ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
DEPARTMENT OF MANAGEMENT
FINANCIAL SERVICES (SPECIALIZED IN BANKING)

"DETERMINANTS OF PROFITABILITY: THE CASE OF PRIVATE COMMERCIAL BANKS IN ETHIOPIA"

A PROJECT RESEARCH PAPER SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION (MBA)

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JUNE, 2020
ADDIS ABABA, ETHIOPIA

Declaration

I declare that the project research for the MBA degree in financial services (Specialized in banking) is my original work, prepared under the guidance of Dr.Tsegabrhan Mokonen at the University of Addis Ababa, hereby submitted by me, is my original work and have not previously been submitted for a degree at this or any other University, and that all references materials contained therein have been duly acknowledged.

Signature_____ Date _____

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STATEMENT OF CERTIFICATION

This is to certify that Gebre Erkalo, has carried out this research Project work on the topic entitled: "Determinants of profitability: The Case of Selected Private commercial Banks in Ethiopia" under my supervision.

This work is submitted in partial fulfillment of the requirements for MBA Degree in Financial services specialized in banking complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Approved by:

Advisor: _____ Signature_____ Date_____

Internal examiner: _____ Signature _____ Date _____

External examiner: _____ Signature _____ Date _____

Acknowledgment

Above all thanks to the Almighty God who has helped me to go through all the period and accomplish my study.

I would like to extend my gratefulness to my advisor Dr. Tsegabrhan Mokonen who was consistently checking up on my research guiding me in every aspect. He had made several corrections to give strength to the paper. Next my sincere thanks to my family deserves my appreciation for their love and care. They coverlet me down in the hardship I had come through during my studies.

ABSTRACT

The purpose of this study is to examine the determinants of profitability of private commercial banks in Ethiopia. The study employed an explanatory type of research design and quantitative approach. Secondary financial data on capital adequacy ratio, bank size, management efficiency ratio, funding cost ratio, interest rate, foreign exchange rate, and GDP on profitability. Return on equity (ROE) was used as a measure of profitability. The major findings of the study show that management efficiency ratio, have statistically significant and positive relationship with private commercial banks profitability. Further, the results from the panel regression suggest that, capital adequacy ratio, bank size, interest rate spread, foreign exchange rate have a negative and statistically significant relationship with private banks profitability. However, the relationship for debt to equity ratio and real domestic product growth is found to be statistically insignificant. banks in Ethiopia should not only be concerned about internal structures and policies, but they must consider both the external environment and the macroeconomic environment together in fashioning out strategies to improve their performance or profits.

Key terms: Determinants, Profitability and private Commercial Banks.

LIST OF ACRONYMS AND ABBREVIATIONS

AB	Abay Bank
AIB	Awash international Bank
BIB	Buna Bank
CAMEL	Capital adequacy, Asset quality, Management Efficiency Earning & Liquidity.
CAPM	Capital asset pricing model
CAR	Capital Adequacy Ratio
CBE	Commercial Bank of Ethiopia
CLA	Cost per loan asset
CLRM	Classical Liner Regression model.
ECB	Ethiopian Commercial Banks
EH	Efficiency Hypothesis
FER	Foreign Exchange Rate
GDP	Gross Domestic Production
IR	Interest Rate
IS	Interest rate spread
LIQ	Liquidity
LR	Leverage Ratio
MEFFR	Management Efficiency Ratio
NBE	National Bank of Ethiopia
OLS	Ordinary Least Square
ROA	Return on Asset
ROIC	Return on Invested Capital
ROE	Return on Equity
SCP	Structure Conduct Performance
SPSS	Statistical package social sciences

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CHAPTER ONE

1. INTRODUCTION

1.1 Background of the Study

The main purpose of any business is to maintain profitability and banks are also included in them. Profit is an imperative element for the proper and even performance of any business in the existing aggressive surrounding and the performance of the firms is affected by it notably, as the budgetary potential of banks can in addition force the financial advancement. While identifying bank profit determinant, there is a chance to evaluate which variable have more impact on profit, and it is very important for management to make timely decisions. Over the past 30 years the greater part of the research allocates substantial time and cash in the significance of the commercial variable and different studies and investigations have made to link different factors. (Tariq , Usman, Mir, &Aman, 2014).

Microeconomic as well as macroeconomic activities of an economy largely depend on banking sector. Banking institutions are considered the lifeblood of any economy. The main role of a banking system is to assist the flow of funds from savers to borrowers. Banks are such types of business where deposits are considered as liabilities and issuing debt securities are considered as assets on the other part (Fama, 1980). If a financial system is efficient, then it should show profitability improvements, increasing volume of funds flowing from savers to borrowers, and better quality services for consumers (Sufian & Habibullah, 2009).

The history of banking in Ethiopia dates back to the turn of 20th century. The agreement that was reached in 1905 between Emperor Minilik II representative of the British owned National Bank of Egypt marked the introduction of modern banking in Ethiopia. Following the agreement, the first bank called Bank of Abyssinia was inaugurated in February16, 1906 in Addis Ababa, by the Emperor. Recently, banking services in Ethiopia has showed rapid boom as the economy of the country growing fastly. The current development bank of Ethiopia was established by government of Ethiopia in 1909 following bank of Abyssinia. After state bank of Ethiopia had spilt in to national bank and commercial bank of Ethiopia in 1963, there are about sixteen private commercial banks opened in Ethiopia based on Proclamation No. 592/2008. These are Awash

international bank in 1994, bank of Abyssinian in 1996, Wegagen bank in 1997, united bank in 1998, Nib international bank in 1999, Dashen in 2003, Cooperative bank of Oromia in 2005, lion international bank in 2006, Oromia international bank in 2008, Buna international bank in 2009, Zemen Bank in 2009, Abay bank 2010, Berhan bank in 2010, Addis international bank in 2011, Debub Global bank in 2012 and Enat bank in 2013 respectively.

Banking sector is the back bone of any economy and plays an important role in the economic development of a country. Mobilization of the national savings to the productive sectors is possible only with the help of commercial banks that increases the economic growth rate of a country. Profitable commercial banks also stabilize the financial system of a country.

Determinants of bank profitability can be split between those that are internal and those that are external. Internal determinants of bank profitability can be defined as those factors that are influenced by the bank's management decisions and policy objectives. Management effects are the results of differences in bank management objectives, policies, decisions, and actions reflected in differences in bank operating results, including profitability. Zimmerman (1996) found that management decisions, especially regarding loan portfolio concentration, were an important contributing factor in bank performance. Researchers frequently attribute good bank performance to quality management. Management quality is assessed in terms of senior officers' awareness and control of the bank's policies and performance. Internal drivers of bank performance or profitability can be defined as factors that are influenced by a bank's management decisions. Such management effects will definitely affect the operating results of banks. Although a quality management leads to a good bank performance.

This study would give due attention to the importance of factors that we will lead think about and to direct an investigation about the banks determinants of the profitability which is essential for the owner as well as for the management and decision makers to take timely action which improve banks efficiency and profit.

1.2 Statement of the Problem

Ethiopia is the country's central bank. The banking sector these days has gone less secure, and hence, the studies devoted to profitability of commercial banks assume a greater significance. Efficient composition of assets and liabilities of commercial banks is crucial for their sound

financial performance. Internal factors or management factors include the management policies, capital ratios, risk management, efficiency of banking services to customers like money transfer, assets, equity loan facilities, deposit services etc. The Ethiopian financial sector reform was aimed at improving profitability, efficiency and productivity, by adopting a strategy of gradualism, but Ethiopian banks' performance has still remained poor with substantial gaps in service delivery to private agents, particularly to the rural and lower income population.

The profitability, which is an important criterion to measure the performance of banks in addition to productivity, financial and operational efficiency, has come under pressure because of changing environment of banking. An efficient management of banking operations aimed at ensuring growth in profits and efficiency requires up-to-date knowledge of all those factors on which the bank's profit depends. Accordingly, in this paper researcher have made an attempt to identify the key determinants of profitability of Private Sector Banks. Like all businesses, banks profit by earning more money than what they pay in expenses. The major portion of a bank's profit comes from the fees that it charges for its services and the interest that it earns on its assets. Profits can be measured as a return on assets and as a return on equity.

Profit in the banking industry fluctuates overtime having its ripple effect on economic growth; this calls attention to profitability variables (return on capital employed, return on equity) in banks and their effect on economic growth (Adekola,2016).

Studies of the determinants of profitability in commercial banks have mixed findings, for example, Funso et al. (2012), Kapur, and Gualu (2011), Damena (2011), Schwaiger, & Liebig (2008) found a positive relationship on banks profitability. On the other hand, some found a negative relationship (Kaaya & Pastory2013); Kerlin2013; Musyoki and Kadubo 2012 and Nawaz and Munir 2012, Poudel, 2012; Alper & Anbar 2011, and Kithinji2010).

Banking institutions are playing significant roles in the expansion of the financial system and the economy of the nation. It is notable that, the banking sector of developing countries is less stable than developed countries (Beck & Rahman, 2006; Sufian & Habibullah, 2009; Uddin& Suzuki, 2011). It is expected to maintain proper profit for any firm in order to survive. Recently, banking sector is passing a critical path. Some commercial banks are trying hard to keep their operations in proper ways. Banking sector is increasing its appeal to customers, investors, and business

people etc. Financial system is rounding up through the orbit of banking industry. An efficient financial system improves banks' profitability by increasing the amount of funds available for investment, while enhancing the quality of services provided for the customers (Saona, 2011).

Literature has provided many evidences which identify the major determinants of banks profitability. Some studies are conducted on a particular country and others on countries 'panel but study would focus on the bank specific variables as major determinants of banks' profitability. The factors being focused are bank related and also reflect the management performance.

The following research questions are set to address the problem statement:

1. What are the major internal factors that determine the Profitability of private commercial banks in Ethiopia?
2. What is the effect of external factors on the profitability of private commercial banks in Ethiopia?

1.3. Research Hypotheses

To specifically the answer the research questions, the following hypotheses are formulated

Ho1: There is positive and significant relationship between debt to equity ratio and profitability.
Ho2: There is positive and significant relationship between capital adequacy ratio and profitability.
Ho3: There is positive and significant relationship between bank size and profitability of Banks.
Ho4: There is positive and significant relationship between management efficiency and profitability of private commercial banks in Ethiopia.
Ho5: There is negative and significant relationship between interest rate and profitability of private commercial banks in Ethiopia.
Ho6: There is negative and significant relationship between foreign exchange rate and profitability of private banks in Ethiopia.
Ho7: There is positive and significant relationship between GDP and the profitability of private banks in Ethiopia.

1.4. Objectives of the Study

1.4.1. General Objective of the Study

The general objective of the study is to examine the determinants of profitability of private Commercial banks in Ethiopia.

1.4.2 Specific Objectives of the Study

1. To assess the major internal factors those, determine the Profitability private commercial Banks in Ethiopia
1. To assess the effect of external factors on the profitability of private commercial banks in Ethiopia;

1.5. Scope of the Study

The scope of study mainly delimited to three private commercial banks which includes from large Awash International bank (AIB), from medium Buna international bank, and from the small Abay bank S.C. The time period for the study was bounded between 2010–2019 (Ten years' data).

The profitability of the banks would measure using seven elements of specific internal & external factors. Internal factors are debt to equity ratio, capital adequacy ratio, banks size, management efficiency and External factors are Interest rate, foreign exchange rate, and Gross domestic production (GDP) respectively.

1.6 Significance of the Study

This research finding will help in addressing the existing knowledge gap in literature of determinants of bank profitability in Ethiopia. It should also be a valuable addition to the existing knowledge and provide a platform for further research, which should be useful to academicians and scholars. The study would have a great benefit to oversight boards, senior management and investors of financial institutions in Ethiopia. The managers in all commercial banks targeted in the study would clearly understand more on determinants of profitability of private commercial banks in Ethiopia. They would have the advantage of applying the recommendations made on

the study and engage the relevant stakeholder to determine whether to avoid risk, transfer risks (insurance), risk reduction (mitigating risk) or retain the risk in a bid to maximize returns. The study is also having great benefit to the government and regulatory bodies. It should help the regulators to understand the determinants and how to strengthen the financial industry in terms of policies.

1.7. Limitations of the Study

It is challenging for the researcher to undertake the research absolutely without any problem or limitation. Similar to every research, this study has the following limitations: as it is known the study was conducted by secondary data so it was very difficult to find full data from different banks. Therefore, these and other similar problems have affected the quality of the paper which in turn might have led limitation in result.

1.8. Organization of the Paper

This paper was organized under five chapters: The first chapter is introduction part, which deals with the general aspect of the study, which includes background to the study, statement of the problem, research objectives, scope, and significance of the study, limitation of the study and organization of the research paper. The second chapter is devoted to the review of related literature, conceptual frame work and hypothesis. The third chapter deals with the methodology part of the paper and it encompasses the research design, data source and collection techniques, sampling technique and sample size determination, method of data analysis, Chapter four deals with result and discussion, the fifth chapter contains the summary, conclusion and recommendations.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

2.1 Introduction

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 (Samuel, 2015).

The profitability of banks has always been an issue of great interest in economic literature. A considerable bulk of literature has come into existence in search for the indicators of profitability. In most of these studies the profitability of banks has been represented by the return

on assets (ROA) and return on equity (ROE) besides other proxies (Mehmet, & Nimet,2017).

The fundamental requirements here are that the income and the expenses must occur during the same period of time (Matching Concept) and the income must be a direct consequence of the expenses. The period of time may be one week, three months, one year etc. (Sabo, 2007).

It is not immaterial whether or not the income has been received in cash nor is it compulsory that the expenses must have been paid in cash. The term profit can take either its economic meaning or accounting concept which shows the excess of income over expenditure viewed during a specified period of time. Profit is one of the main reasons for the continued existence of every business organization (Macharia, 2016).

On the other hand, profit is expected so as to meet the required return by owners and other outsiders. Hampton (2009) clarified profitability ratio as a class of financial metrics that are used to assess a business's ability to generate earnings as compared to its expenses and other relevant costs incurred during a specific period of time. Accordingly, the term profitability is a relative measure where profit is expressed as a ratio, generally as a percentage. Profitability depicts the relationship of the absolute amount of profit with various other factors. Similarly, Koller (2011) argued that profitability is the most important and reliable indicator as it gives a broad indicator of the ability of company to raise its income level. In practice, executives define profits as the

difference between total earnings from all earning assets and total expenditure on managing entire asset-liabilities portfolio (Macharia, 2016).

Banking Profitability may also show managers attitude toward risk. Banks that make huge profits are not scared when venturing into risky activities. In a similar fashion, banks that are not effective in their management encounter higher bad debt. Profitability measure is important to the investors. The level of profitability is very significant for shareholders of a bank because it shows how effective management has utilized their investments (Devinaga, 2010). In determining the financial strength of a commercial bank, the level of profitability is predominant. According to Codjia (2010), profitability financial performance will look at the statement of an accounting summary that details a business organization's revenues, expenses and net income. This may be prepared by the bank on a monthly, quarterly or annual basis (Nshimiyimana & Zubeda, 2017).

2.2 General Theories of Influences on Bank's Profitability

This sub-section presents other theoretical explanations for relationships between regulation, the structure Conduct Performance (SCP) model, efficiency hypothesis, Capital Asset Pricing Model (CAPM), Expense-preference behavior, and Agency theory. Nevertheless, it should be mentioned that this study focuses on a broader model combining macroeconomic and bank-specific determinants of banks profitability (Samuel, 2015).

2.2.1 Regulation

The main objective of regulation and supervision in the banking is to overcome the moral hazard problem in the banking sector. Without any regulation, politicians assume that value-maximizing banks take on more risks than which is optimal 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. Regulation that requires minimum capital ratios would likely negatively influence profitability as regulation constrains value-maximizing banks in risk taking and in reaching an optimal capital structure. Furthermore, according to 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 (Nkegbe &Yazidu, 2015).

2.2.2 The Structure Conduct Performance (SCP) Model

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).

According to Baye (2010), 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 behavior causes resources to be allocated in certain ways leading to either an efficient or inefficient market. This model only fails to recognize that performance can influence structure and conduct while structure can impact on both performance and conducts. The Structure Conduct Performance (SCP) model therefore asserts that factors external to the organizations such as market conditions are primarily and indirectly, the determinants of profitability (Alemu, 2015).

2.2.3 Efficiency Hypothesis

A theoretical attempt to offer an alternative explanation on the market Structure Conduct Performance (SCP) relationship was first made by Demsetz (1973) who also proposed the Efficiency Hypothesis. He stated that higher profits of banks are not due to their collusive behavior but because of high efficiency level, which in turn, leads to larger market shares that banks possess. In other words, profitability of bank is determined not by the market concentration but by bank efficiency (Grygorenko, 2009).

This hypothesis stipulates that a bank which operates more efficiently than its competitors gains higher profits resulting from low operational costs. The same bank holds an important share of

the market. Consequently, differences at the level of efficiency create an unequal distribution of positions within the market and an intense concentration (Macharia, 2016).

2.2.4 Capital Asset Pricing Model (CAPM)

The Capital Asset Pricing Model (CAPM) describes the relationship between risk and expected (required) return. In this model, the expected return on a firm's stock is defined as a function of risk-free rate and a premium based on the systematic risk. The greater the systematic risk, the greater the return the investors will expect from the security. The underlying logic behind this model and its relevance in this study is based on the fact CAPM views the total portfolio risk as a function of systematic risk and unsystematic risk. The systematic risk is attributable to factors that affect the market as a whole such as government policies, changes in the economy and the political climate. The unsystematic risk is specific to a particular company such as industrial relations, quality of firm's management or a new competitor in the industry. Systematic risks cannot be avoided through diversification. However unsystematic risk can be avoided through diversification. It asserts that in market equilibrium, a security is expected to provide return commensurate with its systematic risk. Investors should not be compensated for unsystematic risks as it assumes investors are rational and risk-averse enough to diversify unsystematic risks (Melaku, 2016).

2.2.5 Expense-Preference Behavior

It is worth noting that profitability or bank returns is not the only measure of performance as used in the theories discussed so far. There are however other theories such as the Expense-Preference Behavior hypothesis which uses utility instead of profits as a measure of performance. In this theory it is proposed that the main goal which managers pursue is to maximize not profit but own utility or utility of the firm, which is usually achieved via increasing salaries or other staff expenses (Williamson, 1963). We shall go no further on the Expense-Preference Behavior - as this study is on profitability as a measure of performance (Melaku, 2016).

2.2.6. Agency Theory

The main theoretical explanation for the relationship between the ownership structure and profitability is based on the agency theory, first formalized by (Jensen and Meckling, 1976).

Their research explains why managers of entities with different capital structures, choose different activities. In a relationship between owners and managers, a principal-agent relationship, both differ in needs and preferences. In this context, an obvious theoretical argument for the relationship between the ownership structure and profitability arise, capital market discipline could strengthen owner's control over management, giving banks management more incentives to be efficient and profitable. Following Jensen and Meckling (1976) their results has implications for banks profitability suggesting that the ownership structure and corporate governance structure influence performance. Banks with more stringent and value-based owners will likely have better profitability than mutual, co-operative or state-owned banks (Macharia, 2016).

2.3. Determinants of Profitability

2.3.1. Internal Determinants of Banks' Profitability

According to Devinaga (2010), researchers who paid more attention to the discovery of the determinants of a bank's performance and profitability classified them into two main factors. These are the internal and the external factors. According to Husni (2011), the internal determinants of profitability are made up of factors that can be controlled by the banks. Thus, it is within the power of the banks to determine the level these factors should take. These determinants have effect on both the revenue and cost incurred by the banks. Some research papers have divided these determinants into two groups. They are the financial statement variables and non-financial variables. The financial statement variables have a direct effect on both the financial statement and the statement of financial position of the bank and the non-financial statement variables consist of factors like the number of branches of a particular bank, location (Haron, 2004). The following are the internal determinants of the profitability of banks;

2.3.1.1. Non-performing Loans

Non-performing loans ratio (NPLR) indicates the loans that are default for the period of more than 90 days and the assets that are acquired as result of foreclosure. Non-performing loans ratio (NPLR) reflects the bank's credit quality and is considered as an indicator of credit risk management. NPLR indicates how banks manage their credit risk Hosna et al, (2009).Bhattarai,

(2016) asserted that non-performing loan ratio (NPLR) is the major indicator of commercial banks' credit risk.

2.3.1.2. Capital Adequacy

Capital adequacy is the minimum capital requirement of the Bank, which indicates the bank's ability to absorb the loss. It acts like an air bag in the car. Capital adequacy is the amount of capital hold as required by financial regulator, to guarantee the level of capital those banks have to sustain operating losses while honoring withdrawals. It is a measure of the amount of bank's capital expressed as a percentage of its risk weighted exposure. Theoretically, banks with good capital adequacy ratio have a good profitability. Since higher capital reduces banks' risk and creates a buffer against losses, it makes funding with non-insured debt and less information sensitive Admati, et.al, (2013). Thus, capital adequacy can enhance bank performance. Kurawa and Garba, (2014) found significant positive relationship between capital adequacy variable and ROE of banks. Simultaneously, Jha and Hui, (2012) found negative association between capital adequacy ratio and financial performance of the banks while the coefficient was statistically significant.

2.3.1.3. Leverage

Leverage Ratio/Debt to equity ratio (DTEQR): Leverage means borrowing money and investing with the aim of earning more profit than the money spent on borrowing. The bank provides loan to the customer out of deposits made with the aim of earning more profit. Excessive leverage increases the credit risk faced by the bank (Alemu, 2015).

2.3.1.4. Bank Size

Bank Size: In most studies of bank profitability determinants, the total asset is used a measure for bank size. Bank size is usually used to account for potential economies or diseconomies of scale in the banking sector. Additionally, bank size is associated with diversification which may impact favorably on risk and product portfolio. Economies of scale will reduce the cost of gathering and processing information Macharia (2016) Cited in Boyd et al. (1993) so that a positive effect of bank size is associated with profitability. Akhaveinet al. (1997) and Smirlock (1985) found a positive and significant relationship between size and bank and profitability. Short (1979) argues, size is closely related to the capital adequacy of a bank since relatively large

banks tend to raise less expensive capital and hence, appear more profitable. These results imply that as size increases, profitability increases. This is especially true in the case of small to medium-sized banks (Macharia, 2016).

2.3.1.5. Management Efficiency

Management efficiency is the performance of the other four components will depend on the vision, capability, agility, professionalism, integrity, and competence of the financial institutions management. A sound management is crucial for the success of any institution. Management quality is generally accorded greater weighting in the assessment of the overall CAMEL composite rating brickwork rating. The quality of the management will determine the success of a bank or financial institution. The performance of a bank is largely dependent on the vision, competence, and integrity and risk appetite of the management, financial management and Analysis of Projects. Efficiency is one of the key internal factors that determine the bank profitability. It is represented by different financial ratios like total asset growth, loan growth rate and earnings growth rate. Yet, it is one of the complexes subject to capture with financial ratios. Moreover, operational efficiency in managing the operating expenses is another dimension for management quality. The performance of management is often expressed qualitatively through subjective evaluation of management systems, organizational discipline, control systems, quality of staff, and others. Yet, some financial ratios of the financial statements act as a proxy for management efficiency. The capability of the management to deploy its resources efficiently, income maximization, reducing operating costs can be measured by financial ratios. The ratios of operating expenses to operating income and operating expenses to total assets are commonly used to measure Managerial efficiency of the banks. Indranarain (2009), Bourke (1989) and Molyneux and Thornton (1992) used operating expense to operating income and stated that Higher the efficiency level of a bank, higher its profits level (Kebede, 2014).

2.3.1.6. Cost per Loan Assets

Miskir (2015) Cost per loan Assets indicates the cost incurred by the bank in providing one unit of loan. Cost per loan assets (CLA) is the average cost per loan advanced to customer in monetary term. Cost per loan assets is calculated dividing total operating costs by total amount of loans. The function of this is to point out efficiency in distributing loans to customers Appa, (1996); Ahmed et al (1998); Kolapo et al (2012). Thus, cost per loan assets is considered as a

determinant of the bank`s performance and is viewed as an indicator of profitability. Banks that are efficient in managing their expenses (costs), holding other factors constant, earn high profits. Therefore, it is expected that cost per loan assets and bank performance to be negatively associated. This may not always be true because in cases where there are high expenditures due to many businesses done, the bank can still increase the returns.

2.3.1.7. Fund Cost

Dawit (2017) states funding cost is the interest rate paid by commercial banks for the funds that they deploy in their business, the cost of funds is one of the most important input costs for a financial institution, since a lower cost will generate better returns when the funds are deployed in the form of short term and long-term loans to borrowers. The spread between the cost of funds and the interest rate charged to borrowers represents one of the main sources of profit for most financial institutions. The most common ratio used to examine funding costs is the ratio of interest expenses on deposits to total deposits. Macroeconomic theory states that there will be a negative relationship between funding costs and profits because a lower cost will generate better returns for banks that make profits off of the loans to borrowers (Dietrich and Wanzenried, 2011).

2.3.2. External Determinants of Profitability of Bank

Amdemikael (2012) the ambiences in which banks operate have a significant influence on the financial performance and their strategies employed. These external determinants are the outside factors that affect the positioning of a bank. These factors are beyond the control of the banks; however, banks which are proactive can position themselves very well to make the best out of the anticipated changes. According to Karkra and Ameyaw (2010), these external factors are the macroeconomics variables and can affect the profitability.

2.3.2.1. Interest Rate

Manchara (2016) proclaim that interest rate risk arises from movements in interest rates. A bank is exposed to interest rate risk when it experiences a situation of imbalance in terms of size or maturity dates between assets and liabilities sensitive to interest rates, leading to potential losses for the bank when interest rate increases or declines and this influences the net asset value in the budget, which some call risk gap (Claudiu and Daniela, 2009) Alemu (2015) In the scenario of

rising interest rate, when liabilities re-price faster than assets, interest spread would fall and hence profitability of the bank would be adversely affected. Accepting this risk is a normal part of banking business and can be an important source of profitability. However, excessive interest rate risk can pose a significant threat to banks' earnings and capital base. Changes in interest rates affect banks' earnings by changing their net interest income and the level of other interest sensitive income and operating expenses. Companies face interest-rate risks from the interest-rate sensitivity of their debts and/or their investments. However, for nonfinancial services companies, the risks from interest-rate sensitivity of their debts would usually outweigh the risks from their investments. The impact of interest rates on the business will depend on the choice of funding: the mix between capital and debt; the mix between fixed and floating rate debt; and the mix between short-term and long-term debt. There are a number of factors that need to be considered when deciding whether to use fixed-rate or floating-rate instruments: The expectation of future interest-rate movements. If interest rates were expected to fall, a floating rate would be more attractive to a borrower. Interest-rate changes would be easier to predict in the short-term than in the long-term. A mix of fixed and floating-rate instruments ensures diversification of interest rate exposure and acts as a natural hedge (Collier 2009).

According to Dawit (2017), the goal of interest rate risk management is to maintain a bank's interest rate risk exposure within self-imposed parameters over a range of possible changes in interest rates. As expressed in Basel Committee on Banking Supervision (2003), a system of interest rate risk limits and risk taking guidelines provides the means for achieving that goal. Such a system should set boundaries for the level of interest rate risk for the bank and where appropriate, should also provide the capability to allocate limits to individual portfolios, activities or business units. Limit systems should also ensure that positions that exceed certain predetermined levels receive prompt management attention. An appropriate limit system should enable management to control interest rate risk exposures, initiate discussion about opportunities and risks and monitor actual risk taking against predetermined risk tolerances. Limits should be consistent with overall approach to measuring interest rate risk. Aggregate interest rate risk limits clearly articulating the amount of interest rate risk acceptable to the bank should be approved by the board of directors and reevaluated periodically. Such limits should be appropriate to the size, complexity and capital adequacy of the bank as well as its ability to measure and manage risk (Amdemikael, 2012).

2.3.2.2. Foreign Exchange Rate

Foreign exchange Rate: Foreign Exchange risk arises when a bank holds assets or liabilities in foreign currencies and affects the earnings and capital of bank due to the fluctuations in the exchange rates. No one can predict what the exchange rate will be in the next period, it can move in either upward or downward direction regardless of what the estimates and predictions were. This uncertain movement poses a threat to the earnings and capital of bank, if such a movement is in undesired and unanticipated direction (Evans,2014). SongulKakilli (2013) Turkish banking sector's profitability factors found positive relationship between exchange rate and profitability. Thus, this variable has significant and positive impact on profitability. Official exchange rate refers to the exchange rate determined by national authorities or to the rate determined in the legally sanctioned exchange market. It is calculated as an annual average based on monthly averages (local currency units relative to the U.S. dollar).

2.3.2.3. Gross Domestic Product (GDP)

The real GDP is the sum of the value added in the economy during a given period or the sum of incomes in the economy during a given period adjusted for the effect of increasing prices (Daferighe &Aje, 2009). A study by Ugbede, Otache and Umar (2012) on the impact of Commercial Banks Credit on Nigeria's GDP discovered that Commercial banks credit has a high positive impact on the nation's GDP meaning the higher the volume of Commercial banks credit made available, the higher the corresponding GDP.Therefore the increment in GDP to some extent is accountable by rise in price (inflation) In order to measure production and its change overtime, the effect of increasing prices need to be eliminated. The foregoing presupposes that in the determination of GDP growth from one year to another, real GDP give a more accurate view of the economy. Hence, the study focused on real GDP rather than the nominal GDP Two different approaches are used to calculate GDP. In theory, the amount spent for goods and services should be equal to the income paid to produce the goods and services, and other costs associated with those goods and services. Calculating GDP by adding up expenditures is called the expenditure approach, and computing GDP by examining income for resources (sometimes referred to as gross domestic income, or GDI), is known as the resource cost/income approach (Manchara, 2016).

The gross domestic product growth issue as a measure of macro-economic conditions in this study. There is a positive relationship between economic growth and profitability of commercial banks (Bikker *et.al*,2002 and Athanasoglou *et.al.*, 2008). Therefore, a positive relation between real GDP growth and profitability I expected.

Inflation rate is another important macro-economic variable and its effect is depend on whether the inflations anticipated or unanticipated (Perry,1992). If inflation is anticipated, the interest rates are adjusted accordingly, which results increase in revenues faster than costs and will have positive effect on profitability of banks. On the contrary, in unanticipated case, banks may be weak in adjusting their rates of interest resulting in a faster increase cost of banks than revenues and accordingly, having negative effects on the profitability. However, most empirical studies, for instance, Amdemichael (2012) and Melaku (2016) found a negative relationship between inflation and profitability. So, the expected impact to inflation on banks profitability is negative.

Another macro-economic determinant that affects profitability is interest rate. The interest rates spread, i.e. lending interest minus deposit interest, is the measurement of interest rate. A positive relationship is expected to have between interest rate and profitability in the hear to flend-long and borrow-short argument (Vongand Chan, 2008).

2.4 Review of Empirical Studies

According to the study conducted by Tadesse Wubie and Enyew Alemaw in Jinka University, aimed to examine the main internal and external factors that can affect Ethiopian commercial banks profitability. Both internal and external factors are the major determinants of the profitability of commercial banks in Ethiopian. Leverage, capital adequacy, liquidity have a direct and significant effect on banks profitability in Ethiopia. On the other hand, operating efficiency, GDP, inflation, interest rate, annual inflation rate and interest rates predate significant and negatively affect the profitability of the banks. Lastly, bank size and number of branches are factors that have in significant effect on the profitability of Ethiopian banks.

Dawood (2014) evaluated the profitability of the 23 commercial banks operating in Pakistan for the period of 2009 to 2012. The study used the Ordinary Least Square (OLS) method to look into the impact of cost efficiency, liquidity, capital adequacy, deposits and size of the bank on profitability (ROA). The empirical findings showed that cost efficiency, liquidity, and capital adequacy are those variables that decide profitability while deposits and size of the bank did not demonstrate any impact on profitability.

Research conducted by Blessing Katuka in Zimbabwe revealed that banking sector's profitability was volatile under the multiple-currency system and that there is greater variability in deposits among banks. Analysis indicated that ROA, ROE and NIM are differently affected by each of the explanatory variables. The study found out that ROE and NIM are solely influenced by bank specific factors. In contrary, ROA proved to be influences by a combination of both internal and external factors such as managerial efficiency, operating expenses management, inflation, industry concentration and GDP changes. Based on these findings, the researcher recommends banks to ensure they maintain low cost structures since efficiency had greater influence on all profitability measures.

According to the investigation conducted by Tesfaye Boru the determinants of Ethiopian bank performance considering bank specific and external indicators on banks' profitability for the 1990-2012 periods. The study finds that bank specific variables by large explain the variation in profitability. High performance is related to the ability of banks to control their credit risk, diversify their income sources by incorporating non-traditional banking services and control their overhead expenses. In addition, the paper finds that bank's capital and liquidity status are not significant to affect the performance of banks. On the other hand, the paper finds that bank size and macro-economic variables such real GDP growth rates have no significant impact on banks' profitability. However, the inflation rate is determined to be significant driver to the performance of the Ethiopian commercial banks. Hence, as a matter of policy implications it's recommended.

According to the empirical study conducted by Sori Tefera on private commercial banks of Ethiopia, firstly the coefficient of the constant term is positive and statistically insignificant. The

positive coefficient of constant term which represents economies of scale suggests that private commercial banks in Ethiopia during the study period earn net positive income from off-balance

sheet activities. That means that these banks enjoy increasing returns to scale in their operation. Secondly the loans and advances have significant effect on the profitability y of private commercial banks. All other asset variables have no significant effect on private commercial banks profitability. Thirdly the demand deposits variable has positive and significant effect on profitability y of private commercial banks. That is because private commercial banks are receiving better service charges on demand deposits that can cover the liquidity requirement costs on its off- balance sheet activities. Fourthly Market concentration ratio represented by Herfindahl index has a negative sign indicating that higher concentration in the market decreases the profitability of private commercial banks. This is against the structure-conduct-performance (SCP) hypothesis that market concentration positively impact bank profitability. Lastly the GDP growth has statistically significant and positive relationship with profitability. On the other hand, inflation has no impact on the profitability of private commercial banks in this model as far the variable is not significant even at 10% significance level.

2.5 Conceptual Framework

A conceptual framework depicts a relation that exists between study variables. The study seeks to identify determinants of banks profitability hence independent variables will include bank's debt to equity ratio, capital adequacy ratio, bank size, management efficiency, interest rate, foreign exchange rate and GDP. The dependent variable will be profitability.

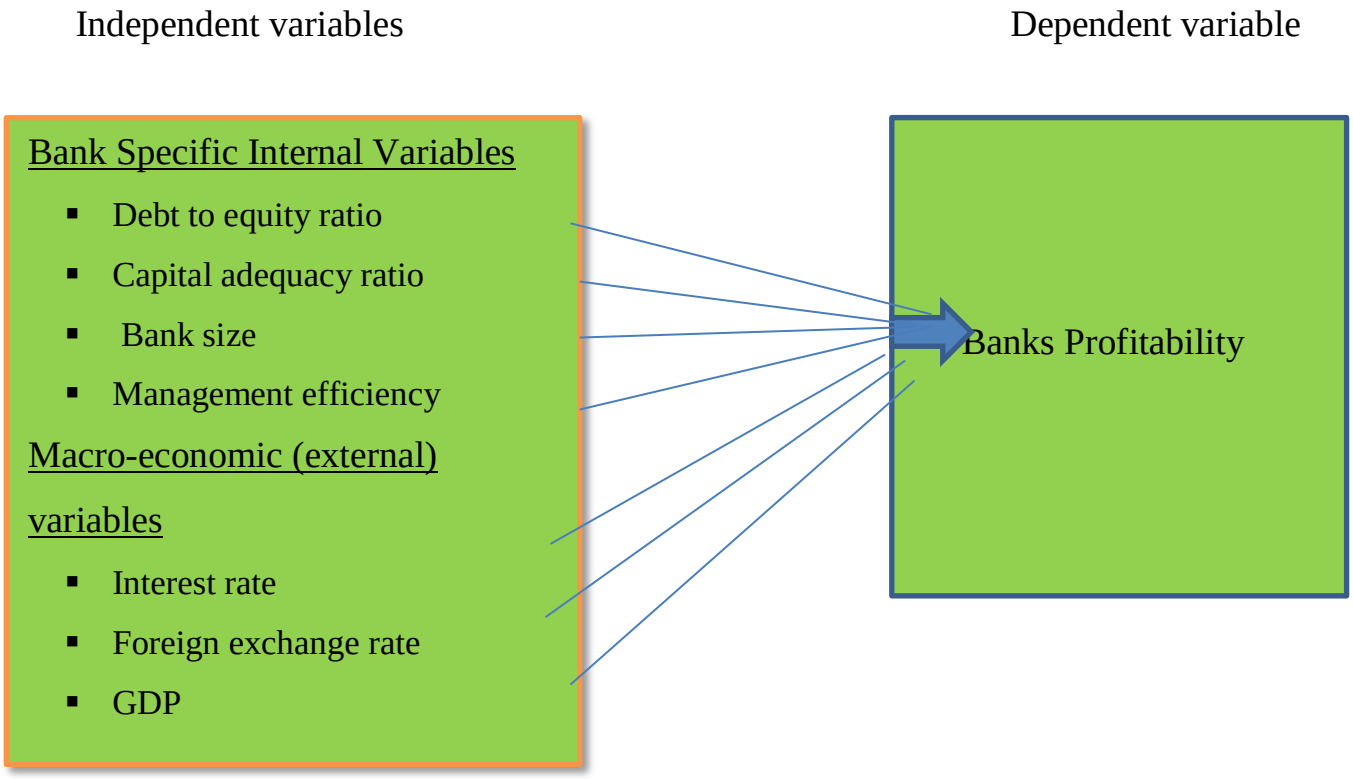
Samuel (2015) fined a positive relationship with financial performance that a well-capitalized bank faces a lower cost of going bankrupt which reduces their costs of funding and risks. the empirical researches conducted by Alper & Anbar (2011) in Turkey and Alexiou and Sofoklis (2009) in Greek found that bank size positively related to bank's profitability.

Molyneux and Thornton (1992) used operating expense to operating income and stated that Higher the efficiency level of a bank, higher its profits level. Hence a positive relationship is expected between efficiency and profitability of banks.

Kutsienyo (2011) found that inflation has a positive impact on commercial banks profitability in Ghana. The study pointed out that inflation used as a signal that bank managers are able to forecast accurately inflation and are proactive in managing anticipated inflation.

According to Davydenko (2010) the exchange rate depreciation has a positive significant effect on income which could be explained by the ability of banks managers to anticipate exchange rate fluctuations.

Figure 1 Conceptual Framework



Source: Compiled by the researcher

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1. Research Design

The choice of research design depends on objectives that the researchers want to achieve (Admas et al., 2007). Explanatory research design examines the cause and effect relationships between dependent and independent variables. Therefore, this was research examining the cause and effect relationships between independent and dependent variables. The research ultimate goal is to test the impacts of determinant factors on profitability of private commercial banks in Ethiopia. Though the research starts with description of the Variables, ultimate aim is to find the cause and effect relationship between the variables. Hence, explanatory research design considered as this research design.

3.2. Population and Sampling Techniques

As noted by (Kothari, 2004) good sample, design must be viable in the context of time and funds available for the research study. Besides, purposive sampling offers the researcher to select deliberately items for the sample concerning the choice of items as supreme based on the selection criteria set by the researcher. Accordingly, this study employed purposive sampling technique to select the required sample of banks from the private commercial banks in Ethiopia since it is viable in line with time and data available for this study. This sampling method is a form of non-probability sampling in which decision concerning the individual source of data to be included in the sample that taken by the researcher, based upon a variety of criteria from sixteen commercial private banks Awash Bank S.C, Buna International Bank S.C, and Abay Bank S.C was selected. From these commercial private banks, consecutive eleven years data was collected.

3.3. Sources of the Data and Collection Technique:

Given the research design, the secondary data source was used to meet the objectives of the study. According to Stewart and Kamins (1993), secondary data have its own advantages. Compared to primary data, secondary data gives higher quality data, the feasibility to conduct

longitudinal studies and the permanence of data. That is, secondary data generally provide a source of data that is both permanent and available in a form that can be checked relatively easily by others and increases the dependability of the data, hence ensure data quality.

As a result, the data for the banks' capital structure and profitability indicator variables were obtained from audited financial statements of the respective banks.

In order to avoid the risk of distortion in the quality of data, the data was audited financial statements particularly balance sheet and income statement. The study included three private commercial banks of Ethiopia.

3.4. Method of Data Analyses

To achieve the objectives of the study, panel data of three private commercial banks was used in this research. The collected panel data were analyzed by using descriptive statistics, and multiple linear regression analysis. Basically, descriptive statistical tools were used to analyze the mean, maximum, minimum and standard deviation values of the study. The collected data was analyzed by using statistical package for social sciences (SPSS) software version 20. Therefore, the multiple regression result of the fixed effect model used to analyze the impact of internal and macroeconomic determinants on profitability of private commercial banks of Ethiopia, and to examine the relationship between the variables used in this study.

3.5 Model Specification

Specifically, the model is:

$ROEit = ROE = \alpha + \beta1(DER) + \beta2(CAR) + \beta3(BS) + \beta4(MEF) + \beta5(IR) + \beta6(FER) + \beta7(GDP) + \varepsilon$

Where ROE it = Return on Equity of Commercial bank

DER = Debit to equity ratio of Commercial bank i for year t

CARit = Capital Adequacy Ratio of Commercial bank i for year t

BSit = Liquidity Ratio of Commercial bank i for year t

MEFFRit= Management Efficiency Ratio of Commercial bank i for year t

IRit= Interest Rate Risk of Commercial bank i for year t

FEXit = Inflation growth rate for year t

GDPit = GDP Growth Rate for year t

CHAPTER FOUR

4. DATA ANALYSIS AND INTERPRITATION

This chapter presents the findings of the study based on the research objectives. In addition, this chapter analyses the impacts of determinants on private commercial banks profitability using the annual balanced panel data, where all the variables are observed for each cross-section and each period. The study has a time series segment spanning from the period 2009 up to 2019 and a cross section segment which considered three Ethiopian commercial Banks, such as: Awash International Bank S.C, Buna International Bank S.C, and Abay Bank S.C was selected.

4.1 Descriptive Statistics of the Data

Table 4.1 presents the outcomes of the descriptive statistics for main variables involved in the econometrics model of this study. The total number of observations for each variable was 33 (i.e., data for three banks for the period from the year 2009 to 2019). Key figures, including mean, maximum, minimum, and standard deviation value reported as follows. The result 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 statistics

Give title	Mean	Maximum	Minimum	Std. Dev.	Observation
ROE	0.2648	0.4886	0.0048	0.0985	33
LR	4.5832	8.7816	0.0103	2.5571	33
CAR	0.1365	0.4074	0.0856	0.0503	33
BS	10.048	41.975	0.4974	8.0797	33
MEFFR	0.4252	0.8949	1.00E-08	0.1801	33
CPLR	0.0946	0.1961	1.00E-05	0.0239	33
FDCR	0.0268	0.0489	0.0161	0.0062	33
INT	0.0635	0.0757	0.0579	0.0067	33
FEX	0.1596	0.2241	0.0879	0.0468	33
GDP	0.1029	0.1180	0.0800	0.0108	33

Source: Own estimation of research data (2020)

As can be seen from table 4.1, regarding the independent variables of the model there are some interesting statistics that have to be mentioned. For instance, the descriptive statistic of bank size, which was measured by total asset of the commercial banks, has shown the highest standard deviation (8.079). The result indicates the existence of relatively higher variation among Ethiopian private commercial banks for the period under consideration. The leverage ratio of banks that was measured by debt to equity also revealed the highest standard deviation (2.557). This indicates the existence of high instability among Ethiopian private commercial banks in terms of their leverage ratio.

CAR also measured by total equity divided by total assets having a minimum of 8.5% and maximum of 40.73% with a mean value and standard deviation of 13.64% and 5.03% respectively. This indicates that CAR, was considerably above the statutory requirement of 8% set by NBE, based on Basel II recommendation. The standard deviation statistics was 0.050, which shows the existence of relatively higher variation of equity to asset ratio between the selected banks compared to the variation in ROE.

The other determinant is Bank Size, which is measured by natural log of total asset that has a mean value 10.04 billion Birr with the standard deviation of 8.08. The maximum and minimum values were 4.197 billion and half a billion respectively. The standard division indicated in Table 4.1 with a value of 8.08 is the maximum from all other variables. This implies that there is a huge difference between the biggest bank and the small bank. Miskir (2015) suggested that the effect of an increasing bank's size on profitability may be positive up to a certain limit. Therefore, that bank which has a big size has an advantage of absorbing some credit risks.

Furthermore, another interesting observation is management efficiency that there was somewhat a higher variation next to bank size and leverage ratio. The cost-to-income ratio (MEFFR) indicated by the range between 89.49% and .000001%. The mean of the cost-to income ratio equals 42.52%. 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 per loan asset measures the cost per loan advanced to customer in monetary term and the function of this is to point out efficiency in distributing loans to customers. The mean percentage for CLA is 2.94% with 2.39% variations, which ranges 0.0094% to 1.96%.

The other groups of external independent variables were the macroeconomic indicators that can affect private commercial banks profitability over time. Interest Spread on average was 6.35% with the standard deviation of 0.67%, which is, much less than 1% deviation from the mean. The maximum and minimum interest spread was 7.57% and 5.79% respectively. This could be due to the government set the minimum rate and the majority banks are similar with this rate. In addition, as banks have sufficient demand for loan, banks do not yet start competing each other by interest rate.

The other macroeconomic variable employed in this study FEX, had the higher standard deviation (4.68) compared to other remaining variables employed in the study; this implies that the foreign exchange rate in Ethiopia during the study period remains highly unstable.

On the other hand, the mean real GDP growth in Ethiopia for the last eleven years was 10.28%, with a maximum of 11.8% and a minimum of 8%. The standard deviation was 1.08%; this implies that economic growth in Ethiopia during the period of 2009 to 2019 remains reasonable stable and the result was more or less in agreement with the government's report regarding economic growth.

4.2 Assumption Test

4.2.1 Test for Normality

The normality of the population distributions the basis for making statistical inferences about the sample drawn from the population (Kothari, 2004). Most studies, which involve statistical procedure, work under the assumption that observations have normal distribution. Any violation of the normality rule may lead to overestimation or underestimation of the inference statistic. In order to examine normality one has to measure each variable's skewness, which looks at lack of symmetry of distribution, and kurtosis, which looks at whether data collected, are peak or flat with relation to normal distribution (Marczyk *et al.*, 2005).

Paurav Shukla (2009) stated that skewness and kurtosis test, and the low difference between mean and median is the basic way to check the normality of the data. Accordingly, positive skewness values suggest clustering of data on the low value (left hand side of the bell curve) and negative skewness values suggest that clustering of data points on the high values (right hand side of the bell curve). Positive kurtosis values suggest that the data points gathered in center with long thin tails. Kurtosis values below zero suggest the distribution of data point is relatively flat.

The general rule-of-thumb fortes to formality varies depending on the nature of the research. The common one mostly suggested mentioned in literature for both kurtosis and Skewness to be between-2and+2 (George&Mallery,2010). As indicate din the table below, skewness and kurtosis measures for this study are well within that range between -2and +2 values. Therefore, the data for this study is normally distributed.

Table 4.2.1 Normality measurement table.

Variables	Skewness	Kurtosis
ROE	0.13	-1.27
DER	0.06	-1.93
CAR	-0.75	0.86
BS	0.64	-1.49
MEF	-0.94	1.74
INTR	0.16	- 1.68
FER	-0.15	1.42
GDP	0.56	-1.64

4.2.2 Test for Multi Collinearity

Before running regression, one should check for the problem of multi-collinearity which is present if there is high correlation between some of the independent variables. Correlation matrix between independent variables is presented in table4.2.2. As shown in table there are fairly low data correlations among the independent variables. These low correlation coefficients indicate that, there is no problem of multi collinearity in this study. Moreover, Kennedy (2008) stated that multi-collinearity problem exists when the correlation coefficient among the variables are greater than 0.70, but in this study there is no correlation coefficient that exceeds 0.70. Accordingly, in of multi collinearity which enhanced their liability for regression analysis.

Table 4.2.2 Multi collinearity test table

	ROE	DER	CAR	BS	MEF	INTR	FER	GDP
ROE	1							
DER	0.124	1						
CAR	0.071	0.0342	1					
BS	0.093	0.095	0.108	1				
MEF	.0236	0.326	0.0547	-0.215	1			
INTR	-0.0674	0.092	0.0761	-0.145	-0.0875	1		
FER	-0.256	-0.0875	-0.092	0.067	-0.0784	0.158	1	
GDP	0.097	-0.0743	0.0892	0.183	0.0562	0.0947	0.0965	1

4.3 Correlation Analysis between Study Variables

In this section the correlation between profitability measures; return on equity(ROE) and explanatory variables; Debt equity ratio(DER) Capital adequacy ratio(CAR), Bank size(BS), Managerial efficiency factor(MEF), Interest rate(INTR), Foreign exchange rate(FER) and Gross domestic product(GDP) have been presented and analyzed. A correlation matrix used to ensure the correlation between explanatory variables have been presented and analyzed. Cooper & Schindler (2009) suggested that a correlation coefficient above 0.8 between explanatory variables should be corrected for because it is a sign for multi collinearity problem. Mashotra (2007) argued that the correlation coefficient can be 0.75. Lastly, Hair et al. (2006) argued that also correlation coefficient below 0.9 may not cause serious multi culinary problem.

4.3.1 Correlation Analysis between Return on Equity and Explanatory Variables

Return on Equity (ROE), the net income per birr of equity capital, which is more concerned about how much the bank is earning on their equity investment. The correlation analysis was done between profit ability measures; return on equity(ROE) and explanatory variables (debt equity ratio(DER), capital adequacy ratio(CAR), bank size(BS), managerial efficiency factor(MEF), interest rate(INTR), foreign exchange rate(FER) and gross domestic product(GDP))

The Pearson correlation coefficient(r) issued to test if a linear relations hip exists between two variables. The correlation coefficient is a statistical measure of the association between two numerical variables (Zikmund, 2003). The value of "r" ranges from +1.0 to -1.0, where a positive "r" value indicates a direct relationship and a negative 'r" value represents an inverse relationship between two variables. When're=0" it implies that there is no relationship between the two variables. When "r=+1"it implies that there is a perfect direct relationship between the variables.

When “r=-1”it implies that there is a perfect negative/inverse relationship between the variables. When “r” is in between 0.10-0.29, it implies that variables have weak relationships and when“r” value is in between 0.3-0.49,it implies that they a rabbles have moderate relationship.When “r” value becomes greater or equals to 0.5 it indicates the relationship is strong.

Table 4.3.1 Correlation analysis between ROE and explanatory variables.

	ROE	DER	CAR	BS	MEF	INTR	FER	GDP
ROE	1							
DER	- 0.213	1						
CAR	0.268	-0.187	1					
BS	0.669	0.534	0.782	1				
MEF	0.465	-0.274	0.643	0.257	1			
INTR	-0.537	0.756	0.483	0.731	-0.436	1		
FER	-0.683	0.693	-0.572	-0.436	0.364	0.521	1	
GDP	0.843	-0.521	0.735	0.713	0.251	0.508	0.613	1

As described in the above tablet here is a positive relationship between return on equity and capital adequacy ratio (CAR), bank size(BS), managerial efficiency factor(MEF) and gross domestic product(GDP). But there is negative relationship between return on equity (ROE) and debt to equity ratio (DER), interest rate (INTR) and foreign exchange rate (FER).

Debt to Equity ratio (DER)

The debt to equity ratio is calculated by dividing total liability by total equity. Total debt includes everything the shareholders owns, including deposits, borrowings, account payable and other liability accounts. The debt to equity ratio is a common measure used, or in other words the extent to which it relies on debts source of financing.

According to Kawiche, (2012) the findings of the study show a negative correlation between return on equity ROE) which is the measure of financial Performance. This is because there is high amount of liabilities which drained down the amount of net income of the banks.

Capital Adequacy ratio (CAR):

Bank capital acts as a safety net and reflects bank’s ability to engross losses during contingent events. The ratio of equity to assets proxy for bank capital adequacy which indicates banks’ safety and soundness. Signaling and bankruptcy costs hypotheses assume a positive relationship

between capital adequacy ratios and profitability, thus the study anticipate a positive correlation between capital adequacy ratios and ROE which measures banks' performance.

Bank size (Size):

Bank size is measured by the natural logarithm of bank total assets. This variable will capture existence of economies of scale or diseconomies of scale among banks in the models. The bed rock assumption is that large banks are more profitable than small banks due to their ability to diversify and reduce risk. Increase in bank size is expected to be accompanied by rise in profitability but if size becomes extremely big, it could bring negative effects on bank performance (Athanasoglou, Brissimis and Delis, 2005).

Managerial efficiency (MEF):

Banks are managed by humans thus managerial efficiency is of chief importance in ensure success of banking institutions. The proxy for managerial efficiency is the ratio of operating expenses to operating income. Highly efficient management brings positive contributions to profitability, thus high efficient ratio is expected to accentuate profitability and this supports the efficiency structure hypothesis. Ayele (2012) found a positive relationship between efficiency ratio and profitability thus this study will anticipate a positive relationship. Positive link means that high managerial efficiency lead to positive shift in bank profitability.

GDP growth

This variable was computed by capturing yearly changes in GDP. If GDP improves, demand for credit increases which imply expansion in bank lending (interest *income*) and hence higher profitability thus leading to a positive association. However, the researcher also expects negative association between GDP and bank profitability (Liu and Wilson, 2009). These authors explained that increases in GDP may improve business environment and lower barriers to entry which will ultimately dampen banks' profitability.

Foreign Exchange Rate (FER)

Exchange rates can affect the performance of commercial banks because of their funding and get back in the form of dollar or foreign currency so that the income received is also dependent

on the fluctuation of exchange rates is going on. Therefore, the risk of exchange rate plays an important part of the company's profit generated.

Swings in inflation rate impacts banks as individual firms and the banking industry in broad. If a bank anticipates a rise in the rate of inflation, they will hedge against this by incorporating expected inflation changes in their interest rates and in this instance they earn higher profits. If inflation rise was unexpected by banks, this will negatively impact their performance. Thus the researcher expects negative relationship between foreign exchange rate and return on equity.

Interest Rate (IR)

A bank's interest rate policy can see from two perspectives: the bank's policy regarding the interests it pays on deposits received by it and the bank's policy regarding the interests it receives on credits given by it. The interest paid by a bank, on its deposit liabilities is a cost source and tends to contract the bank's income. This is why Fries (2002) argue that the profit function of a bank includes the interest it pays on deposits. On the other hand, the interest received by a bank on credits given by it is a revenue source and tends to expand the bank's income. Hence, Bobakova (2003) argues that the profitability of a bank is influenced by its interest rate policy.

The real interest rate expected to have a positive relationship with profitability in the essence of lend-long and borrow-short argument (Vong and Chan, 2008). That means banks may increase lending rates sooner by more percentage points than their deposit rates. On the other hand, the rise in real interest rates may increase the real debt burden on borrowers and this may lower asset quality, thereby interest rate may have a negative impact on profitability. However, Guru (2002) attempt to identify the determinants of successful deposit banks in Malaysia. The findings of this study revealed that, among the macro-indicators, high interest ratio was associated with low bank profitability. Interest expenses and interest income, affect net interest income and hence bank profitability.

4.3.2 Correlation Analysis between Explanatory Variables

The correlation between explanatory variables; Debt equity ratio(DER), Capital adequacy ratio(CAR), Bank size(BS), Managerial efficiency factor(MEF), Interest rate(INTR), Foreign exchange rate(FER) and Gross domestic product(GDP)included in this study are presented and analyzed.

According to table4.3.2 below, the size of private commercial bank with managerial efficiency and capital adequacy highly correlated as compared to other explanatory variables included in this study with the coefficient of 0.687 and 0.583 respectively. Since their coefficient is less than 0.70 we can conclude there is no series multi collinearity problem as supported with in the multi collinearity test. The capital adequacy ratio has appositive correlation coefficient with GDP and debt to equity ratio. But, it has a negative correlation coefficient value of-0.196, and -0.362, interest rate, and managerial efficiency respectively. Foreign exchange rate has high negative correlation coefficient value of with all explanatory variables except with capital adequacy ratio and interest rate.

Table 4.3.2 Correlation analysis between explanatory variables.

	DER	CAR	BS	MEF	INTR	FER	GDP
DER	1						
CAR	0.187	1					
BS	0.534	0.782	1				
MEF	0.465	-0.274	0.643	1			
INTR	-0.537	0.756	0.483	0.731	1		
FER	-0.683	0.693	-0.572	-0.536	0.364	1	
GDP	-0.521	0.735	0.713	0.251	0.508	0.613	1

Asper the above table, managerial efficiency has a positive correlation coefficient with all explanatory variables except with capital adequacy ratio and foreign exchange rate. Debt to equity ratio is positively correlated with capital adequacy ratio, Bank size and managerial efficiency factors; but negatively correlated with interest rate, foreign exchange rate and GDP.

4.4 Discussion of the Regression Results

The data are analyzed in light of the specific research questions stated. Hence, the analysis focuses mainly on the results of the regression analysis and uses result obtained from document review for the selected internal factors and macro-economic factors that have an impact on bank financial performance. These selected factors are debt to equity ratio, capital adequacy ratio, bank size, management efficiency ratio, interest rate, foreign exchange rate, and gross domestic product growth rate.

Under the following regression outputs, the beta coefficient may be negative or positive; beta indicates that each variable's level of influence on the dependent variable. P-value indicates at what percentage or precession level of each variable is significant. R2 values indicate the explanatory power of the model and in this study adjusted R^2 value, which takes into account the loss of degrees of freedom, associated with adding extra variables were inferred to see the explanatory powers of the models.

$ROE = \alpha + \beta1(DER) + \beta2(CAR) + \beta3(BS) + \beta4(MEF) + \beta5(IR) + \beta6(FER) + \beta7(GDP) + \varepsilon$

Regression table

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DER	0.004382	0.004434	0.988249	0.3264
CAR	-0.480490	0.158917	-3.023522	0.0035
BS	-0.002374	0.001401	-1.694169	0.0947
MEF	0.124157	0.032973	3.765383	0.0003
INTR	-4.434160	1.778882	-2.492667	0.0150
FER	-1.003980	0.371822	-2.700159	0.0087
GDP	-0.167473	0.524696	0.319181	0.7505
R2(AD R^2)	0.81(0.79)			

Interpretation of R-squared, adjusted R-squared and F-statistic

Interpretation of R-squared

The analysis of the result has shown in a table R-squared coefficient of 0.81 obtained from the estimated model, revealed that 81% of variation in profitability of private commercial banks (ROE) was explained by the selected explanatory variables (capital adequacy ratio, bank size, management efficiency ratio, interest spread rate, foreign exchange rate and growth domestic product rate). The R-square result makes sense because there are other factors that were not included in the model but could help in explaining profitability of Ethiopian private commercial banks. These and other remaining factors can account for the remaining 19 percent.

An adjusted R-squared value that, takes into account the loss of degrees of freedom associated with adding extra variables they inferred to see the explanatory powers of the models. The adjusted R-squared shows satisfactory levels, which mean that approximately 80 percent of the volatilities in the private commercial profitability explained by the volatilities of independent variables included in the equation. Therefore, an adjusted R-square having value of 0.79

Debit to equity ratio (DER)

One would expect that the impact of debt to equity ratio on profitability is positive and significant. However, even if the coefficient was positive as expected, it was not statistically significant even at 10% significance level (p-value= 0.3264), insinuating that its influence is not worth mentioning. Moreover, the insignificant parameter indicates that the structure does not affect Ethiopian private commercial banks profitability. Weldemikael (2012) found the same result positive but insignificant relationship between debt to equity ratio and bank profits. Thus, the hypothesis that states there is a positive and significant relationship between debt to equity ratio and profitability has been rejected or data did not support the hypothesis.

Capital Adequacy Ratio (CAR)

CAR: Observation of coefficient of capital adequacy ratio is -0.48 and it indicates that there is negative and statistically significant effect at 1% level of significant between dependent variable (return on equity) and independent variable (capital adequacy ratio). Holding other independent variables constant, an increase in one unit of CAR, ROE decrease by -0.48 shows that there is inverse relationship between CAR and profitability of private commercial banks during the period. This is consistent with poudel (2012), and Mwangi, (2012related to performance of private commercial banks. As per Obamuyi (2013) the research result indicates that banks with larger capital are able to diversify their business operations by strengthening their ability to assume risk and attract funds at low cost, which will enhance their liquidity position which intern effect in an improvement of their lending, with positive effect on profitability.

Bank Size

Concerning the banking sector development, the regression results of this study implies that the relation between banking sector development and ROE is negative and significant at 10% significance level (p-value=0.0947). The variable, total asset of the industry was used as a proxy for banking sector development in the model. The result indicates that the banking sector size variable has a significantly negative influence on bank profitability. This implies that high figures for this variable mean low profitability. Since the richer the country, the more active are all financial intermediaries. The greater the development of a country's banks, the tougher is the competition, the greater is the efficiency, and the lower are the bank margins and profits. The

result is consistent with DemirgucKunt and Huizinga (1998) they using bank-level data for a large number of industrial and developing countries, present evidence about the impact of financial development and structure on bank performance. They measure the relative importance of bank or market finance by the relative size of stock aggregates, by relative trading or transaction volumes, and by indicators of relative efficiency.

Management efficiency Ratio (MER)

One would expect that the impact of management efficiency on profitability is positive and significant. However, even if the coefficient of management efficiency was positive as expected, it was statistically significant even at 1% significance level (p-value= 0.0003), insinuating that its influence is significant on the profitability of commercial banks in Ethiopia. Moreover, the significant parameter indicates that the management structure does affect Ethiopian banks performance. Thus, the hypothesis that states there is a significant relationship between management efficiency and profitability the null hypothesis was accepted. Referring to previous studies those are Indranarain (2009). Found a significant positive relationship between management efficiency and bank profits. The findings of the regression analysis result reveals the management efficiency of banks was one of the major determinants of Ethiopian banks profitability. Also the output of the regression analysis and the hypothesis are in agreement in relation to the direction of the effect of management efficiency as far as both of them proves the existence of positive or direct relationship between management efficiency and profitability of Ethiopian private commercial banks.

Interest rate (INTR)

The regression table also shows the relation between interest rate spread and ROE is negative and significant at 5% significance level (p-value=0.0150). Based on this result, thus, the hypothesis that states there is a significant relationship between interest rate spread and profitability the alternate was accepted, and data did support the hypothesis. It implies that Interest spread has significant impact on ROE. Because there is no stiff computation between banks and the minimum saving interest is set by National Bank of Ethiopia. However, the coefficient -4.434160 indicates that the one unit change in IS will have the effect of 4.43 unit change on the ROE to the opposite direction significantly. Do to this, both the result as well as

the coefficient is in agreement with what the researcher has expected. The possible reason for this may be the government close control on the minimum deposit rate and reserve requirement for deposits or banks income made from noninterest income like commissions on money transfer, foreign exchange rate, Letter of guarantee, and various service charges.

Foreign exchange rate

Foreign exchange rate was considered one of the key factors, which can affect the profitability of private commercial banks in Ethiopia. Despite this as shown in table above foreign exchange rate risk revealed a negative association with the profitability of Ethiopian private commercial banks and it is statistically significant at 1% of level of significance. As shown in the regression results of the first regression and general model the p-value of foreign exchange rate risk was 0.0087. The finding is in consistent to the findings of empirical study of Popov & Stutzmann, (2003) which indicated negative relationship between foreign exchange rate risk and profitability of Swiss companies. The finding is also as expected. The significant parameter indicates that the volatility of exchange rate (in terms of dollar) was a factor considerably influenced the profitability of banking sector in Ethiopia under the period of consideration. Thus, the hypothesis that states there is a significant negative relationship between foreign exchange rate and profitability has not been rejected or data did support the hypothesis. The result is somewhat surprising and the possible reason for this may be because of that banks are allowed to take open positions in foreign currencies subject to regulatory limits set by the NBE.

Real Growth Domestic product

Turning to the macroeconomic variables, the researcher observe that real GDP has no statistically significant and positive impact on ROE at 10% significance level (P-value=0.7505). These results about GDP not support the argument of the positive association between economic growth and the profitability. This show as the stimulated Ethiopian economy over the study period not creates a new and potential demand for financial services. The results for negative coefficients are not similar to the parameters that are observed and revealed by the numbers of researchers (e.g. Demirguc- Kunt *et al.,* (1998), Bikker*et al.,* (2002) concluded that positive and strong correlation existed between economic growth (GDP) and bank profitability.

Like with the empirical evidence, the result obtained from data justified a negative and not significant impact of Ethiopia real GDP growth and banks profitability in terms of ROE. This is because; the current Ethiopian economy growth could not create a new and potential demand for financial services and it might not reduce the probability of default loan.

CHAPTER FIVE

5. Summary of the major findings, Conclusion and Recommendation

5.1 Summary of the Major Findings

1. The impact of debt to equity ratio on return on equity of private commercial bank is insignificant in Ethiopia during the time of research.

2. There is negative and statistically significant impact of capital adequacy ratio and profitability of private commercial banks during the period
3. There is negative significant impact of bank size on private commercial banks profitability in Ethiopia during the time of research.
4. There is positively significant impact of management efficiency factors and profitability private commercial banks in Ethiopia during the study period.
5. There is negatively significant impact of interest rate and profitability of private commercial banks
6. There is a negative significant impact of foreign exchange rate and profitability of private commercial banks in Ethiopia during the study period.
7. According to the results of the study, the impact of GDP on return on equity of private commercial banks is negatively insignificant during the study period.
8. The return on equity of private commercial banks in Ethiopia significantly affected by bank specific internal factors like capital adequacy, bank size and managerial efficiency ratio and also other external factors like interest rate and foreign exchange rate.

5.2 Conclusion

The study specified an empirical framework to investigate the effect of determinants on Ethiopian private commercial banks profitability for the period 11 years. A panel data was collected from the sample of three private commercial banks in Ethiopia from 2009 to 2019. The collected Data was analysis by using descriptive statistics and regression analysis. The study also used an appropriate econometric methodology for the estimation of variables coefficient under fixed regression models. Seven internal and external factors affecting private commercial banks profitability were chosen and analyzed.

A number of explanatory variables have been proposed for both categories, according to the nature and purpose of each study. Studies dealing with internal determinants employ variables such as nonperforming loan. Debt to equity ratio, Bank size, capital adequacy, Management efficiency etc. while for external determinants, several factors have been suggested as impacting on profitability and these factors describe the macroeconomic environment, such as interest rates, foreign exchange rate and real growth of domestic product. Based on the review on previous studies and banking area theories, the present study investigated the impact of some selected internal and external factors on the financial performance of the Ethiopian private commercial banks over the period of 2009 to 2019. For testing the research hypotheses, a sample size of three Ethiopian private commercial banks were selected and the necessary financial data were collected for the period of 2009 to 2019. The empirical findings and the secondary data results on the impact of private commercial banks profitability in Ethiopia for the sample suggest the following conclusions. According to the regression results, the findings indicated that debt to equity has positive and significant relationship to ROE. Second, the result showed a capital adequacy ratio has negative and statistically significant impact on return on equity of private commercial banks that operate in Ethiopia. This result indicates that banks with strong capital adequacy or keep the fund in the bank will have a cost and the bank will loss the profit.

Third, the size of the bank influence has a negative impact on ROE with significance coefficient at10%. This indicates that, as larger banks of the country experience tend to decrease as the volume of asset increases. Fourth, again as expected, the result showed a positive relationship between management efficiency and ROE with strong statistical significance. This shows that the increases of commercial banks operating costs in Ethiopia would certainly improve the private commercial banks profitability.

Lastly, GDP macroeconomic factors that have little or no impact on the profitability of Ethiopian private commercial banks. From seven variables incorporated in this model, GDP were not significant even at 10% significance level. Therefore, it can be concluded that profitability in the Ethiopia private commercial banking sector is largely driven by managerial decision as well as macroeconomic external factors.

5.3. Recommendations

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

There is a clear signal to all private commercial banks in Ethiopia, which they cannot ignore the industry structure and macroeconomic indicators when strategizing to improve on their profits or performance. Thus, banks in Ethiopia should not only be concerned about internal structures and policies, but they must consider both the internal environment and the macroeconomic environment together in fashioning out strategies to improve their performance or profits.

As far as lack of innovative products and fear of risky investments by banks themselves are also factors that can affect Ethiopian banks profitability negatively, Ethiopian banks should try their best in order to provide new banking services and to participate in risky investment areas, which may in turn increases their profitability significantly.

Furthermore, the private commercial banks of Ethiopia should also give due attention to that of the mentioned independent variables & other variables which could have the possibility to affect the profitability of commercial banks just for the sake of obtaining good profitability even though they are not legally forced by NBE.

Finally, the study sought to examine the impacts of internal and external determinants on the profitability of private commercial banks in Ethiopia. However, the variables used in the statistical analysis did not include all determinants that can affect Ethiopian private commercial banks profitability. Thus, future research should incorporate others factors which affect determine profitability of banks.

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Appendix. Raw data from the banks.

Banks	Year	DBE	CAR	BS	MGEF	IR	FEX	GDP
AIB	2009	0.343	0.09	6.041	0.3402	0.0879	0.0879	0.118
AIB	2010	0.4552	0.093	7.718	0.329	0.0104	0.09244	0.112
AIB	2011	0.3879	0.093	9.7325	0.4246	0.364	0.1042	0.1
AIB	2012	0.4079	0.001	6.77	0.091	0.02800	0.1289	0.1057
AIB	2013	0.451	0.095	14.65	0.181	0.16118	0.114	0.4886
AIB	2014	0.451	17.52	17.52	0.341	0.1725	0.087	0.3973
AIB	2015	0.4886	19.74	19.74	0.135	0.18194	0.099	0.3686
AIB	2016	0.3973	21.962	21.962	0.081	0.1907	0.103	0.314
AIB	2017	0.3686	0.107	21.96	0.207	0.081	0.190	0.103
AIB	2018	0.3296	0.104	24.76	0.2464	0.077	0.2	0.104
AIB	2019	0.283	0.099	28.57	0.273	0.097	0.211	0.08
BIB	2009	0.398	0.113	3.83	0.2465	0.0879	0.08794	0.118
BIB	2010	0.398	0.124	4.82	0.004	0.253	0.09244	0.112
BIB	2011	0.398	0.117	6.422	0.489	0.364	0.1042	0.1
BIB	2012	0.3657	0.118	3.944	0.447	0.028	0.128	0.105
BIB	2013	0.3779	0.129	10.115	0.4128	0.181	0.1611	0.114
BIB	2014	0.32145	0.135	11.936	0.4685	0.341	0.1725	0.087
BIB	2015	0.2821	0.138	14.858	0.466	0.135	0.1819	0.099
BIB	2016	0.3191	0.139	22.106	0.513	0.081	0.1907	0.103
BIB	2017	0.27	0.126	25.21	0.510	0.077	0.200	0.104
BIB	2018	0.2506	0.126	31.14	0.536	0.097	0.211	0.08
BIB	2019	0.2807	0.1145	41.97	0.609	0.072	0.224	0.109
AB	2009	0.237	0.1974	0.9473	0.6398	0.0879	0.0879	0.118
AB	2010	0.00485	0.2978	0.9524	0.00	0.253	0.09244	0.112
AB	2011	0.0195	0.201	0.9495	0.00	0.364	0.104	0.1
AB	2012	0.1226	0.177	1.3636	0.6302	0.028	0.128	0.105
AB	2013	0.093	0.272	1.297	0.8399	0.181	0.161	0.114
AB	2014	0.128	0.1793	2.463	0.554	0.341	0.1725	0.087
AB	2015	0.15402	0.1841	2.94	0.4899	0.135	0.1819	0.099
AB	2016	0.1153	0.4073	1.5411	0.8949	0.081	0.19075	0.103
AB	2017	0.1831	0.2904	2.83	0.6808	0.077	0.2009	0.104
AB	2018	0.1833	0.1317	8.119	0.097	0.211	0.08	0.08
AB	2019	0.1389	0.132	10.97	0.849	0.072	0.224	0.109