DETERMINANTS OF PROFITABILITY IN COMMERCIAL BANKS; EVIDENCE FROM PRIVATE COMMERCIAL BANKS

ARESEARCH PAPER SUBMITTED TO THE DEPARTMENT OF ACCOUNTING AND FINANCE IN PARTIAL FULFILLMENT OF REQUIRMENT FOR BACHELOR OF ARTS DEGREE IN ACCOUNTING AND FINANCE

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DECLARATION

I, the undersigned, declare that this research is my original work, prepared under the guidance of Mr. Idris A. (MSc.). All sources of materials used for the study have been duly acknowledged. I further confirm that the research has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree. _____

Name Signature

Wolkite University, Wolkite June, 2019

This research has been submitted to Wolkite University College of Business and Economics, Department of Accounting and Finance for examination with my approval as a university advisor. _____

Advisor Signature

Wolkite University, Wolkite June, 2019

Acronyms

AIB: Awash International Bank S.C.

BOA: Bank of Abyssinia S.C

CAP= Capital Adequacy

CBE: Commercial Bank of Ethiopia

GDP: Gross Domestic Product

H: Hypothesis

Lit : Liquidity

MoFED: Ministry of Finance and Economic Development

NBE: National Bank of Ethiopia

NIB: Nib International Bank S.C

OLS: Ordinary Least Square

ROA= Return on Asset

ROE=Return on Equity

ROIC=return on invested capital

SIZE=bank size

SCP= Structure-Conduct-Performance

ROA: Return on Assets

ROE: Return on Equity

UB: United bank

WACC= weighted average cost of capital

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Finally, I would also like to express my sincere thanks to my family who thought me how to make the most of my life and who supporting me in every aspects.

Abstracts

Profitability is one of the most debatable topics within bank sector. The main objective of this study was to identify the determinants of profitability of private commercial banks. To answer the objective of the study, explanatory type study will use & the data covered the period from 2008-2017 for the sample of six Ethiopian private banks and will use secondary data. The study consider the impact of five variables: liquidity, bank size, capital adequacy, deposit growth, and Return on equity by using explanatory analysis. The basic findings of the study were……..

Based on the mentioned findings the researcher recommended……..

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Financial institutions are establishments that conduct financial transactions such as investments, loans and deposits. Financial institutions channel funds and transfers risks from one economic unit to another economic unit so as to facilitate trade and resources arrangement. The performance of financial institutions can affect economic growth while at the same time institutional insolvencies can result in systemic crises which have unfavourable consequences for the economy as a whole. Bank is one example of a financial institution. Banks get a great deal of attention in the economic literature considering that banks play a pivotal role in the economy. If the banking system in a country is effective, efficient and disciplined it brings about rapid growth in the various sectors of the economy.

There are many aspects of the performance of banks that can be analyzed. This study focused on the determinant of profitability of private banks in Ethiopia. As noted in Flamini, McDonald & Schumacher (2009 pigeon 69). Bank profits provide an important source of equity especially if re-invested into the business. This should lead to safe banks, and as such high profits could promote financial stability. Main aim of any kind of economic activity is earning profit. A business concern is also functioning mainly for the purpose of earning profit. Profit is the measuring techniques to understand the business efficiency of the concern. However, too high profitability is not necessarily good. Garcia-Herero, Gavila & Santa Barbara (2009) observed that too high profitability could be indicative of market power, especially by large banks. This may hamper financial intermediation because banks exercising strong market power may offer lower returns on deposit but charge high interest rates on loans. Too low profitability, in turn, might discourage private agents (depositors and shareholders) from conducting banking activities thus resulting in banks failing to attract enough capital to operate. Furthermore, this could imply that only poorly capitalized banks intermediate savings with the corresponding costs for sustainable economic growth.

According to Flamini et al, (2009), bank profitability is high in Sub-Saharan Africa compared to other regions.

The banking environment in Ethiopia has, for the past decades, undergone many regulatory and financial reforms like other African countries and the rest of developing world. These reforms have brought about many structural changes in the banking sector of the country and

have also encouraged private banks to enter and expand their operations in the industry. (Lelissa, 2007).

Despite these changes, currently, the banking industry in Ethiopia is characterized by operational inefficiency, little and insufficient competition and perhaps can be distinguished by its market concentration towards the big government owned commercial bank and having undiversified ownership structure (Lelisa, 2007). The existence of less efficiency and little & insufficient competition in the country's banking industry is a clear

Indicator of relatively poor performance of the sector compared to the developed world financial institutions. Thus, it is important to know the determinants of banks profitability for an efficient management of banking operations aimed at ensuring growth in profits and efficiency (Abera, 2012).

In light of the above, a lot of research work has so far taken place concerning the issue of determinants of bank profitability. In the context of Ethiopia, to the knowledge of the researcher, until about 2012 there appears to be very limited work on the assessment of determinants of profitability of banks but after 2012 it has received attention by Ethiopian researchers.

1.2 Statement of the problem

The best performance of any industry in general and any firm in particular plays the role of increasing the market value of that specific firm coupled with the role of leading towards the growth of the whole industry which ultimately leads to the overall success of the economy. Measuring the performance of financial institutions has gained the relevance in the corporate finance literature because as intermediaries, these companies in the sector are not only providing the mechanism of saving money and transferring risk but also helps to channel funds in an appropriate way from surplus economic units to deficit economic units so as to support the investment activities in the economy.

As noted by Damena (2011) different literatures on the banking sector have pointed out that a great deal of economic activity would be seriously hindered if the most prominent agents in the credit markets, the commercial banks, did not execute their function properly. A sound and profitable banking sector is able to resist negative shocks and contributes to the stability of the financial system and sustainability of overall economic development. Thus, identifying the key success factors of commercial banks could allow the bank management and directors

to formulate policies for improving the profitability of the banking industry. According to different banking area researchers, the banking sector profitability determinants include management controllable factors such as the level of deposit, the level of loans and advances, investment in securities, non-performing loans, non interest incomes, and overhead expenditure. Other determinants such as total capital and capital reserves also play a major role in influencing the profitability. Commercial banks in Ethiopia have over the years depended very much on increasing lending rates in order to maximize profits, without much regard to the efficient use of resources that could result in cost minimization. Thus the performance of commercial banks should be measured in respect of total assets, loans, non-interest income, total overhead expenses, and book value of stockholders' equity.

The Ethiopian banking sector, regardless of the series of changes and liberalization measures undertaken which is expected to change the ownership structure, the concentration, and profitability performance of the sector as compared to the situations prevalent before the reform period, currently the country's banking sector is characterized by the existence of high concentration (low competition) and operational inefficiencies; which is a clear sign of unimpressive performance of the sector (Lelissa, 2007 page 60).

The researcher initiates there are no sufficient studies made which considers Ethiopian private commercial banks only and hence, the lack of sufficient research on the determinants of profitability in the context of Ethiopian private commercial banks was initiated this study.

1.3 Objective of the Study

1.3.1 General objective

The main objective of this study was to determine the factors that affect the profitability of private commercial Banks in Ethiopia.

1.3.2 Specific Objective

The specific objectives of the study were;

1. To examine the contribution of capital aduqency for profitability in private commercial banks.
2. To examine the return on equity for profitability in private commercial banks.
3. To examine the contribution of liquidity for profitability in private commercial banks.

4. To examine the contribution of deposit growth for profitability in private commercial banks.
5. To examine the contribution of bank size for profitability in private commercial banks.

1.4 Hypotheses of the Study

These broad research questions were motivated by the following hypotheses

HP_1: There is significance relationship between capital adequacy and bank's profitability.

$HP_{2:}$ There is significance relationship between return on equity and bank's profitability

HP_3: There is significance relationship between the liquidity risk of a bank and the bank's profitability

HP_4: There is significance relationship between deposit growth and bank's profitability.

HP_5: There is significance relationship between bank size and bank's Profitability

1.5 Scope of the study

This paper is confined in identifying the determinants of bank's profitability on Ethiopian private commercial banks. Though there are sixteen private and two publicly owned commercial banks in Ethiopia.The scope of the study is limited from 2008 to 2017.This study focus on 6 private banks: - Awash international bank, Dashen bank, bank of abysina, Wegagen bank, united bank. There are many customers and wide work area more than other banks.

This study was also limited to see the impact of these variables; capital adequacy, return on equity, liquidity, deposit growth and bank size.

1.6 Significance of the study

Every research should have something to contribute since a lot of time, money and human energy is exerted to do it. So, the main reason for this study is to show the bank specific, industry specific and macroeconomic determinants of profitability of private commercial banks in Ethiopia. To this end, particularly this study has importance for the following bodies:

- ✓ **Management:** Administration interested in identifying indicators of success and failure to take the necessary actions to improve the performance of the company and choose the right decisions.

- ✓ **Government**: Government interested in knowing which companies operate

  Successfully or failed to take the necessary measures to avoid crises of the bankruptcy in these companies.
- ✓ **Investors**: Investors interested in such studies in order to protect their investment, and directing it to the best actions.

1.7 Organization of the proposal

This research paper is organized into five chapters. Chapter one provides the general introduction part. Chapter two describes the review of related literatures. Chapter three provide detail description of the methodology employed by the researcher. The fourth chapter was provided results and discussion. The final chapter includes Findings, conclusion and recommendations and at the end references were attached.

CHAPTER TWO

LITERATURE REVIEW

Several factors influence banks operations and banks profitability. The purpose of this chapter is to review the literatures related to bank profitability and its determinants. First, this chapter discusses the function of banks, followed by theories about profitability then review related to bank profitability and its determinants and finally, reviews of the previous studies conducted in relation to bank profitability and its determinants in other countries and Ethiopia.

2.1 Function of Banks

This paragraph discusses the function of banks in the economy and examines the question why banks exist. At first sight, the answer to this question is very intuitive and simple; banks act as an intermediary between those who are in need for money and those who have excess of money. Looking more closely to this question there could be a more detailed explanation. In a perfect capital market of Modigliani-Miller (MM), financial institutions are superfluous; namely, entities can borrow and save directly through the capital market. In reality, such perfect market does not exist; transaction costs and monitoring costs distort capital markets. Furthermore, capital markets suffer from the information asymmetry and the agency problem. The agency problem refers to the dissimilar incentives of borrowers and savers, in a broader context it refers to the dissimilar incentives of principles and agents (Jensen & Mackling, 1976). In a case of financial distress, borrowers are limited liable; implying that they have incentives to alter their behaviour by taking on more risk than savers are willing to accept. Monitoring the borrowers' behaviour is time consuming, complex and expensive for individuals. In inefficient markets, financial intermediation is beneficial since banks have lower monitoring and transaction costs than individuals, due to economies of scale and scope.

Another important aspect of banking is the function of maturity transformation. Banks receive short-term savings from depositors and transform those savings into long-term loans to borrowers. By holding a part of the short-term savings in liquid assets and cash banks could withstand daily withdrawals from depositors. Banks offer a unique service; lending long term while guaranteeing the liquidity of their liabilities to depositors, which can withdraw their money at any time without a decline in nominal value (Schooner &Taylors, 2010). Capital markets cannot achieve maturity transformation with the same benefits as

banks can. Individual investors face liquidity, price and credit risk, which they cannot diversify to the extent banks can. As savers do not withdraw their deposits at the same time, banks hold only a minor part of the savings in liquid cash. Thus, banks diversify liquidity risks over a large pool of savers. Individual savers can also diversify their investments in terms of credit and price risks but it remains unlikely that they could withdraw the investments at any time without facing liquidity issues.

Nowadays, bank activities are more diverse than ever. In the past decades, competition has increased and new activities have emerged.

The traditional form of banking, receiving deposits and extending credits, has become less important. Ever since the complexity of balance sheet has increased, as did balance sheet and risk management (van & Bratanovic, 2009).Besides the incorporations of liquidity, price and credit risks in banking activities, banks increasingly faces market risks (e.g. interest rate risk and currency risk). One may assume that banks' risk managers properly diversify these risks and closely monitor borrowers' behaviour to avoid bank failure or financial distress.

Nevertheless, monitoring bank behaviour is required to safeguard the continuity and stability of the banking sector due to moral hazard issues.

2.2. Theories on Profitability

2.2.1 Regulation

The main objective of regulation and supervision in the banking is to deter excessive risk taking in the banking sector. Without any regulation, politicians assume that banks will take on more risks than necessary and acceptable for depositors. At the same time risk taking is beneficial for average individual banks, one bank failure is highly undesirable for depositors and may spill over to the entire banking sector.

Regulators and supervisory entities that set minimums for equity capital, and establish other types of regulations can affect the bank's capital structure decisions, and hence its earnings. The regulators establish the conditions of entry to the banking industry, the compliance with the capital ratios and liquidity rules, the enforcement of the larger exposure rules in the foreign exchange market, the right of inspection and in our countries case require banks to buy NBE bills etc. Furthermore, (as noted by Alemu,

2015) citing Saunders and Cornett (2008) the net regulatory burden could also negatively influence bank performance. The net regulatory burden equals the cost minus the benefits of regulation. Costs of regulation are e.g. compliance costs, referring to the costs of preparing reports and statements to regulators, or costs of being restricted from an optimal portfolio or capital structure.

2.2.2 The Structure Conduct Performance (SCP) Model

The relationship between performance and market structure on the banking industry is based on the development of the theory in the industry organization. The Structure Conduct Performance (SCP) model is one of the earliest frameworks used to examine the factors that determine the profitability of Banks (Grygorenko, 2009). Baye (2010), (as quoted by Damena, 2011) the structure of an industry refers to the factors such as technology, concentration, and market conditions. Conduct refers to how individual firms behave in the market; it involves pricing decisions (such as interest rate, commission and fees), advertising decisions, and decisions to invest in research and development, among other factors. Performance refers to the resulting profits and social welfare that arise in the market. The Structure Conduct Performance (SCP) paradigm views these three aspects of the industry as being integrally related and asserts that the market structure causes firms to behave in a certain way. In turn, this behaviour causes resources to be allocated in certain ways leading to either an efficient or inefficient market.

The Structure-Conduct-Performance (SCP) hypothesis, asserts that increased market power yields monopoly profits. Profits of firms that operate in highly concentrated industries tend to be higher than those that are less concentrated, as concentration permits the collusion of banks to set higher prices and consequently gain substantial profits.

2.2.4 The Risk-Return Trade Off

The balance sheet structure could also influence banks' profitability; in this context, the Equity-to-asset ratio is an important balance sheet ratio that has received much attention. For this ratio, theoretical explanations assume different signs of the relationship with Profitability. According to the Modigliani-Miller theorem there exists no relationship Between the capital structure (debt or equity financing) and the market value of a bank (Modigliani and Miller, 1958). In this context, their does not exist a relationship between the equity-to-asset ratio and funding costs or profitability. But information asymmetry and

transaction costs distort MM's perfect market. Thus, when the perfect market does not hold there could be a possible explanations for a negative relationship. Financing Theory suggest that increasing risks, by increasing leverage and thus lowering the equity to- asset ratio (increasing leverage), leads to a higher expected return as entities will only take on more risks when expected returns will increase; otherwise, increasing risks have no benefits.

Profitability is a bank's first line of defences against unexpected losses, as it strengthens its capital position and improves future profitability through the investment of retained earnings [European Central Bank (2010)]. Bank profits are an important source of equity and it promotes financial stability. If bank profits are reinvested, this should lead to safer banks, and, consequently, high profits could promote financial stability [Flamini, v. et al (2009)]. As far as the ownership of commercial banks is considered privately owned banks earn higher returns compared to publicly owned ones. Privately owned banks may be more profitable than state-owned due to imperfectly designed incentives or because public banks may have objectives other than profit or value maximization. The more profitability of private banks than the public ones a signal to encourage privatization in the banking sector, but only to the extent that reinvestment of the profits can be effectively encouraged [Flamini, v. et al (2009)].

2.3. Measure of Profitability

There are different ways to measure profitability such as: ROA is an indicator of how profitable a company is relative to its total assets. It gives us an idea as to how efficient management is in using its assets to generate earnings. As Golin (2001) points out (cited by Ayele, 2012) the ROA has emerged as key ratio for the evaluation of bank profitability and has become the most common measure of bank profitability.

Return on asset (ROA), return on equity (ROE) and return on invested capital (ROIC). ROA is an indicator of how profitable a company is relative to its total assets. It gives us an idea as to how efficient management is in using its assets to generate earnings whereas ROE measures a company's profitability which reveals how much profit a company generates with the money shareholders have invested. ROIC is a measure used to asses' company's efficiency in allocating the capital under its control in profitable investments. This measure gives a sense of how well a company is in using its money to generate returns. Comparing a

company's ROIC with its weighted average cost of capital (WACC) reveals whether invested capital is used efficiently or not.

2.4. Determinants of bank profitability

The review of empirical literatures on bank profitability show that determinants are organized in two parts namely internal and external determinants. The internal determinants include variables driven from financial statement and variables internal by their very nature. External determinants comprise review of industry-specific determinants which has impact on the banking sector profitability alone and macroeconomic determinants which affect all business activities of a given country.

Below we will see some of the determinants used by researchers.

Capital Adequacy (CAP): it is measured by the ratio of equity capital to total asset. Bank equity capital can be seen in two ways. Narrowly, it can be seen as the amount contributed by the owners of a bank (paid-up share capital) that gives them the right to enjoy all the future earnings or more comprehensively or it can be seen as the amount of owners' funds available to support a bank's business. It examines the relationship between profitability and bank capitalization. A strong capital structure is essential for financial institutions in developing economies, since it provides additional strength to withstand financial crises and increased safety for depositors during unstable macroeconomic conditions. A high capital asset ratio is assumed to be indicator of low leverage and therefore lower risk.

Liquidity (L): Liquidity is a prime concern for banks and the shortage of liquidity can trigger bank failure. Banking regulators also view liquidity as a major concern. This is because banks without sufficient liquidity to meet demands of their depositors risk experiencing bank run. Holding assets in a highly liquid form tends to reduce income as liquid asset are associated with lower rates of return. For instance, cash which is the most liquid of all assets is a non-earning asset. It would therefore be expected that higher liquidity would negatively correlates with profitability. Liquidity risk is estimated by the ratio of liquid assets to total assets

Return on Equity (ROE)

Although ROA provides useful information about bank profitability, we have already seen that it is not what the bank's owners (equity holders) care about most. 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 birr of equity capital. It is calculated as:

 ROE = Net Income after Tax / Total Shareholders' Equity

2.5. Review of previous studies

2.5.1 Review of previous studies in other countries

This sub section presents some of the previous studies in other countries reviewed by the researcher chronologically.

Athanasoglou et.al (2005) in their paper, specified an empirical framework to investigate the effect of Bank-specific, industry-specific and macroeconomic determinants on the profitability of Greek banks. They used capital, credit risk, productivity (Employee efficiency), expense management, size, ownership structure, concentration, inflation and cyclical output.

They found that capital is important in explaining bank profitability and that increased exposure to credit risk lowers profits. Additionally, labour productivity growth has a positive and significant impact on profitability, while operating expenses are negatively and strongly linked to it, showing that cost decisions of bank management are instrumental in influencing bank performance. The estimated effect of size does not provide evidence of economies of scale in banking. Likewise, the ownership status of the banks is insignificant in explaining profitability, denoting that private banks do not in general make relatively higher profits, at least during the period under their consideration.

Also, the SCP hypothesis is not verified, as the effect of industry concentration on bank

Profitability was found insignificant. Therefore, this result is in line with theoretical

Considerations according to which concentration is not related to profitability, once the other effects are controlled for in the model.

Finally, macroeconomic control variables, such as inflation and cyclical output, clearly affect the performance of the banking sector. The effect of the business cycle is asymmetric since it is positively correlated to profitability only when put out is above its trend.

Pasiouras & Kosmidou (2007) examine how bank's specific characteristics and the overall banking environment affect the profitability of commercial domestic and foreign banks operating in the 15 European Union countries over the period 1995-2001. They find that all explanatory variables employed significantly affect the bank profitability although their impacts are not always uniform for domestic and foreign banks. The utilized internal determinants are equity to total assets, cost to income ratio, loans to customers and short term funding, and total assets. While the used external determinants are inflation rate, GDP growth, concentration level (bank total assets to GDP ratio, the ratio of stock market capitalization to bank total assets, and the ratio of stock market capitalization to GDP.

Sufian & Chong (2008) paper seeks to examine the determinants of Philippines banks profitability during the period 1990–2005. The study utilized size, credit risk, income diversification, operational efficiency, capital adequacy, GDP, inflation, money supply growth and market capitalization as determinants of profitability. The empirical finding suggest that all the bank-specific determinant variables have a statistically significantly impact on bank profitability. The empirical findings suggest that size, credit risk, and expense preference behaviour are negatively related to banks' profitability, while noninterest income and capitalization have a positive impact. During the period under their study, the results suggest that inflation has a negative impact on bank profitability, while the impact of economic growth, money supply, and stock market capitalization have not significantly explained the variations in the profitability of the Philippines banks.

Sufian & Shah (2009) paper seeks to examine the determinants of the profitability of the Chinese banking sector during the post-reform period of 2000–2005. The empirical findings from this study suggest that all the determinants variables have statistically significant impact on China banks profitability. However, the impacts are not uniform across bank types.

The study revealed that non-interest income, non-interest expense, bank's capital strength, natural log of total assets, growth of money supply, and annual rate of inflation are significant key drivers of banks' profitability in Ghana. However, the size of the Ghanaian economy and

loan loss provision or provisions for bad debt did not have any significant impact on the banks profitability.

2.5.2 Empirical Review

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

On the other hand, Damena (2011) applied the balanced panel data of seven Ethiopian commercial banks that covers the period from 2001 to 2010. The paper used Ordinary Least Square (OLS) technique to investigate the impact of capital, size, loan, deposits, non-interest income, non-interest expense, credit risk, market concentration, economic growth, inflation and saving Interest rates on major profitability indicator i.e., return on asset (ROA). The estimation results show that all bank-specific determinants, with the exception of saving deposit, significantly affect commercial banks profitability in

Ethiopia. Market concentration is also a significant determining factor of profitability.

Finally, with regard to macroeconomic variables, only economic growth exhibits a significant relationship with banks' profitability.

The paper by Alemu (2015) was to investigate determinants of commercial banks Profitability in Ethiopia by using panel data of eight commercial banks from year 2002 to 2013. The study used mixed research approach and secondary financial data was Analized by using multiple linear regressions models for the bank profitability measure, Return on Asset (ROA). He used fixed effect regression model to investigate the impact Of bank size, capital adequacy, liquidity risk, operating efficiency, management Efficiency, employee efficiency, funding cost, banking sector development, real GDP, Inflation rate and foreign exchange rate

on Return on Asset (ROA). The empirical result Found that that bank size, capital adequacy and gross domestic product have statistically Significant and positive relationship with banks profitability. On the other hand, variables like liquidity risk, operational efficiency, funding cost and banking sector development have a negative and statistically significant relationship with banks profitability.

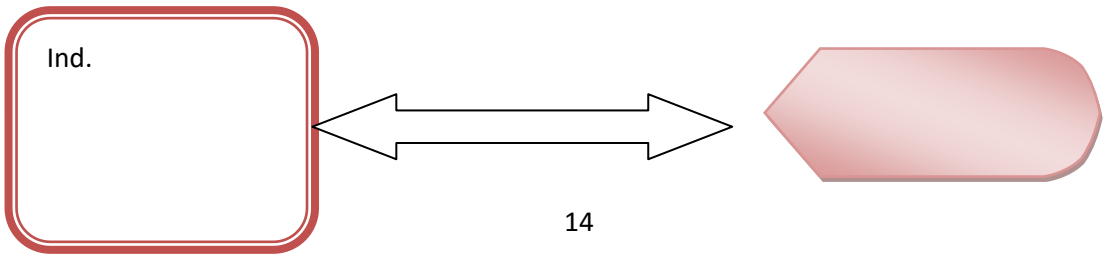
However, the relationship for Management efficiency, employee efficiency, Inflation and Foreign exchange rate is found to be statistically insignificant.

2.6. Knowledge gap

The empirical literatures that are discussed so far showed that, banks profitability is determined by both internal and external factors. However, Most of the literatures that are discussed so far appeared to have focused on studies that are conducted in the banking sector of different countries outside Ethiopia. Despite the fact that several studies are conducted by different researchers the literature review reveals the existence of controversial conclusions that results from different studies made so far.

Accordingly, as per the knowledge of the researcher, all the studies conducted in Ethiopian banking sector clearly failed to identify all the determinants of profitability and also so this research added one variable (Money Supply) to the study of determinants of profitability of banks in Ethiopia that has not been tested in the previous researches moreover, the result from different researchers as indicated in the literature review reveals the existence of controversial conclusions that results from different studies made so far Hence, the purpose of this study is to investigate the determinants of profitability in Ethiopian private commercial banking sector by utilizing an econometrics model so as to estimate both the internal and external determinants of profitability of private commercial banks. The researcher initiates there are no sufficient studies made which considers Ethiopian private commercial banks only and hence, the lack of sufficient research on the determinants of profitability in the context of Ethiopian private commercial banks was initiated this study.

Conceptual Frame Work



CHAPTER THREE

RESEARCH METHODOLOGY

3. RESEARCH METHODOLOGY

This chapter discusses on the research question, hypothesis, approach and techniques adopted for the study with the aim of achieving the research objectives. This section explains the research design and provides the population, sample and sampling technique, the research instruments used in collecting data for the study and the data collection and data analysis methods. It tells about the model and the components of the model both the dependent and the independent

3.1. Sampling Design and Size

The sampling technique selected for this research is purposive sampling. Particularly, the researcher used criterion sampling in which the banks service year is set as criteria and all private commercial banks that meet this criterion are selected as a sample. From all private commercial banks listed by NBE, sample of the below listed six banks that has been in business before 2005 are drawn based on the above criterion. The researcher considers that the sample size is sufficient to make sound conclusion about the population because as per NBE annual report 2014/15, out of the sixteen private commercial banks operating in Ethiopia the six selected private commercial banks constitute 55.52% in terms of branches network and 67.18% in terms of capital.

Moreover, private commercial banks in Ethiopia more or less provide the same service to their customer so the sample size is sufficient. The researcher has taken six banks and ten years data after balancing the number of banks and years covered.

3.3. Data source and collection

In order to analyse the effect of bank exact factors on profitability of banks audited financial statements of six privately owned commercial banks (Awash International Bank, Dashen Bank, Bank of Abyssinia, Wegagen Bank, United Bank and Nib International Bank) for 10

consecutive years was collected. The secondary data collected through document reviews are mainly from the records held by NBE and the banks themselves.

The macroeconomic data are obtained from National Bank of Ethiopia (NBE), which regulates the banking sector of the country, and from The Ministry of Finance &Economic Cooperation (MoFEC) which regulates the macroeconomic issues of the country.

3.4. Methods of Data Analysis.

After the data was collected, organized and financial ratios is computed for each bank of each bank specific variables. And then, the next step is to analyze and interpret them accordingly to achieve the stated objectives. In this research paper two type of statistical analysis is used to test the proposed hypotheses. These are descriptive statistics and inferential statistics/multiple regression analysis. To conduct this research paper statistical tools E-views7 software are very important.

3.5. Definition of Variables

3.5.1 Dependent Variables

Profitability: - it is manly measured by return on asset (ROA) and return on equity (ROE. For the purpose of this study, profitability is measured by return on asset, because the growth of Asset of commercial banks is higher than the growth of Capital.it is better to measure profitability by using return on asset (ROA) by the ratio of profit before tax to total asset.

- **ROA=Net profit before tax / Total Asset**

3.5.2 Independent Variable

This research paper used the following selected variables

Capital Adequacy: it is measured by the ratio of equity capital to total asset. It examines the relationship between profitability and bank capitalization. A strong capital structure is essential for financial institutions in developing economies, since it provides additional strength to withstand financial crises and increased safety for depositors during unstable macroeconomic conditions. A high capital asset ratio is assumed to be indicator of low leverage and therefore lower risk. Conversely, banks with lower capital adequacy are considered riskier relative to highly capitalized banks.

Return on Equity (ROE)

Although ROA provides useful information about bank profitability, we have already seen that it is not what the bank's owners (equity holders) care about most. 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 birr of equity capital. It is calculated as:

ROE = Net Income after Tax / Total Shareholders' Equity

Operating Efficiency: The expense to income ratio is used as proxy for operating efficiency. The expense to income ratio is defined as the operating costs over total generated revenues. The major elements of operating cost are staff salaries and administrative cost. It is used as an indicator of management's ability to control costs and is expected to have a negative relation with profits, since improved management of these expenses will increase efficiency and therefore raise profits. A negative correlation is expected between the operating cost and profitability implying that higher operating cost means lower profit and vice versa.

Liquidity: Another important decision that the managers of commercial banks must take refers to the liquidity management and specifically the ability of an organization to meet its obligations and the solvency of organization. It indicates the percentage of bank's loans funded through deposits. The ratio of bank's advances to deposits is used as a measure of liquidity. From the literature review, Al-Qudah et.al (2013) discovered that negative correlation exists between the level of liquidity and profitability. However, samad (2015) found a significant positive relationship between liquidity and bank profitability. Thus the relationship between liquidity and profitability is indeterminate.

Size of the Bank (SIZE): The bank's total asset is another bank specific variable that affects the profitability of a bank. Bank size measures its general capacity to undertake its intermediary function. There are two opposing arguments regarding to the relationship between bank profitability and bank size. The first view is "too big to fail" which considers negative relationship between bank size and profitability whereas; the second view considers

there is a positive relationship between bank size and profitability. In this study, bank size is measured by the natural logarithm of total asset of the bank and it is expected positive relationship between bank size and profitability.

3.6 Model specification

A multiple line regression model and t-static was used to determine the relative importance of each independent variable in influencing profitability. For this study, the regression analysis known as OLS was used to estimate the relationship between profitability and its determinants using E-view software econometric software package.

In light of the above, to investigate the relationship between capital adequacy (CAP), operational efficiency (OPE), Liquidity (LIQ), income diversification (INDIV), with bank profitability(BP). The following linear regression model is developed. The variables are taken from different papers discussed in the empirical literatures taking into consideration the availability of data. The regression model of this study is estimated in the following form.

$$BP = \beta_0 + \beta_1 CAP + \beta_2 OPE + \beta_3 LIQ + \beta_4 SIZ + \varepsilon$$

Source: Developed for the research

For the purpose of this study, diagnostic tests are performed to ensure whether the assumptions of the CLRM are violated or not in the model. Thus, the following section discusses about the nature and significance of the model misspecification tests.

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 auto correlated. To test for the existence of autocorrelation or not, the popular Durbin-Watson test was employed.

Test for Normality

As noted in Brooks (2008) a normal distribution is not skewed and is defined to have a coefficient of kurtosis of 3. One of the most commonly applied tests for normality; the BeraJarque formalizes these ideas by testing whether the coefficient of skewness and the

coefficient of excess kurtosis are zero and three, respectively. Brooks (2008) also states that, if the residuals are normally distributed, the histogram should be bell shaped and the Bera-Jarque statistic would not be significant at 5% significant level.

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Chapter Four

4. Result and Discussion

In the preceding chapter the research design employed in this study is presented and discussed in detail. The purpose of this chapter is to present results and analysis of data involved in the study. Accordingly, the descriptive statistics of all the variables used in this study and the results of hypothesis testing i.e. the estimated parameters of the regression equation, their significance, the connection between the independent variables and dependent variable according to the sign and the value of the parameters for the regression model are presented and discussed in detail.

The current chapter has three sections. Under the three sections in section 4.1 the test for the classical liner regression model/CLRM were presented followed by the descriptive statistics of the dependent and independent variables under section 4.2 and then finally, the results of the regression analysis were presented under section 4.3.

4.1. Descriptive statistics

Table 1 presents the outcomes of the descriptive statistics for main variables involved in the regression model. Key figures, including mean, median, standard deviation, minimum and maximum value were reported. This was generated to give overall description about data used in the model and served as data screening tool to spot unreasonable figure.

Table 4.1 descriptive analysis of dependent and independent variables

	ROA	ROE	L	DG	CAP	SIZE
Mean	3.143800	0.314528	0.390559	0.698182	0.135692	0.039072
Median	3.060000	0.300000	0.363114	0.699455	0.129377	0.039900
Maximum	4.700000	0.777100	0.693058	0.826358	0.192165	0.049800
Minimum	0.400000	0.005400	0.163797	0.219810	0.090822	0.013500
Std. Dev.	0.722594	0.174028	0.150421	0.090554	0.030950	0.005171
Observations	50	50	50	50	50	50

As can be seen from table 4.1, for the total sample, the mean of ROA was 3.1% with a minimum of 0.4% and a maximum of 4.7%. This indicates that, from the sampled Ethiopian private commercial banks, on average they earn 3.06 % of profit tax and the most profitable bank earned 4.7% of profit after tax for a single birr invested in the assets of the firm. On the other hand, the least profitable bank of the sampled banks earned 0.4% of profit after tax for a single birr invested in the assets of the firm. The standard deviation statistics for ROA was 0.7225 which indicates that the profitability variation between the selected banks was very small. The result implies that these banks need to optimize the use of their assets to increase the return on their assets.

The outputs of the descriptive statistics indicate that, the ratio of Advance to Deposit was 39.05%, on average, with a minimum of 16.37% and a maximum of 69.30%.This indicates that private commercial banks in Ethiopia use 39.05% of customer deposit on lending. This shows that banks keep more than the statutory liquidity requirement. Customer deposit is the second of the cheapest sources of fund due to the high margin between deposit and lending rate that banks utilize to generate income. Moreover, the figure shows that private commercial banks in the country target domestic resources are customer deposit, for their banking business.

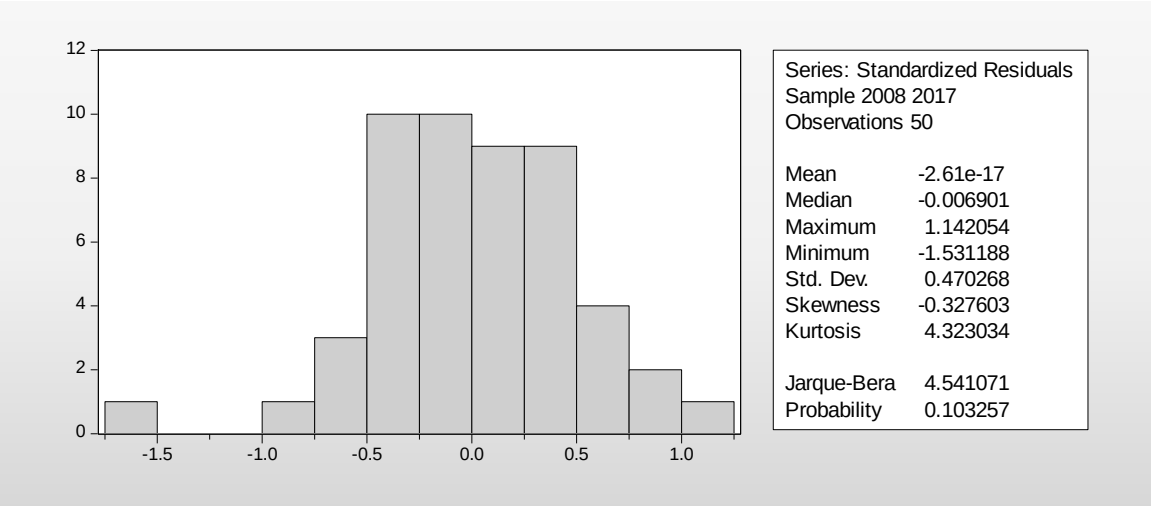
The deposit growth variable indicates that the minimum industry growth is 21.98% while the maximum is 82.63%. The banking industry has generally remained highly concentrated over the period with a mean concentration of 69.8. The descriptive statistics indicate that, the ratio of non-interest income to total Income was 13.56%, on average, with a minimum of 9.08% and a maximum of 19.21%.This indicates that private commercial banks in Ethiopia on average earn 13.56% of their income from noninterest income.

Finally the Table 1 also shows that the mean bank size was 3.9%, with a maximum of 4.98% and a minimum of 1.3%. Table 1 also bank size presents standard deviation of 0.0051; this implies that bank growth in Ethiopia during the period remains reasonable stable and the result was more or less in agreement with the government's report regarding economic growth.

4.2 diagnosis test and analyze

4.2.1 Test for Normality

Bera formalizes this by testing the residuals for normality and testing whether the coefficient of skeweness and kurtosis are zero and three respectively. Skewness measures the extent to which a distribution is not symmetric about its mean value and kurtosis measures how far the tails of the distribution. This study used Jarque-Bera Test (JB test) to find out whether the error term is normality distributed or not.



Source; E-views 7 output from financial statements of sampled banks and own computation

For the purpose of this study, the researcher used BJ normality test, to test the null hypothesis of normally distributed assumption. The p-value for the BJ test was 0.103257 for L which is not significant even at 10% level of significant to reject the null hypothesis. Thus the result of the test implies that the data were consistent with a normal distribution assumption.

4.2.2 Multicollinearity test

The term Multicollinearity indicates the existence of exact linear association among some or all explanatory variables in the regression model. When independent variables are multi collinear, there is overlapping or sharing of predictive power. Thus, if multicollinearity is perfect, the regression coefficients of the independent variables are undetermined and their standard errors are immeasurable (Gujarati, 2004). Kennedy (2008) suggests that any correlation coefficient above 0.7 could cause a serious multicollinearity problem leading to inefficient estimation and less reliable results. Therefore, in this study correlation matrix for

six of the independent variables shown below in the table has been estimated. Since there is no correlation above 0.7 according to Kennedy (2008), so we can conclude in this study that there is no problem of multicollinearity

Table 4.3 Multicollinearity test

	ROE	SIZE	DG	L	CAP
ROE	1.000000	0.410747	0.285918	-0.296790	-0.450822
SIZE	0.410747	1.000000	0.005746	-0.419766	-0.165150
DG	0.285918	0.005746	1.000000	-0.099990	-0.298347
L	-0.296790	-0.419766	-0.099990	1.000000	-0.060222
CAP	-0.450822	-0.165150	-0.298347	-0.060222	1.000000

4.3. Correlation

Table 4.4

	ROA	ROE	SIZE	DG	L	CAP
ROA	1.000000	-0.139421	0.068614	-0.174721	0.346432	0.431508
ROE	-0.139421	1.000000	0.410747	0.285918	-0.296790	-0.450822
SIZE	0.068614	0.410747	1.000000	0.005746	-0.419766	-0.165150
DG	-0.174721	0.285918	0.005746	1.000000	-0.099990	-0.298347
L	0.346432	-0.296790	-0.419766	-0.099990	1.000000	-0.060222
CAP	0.431508	-0.450822	-0.165150	-0.298347	-0.060222	1.000000

Table 4.4 above shows the correlation Matrix results. The correlation analysis has indicated that without return on equity and deposit growth all variables were significant and positively correlation. According to Pearson correlation matrix results, independent variables were significantly correlated with profitability or ROA and the highest correlation occurred between return on asset and capital adequacy 0.4315 followed by liquidity 0.3464 positively and significantly correlated with profitability.

4.4. Results and Discussion of regression analysis

The empirical evidence on the determinants of Ethiopian private commercial banks profitability is studied based on balanced panel data, where all the variables are observed for each cross-section and each time period. The study has a time series segment spanning from the period 2008 up to 2017 and a cross section segment which considered six private commercial banks, namely Nib international Bank, Awash International Bank, Dashen Bank, Bank of Abyssinia, Wegagen Bank, and United Bank. To test the relationship between these private commercial banks profitability and identified profitability determinant variables the following linear regression model is developed.

Dependent Variable: ROA
Method: Panel Least Squares
Date: 06/03/19 Time: 06:51
Sample: 2008 2017
Periods included: 10
Cross-sections included: 5
Total panel (balanced) observations: 50

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.167682	1.243961	-0.938681	0.3535
ROE	-0.356881	0.820222	-0.435103	0.6658
SIZE	0.673894	0.581728	1.158434	0.2536
L	2.543348	0.655959	3.877296	0.0004
CAP	21.40740	7.368775	2.905151	0.0060
DG	0.553614	1.082063	0.511628	0.6117

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.517771	Mean dependent var	3.143800
Adjusted R-squared	0.409269	S.D. dependent var	0.722594
S.E. of regression	0.555379	Akaike info criterion	1.838524
Sum squared resid	12.33782	Schwarz criterion	2.220928
Log likelihood	-35.96309	Hannan-Quinn criter.	1.984145
F-statistic	4.772013	Durbin-Watson stat	1.592808
Prob(F-statistic)	0.000241		

Source: Financial statement of sampled six commercial banks and own computation through E-views

ROA = -0.356881ROE + 0.673894SIZE + 2.543348L + 21.40740CAP + 0.553614DG

The estimation results of the operational panel regression model used in this study are presented in table 2. From table 2 the R-squared statistics and the adjusted-R squared statistics of the model was 51.77% and 40.92% respectively. The result of the R-squared indicates that the changes in the independent variables explain 51.77% of the changes in the dependent variable. That is capital adequacy; return on equity, Liquidity, bank size, and

deposit growth while the result of the adjusted-R squared indicates that the changes in the independent variables explain 40.92% of the changes in the dependent variable. That is capital adequacy, return on equity; Liquidity, bank size, and deposit growth collectively explain 80.68% of the changes in ROA. both the R-squared and the Adjusted R-squared values in this study are found to be sufficient enough to infer that the fitted regression line is very close to all of the data points taken together (has more explanatory power) For panel data, R-Squared greater than 20% is still large enough for reliable conclusions (Trivedi, 2009; Hsiao, 2007, cited in Nyamsogoro, 2010).

Moreover, table 2 also shows that the coefficient of return on equity against ROA were negative since the coefficients of this variables are -0.356881. This indicates that there was an inverse relationship between the independent variables and ROA. Thus the increase of this variable will lead to a decrease in ROA.

Variables like bank size, liquidity, capital adequacy and deposit growth had a positive relationship with profitability since their respective coefficients were 0.673894, 2.543348, 21.40740, and 0.553614 respectively. This revealed that there was a direct relationship between the above five independent variables and ROA.

Chapter Five

Conclusions and Recommendations

The previous chapter presented the analysis of the findings and discussions of the study. The purpose of this chapter is to discuss the conclusions and recommendations. Accordingly, the chapter is organized in two sections, the first section presents the conclusions of the study and the second section presents the recommendations provided based on the findings of the study.

5.1. Conclusions

This broad objective of this study was to identify the main bank-specific and macro-economic factors that can affect Ethiopian private commercial banks profitability and to what extent these determinants exert impact on Ethiopian Private commercial Banks' profitability. In doing so, previous studies on bank profitability have been reviewed and it is summarized that the profitability of bank is usually expressed as a function of internal and external determinants. The internal determinants refers to the factors originate from bank accounts (balance sheets and/or profit and loss accounts) and therefore could be termed bank-specific determinants of profitability. The external determinants are variables that are not related to bank management but reflect the economic and legal environment that affects the operation and performance of financial institutions. Empirical results from previous studies conclude that internal factors explain a large proportion of banks profitability; nevertheless external factors have also an impact on the performance.

A number of explanatory variables have been proposed for both categories, according to the nature and purpose of each study. Studies dealing with internal & external determinants employ variables such as Liquidity, bank size, capital adequacy, deposit growth and return on equity.

Based on the review of previous studies and banking area theories, the present study investigated the impact of some selected bank-specific and macroeconomic factors on the profitability of the Ethiopian Private commercial Banks over the period of 2008to 2017 with a sample size of six Ethiopian Private commercial Banks. To comply with the objective of

this research, the paper used quantitative research method. The quantitative data were mainly obtained from the banks themselves, from NBE and MoFEC through documentary analysis in order to identify and measure the determinants of banks profitability. In specific, multiple regression analysis is adopted to measure the effect of determinants on banks profitability quantitatively.

The empirical findings on the impact of private bank profitability in Ethiopia for the sample suggest the following conclusion. First, among the bank specific variables as , the result showed a positive relationship between bank size , liquidity deposit growth and capital adequacy.

The coefficient for the ratio CAP is the highest positive, showing that an increase in capital strength will result in increased profitability. This is in line with the expectation as a bank with a sound capital position is able to pursue business opportunities more effectively and has more time and flexibility to deal with problems arising from unexpected losses, thus achieving increased profitability. The result between return on asset and profitability showed a negative relationship with strong statistical significance .While the result for bank size, liquidity, deposit growth and capital adequacy showed a positive relationship with profitability.

5.2. Recommendation

Based on the findings of the study the following possible recommendations were forwarded: Banks size, Liquidity, deposit growth and capital adequacy are significant key drivers of profitability of private commercials banks in Ethiopia. Indeed focusing and reengineering the institutions alongside these indicators could enhance the profitability as well as the performance of the commercial banks in Ethiopia.

The following recommendations are put forward based on the findings of the research.

- ♣ There is need for private commercial banks to consider raising their capital more as it is found to have influence on profitability. Private commercial Banks should look in to reducing the amount they pay to shareholders as dividend, instead using it to raise the capital in addition to selling shares. The government should also continue to encourage and demand banks to raise their capital.

- ♣ Ethiopian private commercial banks should have liquidity management policy to ensure that they are operating to satisfy their profitability target as well as the ability of meeting the financial demands of their customers by maintaining optimum level of liquidity. And it is the most crucial and driving factor for commercial banks in running of the day today business activity and by large it affects also the overall economic activity of the country, therefore regulatory bodies like (NBE) should give special attention and follow commercial banks through strong directives in order to maintain the liquidity position safe

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