approximately 1. Thus, the model fulfills the assumption of being normally distributed. This would suggest no major deviations from normality.

Figure 2 Histogram

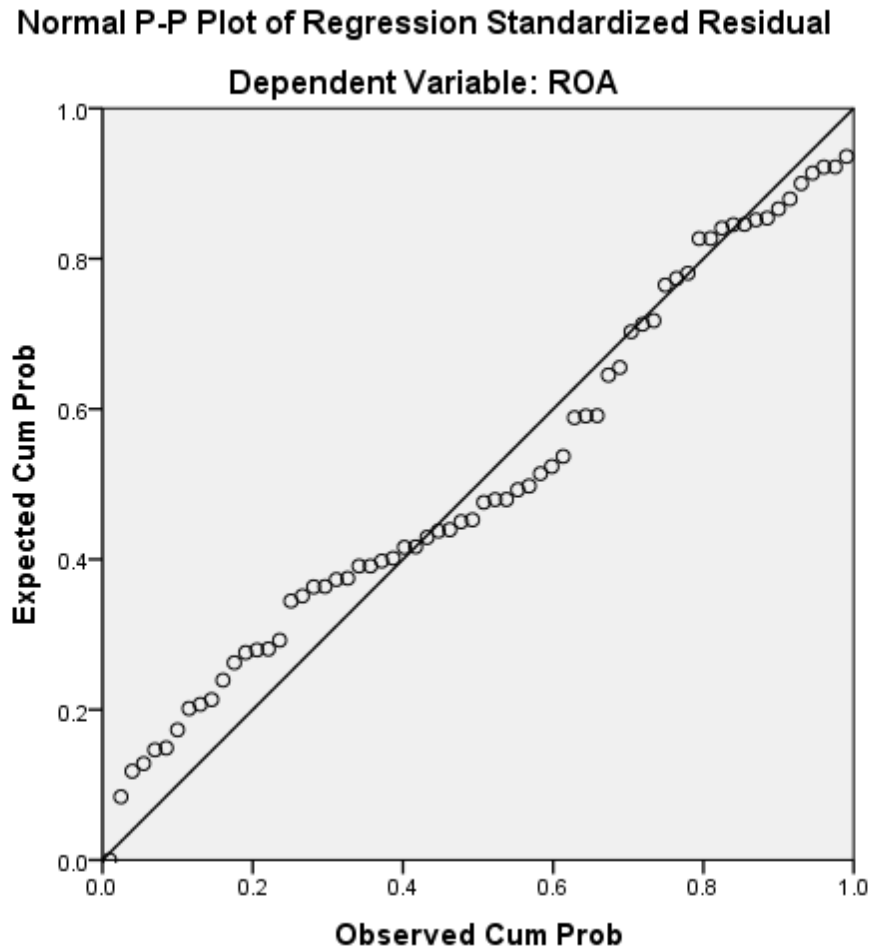


Source: SPSS output from financial statements of banks, and own computation, 2018

4.1.2 Test of Nonlinearity

The other assumption of linear regression model is linearity which assumes that the residuals should have a straight-line relationship with predicted dependent variable scores. If this assumption is violated, the linear regression will try to fit a line to data that do not follow a straight line. Moreover, in the Normal Probability Plot it is expected that the points lie in a reasonably straight diagonal line from bottom left to top right which can be confirmed from p-p plot depicted below and it seems the linear regression tried to fit the data on a straight line which confirmed existence of linearity.

Figure: 3 Normal P-P Plot of Regression Standardized Residual



Source: SPSS output from financial statements of banks, and own computation, 2018

4.1.3 Test for Heteroscedasticity

It is a sequence of random variables, if the random variables have different variance. In this study as shown in table 4.1, the F-statistic result shows that there is no evidence for the presence of heteroscedasticity, since the p-values were 0.106 and it is in excess of 0.05 and the F statistics value is greater than zero, there is no evidence for the presence of heteroscedasticity problem, since the p-value was considerably in excess of 0.05.

Table 4.1 Test for Heteroscedasticity

ANOVA ^a						
Model	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	.000	9	.000	1.722	.106 ^b
	Residual	.001	56	.000		
	Total	.001	65			

a. Dependent Variable: AbsUt

b. Predictors: (Constant), GDP, COE, INF, DPTA, CR, LOA, SIZ, CAP, LIQ

Source: SPSS output from financial statements of banks, and own computation, 2018

4.1.4 Test for Autocorrelation

This is an assumption that the errors are linearly independent of one another (uncorrelated with one another). If the errors are correlated with one another, it would be stated that they are autocorrelated. The existence of autocorrelation can be detected by the measurement made by Durbin-Watson statistic (which is usually calculated automatically and is given in the general estimation output).

As it can be observed from Table 4.5, in regression section, the Durbin-Watson (DW) statistic result is seen to be 2.085. According to Brooks (2008), a value near to 2 indicates non-existence of autocorrelation (so there is a no sign of autocorrelation since it is approximately to 2 and so it is not worrisome), a value near to 4 indicates negative autocorrelation, and a value near to 0 indicates positive autocorrelation.

4.1.5 Test for Multicollinearity

Multicollinearity is used to ensure a linear relationship between two explanatory variables. According to Brook (2008), if an independent variable is an exact linear combination of the other independent variables, then we can infer that the model suffers from perfect co linearity, and it cannot be estimated by OLS. Researchers also indicated that multicollinearity condition also exists where there is high, but not perfect, correlation between two or more explanatory variables.

Cooper & Schindler (2009) recommended that a correlation coefficient above 0.8 between explanatory variables should be corrected for because it is a sign for multicollinearity problem. Moreover, Hair et al. (2006) believed that correlation coefficient below 0.9 may not cause serious multicollinearity problem.

In this study the correlation matrix for the independent variables in the table below showed that the highest correlation of 0.788 is seen which is between DPTA and CAP. Since there is no correlation above 0.8 or 0.9 as stated by Cooper & Schindler (2009) and Hair et al (2006) respectively, the researcher can conclude in this study that there is no problem of multicollinearity.

Table 4.2 Test of Multicollinearity

Correlations

	ROA	DPTA	LOA	CR	COE	CAP	SIZ	LIQ	INF	GDP
ROA	1	-.321**	-.231*	.050	-.735**	.256*	.073	-.138	.109	-.113
DPTA		1	.110	-.084	.211*	-.788**	.087	-.212*	-.104	.136
LOA			1	-.036	.092	-.238*	-.700**	.746**	.100	.608**
CR				1	-.008	.039	-.198	-.020	.238*	.188
COE					1	-.114	.042	.018	-.078	.036
CAP						1	.078	.021	-.011	-.267*
SIZ							1	-.712**	-.123	-.677**
LIQ								1	.132	.551**
INF									1	.139
GDP										1

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

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

Source: SPSS output from financial statements of banks, and own computation, 2018

4.2 Descriptive Statistics

The table depicted below shows information about the descriptive statistics of the dependent and independent variables. The table presents some of the selected descriptive statistics of the sample firms including the mean, standard deviations, minimum and maximum values of study variables for the study period. The research has employed nine independent variables and one dependent variable for analysis purpose.

The mean and standard deviation for the profitability of commercial banks that measured by ROA in the sample are .0391 & .0093 respectively. This revealed that Ethiopian commercial banks were able to generate an average positive return of 3.91% on their assets for the last eleven years. The minimum recorded return on asset was as low as 0.51% while the maximum was about 5.68%. That means, the most profitable bank of the sample banks earned 5.68 cents of net profit from a single birr of asset investment and least profitable bank earned 0.51 cents of net profit from a unit of each birr asset invested.

The standard deviation statistics for ROA was 0.0093 which indicates that the profitability variation between the selected banks was very small. The result implies that these banks are optimizing their return from the use of their assets.

Table 4.3 Descriptive statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
ROA	66	.0051	.0568	.039112	.0093206
DPTA	66	.6767	.8715	.774352	.0474327
LOA	66	.3610	.7277	.516841	.0988865
CR	66	0.0000	.4212	.039295	.0521039
COE	66	.5385	2.9110	1.038067	.4086728
CAP	66	.0711	.1922	.129341	.0298687
SIZ	66	20.7937	23.9327	22.579964	.7438726
LIQ	66	.4885	1.0158	.668924	.1313375
INF	66	.0740	.4440	.169445	.1166441
GDP	66	.0870	.1260	.107636	.0103234
Valid N (list wise)	66				

Source: SPSS output from financial statements of banks, and own computation, 2018

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

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

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

Furthermore, the mean of the cost-to-income ratio equals 103.80%. The minimum and maximum value for COE shows as 53.85% and 291.10% respectively. The relatively higher range between the minimum and maximum value implies that the most efficient bank has a quite substantial cost advantage compared to the least efficient bank. Cost efficiency (cost management) has experienced standard deviation equal to 40.86, which shows the existence of relatively higher variation of cost to income ratio between the selected banks.

On the other hand, on average the equity-to-asset ratio equals 12.93% with a maximum of 19.22%, which was considerably above the statutory requirement of 8% set by NBE on Directives No. SBB/50/2011. This can indicate existence of sound financial condition in Ethiopian commercial banks. The standard deviation statistics for capital strength was 0.0299 which shows the existence of relatively high variation of capital between the selected banks compared to the variation in ROA.

LIQ (loan amount to customer deposit) ratio has average value of 66.89% and minimum and maximum value of 48.85% and 101.58% respectively. Liquidity (loan to deposit) has a standard deviation of 13.13% which shows high variation from mean next to the size of bank compared to other variables. Bank size which is measured by natural log of total asset had the highest standard deviation 74.38%, which means it is the most deviated variable from its mean compared to other variables. Size has an average value of 0.2258 with a minimum and maximum value of 0.2079 and 0.2393 respectively.

The annual inflation rate of the country has an average value of 16.94% and minimum and maximum value of 7.4% and 44.4% respectively. Inflation has a standard deviation of 0.1166 which shows high variation from mean. Gross Domestic Product (GDP) growth had standard deviation of 0.0103. Its average value was 10.76% and 8.7% and 12.6% is a minimum and maximum value respectively.

4.3 Correlation Analysis Among Study Variables

The correlation analysis was done to examine the simple relationship between profitability of private commercial banks in Ethiopia measured by ROA and explanatory variables. This study used the most widely used bi-variant correlation statistics, the Pearson product-movement coefficient, commonly called the Pearson correlation to analyze the relationship among these variables.

Table 4.4 Correlation matrix between variables

Correlations										
	ROA	DPTA	LOA	CR	COE	CAP	SIZ	LIQ	INF	GDP
ROA	1	-.321**	-.231*	.050	-.735**	.256*	.073	-.138	.109	-.113
DPTA		1	.110	-.084	.211*	-.788**	.087	-.212*	-.104	.136
LOA			1	-.036	.092	-.238*	-.700**	.746**	.100	.608**
CR				1	-.008	.039	-.198	-.020	.238*	.188
COE					1	-.114	.042	.018	-.078	.036
CAP						1	.078	.021	-.011	-.267*
SIZ							1	-.712**	-.123	-.677**
LIQ								1	.132	.551**
INF									1	.139
GDP										1

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

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

Source: SPSS output from financial statements of banks, and own computation, 2018

The correlation analysis shows that capital has a high positive correlation with ROA. It depicts that the larger banks are better placed than smaller banks in harnessing economies of scale in transactions to the plain effect that they will tend to enjoy a higher level of profits. Inflation, size of the bank and credit risk management has a positive relation, while deposit amount, loan amount, cost efficiency management, liquidity and gross domestic product seems to be negatively correlated with the profitability measure, indicating that the direction of ROA and those variables were the opposite.

4.4 Results of Regression Analysis

4.4.1 Overall Fit of The Model

According to Brooks (2008) it is desirable to have an answer to the question ‘how well does the model containing the explanatory variables that were proposed actually explain variations in the dependent variable?’ Goodness of fit statistics is used to test how well the sample regression function fits the data. The most common goodness of fit statistics is known as R square which is defined as the square of the correlation coefficient between the values of the dependent variable and the corresponding fitted values from the model. R square lies between 0 and 1. A modification of R square, adjusted R square is also used which takes into account the loss of degree of freedom associated with adding extra variables.

The SPSS output below demonstrates the model summary which constitutes R, R square & adjusted R square. It illustrates the strength of the relationship between the profitability of private commercial banks measure by (ROA) and explanatory variables. The value of R square is 0.699, which indicated that the explanatory variables in this study can account for 69.9% of the variation in profitability in terms of ROA. However, the remaining 30.1% of the variation in the profitability of sample banks in terms of ROA are caused by other factors that are not included in this model. Thus these variables collectively, are good explanatory variables of the profitability of private commercial banks in Ethiopia.

Table 4.5 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.836 ^a	.699	.651	.0055064	2.085

a. Predictors: (Constant), GDP, COE, INF, DPTA, CR, LOA, SIZ, CAP, LIQ

b. Dependent Variable: ROA

Source: SPSS output from financial statements of banks, and own computation, 2018

4.4.2 Regression Analysis between Dependent and Independent Variables

This section presents the empirical results of the regression analysis. Table 4.6 showed the results of the regressions for the financial performance (ROA) equation discussed in the methodology part where ROA is taken as dependent variable. As presented in the third chapter the empirical model used in the study in order to examine the effect of liquidity on the profitability of Ethiopian private commercial banks was provided as follows:

$$Y = \beta_0 + \beta_1 CR + \beta_2 COE + \beta_3 CAP + \beta_4 SIZ + \beta_5 LIQ + \beta_6 DPTA + \beta_7 LOA + \beta_8 IR + \beta_9 GDP + \varepsilon$$

Based on the regression results in Table 4.6, the multiple regression equation of this study can be written as the following:

$$Y = 0.3595 - 0.0100CR - 0.0163COE - 0.0083CAP + 0.0008SIZ - 0.4276LIQ - 0.4154DPTA + 0.5443LOA + 0.0053IR + 0.0426GDP$$

Table 4.6 Coefficients of Regression Output

Model	Un standardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	0.3595	0.0841		4.2767	0.0001
DPTA	-0.4154	0.0935	-2.1140	-4.4442	0.0000
LOA	0.5443	0.1281	5.7749	4.2498	0.0001
CR	-0.0100	0.0147	-0.0557	-0.6801	0.4992
COE	-0.0163	0.0017	-0.7168	-9.3662	0.0000
CAP	-0.0083	0.0416	-0.0267	-0.2003	0.8420
SIZ	0.0008	0.0015	0.0670	0.5423	0.5897
LIQ	-0.4276	0.0979	-6.0254	-4.3662	0.0001
INF	0.0053	0.0062	0.0664	0.8582	0.3944
GDP	0.0426	0.0972	0.0472	0.4384	0.6628
F-Static	14.471				
Prob (F-static)	0.0000				

Dependent Variable: ROA

Source: SPSS output from financial statements of banks, and own computation, 2018

As we can observe from the above table, the null hypothesis of F-statistic (the overall test of significance) that says the R square is equal to zero was rejected at 1% as the p-value was sufficiently low. The F statistic is used to test the model specification. From the table 4.6 the result of one can see that the model is fit with F statistics 14.471 at p-value of 0.0000.

As table 4.6 shows above, loan amount, size of the bank, inflation and GDP with coefficient of 0.5443, 0.0008, 0.0053 0.0426 respectively had a positive relationship with ROA, other variables like deposit, cost efficiency, capital, credit risk management and liquidity had negative relationship with profitability as far as their respective coefficients were negative. This revealed that there was an inverse relationship between the above five independent variables and ROA. In general as per the regression results provided in table 4.6 among the 9 regressors used in this study, 4 of them (deposit, loan, cost efficiency management and liquidity) were significant and the other five were insignificant.

4.5 Hypothesis Test

4.5.1 Credit Risk Management and Profitability (ROA)

The first hypothesis examined the relationship between credit risk management and profitability of private commercial Banks. The beta coefficient of credit risk is negative and it is -0.0100, there is insignificant relationship between credit risk and profitability of private commercial banks with significant level of 0.4992. In the study year credit risk management has negative relation with profit (ROA), but it is not significant because the significant level is 0.499 and the beta coefficient of the regression was -0.0100. This result shows that credit risk management ratio of provision to doubtful debt to total loan has a negative relationship but has not significant impact on profitability of private commercial banks in Ethiopia.

4.5.2 Cost Efficiency Management and Profitability (ROA)

The study found that management efficiency negatively influences the profitability with the coefficient of -0.0163 though the effect is significance. This means that the poor management of expenses leads to the reduction of commercial banks profitability. Similarly, low operating costs leads to greater profitability of commercial banks. Other costs like the provisions made towards bad debts and doubtful debts influence performance and are likely to lead to probable annual loss on assets (Chinoda, 2014).

4.5.3 Capital with Profitability (ROA)

As a proxy for the bank capital, we use the ratio of equity to assets. The equity to asset ratio measures how much of bank's assets are funded with owner's funds.

The study also found that capital adequacy has a negative relationship but not have a significance influences on banks' profitability. The study found that capital adequacy had a negative influence on the profitability with the coefficient of -0.0083 though the effect is insignificance with the p-value of 0.8420. This result contradicts with Gavila et al (2009) states that, although capital is expensive in terms of expected return, highly capitalized banks face lower cost of bankruptcy, lower need for external funding especially in emerging economies where external borrowing is difficult. Thus well capitalized banks should be profitable than lowly capitalized banks. But the study result is consistent with Beckmann (2007) high capital leads to low profits since banks with a high capital ratio are risk-averse; they ignore potential (risky) investment opportunities.

4.5.4 Bank Size with Profitability (ROA)

The study found that bank size positively influences the profitability though the effect is insignificance. This indicates that there is a negative affect between bank size and the banks' profitability hence the smaller the bank the lower the profitability and vice versa. Similarly, Lipunga (2014) also established that size of the bank had an impact on ROA. According to Alkhazaleh and Almsafir, (2014) large banks are assumed to have more advantages as compared to their smaller rivals and have a stronger bargaining capability and making it easier for them to get benefits from specialization and from economies of scale and scope.

4.5.5 Liquidity with Profitability (ROA)

Another important variable that was examined in this study is measure of liquidity, i.e., current ratio, is significantly and negatively related in the model with the return on assets on beta value of -0.4276 and p-value of 0.0001, and the results are consistent with earlier studies of Dang(2011), Bourke (1989), and Kosmidouet al. (2005). This implies that high figures for this variable mean low profitability. Since high figures for this variable denotes low liquidity, lower liquidity is associated with lower profitability.

4.5.6 Deposit Amount with Profitability (ROA)

The study result examined the relationship between deposit amount and profitability of private commercial banks. Based on regression result, deposit amount has significant negative relationship with profit, with beta coefficient of -0.4154 and significant level of P (0.0000). Because of this deposit amount has strong significant relationship with profit of private commercial banks. It shows that deposits have negative impact on profitability and banks depending on deposits for funds cannot achieve better return on assets. Kunt and Huizinga Demirgüç (1999), their result stated that the high costs generated by deposits lead to weigh negatively on the performance of banks.

4.5.7 Loan Amount with Profitability (ROA)

Another hypothesis that examined the relationship between loan amount paid and profitability of private commercial Banks. According to regression result, loan amount has strong positive significant relationship with profitability, with beta coefficient of 0.5443 and significant level of P (0.0001). The positive sign of beta coefficient meaning that if the banks increase the financing of the loans with deposits it will impact positively the ROA. The positive relationship between total loans and profitability implies that, as the ratio of total loans and advances to total asset increases, the profitability of Ethiopian commercial banks also increases. This indicates that with more loans the chances of return on assets will be high. This result is consistent with the previous finding of Sastrosuwito and Suzuki (2011) as they conclude that, it is expected that the more loans, the more interest income, and the more profitable the bank.

New loan disbursement had significant positive relationship with banks performance measured in terms of return on asset. This implies that high figures for this variable mean high profitability. Loan is main source of income for commercial banks and the more deposit is transferred to loan, the higher the interest margin and profit. Therefore, they more concerned with keeping a high quality for their loans. On the other hand, smaller banks try hard to increase their market share. In this process, they often tend to overlook the quality of their borrowers.

4.5.8 Inflation with Profitability (ROA)

The effects of inflation can be substantial and undermines the stability of the financial system and the ability of the regulator to control the solvency of financial intermediaries. Revell (1979) noted that variations in bank profitability can be strongly explained by the level of inflation.

Demirgüç-Kunt and Huizinga (1999) notice that, banks in developing countries tend to be less profitable in inflationary environments, particularly when they have a high capital ratio. But this study found that inflation influences the profitability positively though the effect is insignificant with the coefficient of 0.0053 and significant value of 0.6944. This result shows that inflation rate has not significant impact on profitability of private commercial banks in Ethiopia. In this study, the data shows a direct relationship between inflation rate and ROA. According to Skarica (2013) and Tomak(2013) found as there is a positive relationship between ROA and Inflation rate and this study is as similar with it.

4.5.9 Gross Domestic Product Growth with Profitability (ROA)

Hoggarth et al. (1998) says that GDP variability did not affect profits, only that they could not use it to explain different UK/German banks performance. If this variable is not statistically significant in explaining profitability, then the conclusions of the authors are reinforced. Otherwise, the expected sign should be positive since higher growth implies both lower probabilities of individual and corporate default and an easiest access to credit.

The study found that GDP growth influences the profitability positively though the effect is insignificant with the coefficient of 0.0426 and significant value of 0.6628. This result shows that GDP has not significant impact on profitability of private commercial banks in Ethiopia.

CHAPTER FIVE

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter deals with the conclusions and recommendations based on the findings of the study. Accordingly this chapter is organized into three sub-sections. Section 5.1 is about findings, Section 5.2 presents the conclusions and section 5.3 is about the recommendations.

5.1 Findings

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

The result in table 5.1 shows the effect of all determinants to the return on assets respectively. This summarization shows that deposit amount, loan amount, cost efficiency and liquidity has significant relation with return on assets, while deposit amount, cost efficiency and liquidity has a negative effect and loan amount has positive effect on return on assets. However, the other variables like credit risk management, capital, GDP, inflation and size of the bank do not have significant influence on the performance of bank (return on assets).

Based on the result of the study, the hypothesis result is stated in the following table 5.1 and the hypothesis results shows that the effect of all determinants to the return on assets respectively with their coefficient.

Table 5.1 Results for the Hypothesis

Hypothesis	Coefficient	Conclusion
credit risk management with return on assets	Negative	Insignificant
cost efficiency with return on assets	Negative	Significant
capital adequacy with return on assets	Negative	Insignificant
size of the bank with return on assets	Positive	Insignificant
Liquidity with return on assets	Negative	Significant
deposit amount with return on assets	Negative	Significant
loan amount with return on assets	Positive	Significant
inflation with return on assets	Positive	Insignificance
growth domestic product with return on assets	Positive	Insignificance

Source: SPSS output from financial statements of banks, and own computation, 2018

5.2 Conclusion

Commercial banks have a crucial role for the allocation of economic resource in one country. Their main contribution is in the economic growth of the country through making available the funds for investors to borrow as well as financial deepening in the country. According to previous studies made on banks profitability determinant, profitability is affected by both internal and external factors. Internal factors are factors that are mainly influenced by a bank's management and also called bank specific factors. External factors are those factors which are beyond the control of management of these institutions such as interest rates, inflation rates, market growth, and GDP growth rate and market share. The main purpose of this study was to find out the most important internal and external factors that affecting the profitability of the private commercial banks in Ethiopia.

The data set consists of 6 private commercial banks from 2005 to 2015 and financial ratios were calculated and statistical tools including; (Pearson's correlation, descriptive analysis of variance and regression analysis) were utilized in testing the hypotheses and to measure the differences and similarities between the sample banks according to their different characteristics. Nine independent variables were chosen from literature and theoretical relevance such as: liquidity, Capital, credit risk management, cost efficiency management, bank size, deposit of the customer, loan amount as a bank specific variables and inflation and GDP growth as an explanatory variables. The variables were selected by refereeing different theories and empirical studies that have been conducted on factors affecting the profitability of private commercial banks profitability.

To comply with the objective of this research, the paper is based on quantitative research method. The quantitative data are obtained from annual reports of NBE. So, for testing the research hypothesis, this study employed a data for a period over 2005 to 2015 of the private commercial banks operating in Ethiopia. The empirical findings on the impact on banks profitability reaches in the following conclusions:

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

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

Capital adequacy measured by equity to total asset has negative but insignificant impact on profitability of private commercial banks in Ethiopia. This result shows that having high or low amount of capital has no significant impact on profitability of the banks.

Size of the bank has positive but insignificant impact on profitability of private commercial banks. This result revealed that bank size which is measured by natural logarithm of total asset has no significant impact on Ethiopian private commercial banks weather large or small the size.

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

The negative and significant impact of deposit amount on return on asset shows that reducing deposit amount increase profitability of private commercial banks that operate in Ethiopia. This implies that the high costs generated by deposits lead to weigh negatively on the performance of banks. According to negative relationship between the amount of deposits and private commercial banks profitability, since in this study the ratio of deposits to total assets have been used to measure this variable, It seems that absorbing of long term deposits and the more absorption of short term and current deposits caused the decrease in profitability of private commercial bank's assets.

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

All external factors included in the study were not significant to explain bank profitability in this study. Generally, four hypotheses of the bank specific variables were significantly impact bank profitability. On the other hand, all external variables were insignificant in the hypotheses.

Therefore, the study concluded that most of bank profitability drivers are explained by bank specific determinants rather than external determinants.

5.3 Recommendations

The recommendations of the research were premised on the summary of and conclusions from the results and discussion.

In order to improve private commercial banks performance, efficient management of bank operations can alleviate the high operational cost that erodes bank profits. Managerial cost and other expenses should be at optimal level and consistent with profit maximization objectives of shareholders. Therefore, the researcher recommends the following points based on the study findings.

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

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

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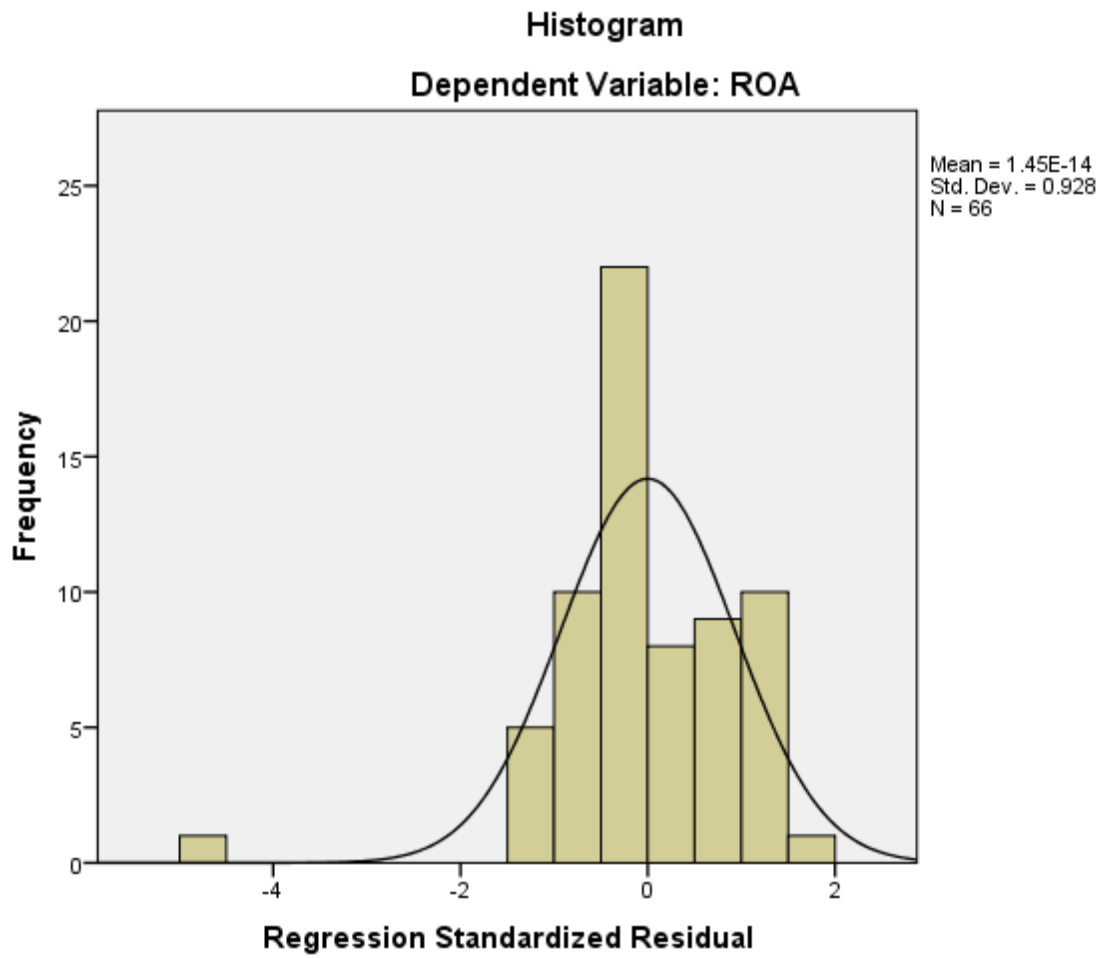
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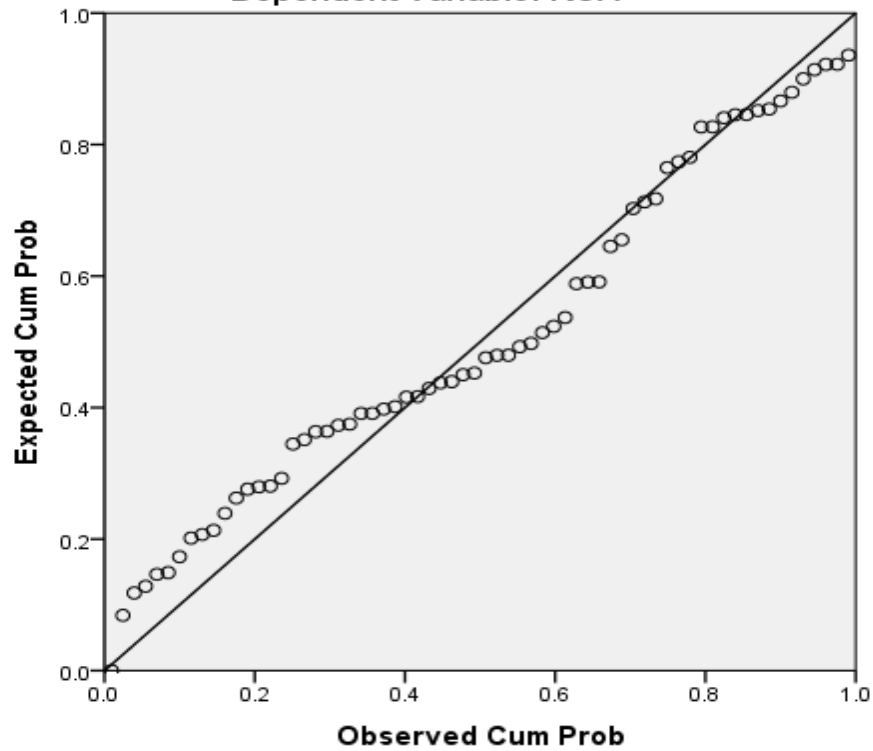
APPENDIXES

Appendix I

TEST FOR NORMALITY OF THE DATA



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



TEST OF HETROSCEDASTICITY

ANOVA^a

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	.000	9	.000	1.722	.106 ^b
Residual	.001	56	.000		
Total	.001	65			

a. Dependent Variable: AbsUt

b. Predictors: (Constant), GDP, COE, INF, DPTA, CR, LOA, SIZ, CAP, LIQ

Appendix II

DESCRIPTIVE STATISTICS

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
ROA	66	.0051	.0568	.039112	.0093206
DPTA	66	.6767	.8715	.774352	.0474327
LOA	66	.3610	.7277	.516841	.0988865
CR	66	0.0000	.4212	.039295	.0521039
COE	66	.5385	2.9110	1.038067	.4086728
CAP	66	.0711	.1922	.129341	.0298687
SIZ	66	20.7937	23.9327	22.579964	.7438726
LIQ	66	.4885	1.0158	.668924	.1313375
INF	66	.0740	.4440	.169445	.1166441
GDP	66	.0870	.1260	.107636	.0103234
Valid N (list wise)	66				

Appendix III

PEARSON CORRELATION

Correlations

	ROA	DPTA	LOA	CR	COE	CAP	SIZ	LIQ	INF	GDP
ROA	1	-.321**	-.231*	.050	-.735**	.256*	.073	-.138	.109	-.113
DPTA		1	.110	-.084	.211*	-.788**	.087	-.212*	-.104	.136
LOA			1	-.036	.092	-.238*	-.700**	.746**	.100	.608**
CR				1	-.008	.039	-.198	-.020	.238*	.188
COE					1	-.114	.042	.018	-.078	.036
CAP						1	.078	.021	-.011	-.267*
SIZ							1	-.712**	-.123	-.677**
LIQ								1	.132	.551**
INF									1	.139
GDP										1

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

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

APPENDIX IV

REGRESSION OUTPUT

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.836 ^a	.699	.651	.0055064	2.085

a. Predictors: (Constant), GDP, COE, INF, DPTA, CR, LOA, SIZ, CAP, LIQ

b. Dependent Variable: ROA

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	.004	9	.000	14.471	.000 ^b
Residual	.002	56	.000		
Total	.006	65			

a. Dependent Variable: ROA

b. Predictors: (Constant), GDP, COE, INF, DPTA, CR, LOA, SIZ, CAP, LIQ

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.3595	0.0841		4.2767	0.0001
	DPTA	-0.4154	0.0935	-2.1140	-4.4442	0.0000
	LOA	0.5443	0.1281	5.7749	4.2498	0.0001
	CR	-0.0100	0.0147	-0.0557	-0.6801	0.4992
	COE	-0.0163	0.0017	-0.7168	-9.3662	0.0000
	CAP	-0.0083	0.0416	-0.0267	-0.2003	0.8420
	SIZ	0.0008	0.0015	0.0670	0.5423	0.5897
	LIQ	-0.4276	0.0979	-6.0254	-4.3662	0.0001
	INF	0.0053	0.0062	0.0664	0.8582	0.3944
	GDP	0.0426	0.0972	0.0472	0.4384	0.6628
	F-Static	14.471				
	Prob (F-static)	0.0000				

Dependent Variable: ROA

DECLARATION

I, **Simachew Shiferaw**, declare that this thesis is my original work, prepared under the guidance of **Asmamaw Getie (Asst. Professor)**. All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full in this or any other higher learning institution for any degree or diploma program.

Name: **Simachew Shiferaw**

Signature: _____

Date: _____

ENDORSEMENT

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

Name: **Asmamaw Getie (Ass. Professor)**

Signature: _____

Date: _____