



***ST. MARY'S UNIVERSITY SCHOOL OF
GRADUATE STUDIES***

***FACTORS AFFECTING PROFITABILITY OF
INSURANCE COMPANIES IN ETHIOPIA***

By

HINDEYA ZEKARIAS

JUNE 2017

ADDIS ABABA, ETHIOPIA

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List of Acronyms/ Abbreviations

CACL	Current Asset to Current Liability
CIEP	Claims Incurred To Earned Premiums
CLRM	Classical Linear Regression Model
COE	Claims Outstanding To Equity
DW	Dublin Watson
EIC	Ethiopian Insurance Corporation
FATA	Fixed Asset to Total Asset
FEM	Fixed Effect Model
GDP	Gross Domestic Product
HO	Null Hypothesis
INF	Inflation
INT	Interest rate
LIQ	Liquidity
MCI	Management competency index
MOFED	Ministry of Finance and Economic Development
NBE	National Bank of Ethiopia
OLS	Ordinary List Square
REM	Random Effect Model
ROA	Return on Asset
TLTA	Total Liability to Asset

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ABSTRACT

Insurance services are now being integrated into wider financial industry and play an important role in countries economy. Profitability is one of the most important objectives of financial management because one goal of financial management is to maximize the owner`s wealth. The objective of this paper is to identify the factors affecting profitability of insurance companies in Ethiopia by examining internal and external factor affecting insurance companies` profitability. Profitability is peroxide by ROA, which is a key indicator of insurance companies` performance. In order to attain the objective the study used mixed research approach. Panel data covering twelve -year period from 2005 – 2016 are analyzed for nine insurance companies with a total of 108 data in-depth interview is conducted with company managers. The study uses multiple linear regression models, and fixed effect technique has been applied to find out the most significant variables which affect the insurance companies` profitability. The findings of the study indicate that that loss ratio and technical provision have statistically significant and negative relationship with insurers` profitability. However, interest rate, management competency index and solvency positive and significant relationship with profitability. On the other hand, inflation negative not statistically significant and GDP and asset tangibility have insignificant influence on insures` profitability.

Key words: profitability; insurance, factors, Management Competency Index

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

In developed economies, insurance business is seen as the backbone of any country's risk management system, since it ensures financial security, serves as an important component in the financial intermediation. Because of their role as intermediaries the determinants of performance of insurance companies, is considered important (Hamadu & Mojekwu, 2010). In Ethiopia insurance business plays a vital role through risk bearing, employment of labour, payment of tax. In general insurance companies fall into two categories Life Insurance (includes life savings, accident indemnity, hospitalization Insurance and many others), Non-Life Insurance (includes fire, property , burglary, public liability, engineering and many others) in order to facilities insurance business in Ethiopia there are Intermediaries like brokers, agents , loss adjusters, and others licensed by NBE.

Functions of insurance companies have two dimensional landscapes, a) underwriting activity, which is mainly centered on collecting premiums and honoring claim; b) investment activity, which is meant to dispense allowed assets into various investments to earn additional revenues in the form of interest, dividends and realized capital gains Kumba,(2011). This implies that Insurance companies sell protection to policyholders against many types of risks: property damage or loss, health and casualty etc. In return for this risk protection, insurance companies receive a premium from the policyholder that is used to cover expenses and the expected risk.

Globally, the performance of insurance companies is an important indicator of a successful economy that could lead to an increase in Gross Domestic Product (GDP) of a nation, (USAID, 2012). There are many factors to examine when looking at insurance companies. More than anything, both management and investors should concern themselves with the insurer's financial strength and ability to meet ongoing obligations to policyholders and concerned with its profitability. Profitability indicates how well management of an enterprise generates earnings by using the resources at its disposal. Profitability is one of the most important objectives of

financial management since one goal of financial management is to maximize the owners' wealth; therefore, profitability is very important determinant of performance. The performance of any business firm not only plays to increase the market value of that specific firm but also leads towards the growth of the whole sector which ultimately leads towards the overall prosperity of the economy. Insurance companies are not only providing the mechanism of risk transfer, but also helps to channelize the funds in an appropriate way to support the business activities in the economy. (Ahmed, 2011).

Malik (2011) indicate that insurance companies have importance both for businesses and individuals as they channel funds and indemnify the losses of other sectors in the economy While Insurers help individuals as well as businesses to minimize the consequences of risk and put the insured in the positions where they were before the risk occurs. In order to carry all risks, insurers should keep their profitability; because Performance of insurance sector can affect economic growth and institutional insolvencies that result in systemic crises which have unfavorable consequences for the economy as a whole. Chen & Wong, (2004) stated that high profits provide both the tools (bigger availability of funds), and the incentive for new investment (higher rate of return). Insurance companies have a dual responsibility, they must be profitable in order to be able to make new investments and they must be profitable in order to have the necessary solvability to convert other parts of the economy in previous state after the occurrence of damage. Furthermore, Insurance companies provide unique financial services to the growth and development of every economy. Such specialized financial services range from the underwriting of risks in economic entities and the mobilization of large amount of funds through premiums for long term investments. The risk absorption role of insurers promotes financial stability in the financial markets and provides a sense of peace to economic entities in addition insurance companies' have ability to cover risk in the economy hinges on their capacity to create profit or value for their shareholders. A well developed and evolved insurance industry is a boon for economic. Most of the time in insurance, performance is normally expressed in net premiums earned, profitability from underwriting activities, annual turnover, returns on investment and return on equity. These measures can be classified as profit performance measures and investment performance measures. Profit performance includes the profits

measured in monetary terms. Simply, it is the difference between the revenues and expenses. These two factors, revenue and expenditure are in turn influenced by firm-specific characteristics, industry features and macroeconomic variables. Investment performance can take two different forms. On the other hand micro level, profit is the essential pre-requisite for the survival, growth and competitiveness of insurance firms and the cheapest source of funds. Without profits insurers can not attract outside capital to meet their set objectives in this ever changing and competitive globalized environment. Profit does not only improve upon insurers' solvency state but it also plays an essential role in persuading policyholders and shareholders to supply funds to insurance firms. Thus, one of the objectives of management of insurance companies is to attain profit as an underlying requirement for conducting any insurance business (Chen and Wong, 2004). Insurer's profitability is influenced by both internal and external factors. Whereas internal factors focus on an insurer's specific characteristics, the external factors concern both industry features and macroeconomic variables. The concept of financial performance has received significant attention from scholars in the various areas of business. It is of primary concern of all business stakeholders in any sector since financial performance is an ingredient to organizational health and ultimately its survival. The insurance industry of Ethiopia is a vital part of the entire financial system. Apart from commercial banks, insurance companies contribute significantly to financial intermediation of the economy. As such, their success means the success of the economy; their failure means failure to the economy so high performance reflects management effectiveness and efficiency in making the use of a company's resources and this contributes to the economy at large. Profitability shows the company's ability to provide a rate of return on its assets and investments. In this paper, we will focus on the study of profitability, as one of the indicators of the performance of insurance companies. A number of factors, which can be classified as internal and external factors, that includes industry and macroeconomic , these factors might affect the profitability of insurance companies. In most financial literature that addresses the topic of profitability of insurance companies. Since insurance companies in Ethiopia are seen as intermediaries that would help to channel the funds in an appropriate though, it is important to investigate what

factors affecting the profitability of insurance companies. Therefore; this study focuses on identifying what are the factors affecting profitability of insurance companies.

1.2 Overview of Insurance Industry in Ethiopia

The start of insurance industry in Ethiopia were began an agreement was reached on 1905 between Emperor Menelik II and a representative of the British owned National Bank of Egypt to open a new bank in Ethiopia similarly, modern insurance service, also introduced by foreigners. The newly introduced bank the bank of Abyssinia began to transact fire and marine insurance as an agent of a foreign insurance company. According to Hailu (2007), the first significant event that the Ethiopian insurance market observation was the issuance of proclamation No. 281/1970 and this proclamation was issued to provide for the control & regulation of insurance business in Ethiopia. Consequently, it created an insurance council and an insurance controller's office, its strange impact in the sector. The controller of insurance licensed 15 domestic insurance companies, 36 agents, 7 brokers, 3 actuaries & 11 assessors in accordance with the provisions of the proclamation immediately in the year after the issuance of the law. The law required an insurer to be a domestic company whose share capital (fully subscribed) to be not less than Birr 400,000 for a general insurance business and Birr 600,000 in the case of long-term insurance business and Birr one million to do both long-term & general insurance business. The proclamation defined 'domestic company' as a share company having its head office in Ethiopia and in the case of a company transacting a general insurance business at least 51% and in the case of a company transacting life insurance business, at least 30% of the paid-up capital must be held by Ethiopian nationals or national companies. Four years after the enactment of the proclamation, the military government that came to power in 1974 put an end to all private entrepreneurship. Then all insurance companies operating were nationalized and from January 1, 1975 onwards the government took over the ownership and control of these companies & Insurance Corporation become sole operator and monopoly of the sector by the government. During the command economic system the insurance sector lacks dynamism and innovation, volatile premium growth rates and reliance on a couple of classes of insurance business (motor and marine) for much of gross premium income. Hailu (2007) emphasized that the nationalization of private insurance companies, the restrictions imposed on private business

ventures, and management of the insurance sector had significant adverse impact on the development and growth of Ethiopian insurance industry. However, following the change in the political environment in 1991, the proclamation for the licensing and supervision of insurance business No. 86/1994 heralded the beginning of a new era. Immediately after the enactment of the proclamation private insurance companies began to flourish. According to the directive of ISB/34/2014, any insurance company required to be a domestic company whose share capital (fully subscribed) to be not less than Ethiopian Birr 60m for a general insurance business and Ethiopian Birr 15m in the case of long term (life) insurance business and Ethiopian Birr 75m to do both long term & general insurance business. As a result, currently, the country has one public-owned and sixteen private insurances, which are operating throughout the country (NBE, annual report, 2016) refer Appendix I.

There are two kinds of performance, financial performance and non-financial performance. Performance is the function of the ability of an organization to gain and manage the resources in several different ways to develop competitive advantage. The study tries to show the effect of financial and non financial drives that affect the Ethiopian insurance companies' financial performances. Hence, these are important issues to be investigated whether the said determinants are useful predictors of financial performance of the insurance industry of Ethiopia with the objective of developing an empirical model. To this end, this study is examined the factors that affecting the companies' financial performance by examining empirical evidence in insurance companies, so that the insurer could focus on the appropriate factors of profitability to maximize their profit

1.3 Statement of the problem

The subject of financial performance has received significant attention from scholars in the various areas of business and strategic management. It has also been the primary concern of business practitioners in all types of organizations since financial performance has implications to organization's health and ultimately its survival Amal, (2012). High performance reflects management effectiveness and efficiency in making use of company's resources and this in turn contributes to the country's economy at large. In this regard the high performance yields

satisfactory profit. Profitability is one of the most important objectives of financial management because one goal of financial management is to maximize the owner's wealth and profitability Malik et al, (2011). The insurance industry in particular is part of immune and repair system of an economy and successful operation of the industry can set energy for other industries and development of an economy. Insurance industry is expected to be financially solvent and strong through being profitable in operation. Therefore, not only measuring the financial performance of insurance companies but also clear insight about factors affecting financial performance is important.

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. In this regard Insurance Companies play a significant role in a country's economic growth and offers financial protection to an individual or firm against monetary losses suffered from unforeseen circumstances Kihara, (2012). This is because the world is characterized by risks and uncertainties and insurance has evolved as a way of providing security against the risks and uncertainties. In this situation, it is vital to identify what drives insurers' profitability. Measuring of profitability of insurance industry compared form other financial institution or corporations is more difficult because insurance companies use unique accounting system even as determinants of insurances' profitability had been analyzed by using empirical investigation and resulted in different conclusions. According to Malik (2011), profitability for insurance companies is affected by different factors including actual mortality experience, investment earning, capital gains or losses, the scale of policyholder dividends, and federal and state taxes. Yuvaraj and Abate (2013). Growth, leverage, volume of capital, size, and liquidity are identified as most important determinant factors of profitability in contrast, the age

of companies and tangibility of assets are not significantly related with profitability. Jerene, (2016). examined the determinants of insurers' profitability indicated that , size in terms of total assets, loss ratio, liquidity, age and GDP are positively correlated with ROA while capital adequacy, premium growth and inflation are negatively correlated with ROA. In addition Wanjugu (2015), on his research point out that, leverage, equity capital and management capability the better the financial performance of general insurers in Kenya. However size and foreign ownership appear to be negatively related to return on assets. On the other hand research conducted by (Pervan and Lee, 2014, Emine, 2015, Kazimierz, 2016 and others) confirmed that there is direct association between profitability of insurance companies' and both firm-specific factors and macroeconomic factors. However, the results found by the researchers mentioned above in the empirical revealed inconsistencies regarding some variables like age, size and volume of capital according to the country in which the research is conducted. Therefore, the determinant factors of insurance companies' performance are still unsolved.

Various studies in Ethiopia have investigated the determinants of performance only for non-financial and banking sectors not Insurance. The study conduct on factors affecting profitability insurance companies of Ethiopia is few in number for instance (Abate,et al. 2012 and Daniel *Mehari, 2013*) studied on factors affecting insurance companies' profitability in Ethiopia. They only focused on internal or specific factors and have not considered external factors like macroeconomic (gross domestic products, Inflation and interest rate) on the other hand Suheyli Reshid, (2016) on his study company specific factors like underwriting risk, reinsurance dependence, solvency ratio , technical provision risk, liquidity, company size and premium growth and macroeconomic variables such as growth of gross domestic product and inflation i.e. only financial statement variables but not include non-financial statements variables such as management competency index, efficiency and productivity and microeconomic factor like interest rate.

This is therefore, factors affecting profitability of insurance companies have not been adequately investigated; thus the researcher believes that to extended prior research and contributes to the

literature on the factors affecting profitability of insurance companies in different approach i.e. by adding important variables to both company specific factors and macroeconomic factors in previous studies such as management competency index, tangibility of asset and Interest rate with the variable those are the most important factors to determine the profitability of the insurers like solvency ratio , loss ratio, liquidity and technical provision in addition microeconomic GDP, Inflation. These factors are important issues to be investigated for the insurance managers, professionals, regulators and policy makers to support the sector in achieving the excellence so that required economic outcomes. This is therefore; this study will seek to fill the above explained gap by providing information about the internal and external factors that affects profitability and identifying its directions and magnitude to develop the strategy to get the opportunity or to minimize the treat. Finally understanding the key factors and its magnitude determining profitability assists managers in developing an effective profitability strategy for their company.

1.4 Basic Research Questions

In line with the broad purpose statement highlighted above, the following specific research question was formulated and the study attempted to answer them.

RQ1: What are the insurance specific variables that affect Ethiopia insurance companies' profitability?

RQ2: What are the macroeconomic variables that affect Ethiopia insurance companies' profitability?

RQ3: how do those factors influence the profitability of Ethiopian insurances companies?

1.5 Objectives of the study

The General objective of the study will be to identify the most important factors that affect the profitability of insurance companies of Ethiopia. Some of the Specific objectives are as follow:

1. This study focus on analyzing the internal factor like Management competency ,Tangibility of asset, Solvency ratio , loss ratio, liquidity and technical provision that determine the return on Asset (ROA) of insurance companies in Ethiopia
2. To examine the external factor, that is beyond the decision capacity of the firms` manager .and to rank the factors according to their degree of influence on insurance companies` profitability.

1.6 Hypothesis

A **hypothesis** (plural **hypotheses**) is a proposed explanation for a phenomenon. For a hypothesis to be a scientific hypothesis, the scientific method requires that one can test it. Scientists generally base scientific hypotheses on previous observations that cannot satisfactorily be explained with the available scientific theories. Even though the words "hypothesis" and "theory" are often used synonymously, a scientific hypothesis is not the same as a scientific theory. A working hypothesis is a provisionally accepted hypothesis proposed for further research. A different meaning of the term *hypothesis* is used in formal logic, to denote the antecedent of a proposition; thus in the proposition "If *P*, then *Q*", *P* denotes the hypothesis (or antecedent); *Q* can be called a consequent. *P* is the assumption in a (possibly counterfactual) *What If* question. A hypothesis is a specific statement of prediction. It describes in concrete (rather than theoretical) terms what you expect will happen in your study. Not all studies have hypotheses. Sometimes a study is designed to be exploratory .There is no formal hypothesis, and perhaps the purpose of the study is to explore some area more thoroughly in order to develop some specific hypothesis or prediction that can be tested in future research. A single study may have one or many hypotheses.

Actually, whenever we talk about a hypothesis, we really think simultaneously about *two* hypotheses. Let's say that you predict that there will be a relationship between two variables in your study. The way we would formally set up the hypothesis test is to formulate two hypothesis statements, one that describes your prediction and one that describes all the other possible outcomes with respect to the hypothesized relationship. Your prediction is that variable A and variable B will be related (you don't care whether it's a positive or negative relationship). Then the only other possible outcome would be that variable A and variable B are *not* related. Usually, we call the hypothesis that you support (your prediction) the *alternative* hypothesis, and we call the hypothesis that describes the remaining possible outcomes the *null* hypothesis. Sometimes we use a notation like H_A or H_1 to represent the alternative hypothesis or your prediction, and H_o or H_0 to represent the null case. You have to be careful here, though. In some studies, your prediction might very well be that there will be no difference or change. In this case, you are essentially trying to find support for the null hypothesis and you are opposed to the alternative

In line with the statement the following hypotheses were also formulated for investigation. Hypotheses of the study stands on the theories related to a insurance's profitability that has been developed by a researcher's and past empirical studies related to a insurance's profitability. Hence, based on the objective, the present study seeks to test the following 9 hypotheses

Ho1: Management competency Index has no significant impact on profitability of insurance Companies' in Ethiopia

Ho2: Interest rate has no significant impact on profitability of insurance Companies' in Ethiopia

Ho3: Liquidity has no significant impact on profitability of insurance Companies' in Ethiopia

Ho4: Technical provision has no significant impact on profitability of insurance Companies' in Ethiopia

Ho5: Loss ratio has no significant impact on profitability of insurance Companies' in Ethiopia

Ho6: Solvency ratio has no significant impact on profitability of insurance Companies' in Ethiopia

Ho2: Tangibility of Asset has no significant impact on profitability of insurance Companies' in Ethiopia

Ho8: Growth Domestic Product has no significant impact on profitability of insurance Companies' in Ethiopia

Ho9: Inflation has no significant impact on profitability of insurance Companies' in Ethiopia

1.7 Definition of Terms

ROA: - There are many different ways to measure profitability, namely ROA and ROE. ROA reflects the ability of insurance's management to generate profits from the insurance assets. ROE shows the return to the shareholders on their equity many scholars suggest that ROA is the key ratio for the evaluation of insurance profitability. ROA was developed in 1919 by Dupont and it emphasizes the company's ability to efficiently use its assets which gives an indication of the capital intensity of the company and is comparable for companies in similar industry Maria, (2014).reflects the ability of insurance's management to generate profits from the insurance assets is one of the most widely used financial models for performance measurement that determines a firm's ability to make use of its resources.

Management competency Index: - Is a multidimensional concept and a number of well documented attempts have been made in the literature to define it. "The Competent Manager Boyatzi ,(1982) defines competence as "an underlying characteristic of a person", stating it could be, "motive, trait, skill, aspect of one's self-image or social role, or a body of knowledge which he or she uses" which are crucial to the effective performance of a position' work-related knowledge, a bundle of skills and technologies that enable company to provide benefits for customers rather than a single skill or technology.

Tangibility of Asset:- A recent study by Naveed Ahmed et.al (2011) investigates the impact of firm level characteristics on performance of the life insurance sector of Pakistan over the period of seven years. For this purpose, tangibility is selected as explanatory variables while ROA is taken as dependent variable., Malik et al. (2011) found that there exists a positive and significant relationship between tangibility of assets and profitability of insurance companies and argued that the highest the level of fixed assets formation, the older and larger the insurance company is.

Liquidity: - is the ability of insurance and reinsurance companies to fulfill their immediate commitments to policyholders and other creditors without having to increase profits on underwriting and investment activities and/or liquidate financial assets

Technical provision:-Insurance companies collect premiums in advance and keep them in reserve accounts for future claim settlements in the form of two main accounts outstanding claims and unearned premiums reserves which appears in the liability side of the balance sheet.

Loss ratio According to the nature of the insurance industry, the ratio of net claims paid in net premiums earned (loss ratio) is used as a proxy to measure the risk of the insurance companies this risk is underwriting risk which is a premiums collected will not be sufficient to cover the cost of coverage.

Solvency ratio:-Concerning insurance company's volume of capital measures as the difference between total assets and total liabilities and in some cases it is measured by the ratio of equity capital to total asset. Insurance company's equity capital can be seen in two ways, one is the amount contributed by the owners of an insurance (paid-up share capital) that gives them the right to enjoy all the future earnings. More comprehensively, it can be seen as the amount of owners' funds available to support a business. The other is a reserve, and is also termed as total shareholders' funds. The solvency of an insurance company corresponds to its ability to pay claims. The Solvency ratio is also a way investors can measure the company's ability to meet its long term obligations. An insurer is insolvent if its assets are not adequate (over indebtedness) or cannot be disposed of in time to pay the claims arising. Solvency margin is one of the indicators of financial soundness.

Interest Rate: Insurance companies invest much of the collected premiums, so the income generated through investing activities is highly dependent on interest rates. Declining interest rates usually equate to slower investment income growth impacting on the insurance company's financial performance. Kozak S (2011) contends that insurance companies may also benefit from rising interest rates, because much of their profit is earned on the float, the period between when premiums are collected and claims paid out. During this time, insurers invest the premium. It is argued that a continuing decline in market interest rates tends to make it more difficult for

insurance companies to provide high interest rates for their customers as a result-to maintain high levels of profitability.

Growth Domestic Product:-GDP is the most informative single indicator of progress in economic development. Poor economic conditions can worsen the quality of the finance portfolio, thereby reducing profitability. Growth rate of GDP reflects economic activity as well as level of economic development and as such affect the various factors related to the supply and demand for insurance products and services.

Inflation:- Inflation is represented by the average annual change in the consumer price index. Inflation itself is unlikely to seriously impact on the performance of insurance companies it could case insurance companies' financial difficulty for instance, adverse impact on many aspects of insurance operations, such as claims, expenses and technical provisions

1.8 The significance of the study

It has been noted that without the insurance sector, the economy and the wealth creation associated with it can be adversely affected (International Accounting Standards Board, 2007). The insurance industry forms an integral part of the country's financial sector and its benefits cannot be over-emphasized. If this crucial sector was missing, the consequence on the economy would be devastating, knocking off billions of Birr from the Gross Domestic Product (GDP). This study will design to identify the factors affecting profitability of insurance companies in Ethiopia and identifying its directions and magnitude to develop the strategy to get the opportunity or to minimize the treat. Therefore from this study many parties would benefit and these parties are

- ✓ **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.

- ✓ **Policy holders:** Policy holders interested in knowing the ability of insurance companies to pay their obligations based on the indicators of success of the companies
- ✓ **Investors:** The investors might benefit from the findings of this study by learning the factors which could be affecting the financial performance of insurance companies. They can be in a position to compare different companies and hence make the right decisions before investing. Furthermore, this study does have a paramount importance in providing a better ground for business professionals, business initiatives and policy makers. Moreover, the researcher also contributes that this study can potentially serve as a footstep for further research in the area

1.9 Scope of the study

The scope of this study is to focus on determining factors that affect Ethiopian insurance companies' profitability. Only took the insurance companies' registered by the National Bank of Ethiopia and which are in service for more than twelve years, it is due to that, if it is taken beyond twelve years the number of firms which will be out of the samples will increase. researcher believed that it is important to consider twelve years, because most new emerge companies register loss for two years, which is compensated by a certain form of profitability achieved over several years. Though Companies which have less than twelve years excluded in this study because they do not have full data for the study period. Even if Insurers' profitability is determined first by underwriting performance (losses and expenses, which are affected by product pricing, risk selection, claims management, and marketing and administrative expenses); and second, by investment performance, which is a function of asset allocation and asset management as well as dynamics and competitive market position. While the perception of the study restricted on would-be liable for determinants of insurers profitability based on selected empirical works such as company specific factor like management competency test , tangibility of asset, solvency ratio , loss ratio, liquidity and technical provision and external variable, like growth of gross domestic product , inflation and Interest rate .

1.10 limitation of the study

This study will limit its assessment on factors that affect the profitability of insurance companies in Ethiopia that have at least twelve years data i.e., 2005-2016. The study has been chosen based on the previous empirical studies. Further, in order to get an accurate picture factors affect of insurers' profitability, The study will limit the collection of secondary data from income statement, balance sheet and revenue account of general insurance business only because income statement of life assurance business is not prepared at the end of each year and few of insurance a company in Ethiopia gives life assurance services. The other was life/health insurance companies are different from property/liability insurers in terms of operation, investment activities, vulnerability and duration of liabilities Chen, (2004).

1. 11 Organization of the study

This study is organized in to four chapters. Chapter one presents the introduction of the study which includes statement of problems, objective of the study, methodology of the proposed study, limitation of the study, scope of the study, and significance of the study . Chapter two presents the literature review regarding the research area of determining the insurance companies' profitability and therefore sets out the theoretical foundations for the research. Then chapter three presents research design and methodology used in this study. Then in chapter four, research results will be presented and discussed in detail. The final chapter will conclude the paper, summarized the findings and drawn conclusions and recommendations.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

Financial intermediaries such as banks, savings and loan associations, and insurance companies are fundamental institutions of economic growth. They contribute to the optimal allocation of scarce resources in an economy. Hence, chapter two serves as background for this study by describing concepts of financial intermediation and factors that could influence insurance profitability. It also provides necessary intellectual foundation for building the blocks for this study. The review Related literature is divided in to four sections; the first section deals with definition of insurance and the concept of insurance companies and their profitability, the second section reviews related empirical studies concerning the factors that affecting the profitability of insurance companies the third section will presents determent selection. The last section will summarizes empirical literature concerning factors affecting profitability in insurance companies.

2.1 Theoretical review

2.1.1 Definition of insurance and the concept of insurance companies and their profitability

Scholars all over the world have tried to define insurance based on their opinion. Adebisi (2006), states that insurance is a complicated issue which involves economic and social devices for the handling of risks to life and property .Michael ,(2012) also defined that insurance is designed to protect the financial wellbeing of an individual, company or other entity in case of unexpected loss. According to him, some forms of insurance are required by law, while others are optional. Agreeing to the terms of an insurance policy and paying the premium create a contract between the insurer and the insured. In legal aspect Insurance is, essentially, a contract by which one party gives a consideration, typically paid in money called premiums, in exchange for a promise from another to make a return payment if a certain loss has occurred. Irukwu J.O (1994 described that insurance involve covering against events that may or may not happen. Williams A., Heins (1995) defines insurance as “a device by means of which the risks of two or more persons or

firms are combined through actual or promised contributions to a fund out of which claimants are paid. Davies, & Podpiera (2003) also defined insurance as "a device for transferring of risks of individual entities to an insurer, who agrees, for a consideration (called the premium), to assume to a specified extent losses suffered by the insured. Insurance is a form of risk management, used to hedge against the risk of a contingent loss. It involves the transfer of the risk of potential loss from one entity to another, in exchange for a risk premium. According to Kripa & Ajasllari, (2016, (2010) defines it as "a contract between the person who buys insurance and an insurance company who sold the policy". He opines that "by entering into the contract, the insurance company agrees to pay the policy holder or his family members a predetermined sum of money in case of any unfortunate event for a predetermined fixed sum payable which is in normal term called insurance premiums".

Sambasivam & Gashaw, (2013), the role of financial institutions in the economy of a country in general and insurance companies in particular and it means their efficient and effective financial system through savings mobilization, risk transfer and intermediation. Therefore, financial institutions, channel funds and transfers risks from one economic unit to another economic units so as to facilitate trade and resources arrangement particularly insurance sector contributes to economic growth, reduction of transaction costs, creation of liquidity, facilitation of economies of scale in investment, spread of financial loss and efficient resources allocation provides indemnification against risks, strengthens the linkage between other sectors of the economy in encouraging growth and stability and by creating a substantial impact on the national income of a country by improving the efficiency of the financial system. Insurance companies shares the function of banks and other financial institutions beside to the role of risk minimizing by pooling similar risk exposures and helps individuals and organizations to minimize the impact of risk result on their property and life Wondwossen (2016). There are many factors to consider when looking at insurance companies. More than anything, consumers and investors should be concerned about the financial strength of the insurer and its ability to meet its ongoing obligations to holders of insurance policies. Abdelkader , 2014, Mirie and Jane (2015) describe that Insurance companies provide unique financial services to the growth and development of

every economy. Such specialized financial services range from the underwriting of risks inherent in economic entities and the mobilization of large amount of funds through premiums for long term investments. The risk absorption role of insurers promotes financial stability in the financial markets and provides a sense of peace to economic entities; on top of this the insurance companies' ability to cover risk in the economy hinge on their capacity to create profit or value for their shareholders.

Among financial intermediaries, the insurance companies play important role, they are the main risk management tool for companies and individuals. Through issuing insurance policies, they collect funds and transfer them to deficit economic units for financing real investment. The importance of insurance is growing due to the increasing share of the insurance sector in the aggregate financial sector in almost every developing country. Insurance companies are similar to banks and capital markets as they serve the needs of business units and private households in intermediation by making stable of the economy and also the business participants accept aggravated risks. Theoretical studies and empirical evidence have shown that countries with better developed financial system enjoy faster and more stable long-run growth Well-developed financial markets have a significant positive impact on total factor productivity, which translates into higher long-run development Given that the insurance institutions not only facilitate a myriad of economic transactions through risk transfer and indemnification but are also seen to promote financial intermediation, it is surprising that rigorous and in-depth research of this kind is not more prominent among research topics

2.1.2 Concept of insurance companies and their profitability

We can divide insurance business in to two broad categories the nonlife and life insurance business nonlife or General insurance business these provide all types of insurance such as automobile, homeowner's, fire, accident, oil and gas, contractors' all risks and engineering risks; marine and aviation, Credit insurance, bond and surety ship among others. . However, they do not cover life insurance. Life Insurance is an agreement or contract between the insurance company and the policy holder, in which the insurance company assures the payment of a

particular amount of money if the insured person dies or passes away. For this, the policyholder pays a specific amount at regular intervals, which is known as the premium. Life insurance includes, group life insurance and pension business, health insurance business and annuities. In this covers the designated beneficiary of the policy receives the associated benefit if an event occurs that is covered by the policy.

The concept behind insurance is that a group of people exposed to similar risk come together and make contributions towards formation of a pool of funds. In case a person actually suffers a loss on account of such risk, he is compensated out of the same pool of funds. Therefore, contribution to the pool is made by a group of people sharing common risks and collected by the insurance companies in the form of premiums. Furthermore, risk has the element of uncertainty. Human life is subject to risk of death, disability as a result of natural or accidental causes, diseases and hazards. Generally, loss or damage could occur at any time and losses can be mitigated through insurance. Therefore, any introduction to insurance requires a clear understanding of the concept of risk. In this case, many insurance professionals use the word risk to refer to an insured, a prospect for insurance or to the peril that is being insured. They will say that a particular person or property is a good risk or a bad risk, meaning that they have evaluated the underwriting characteristics of that person or property for a particular insurance policy. This usage differs from the strict insurance definition, which defines risk as the uncertainty regarding financial loss. The insurance companies' ability to cover risk in the economy hinges on their capacity to create profit or value for their shareholders.

There are two kinds of performance, financial performance and non-financial performance. The first dimension is company's productivity, or processing inputs into outputs efficiently. The second is profitability dimension, of which company's earnings are bigger than its costs which emphasizes on variables related directly to financial report. (Amal, Almajali, Sameer and Ahmed 2012).The term Profitability consists of two words profit and ability. It is necessary to differentiate between the term Profit and Profitability at this point. The term Profit, from accounting point of view, is arrived at by deducting from total revenue of an enterprise all amount expended in earning that income while the term Profitability is defined as the ability of a

given investment to earn a return from its uses. *Reshid (2015)*. According to *Mirie, (2015)* the profits measured in monetary terms. Simply, it is the difference between the revenues and expenses. These two factors, revenue and expense are in turn influenced by firm-specific characteristics, industry features and macroeconomic variables. For the continued existence of most business organization and a crucial prerequisite for an increasing competitiveness of a company that operates in a market profit is important because it become sources of dividends, provides additional security against insolvency to investors and management. Profitability is one of the most important objectives of financial management, since one of the main tasks and goals of financial management is to increase shareholders wealth. According to Swiss Re (2008) Profits are determined first by underwriting performance (losses and expenses, which are affected by product pricing, risk selection, claims management, and marketing and administrative expenses); and second, by investment performance, which is a function of asset allocation and asset management as well as asset leverage. For an insurance company, there are two components of profits that we must consider: premium/underwriting income and investment income underwriting income is just any revenue derived from issuing insurance policies. The second area of profitability is investment income. That is, a greater proportion of an insurer's income comes from investments. Generally, a firm's performance can be estimated by measuring its profitability. The term 'profitability' is a relative measure where profit is expressed as a ratio, generally as a percentage Abate (2012) clarifies 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. Malik et al (2011,) and other agree on a number of ratios for the measurement of profitability. These include Return on Assets (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 shows how efficient the management uses its assets to generate earnings. Whereas ROE measures how much profit a company generates with shareholders' investment. ROIC is a measure used to asses a 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. Most empirical review argued that the performance of insurance companies in financial terms is normally expressed in

net premium earned profitability from underwriting activities, annual turnover, return on investment, and return on equity. These measures could be classified as profit performance measures and investment performance measures. However, most researchers in the field of insurance and their profitability stated that the key indicator of a firm's profitability is ROA. According to Boadi (2013) profitability is defined in terms of return on assets (ROA). The Return on Assets ratio is an important measure of profitability because it measures the efficiency with which the company is managing its investment in assets and using them to generate profit. It measures the amount of profit earned relative to the firm's level of investment in total assets. The return on assets ratio is related to the asset management category. The higher the percentage, the better the profitability, because that means the company is doing a good job using its assets to generate sales. Bawa and Chattha (2013) in their analysis stated that ROA shows the investor how well a company uses its assets to generate income, besides, it is a key indicator of the overall productivity of the company, and shows the percentage of profit, company earns in relative to its total asset

2.2 Factors affecting the profitability of insurance companies: An Empirical Review

Performance of financial institutions can affect economic growth while at the same time institutional insolvencies can result in systemic crises which have unfavorable consequences for the economy as a whole. Therefore it requires empirical investigation so as to sort out what are the important factors affecting profitability of insurance companies and this will help concerned bodies to focus on the relevant factors. Different individual in different countries studies the factors that influence the profitability of insurance companies; most of them suggested that firm specific factors and macroeconomic factors play a vital role in influencing insurance companies' profitability. It is therefore very important to identify what are these factors affecting the profitability of insurance companies and help insurance companies to take action on what will increase their profitability and investors to forecast the profitability of insurance companies. To perform so, it is better to see what factors were considered in previous times by different individuals in different countries,

Malik et al. (2011), analyze the determinants of Pakistan's insurance company's profitability proxied by ROA. The study used secondary data for the period of 2005-2009 and the sample is 34 insurance companies' of Pakistan. The variables tested are age, size, voc (volume of capital), leverage and loss ratio. Descriptive statistics and multiple regression analysis were performed to describe the profitability among Pakistan insurance companies ROA and five variables above were developed to test which factor best explains profitability of Pakistani insurance companies. Result showed that there is no relationship between profitability and age of the company and there is significantly positive relationship between profitability and size. The capital was significantly and positively related to profitability. On the other hand the analysis suggests that a reverse and significant relationship between leverage ratio and loss ratio as independent variables and profitability

Yuvaraj and Abate (2013) examined the effects of firm specific factors (age of company, size of company, volume of capital, leverage ratio, liquidity ratio, growth and tangibility of assets) on profitability proxied by Return on Assets (ROA). The sample in this study includes nine of the listed insurance companies for nine years (2003- 2011). Secondary data obtained from the financial statements (Balance sheet and Profit/Loss account) of insurance companies, financial publications of National Bank of Ethiopia are analyzed. Descriptive statistics and multiple regression analysis were performed to describe important determinant factors of profitability of insurance companies. From the regression results; growth, leverage, volume of capital, size, and liquidity are identified as most important determinant factors of profitability. In contrast, the age of companies and tangibility of assets are not significantly related with profitability

Ramesh, (2017). On his research examined by developing an empirical model (regression, 2011-15) of general insurance companies in Mauritius to monitor their financial performance and assess the impact of firm level Company Size, Underwriting Profit, Leverage, Sales Profitability Ratio, Net Operating Expenses, Investment income, Investment performance, Premium Growth, Liquidity, Net Operating Expenses and Growth Rate over the past five years. The most significant predictors of an insurer's return on assets are Reinsurance, Sales Profitability,

Operating Margin, Premium Growth and Company Age also contribute to explain growth in return on assets.

Luçi and Ajasllari, (2016). Assess in their research the impact of 6 internal factors; company size, volume of capital, fixed assets, liquidity, liabilities, growth rate; which affect the profitability of insurance companies in Albania represented by (ROA). They used multiple regression analysis, for 7 companies operating in the Albanian insurance market during the period 2008- 2013. The results of the multiple regression indicated that there was a statistically significant relationship between growth rate, liquidity, liabilities and fixed assets to the profitability of insurers, while the impact of factors of company size and the volume of capital was not statistically significant. Fixed assets had a negative correlation with ROA of insurance companies. Despite that statistically insignificant, variables such as company size and the volume of capital had a positive impact on the profitability of insurers companies in Albania,

Jerene, (2016). Analyzed that the effects of firm specific factors (age of company, size of company, volume of capital, leverage ratio and loss ratio) on profitability proxied by ROA defined as the before tax profit divide by total assets (TA). Data primarily collected from secondary sources, which was retrieved from the financial statement of the general insurance companies in India from their respective website. Therefore, based on survey of quantitative research, the researcher used to construct an econometric model to identify and measure the determinants of non-life insurance companies' profitability. According to the results, size in terms of total assets, loss ratio, liquidity, age and GDP are positively correlated with ROA while capital adequacy, premium growth and inflation are negatively correlated with ROA. In case of macroeconomic factor; inflation has a negative significant relation while GDP has a positive effect on ROA but insignificant.

Asrat and Tesfahun, (2016). The study analyzes the determinant of profitability of private insurance company in Ethiopia over the period from 2005 to 2015 by using non probability judgment sampling design of eight private insurance companies' for the econometrics analysis of multiple regressions of fixed effect approach of panel data. The constituent of firm specific and macro variable (Underwriting risk, Reinsurance Dependence, Solvency Ratio, Premium growth,

Company Size and macro factor (Growth rate of GDP, Inflation and Interest Rate) analysis was made to investigate the determinants of private insurance company profitability. The panel data model regression analysis shows that private insurers' profitability is statistically significantly affected by firm specific factor which is underwriting risk negatively, company size positively, premium growth positively, and solvency ratio negatively and reinsurance dependency has no influence on profitability and statistically insignificant. The macroeconomic variable economic growth rate has significant influence on profitability and inflation has insignificant influence on insurers' profitability whereas interest rate which measured by time deposit weighted average was insignificant variable

Abdelkader,(2014). In his study, examined the impact of firm-specific characteristics like, (size, leverage, tangibility, risk, growth, liquidity and age) on the performance of eight insurance companies in Tunisia a period of 8 years (2005-2012). The analysis of the results from a regression on panel data indicates that the variables age and premium growth are the most important determinants of the performance of insurance companies measured by ROA ratio (Return on Asset). Then, the performance of insurance companies is not statistically significant with leverage, tangibility, liquidity and risk. The results show that three variables, size, age and growth are the most important determinants of the performance of the sector of insurance in Tunisia during the period going from 2005 until 2012. Thus, the two variables Age and Growth have a positive impact on performance while the Size variable has a negative impact on the level of performance. Then, the other variables (Leverage, Tangibility and Liquidity Risk) are insignificant in relation to the performance.

Alice and Willy (2016) in their study census were done over a period of 5 years from 2010 to 2014 case of firms listed on Nairobi securities exchange. A Secondary data was obtained from the annual published financial statements which were quantitatively analyzed using descriptive statistics like mean and percentages. It is evident from the findings that firm size has a significant effect on the profitability of insurance firms. It indicates that insurance firms that have substantial investments in assets are likely to have higher profits compared to those that have low investment in assets.

Kazimierz, (2016), examined the determinants of the performance of general insurance companies in Poland using a panel dataset consisting of a firm specific factors and macroeconomic factors over the period 2006-2013. Six financial performance measures are used to capture different aspects of the insurance operations namely: profitability ratio of technical activity, assets profitability ratio, equity profitability ratio, sales profitability ratio, profitability of subscribed capitals and profitability of gross premium written. A weight least square (WLS) method and intergroup method are used to estimate the parameters. The empirical results prove that the performance being- negatively affected by underwriting activity (represented the net claims ratio variable) and by the net operating expenses variable. It was also shown that the size of a company has positive relationship with its profitability

Wanjugu (2015), on his research establishes the factors that affect the profitability of general insurers in Kenya for the period 2009-2012. The study employed multiple linear regressions, with return on assets as the dependent variable, Profitability was positively related to leverage, equity capital, management competence index and negatively related to size and ownership structure the study findings are that the higher the leverage, equity capital and management capability the better the financial performance of general insurers in Kenya. However size and foreign ownership appear to be negatively related to return on assets.

Tanbir, Chowd and Farzana (2014). On their research paper analyze the development and growth of selected Private Life Insurance Companies of Bangladesh during the period of 2007-2011. Seven trend equations have been tested for different activities of private life insurance companies. Among them the trend value of premium, investment fund, total assets, earnings per share etc. The study has been carried out mostly on the basis of secondary data to evaluate the performance others relevant data and information has been extracted from Stock Exchanges, Annual Reports of different insurance companies etc. For evaluating the performance of selected private life insurance companies of Bangladesh data has been analyzed through the various statistical measures like growth percentage, trend equation, square of correlation coefficient etc. Among them the trend value of investment fund is positive of all selected private life insurance companies.

Tajudeen, Francis and Dansu (2014). In their study examine the contribution of claim expenses to the profitability of insurance firms companies in Nigeria. Secondary data used for this study was extracted from the annual financial reports. The data generated for this study were Profit before Tax (PBT), Net Claims, and Return on Asset (ROA), Loss Ratio, and Expense Ratio. The dependent variable is profitability, which is proxy by Return on Asset (ROA), Profit before Tax (PBT), and Loss Ratio. Statistical techniques of ordinary least square regression and multiple regression analysis and a descriptive analysis of the data was conducted through a calculation of the mean and standard deviation. An insurance firm to generate profit, claim expenses must be minimized considerably this mean that insurance companies must pay adequate attention to fraudulent claims, recoveries from salvage, subrogation, or third parties.

Lee (2014). He investigates the relationship between firm specific factors and macroeconomics on profitability in Taiwanese property-liability insurance industry using the panel data over the 1999 through 2009 time period. Using operating ratio and return on assets (ROA) for the two kinds of profitability indicators to measure insurers' profitability. The results show that underwriting risk, reinsurance usage, input cost, return on investment (ROI) and financial holding group have significant influence on profitability in both operating ratio and ROA models. The results find that underwriting risk, reinsurance usage, input cost, ROI and financial holding group have significant influence on profitability in both operating ratio and ROA models, but macroeconomics variables only economic growth rate has significant influence on profitability in operating model. In addition, the significantly positive coefficients on the ROI variable in model support that insurers with higher investment returns have better profitability

Shala, Vlora, Yllka and Skender (2014). On their research examines the determinants of profit insurance companies represented by ROA for the period 2009-2012 for 11 insurance companies in Kosovo. Variables tested in this study are: life expectancy of the company, size, and the volume of capital leverage, growth of the company, tangible assets and liquidity. The research found that ROA is positively affected by the volume of capital, liquidity ratio and the company's growth and negatively affected by size and fixed assets. Volume of capital also significantly and positively related to profitability.

Naveed , Zulfqar and Ishfaq (2010). In their research examined the determinants of capital structure of life insurance companies of Pakistan over the period of seven years from 2001 to 2007. For this purpose, leverage is taken as dependent variable while profitability, size, growth, age, risk, tangibility of assets and liquidity are selected as independent variables. The results indicate that size, profitability, liquidity and risk are important determinants of capital structure of life insurance companies of Pakistan. In addition, life insurance companies follow Pecking Order pattern in terms of profitability, liquidity and age as leverage has a negative relationship with profitability, liquidity and age while positive relationship between leverage and size shows consistency with the Trade-off theory. The results also indicate that leverage has statistically insignificant relationship with growth and tangibility of assets.

Emine (2015), this study investigates the firm-specific factors affecting the profitability of non-life insurance companies operating in Turkey. For this purpose, data of 24 non-life insurance companies operating in Turkey from the period 2006–2013 were brought together using the data drawn from publicly available corporate financial reports. In this study, profitability is measured by two different variables: technical profitability ratio and sales profitability ratio. According to the empirical results, the firm-specific factors affecting the profitability of Turkish non-life insurance companies are the size of the company, age of the company, loss ratio, current ratio, and premium growth rate. However, the results obtained for the size of the company variable demonstrate that large non-life insurance companies have higher profitability than small non-life insurance companies. On the other hand the loss ratio variable indicates that with low underwriting risk has higher profitability than with high underwriting.

Pervan (2014) investigated in his research, how insurance companies in Macedonia performed regarding the determinants of profitability, based on the findings of panel analysis it was revealed that expense ratio, claim ratio, Size of the insurer, economic growth (GDP), and inflation have statistically significant influence on insurers' performance. Expense as well as Claims ratios (CR) have negative and statistically significant influence on insurers' profitability while size has a positive influence on the insurers' profitability. GDP growth positively affects insurers profitability i.e. growth of overall economic activity encourage demand for insurers services and indirectly result in higher insurers income while Inflation on profitability is

statistically significant and negative, suggesting that higher levels of inflation cause higher interest rates and lower bond prices which in turn reduce portfolio returns.

Almajali (2012) surveyed 25 insurance companies of Jordan during the period 2002-2007 by using a number of basic statistical techniques such as T-test and Multiple- regression. The results showed that leverage, liquidity, Size, management competence index have a positive statistical effect on the financial performance of Jordanian Insurance Companies and a high consideration of increasing the company assets will lead to a good financial performance and there is a significant need to have highly qualified employees in the top managerial staff.

Michael (2012), this research paper examined the short and long-run relationships between economic growth and insurance sector development in the Nigerian economy. The fixed-effect model was adopted and relevant data within the period of 1985 and 2009 were collated and analyzed with the use of co-integration analysis. Gross domestic product (GDP) was adopted as a proxy for the level of economic growth, while numbers of insurance companies, premium of life-insurance, premium of non-life insurance, total insurance investment and inflation rate were used in measuring insurance sector growth. The findings revealed that insurance sector growth and development positively and significantly affects economic growth using the ordinary least square (OLS) of regression estimate at the first stage, the result is in conformity with our expectation as all the variables, except inflation rate is positively related to Gross domestic product (GDP).

The above different empirical studies confirmed that Insurers' profitability is influenced by both internal and external factors. Whereas internal factors focus on an insurer's specific characteristic, the external factors concern both industry features and macroeconomic variables in addition (Lee. et al 2014, Tesfahun, 2016) elaborate more, the insurer's specific factors represented which is totally under the hand of the corporate management system, and external factors regarding connected industry and macroeconomic environment in general which also not under the hand of the corporate management but identifying and knowing its directions and magnitude was helps to develop the strategy to get the opportunity.

From stated empirical evidences regarding determinants of insurance companies focused mainly on internal factors affecting profitability and the factors considered are company size, age of

company, liquidity, Premium growth, Reinsurance dependency, Leverage and volume of capital. Thus, let us see empirical evidences for each variable independently.

A. Company size

Literature supports there is a positive relation between operational performance and insurance company size. According to Ramesh, (2017) large corporate size also enables insurers to effectively diversify their assumed risks and respond more quickly to changes in market conditions. It has been suggested that company size is positively related to financial performance. The main reason is that large insurance companies normally have greater capacity for dealing with adverse market fluctuations than small insurance companies. In addition, large insurance companies usually can relatively easily recruit competent employees with professional knowledge as compared to small insurance companies. Furthermore, large insurance companies have economies of scale in terms of the labour cost, which is the most significant production factor for delivering insurance services. It is expected that there is a positive linkage company size and profitability because large insurers are likely to perform better than small insurers as they can achieve operating cost efficiencies through increasing output and saving on the unit cost of innovations in products and process development.

B. Age of Company

Newly established banks are not particularly profitable in their first years of operation, as they place greater emphasis on increasing their market share, rather than on improving profitability Athanasoglou, (2005). Ahmed et al. (2009) defined age as the difference between observation year and establishment year. They found that the negative coefficient of variable age specifies the negative relationship between age of the life insurance companies and debt ratio. This inverse relationship predicts that in Pakistan older or mature life insurance companies are preferred to utilize small portion of debt in formation of capital. One key reason to employ less debt ratio is that when firm survives in business for a long time then it can accumulate more funds for running the operations of the business and subsequently keeps away the firm to go for debt financing Nivorozhkin,(2005). According to Malik et al, (2011), there was no correlation

between company age and profitability of 34 life and non-life insurance companies in Pakistan over 2005-2009. Pervan , (2012), however, found that company age and significantly impacted on insurers' financial performance in Bosnia and Herzegovina. In contrast, Kaya (2015) observed that a negative relationship between company age and profitability, thereby indicating that profitability decreases as the company ages. Regarding firm age, older firms are more experienced, have enjoyed the benefits of learning, are not prone to the liabilities of newness, and can, therefore, enjoy superior performance. Older firms may also benefit from reputation effects, which allow them to earn a higher margin on sales. On the other hand, older firms are prone to inertia, and the bureaucratic ossification that goes along with age; they might have developed routines, which are out of touch with changes in market conditions, in which case an inverse relationship between age and profitability or growth could be observed. (Liargovas, and Skandalis, 2008)

C. Liquidity

Liquidity is ability of insurance companies to fulfill their immediate commitments to policyholders and other creditors without having to increase profits on underwriting and investment activities and/or liquidate financial assets also the cash and bank balances are to be kept sufficient to meet the immediate liabilities towards "claims due for payment but not paid" It is usually measured by the current assets to current liabilities (current ratio). It shows the ability to convert an asset to cash quickly and reflects the ability of the firm to manage working capital when kept at normal levels This implies that high liquidity impedes the need for management to improve annual operational performance Shiu (2004) avert that companies with more liquid assets are less likely to fail because they can realize cash even in very difficult situations, thus expected that insurance companies with more liquid assets will outperform those with less liquid assets. An alternative hypothesis could be formulated as follows. Maintaining high liquidity can reduce management's discipline as regards both underwriting and investment operations. Moreover, according to the theory of agency costs, high liquidity of assets could increase agency costs for owners because managers might take advantage of the benefits of liquid assets (Adams and Buckle, 2000). In addition, liquid assets imply high reinvestment risk since the proceeds

from liquid assets would have to be reinvested after a relatively short period of time. Undoubtedly, reinvestment risk would put a strain on the performance of a company. In this case, it is, therefore, likely that insurance companies with less liquid assets outperform those with more liquid assets.

D. Reinsurance Dependence

Reinsurance is defined as the shifting of part of the insurance originally written by one insurer to another insurer⁶. Reinsurance enables insurers to increase underwriting results, to stabilize profits, to decrease the level of unearned premium reserve required and temporarily increase policyholders⁶ ; enabling insurers to write more business; or to provide catastrophe protection. It is important for insurers to determine an appropriate retention level in order to strike a balance between decreasing insolvency risk and reducing potential profitability because reinsurance can be costly. Increasing reinsurance dependence although it increases operational stability, i.e. lowering the retention level, reduces the potential profitability. Moro and Anderloni (2014) found that reinsurance was weakly correlated to profitability, showing that reinsurance activity has negative effects on profitability. Accordingly Lee et al.(2012) explains that an insurer that cedes more business to reinsurer and keeps lower retention more or less operates like a reinsurance broker who only transfers risk without underwriting risk and is likely to report less profit for a relatively high percentage of the premium received is ceded to reinsurers.

E. Premium growth

A primary source of insurance company's revenue is premium income and it is generally more persistent than other revenue sources. The value of gross premiums collected by the company, in other words the scale of its operation, significantly positively influences profitability and efficiency of the company Kozak (2011) suggested that it could indicate that the growth of medium sized companies, improves profitability of core insurance activities, as well as the total net profitability of the company. Hrechaniuk,(2007) found a strong correlation between insurers financial performance and the growth of written premium. Empirical results showed that the rapid growth of premium volume is one of the causal factors of insurers' insolvency(Kim. 1995).

In insurance companies there are two source of Premium growth i.e. exposure growth (an increase in the number of policyholders) and rate-level growth (an increase in the average price per exposure). These two sources of growth have different determination and risk implications. Exposure growth is valuable if the products are properly priced, but in a competitive market, significant exposure growth may be an indication of under pricing.

F. volume of capital

The capital of a company is expressed by the basic accounting equation as the difference between total assets with total liabilities. In studies related to factors affecting the profitability of insurance companies, the size of capital as a factor is represented by the ratio of shareholder equity to total assets, but this factor can be expressed by the carrying amount of capital insurance companies. In most of the studies concerning insurance companies" volume of capital measures as the difference between total assets and total liabilities and in some cases it is measured by the ratio of equity capital to total asset. Insurance companies" equity capital can be seen in two ways. it can be seen as the amount contributed by the owners of an insurance (paid-up share capital) that gives them the right to enjoy all the future earnings. More comprehensively, it can be seen as the amount of owners" funds available to support a business. Volume of capital is widely used as one of the determinants of insurance company's profitability since it indicates the financial strength of the firm. Malik et al. (2011) examined the relationship between volume capital and return on asset for Pakistan insurance industry and found positive and statistically significant relationship between insurance capital and profitability as it has been expected positive relationship between profitability and capital has been demonstrated by Athanasoglou *et al.* (2005). Studies conducted in different countries found that for non-life insurance companies, size of capital is one of the important factors that affect ROA.

G. Leverage

Leverage could be defined as reserves to surplus or debt to equity. Insurance companies collect premiums which are kept in reserve accounts for future claim settlements as outstanding claims

and unearned premiums reserves which are considered riskier than ordinary long-term corporate debt since neither the magnitude nor the timing of the cash flows is known. Unearned premium reserve is similar to ordinary short-term loans because most general insurance policies are short-term and expire in one year Briys and Varenne, (2001). The degree of financial leverage reflects insurance and reinsurance companies' ability to manage their economic exposure to unexpected losses. Therefore, low leverage provides a measure of corporate financial strength and presumably, reduces the need for managers to increase investment earnings, such as building-up reserves. The investment yield is positively related to leverage, implying that the higher the leverage the higher the investment. The risk of an insurer may increase when it increases its leverage. Literatures in capital structure confirm that a firm's value will increase up to optimum point as leverage increases and then declines if leverage is further increased beyond that optimum level. Harrington (2005) stated that the relationship between leverage and profitability has been studied extensively to support the theories of capital structure and argued also that insurance companies with lower leverage will generally report higher ROA, but lower ROE. Since an analysis for ROE pays no attention to the risk associated with high leverage. Empirical evidence also supports the view that leverage risk reduces company performance. Carson and Hoyt (1995) find that leverage is significantly positively related to the probability of insolvency. Moreover, a negative relationship between leverage and performance has also been found. Emine (2015) investigates the firm-specific factors affecting the profitability of non-life insurance companies operating in Turkey. In this study, profitability is measured different variables: technical profitability ratio and sales profitability ratio. And the empirical results, the firm-specific factors affecting the profitability of Turkish non-life insurance companies are the size of the company, age of the company, loss ratio, current ratio, and premium growth rate. However, the results obtained for the size of the company variable demonstrate that large non-life insurance companies have higher profitability than small non-life insurance companies.

2.3 Summary of the literature review & Conceptual Framework

2.3.1 Summary of the Gap

Review of the literature showed that the researches on the determinants of profitability had been comprehensively studied around the world and suggested that profitability of financial institutions affected by internal and external factors. Various researchers investigate the determinants of profitability of insurance companies and come up with different conclusion. In Ethiopia case few empirical study made by Yuvaraj and Abate et al (2013) focused only on internal factors such as age, size, leverage, growth, volume of capital, tangibility of assets and liquidity. (Daniel & Tilahun et al.(2013) indicated that positive and significant relationship between size, tangibility with profitability; however, loss ratio is statistically significant and negatively related with ROA the result also revealed that there is negative relationship between age and profitability but statistically insignificant. Asrat and Tesfahun et al. (2016) examined the determinant of profitability of private insurance company in Ethiopia over the period from 2005 to 2015 constituent of firm specific and macro variable (Underwriting risk, Reinsurance Dependence, Solvency Ratio, Premium growth, Company Size and macro factor Growth rate of GDP, Inflation and Interest Rate) and analysis was made to investigate the determinants of private insurance company profitability. The analysis shows that private insurers' profitability is statistically significantly affected by firm specific factor which is underwriting risk negatively, company size positively, premium growth positively, and solvency ratio negatively and reinsurance dependency has no influence on profitability and statistically insignificant. The macroeconomic variable economic growth rate has significant influence on profitability and inflation has insignificant influence on insurers' profitability whereas interest rate which measured by time deposit weighted average was insignificant variable.

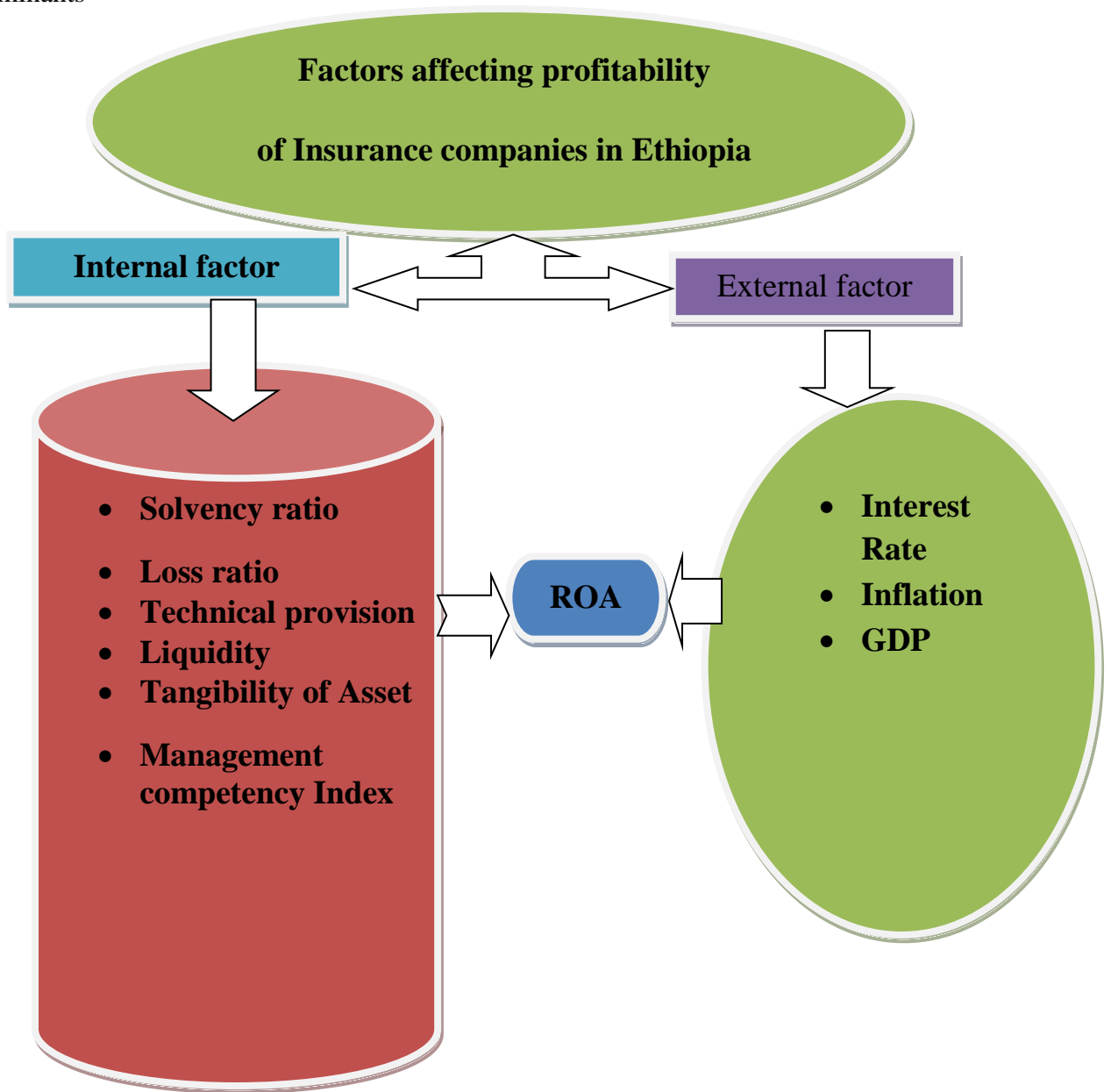
In Ethiopia most of the researches focused on banks and other non-financial sectors rather than insurance companies though this study extend the research based on the selected previous empirical by adding additional variables that are the most important factors to determine the profitability of the insurers to both company specific factors and macroeconomic factors in

previous studies such as Management competency Index, tangibility of asset, solvency ratio, loss ratio, liquidity and technical provision. Microeconomic factor GDP, Inflation and Interest rate. In addition to this it is important issues to be investigated for the insurance managers, professionals, regulators and policy makers to support the sector in achieving the excellence so that required economic outcomes.

2.4 Conceptual Framework

Figure 2.1 shows the diagram of factors affect the profitability of insurance companies in Ethiopia. This study used both internal and external determinants of insurance's profitability such as management competency Index, tangibility of asset, solvency ratio, loss ratio, liquidity and technical provision. Growth rate of GDP, Inflation and Interest rate and how these variables are determine the profitability of insurance Companies in Ethiopia.

Figure 2.1. Conceptual framework: Relation between insurance company's Profitability and its determinants



Source: Compiled by the researcher based on earlier studies

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1 Research Design

Research design is a master plan specifying the methods and procedures for collecting and analyzing the required data. The choice research design depends on objectives that the researchers want to achieve John, (2007). Since this study was designed to examine the relationships between profit and its determinants, testing objective theories by examining the relationship among variables therefore, quantitative research is primarily used. To add a richer understanding about the research problem is also supplemented by the qualitative research of inquiry. That is, combining both quantitative and qualitative research benefits of a mixed research approach because it alleviate the bias in adopting only either quantitative or qualitative research approach, As noted by Kothari (2004), explanatory research design examines the cause and effect relationships between dependent and independent variables Therefore, this study was examined the cause and effect relationships between profitability of insurance companies and its determinant, it is an explanatory research must be undertaken Shields (2013).

3.1.1 Research methods adopted

The purpose of this study is to identify factors affecting profitability of Insurance Companies in Ethiopia and the researcher wants to both generalize the findings to a population and to conduct an in-depth investigation, therefore selection of appropriate research methods is very important because it decides the quality of study findings. The current study adopts mixed methods approach. Mixed method approach focuses on collecting, analyzing and mixing both quantitative and qualitative data in a single study or series of studies. The decisive argument here is that the

use of both quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach achieves alone. Mixed method research involves both collecting and analyzing quantitative and qualitative data either sequentially or concurrently. Hence, the following sections present consecutively the quantitative and qualitative aspects of the research method.

3.1.2 Quantitative aspect

A type of data collection method used in which the researcher decides what to study, asks specific, narrow questions, collects numeric (numbered) data from participants, analyses these numbers using statistics, and conducts the inquiry in an unbiased, objective manner. According to Leedy & Ormord (2005 cited in Semu 2010, p.45) survey research is a common method used in business among quantitative strategies of inquiry that includes experimental design on it and provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population in order to generalize from the sample to the population. As a result, in order to generalize the findings to the whole insurance operated in the country, the current study the researcher adopts survey research method.

3.1.2.1 Survey design: documentary Analysis

Creswell (2003, p. 153) stated that the purpose of survey is to generalize description of trends, attitudes, or opinions from a sample to a population so that inferences can be made about some characteristic, attitude, or behavior of this population. In addition Fowler (1986) noted that it is also reasonable to use survey designs because of its benefits such as the economy of the design and the rapid turnaround in data collection and identifying attributes of a large population from a small group of individuals. Therefore, applying survey method to this research is logical and survey was carried out by means of structured document review

3.1.3 Qualitative aspect

Qualitative research approach is a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem with intent of developing a theory or

pattern inductively. According, Creswell (2009) for supplementary purpose of the quantitative gathered data of this study qualitative data also necessary. Since the nature of this research requires in-depth understanding of the factors affecting profitability of insurance company's in Ethiopia, The study used unstructured face to-face interviews to the officials of the insurances companies about the determinants of insurance profitability. The interviewees were two senior officials from Ethiopian Insurance Corporation and seven from private insurance companies.

3.2 Study population and sampling technique

For the study the target population would be all Insurance Companies that currently registered by NBE and under operation in the country. The country has one public-owned and sixteen private insurance companies which are operating throughout the country (as presented in appendix 1). In order to reach meaningful conclusion, there is no need to sample from the seventeen insurance companies, as they are already few in numbers to collect information over the period of 2005-2016. But lack of 12 years data that is required for the analysis purpose in most of the newly established private insurance companies, the number of sample Insurances are reduced to nine. The sample size is sufficient to make sound conclusion about the population as far as it covers around 50% of the total population. Accordingly, available audited financial statements of twelve consecutive years from 2005-2016 of each insurance companies include in the sample frame. Thus, to make the panel data structured, i.e. every cross-section follows the same regular frequency with the same start and end dates. Besides, twelve years is assumed to be relevant because five years and above is the recommended length of data to use in most finance literatures. The procedure used for drawing the sample from the available lists is the insurance service year profile, for the reason that the study intend to use document sources. Therefore, sample size is decided based on the availability of operating data in the insurance operating in Ethiopia. When the subject used in the sample is homogeneous, using purposive sampling technique is appropriate Singh, (2006). Therefore, the researcher used purposive sampling method to draw the sample from the population.

3.3 Types of data and instrument of data collection

In order to analyze the factors affecting the profitability of insurance companies in Ethiopia the necessary data was obtained through both primary and secondary sources. The sources of data for this research are mainly from secondary sources i.e. Insurance financial statements of nine insurance for 12 consecutive years i.e., from 2005-2016 (audited financial statements; balance sheet, income statement and revenue account) were collected from each insurance companies include the sample frame is consider (108 yearly observation). For the purpose of supporting the finding of the research, primary data were used to some extent. While books, journal articles, and internet were explored to gather published data on the issues under investigation, primary data on determinant of profitability are collected from the senior officials of insurance companies through unstructured questionnaire (interview). Moreover, in order to analyze the relationship that exists between profitability and macro-economic variables, macroeconomic data were also collected for the same years. Those macroeconomic data were mainly gathered from the records held by MoFED through structured document review. In order to minimize risk of irrelevant conclusion researcher need to uses appropriate data gathering instruments to combine the strengths and amend some of the inadequacies of any source of data Koul (2006).

3.4 Method of data analysis

To comply with the objective, the paper was primarily based on panel data, which was collected through structured document review. As noted in Baltagi, (2005) the advantage of using panel data is that it controls for individual heterogeneity, less collinearity among variables and tracks trends in the data something which simple time-series and cross-sectional data cannot provide. In order to achieve the objectives of this research, collected panel data was analyzed using descriptive statistics, correlations, multiple linear regression analysis and inferential statistics. Mean values and standard deviations were used to analyze the general trends of the data from 2005 to 2016 based on the sector sample of 9 insurances and a correlation matrix was also used to examine the relationship between the dependent variable and explanatory variables like Management competency Index, tangibility of asset, solvency ratio, loss ratio, liquidity, technical

provision, GDP, Inflation and Interest rate. A multiple linear regression model and t-static was used to determine the relative importance of each independent variable in influencing profitability. The multiple linear regressions model was run, and thus ordinary least square (OLS) was conducted using statistical package “EViews” econometric software package, to test the casual relationship between the firms’ profitability and their potential determinants and to determine the most significant and influential explanatory variables affecting the profitability of insurance companies of Ethiopian . The rational for choosing OLS is as noted in Petra (2007) OLS outperforms the other estimators when the following holds; the cross section is small and the time dimension is short. Therefore, as far as both the above facts hold true in this study it is rational to use OLS to investigate the effect of insurance-specific and macroeconomic determinants of insurance profitability. According Altai, (2005) Panel data is favored over pure time-series or cross-sectional data because it can control for individual heterogeneity and there is a less degree of multi-linearity between variables

In light of the above, the following general multiple regression equation is adopted from different studies conducted on the same area

$$\Pi = \beta + \sum_{i=1}^n X_{it} + \sum_{i=1}^n LX_{it} + \varepsilon_{it} \dots \dots \dots \text{(Equation 1)}\beta$$

Where π_{it} is the profitability insurance i at time t, with $i=1 \dots N$, $t=1 \dots T$, β_0 is a constant term; β is the value of parameter X_{it} the explanatory variables, L_{it} macroeconomic variables and ε_{it} error

A fixed cross-sectional effect is specified in the estimation so as to capture unobserved idiosyncratic effects of different insurance. In addition, as noted in Gujarati (2004) if T (the number of time series data) is large and N (the number of cross-sectional units) is small, there is likely to be little difference in the values of the parameters estimated by fixed effect model and random effect model. Hence, the choice here is based on computational convenience. On this score, fixed effect model may be preferable than random effect model Gujarati et al. (2004). Since the number of time series (i.e. 12 year) is greater than the number of cross-sectional units (i.e. 9 insurances) and adjusted R² value and Durbin-Watson stat value increases with the use of cross-sectional fixed effect model, fixed effect model is preferable than random effect model in this case because

fixed effect model allow correlation of unobserved individual specific heterogeneity with other explanatory variable in the model. Therefore, for the purpose of this study, diagnostic tests are performed to ensure whether the assumptions of the CLRM (classical linear regression model) 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

The study also tested the autocorrelation assumptions that imply zero covariance of error terms over time. That means errors associated with one observation are uncorrelated with the errors of any other observation. As noted by Gujarati. (2004), the best renowned correlation is Durbin Watson test. In accordance to Brooks . (2008), DW has 2 critical values: an upper critical value (dU) and a lower critical value (dL), and there is also an intermediate region where the null hypothesis of no autocorrelation can neither be rejected nor not rejected. 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 As noted in Brooks (2008) the rejection / non-rejection rule would be given by selecting the appropriate region. The null hypothesis is rejected and the existence of positive autocorrelation presumed if DW is less than the lower critical value; the null hypothesis is rejected and the existence of negative autocorrelation presumed if DW is greater than 4 minus the lower critical value; the null hypothesis is not rejected and no significant residual autocorrelation is presumed if DW is between the upper and 4 minus the upper limits; the null hypothesis is neither rejected nor not rejected if DW is between the lower and the upper limits, and between 4 minus the upper and 4 minus the lower limits

Test for normality

In order to test normality of variables 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; is the Bera-Jarque formalizes the ideas by testing whether the coefficient of skewness and the coefficient of excess kurtosis are zero and three respectively.

Test for Multicollinearity

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. To test the independence of the explanatory variables or to detect any multicollinearity problem in regression model the study used a Pearson correlation of independent variables. The problem of multicollinearity usually arises when certain explanatory variables are highly correlated and there is overlap or sharing of predictive power.

Based on the general model provided earlier and on the base of explanatory variables which are specified for this particular study is given as follows.

$$ROA_{it} = \beta_0 + \beta_{IRS} + \beta_{2LR} + \beta_{3LQ} + \beta_{4TR} + \beta_{5TP} + \beta_{6MTI} + \beta_{7INR} + \beta_{8INF} + \beta_{GDP} + \varepsilon_{it}$$

Source: developed by researcher by reviewing previous research works.

Where:

ROA_{it} = dependent variable return on asset;

SR = solvency ratio;;

LR = Loss Ratio;

LQ = Liquidity;

TA = Tangibility of Asset;

TP = Technical Provision;

MCI = Management Competency index;

INR = Interest Rate

INF = inflation;

GDP = growth rate of GDP;

i = Insurance company $i = 1 \dots 9$; and t = the index of time periods and $t = 1 \dots 12$ The issue that may arise from the use of panel data is whether the individual effect is considered to be fixed or

random. While random effects estimation addresses the endogeneity issue by instrumenting potentially endogenous variables, it also assumes that the individual firm effects are uncorrelated with the exogenous variables. On the other hand, the fixed affect estimation deals successfully with the correlated effects problem. The choice between both approaches is done by running a Hausman test. To conduct a Hausman test the number of cross section should be greater than the number of coefficients to be estimated. But, in this study the numbers of coefficients are equal with the number of cross sections so it is not possible to conduct a Hausman test.

3.4.1 Variable specification

This section has attempted to see the dependent and independent variables with there measurements

3.4.1.1 Dependent variable

ROA is dependent variable because it measures the profitability of insurance companies. Therefore, this study attempts to measure profitability by using ROA similar to most of the aforementioned researchers. ROA is measured as net profit before tax divided by total assets.

ROA = measures the profit earned dollar/Birr of assets and shows how well insurance companies management use the resources to generate profit. And defined as the before tax profit divided by total assets

3.4.1.2 Independent variables

This subsection describes the independent variables that are used in the econometric model to estimate the dependent variable. Following prior researches towards the determinants of insurance' profitability, the independent variables are classified into insurance specific or internal, external or macroeconomic variables. The insurance specific variables are internal factors and controllable for insurances managers while the industry-specific and macroeconomic variables are uncontrollable and hence external. . The choice of independent variables is based on their theoretical relationship with the dependent variable, so in this particular study the dependents variables are management competency Index, tangibility of asset, solvency ratio, loss

ratio, liquidity, technical provision, Growth rate of Domestic Product (GDP), Inflation and Interest rate:

Management competency Index: Social role or a body of knowledge which he or she uses it measures profit ratio to number of employee.

Tangibility of Asset: Tangibility of assets in insurance companies in most studies is measured by the ratio of fixed assets to total assets.

Technical provision: Risk of holding or holding provisions. The ratio is total outstanding to total capital

Liquidity: the liquidity ratio measures the firm's ability to use its near cash or quick assets to retire its liabilities. Liquidity Ratio = Current Assets / Current Liabilities.

Loss ratio: the ratio of net claims paid in net premiums earned (loss ratio) is used as a proxy to measure the risk of the insurance companies this risk is underwriting risk.

Solvency ratio: Concerning insurance company's volume of capital measures as the difference between total assets and total liabilities and in some cases it is measured by the ratio of equity capital to total asset.

Growth of real GDP: it is a macroeconomic variable, and it is expected to have a positive influence on the insurers' financial performance. Economic Growth Rates (EGR) = $(GDP_t - GDP_{t-1}) / GDP_{t-1}$, where GDP respects real gross domestic product

Inflation- occurs when the prices of goods and services increase over time. Inflation cannot be measured by an increase in the cost of one product or service, or even several products or services. Rather, inflation is a general increase in the overall price level of the goods and services in the economy. Inflation rates (IR) = $(I_t - I_{t-1}) / I_{t-1}$,

Interest Rate: Insurance companies invest much of the collected premiums, so the income generated through investing activities is highly dependent on interest rates. Declining interest rates usually equate to slower investment income growth impacting on the insurance company's

The following table 3.1 presents the summary of hypothesized expected sign for the relationship between the explanatory variables (independent variables) and insurances' profitability (dependent variable)

Table 3.1 Description of the variables and their expected relationship

Variables	Definition/Measure	Expected sign	
Dependent	Profitability(ROA)	Net profit before tax/total assets	NA
Independent	Loss ratio	claim incurred to premium earned	-
	Liquidity(LQ)	Current Assets to Current Liabilities	+/-
	Technical provisions	claims outstanding to equity ratio	-
	Solvency ratio	Total Liabilities to total Asset	+/-
	Management competency Index	Ratio of Profit to number professional	+/-
	Tangibility of Asset	Fixed Assets to Total Assets.	+/-
	Growth rate of GDP	$(GDP_t - GDP_{t-1}) / GDP_{t-1}$	+
	Interest Rate	Measured by time deposit weighted average	
	Inflation(I)	$I = (Inf_t - Inf_{t-1}) / Inf_{t-1}$,	-

Compiled by the researcher based on earlier studies

Table 3.2 research hypotheses and variables

Research hypotheses	Variables	Data sources
----------------------------	------------------	---------------------

HP1: Solvency ratio has no significant impact on profitability of insurance company's in Ethiopia	<p>Dependent variable: Profitability (ROA)</p> <p>Independent Variables</p> <ul style="list-style-type: none"> ✚ Solvency ratio ✚ Technical provision ✚ Liquidity ✚ Loss ratio ✚ Tangibility of Asset ✚ Management competency Index ✚ Growth of real GDP ✚ Inflation ✚ Interest Rate 	Insurance specific data from revenue statement and balance sheet held by NBE and the macroeconomic data from the records held by NBE and MOFED
HP2: Technical provision has no significant impact on profitability of insurance company's in Ethiopia		
HP3: Liquidity has no significant impact on profitability of insurance company's in Ethiopia		
HP4: Loss ratio has no significant impact on profitability of insurance company's in Ethiopia		
HP5: Tangibility of Asset has no significant impact on profitability of insurance company's in Ethiopia		
HP6: Management competency Index has no significant impact on profitability of insurance company's in Ethiopia		
HP7: Growth of real GDP has no significant impact on profitability of insurance company's in Ethiopia		
HP8: Inflation has no significant impact on profitability of insurance company's in Ethiopia		
HP9: Interest Rate has no significant impact on profitability of insurance company's in Ethiopia		

Source: Compiled by the researcher based on earlier studies

CHAPTER FOUR: RESULTS AND DISCUSSION

4.1 Result of the Study

This chapter deals with analysis of the finding and discussion of the result those determinants of insurance company's profitability using the annual 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 2005 up to 2016 and a cross section segment which considered nine insurance companies in Ethiopia such as Ethiopian Insurance Corporation, Awash, Global, Nile, Nice, Africa, Nib, Nyala and United. Before conducting the regression of the insurance profitability determents, it is essential to test the appropriateness of the panel data (both time - series and cross – section data) based on certain criteria and assumption of OLS diagnostic tests.

4.1.1 Model Specification Test (Fixed effect Versus Random effect)

According to Brooks (2008) estimating of a panel data there are two approaches that can be employed in financial research: fixed effects models (FEM) and random effects models (REM). In order to choice which one is better approach to use running a Hausman test is mandatory. To conduct a Hausman test the number of cross section should be greater than the number of coefficients to be estimated. But, in this study the numbers of cross section are not greater than the number of coefficients to be estimated so it is not possible to conduct a Hausman test. Therefore a fixed cross-sectional effect is specified in the estimation so as to capture unobserved idiosyncratic effects of different insurance companies. Hence, the choice here is based on computational convenience Gujarati. (2003). For these reason , fixed effect model may be preferable than random effect model since the number of time series (i.e. 12 year) is greater than the number of cross-sectional units (i.e.9 insurance companies). According to Wooldridge (2006), it is often said that the REM is more appropriate when the entities in the sample can be thought of as having been randomly selected from the population, but a FEM is more

conceivable when the entities in the sample effectively constitute the entire population/sample frame. Hence, the sample for this study was not selected randomly

Tests of Heteroscedasticity

The other important assumption for classical linear regression model is that the disturbances appearing in the population regression are homoscedastic that means the variance of the error term is consistent. In this study white test was used to test for existence of heteroscedasticity across the range of explanatory variables.

4.1 Heteroskedasticity Test: White

F-statistic	2.678394	Prob. F(54,53)	0.0002
Obs*R-squared	79.03727	Prob. Chi-Square(54)	0.0148
Scaled explained SS	52.97886	Prob. Chi-Square(54)	0.5138

Source: Eview output from data of sample insurance com, 2005 – 2016

The assumption of homoscedasticity says that the variance of the errors is constant, Brooks. (2008) if the errors do not have constant variance they are said to be heteroscedastic. In this study which is indicated above test result presented on table 4.1 both F – statistics and Chi square showed that there is evidence that heteroscedasticity is there because the result in the P value is less than .05 thus there is evidence for the not presence of heteroscedasticity problem, since the p-value was considerably in less than .05.

Test for autocorrelation

The Durbin-Waston test statistic value of 108 observations in table 4.1 is 1.6335. There are 9 regressors and an intercept term in the model, hence the relevant critical values for the test of 108 observation and 9 regressors are:- $dL = 1.357$ $dU = 1.741$, and $4 - dU$ which is $4 - 1.741 = 2.259$; $4 - dL$ which is $4 - 1.357 = 2.643$. The result of Durbin Watson test statistic of 1.633 is between the lower and the upper limits i.e. which is $dL=1,357$ and $dU=1.741$ Therefore, result falls under no auto-correlation range, which is within the neither rejected nor not rejected non rejection line of the number which shows there is no evidence for the presence of autocorrelation.

Table 4.2 Test of auto correlation

R-squared	0.866953	Mean dependent var	0.090410
Adjusted R-squared	0.841822	S.D. dependent var	0.051760
S.E. of regression	0.020586	Akaike info criterion	-4.777437
Sum squared resid	0.038139	Schwarz criterion	-4.330415
Log likelihood	275.9816	Hannan-Quinn criter.	-4.596185
F-statistic	34.49726	Durbin-Watson stat	1.633582
Prob(F-statistic)	0.000000		

Source: Financial statements of insurers and own computation

Test for Normality

According to Brooks (2008) in order to conduct hypothesis test about the model parameter, the normality assumption must be fulfilled. The normality assumption is about the mean of the residuals is zero. Therefore, the researcher used graphical methods of testing the normality of data as shown below.

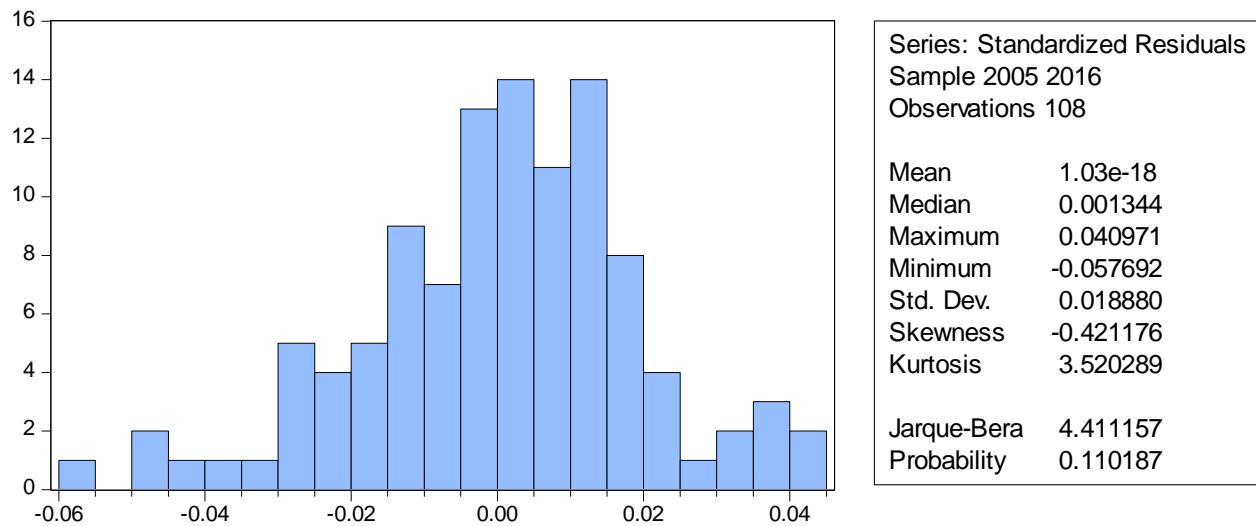


Figure 4.3: Source: Eviews output

A normal distribution assumption states that it is not skewed and has a coefficient of kurtosis of 3. Bera_Jarque formalizes this by testing the residuals for normality and testing whether the coefficient of skewness is zero and kurtosis to be three. Based on the statistical result, the study

failed to reject the null hypothesis of normality at the 5% significance level and p-value of .110 which shows that the data is consistent with a normal distribution assumption.

Test-Multicollinearity

Multicollinearity test is conducted to check whether the independent variables are correlated or not. Testing of this approach introduces a problem because the estimates of the sample parameters become inefficient and entail large standard errors, which makes the coefficient values and signs unreliable. Anderson (2008), states that multiple independent variables with high correlation add no additional information to the model. It also covers the real impact of each variable on the dependent variable the standard statistical method for multicollinearity analyzes the control variables correlation coefficient; represents the linear relationship between two variables. In order to confirm that there is no problem of multicollinearity it is essential to check the correlation between independent variables before running the panel data models Bilal (2013) Hair (2006) argued that correlation coefficient below 0.9 may not cause serious multicollinearity problem. In addition, Malhotra (2007) stated that multicollinearity problems exists when the correlation coefficient among variables should be greater than 0.75. Moreover, Kennedy (2008) stated that multicollinearity 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 or even close to 0.70. Accordingly, in this study there is no problem of multicollinearity which enhanced the reliability for regression analysis.

Table 4.4 Correlation matrixes of independent variables

	TLTA	MCI	INT	INF	GDP	FATA	COE	CIEP	CACL
TLTA	1								
MCI	0.583	1							
INT	0.251	-0.080	1						
INF	0.189	-0.189	0.039	1					
GDP	0.142	0.075	-0.683	0.011	1				
FATA	0.369	0.193	0.054	0.025	-0.015	1			
COE	0.826	-0.588	0.249	0.212	-0.129	-0.176	1		
CIEP	0.398	-0.584	-0.005	0.191	-0.059	0.022	0.477	1	
CACL	0.504	0.368	-0.160	-0.179	0.096	-0.353	-0.526	-0.309	1

Source: Financial statements of insurances, MoFED reports and own computation.

The above method used to study to test the existence of multicollinearity by checking the Pearson correlation between the independent variables. From the above table the correlation between the independent variables are low thus, there is no problem of Multicollinearity in this study. But when there is a multicollinearity problem it indicates that the estimates of the sample parameters become inefficient and entail large standard error which makes the coefficient values and signs unreliable. Gashayie (2013) indicates that multicollinearity is a violation that no independent variables are nearly or highly correlated, as a result high correlation among independent variables will make hard to separate the effects of individual variables.

4.1.2 Result descriptive statistics

The descriptive statistics provides descriptive about statistical mean, maximum value, minimum value and standard deviation of both dependent and explanatory variables of the study. This is generated to give overall description about data used in the model

Table 4.5 Descriptive Statistics

	Mean	Std. Dev.	Maximum	Minimum	Probability	Obsers
ROA	0.094	0.051	0.259	-0.027	0.078	108
TLTA	0.674	0.086	0.827	0.453	0.400	108
MCI	0.001	0.001	0.005	0.000	0.000	108
INT	0.049	0.008	0.038	0.035	0.002	108
INF	0.164	0.107	0.364	0.028	0.004	108
GDP	0.107	0.009	0.126	0.080	0.000	108
FATA	0.181	0.112	0.542	0.026	0.000	108
COE	0.768	0.330	1.520	0.112	0.526	108
CIEP	0.631	0.147	0.895	0.132	0.000	108
CACL	1.019	0.232	2.306	0.365	0.000	108

Source: Financial statements of sampled insurance companies

Table 4.4 provides a summary of the descriptive statistics of the dependent and independent variables for twelve year from 2005 to 2016 for nine insurance companies with a total 108 observations. For the total sample, the mean of ROA was 9.4% with a minimum of -0.2% and a maximum of 25.9%. That means, the most profitable insurance among the sampled insurances earned 25.9 cents of profit before tax for a single birr invested in the assets of the firm. On the other hand, not profitable insurance company of the sampled lost 0 .02cents of profit before tax for each birr invested in the assets of the firm the standard deviation statistics for ROA was 0.051 which indicates that the profitability variation between the selected insurance was very small and low variation from the mean, it means that the value of ROA deviate from its mean to both sides by 5 percent.

Loss ratio which proxies by losses incurred divided by annual premium earned as proxies by losses incurred divided by annual premium earned; the mean of incurred claims to earned premium ratio was 63 percent. This implies that on average, most insurance companies from the sample paid 63 percent loss incurred out of the total premium earned per year which was favorable as compared with acceptable standard and industry average is around 69-70%. As indicated on the table there was high variation between the highest loss ratio and lowest loss ratio i.e. The highest was 89.5 percent on the other hand the lowest was 13.2 percent these shows that the highest was above the industry average of 70% while the minimum loss ratio for a company in a particular year was far below the average. This result point out, that there is high variation in underwriting performance of in insurance industry in Ethiopia during the study period from 2005 to 2016.

The other variable was technical provision that proxy by the ratio of reserve for claims outstanding to equity was 0.76. This shows that an average, reserve for claims outstanding from equity is 0.77 times. The maximum claims outstanding to equity for a company in a particular year were 1.52 which is far below the maximum standard of 2.5 times and the minimum ratio was 0.11times.

Solvency ratio of insurance industry measured by the ratio of total liability over total assets was 67.4, maximum of 82.7, the minimum of 67.4 and standard deviation of 8.6 this indicates that the minimum of solvency ratio is higher than the minimum requirement of 20 percent.

Liquidity is the ability of company to meet its short-term obligations. The higher the liquidity of a company the better is company able to pay the debt interests. As per NBE the average value of the liquidity is 150% while the liquidity that measures the ability of insurance industry in Ethiopia during the study period was 101% which was below the standard and the industry was operating at a low current ratio also the maximum value and the minimum value was 2.3 and 0.36 respectively. In addition the average value of the liquidity 1.01 indicates that for each one birr current liability there was 1.01 birr current asset to meet obligation. The standard deviation of birr 0.23 indicated that there is high dispersion from the mean value of liquidity in the case of Ethiopia insurance industry.

Tangibility of asset is defined in respect to the model as the ratio of fixed assets to total assets. From the descriptive statistics above insurance industry fixed assets at least constitute 0.2% and at most 54.2%. The dispersion of fixed assets to total assets is 18.1%. By the descriptive statistics in the case of Ethiopia insurance industry fixed assets does not exceed 54.1% of their total assets. This means that insurance industry have assets that can be used for more than one accounting year to generate revenue. Insurance firms have fixed assets to generate profit over a long period.

Management competency index is measured by the ratio of profit to number of professional. The outputs of the descriptive statistics of management competency index indicate that the same result because the industry has almost the same type of professionals.

Concerning the external factors average inflation was 16.4 with a maximum rate of 36.40 and a minimum of 2.80 which shows a very fluctuating situation with a standard deviation of 10.70. average GDP growth is 10.70 % with a maximum of 12.60% and a minimum of 8% with a standard deviation of 1.1 for the study period which indicated the economic growth in Ethiopia during this period is stable. This GDP result coincides with the government report and indicates

that there is a potential for the insurance industry. On the other hand the average interest rate indicate that 4.9% with a maximum rate of 5.08%, a minimum of 3.05% and with standard deviation of .008 for the study period

4.1.3 Result of correlation Analysis

As noted by Gujarati (2004), the correlation analysis is made to describe the strength of relationship or degree of linear association between two or more variables. In Pearson correlation matrix, the values of the correlation coefficient range between -1 and +1. A correlation coefficient of +1 indicates that the two variables have perfect positive relation; while a correlation coefficient of -1 indicates as two or more variables have perfect negative relation. A correlation coefficient of 0, on the other hand indicates that there is no linear relationship between two variables

Table 4.6 below provides the Pearson's correlation matrix for the variables used in the analysis.

correlation Probability	ROA	TLTA	MCI	INT	INF	GDP	FATA	COE	CIEP	CACL
ROA	1									
TLTA	-0.0459	1								
MCI	0.5150	-0.5688	1							
INT	0.4318	0.2018	-0.0330	1						
INF	-0.1469	0.1882	-0.1427	0.0884	1					
GDP	-0.2584	-0.0521	0.0350	-0.7086	-0.0124	1				
FATA	-0.2015	-0.3789	0.1703	0.0598	0.0143	-0.0489	1			
COE	-0.2217	0.8360	-0.5902	0.2002	0.2032	0.05148	0.1900	1		
CIEP	-0.4858	0.3749	-0.5887	0.0163	0.1659	-0.1056	0.0295	0.4642	1	
CACL	0.1485	-0.4641	0.3868	-0.2020	-0.1583	0.1951	0.3299	0.4925	0.3533	1

Source: Financial statements of sampled insurance companies

Table 4.5 depicts the correlation result between the variables. From correlation result loss ratio (claims incurred to earned premium) had negative correlation with return on equity and significantly correlated at 1 percent significant level with a coefficient of -0.48. also, claims outstanding to equity, fixed asset to total assets, inflation, GDP and total liability to total asset (solvency ratio) had negative relationship with return on equity with a coefficient of -0.22, -0.20,-0.15,-0.25and -0.04 respectively. This indicates that as a ratio of technical provision,

liquidity, tangibility of asset, inflation, GDP and solvency ratio increases profitability moves to the opposite direction, but the negative relationship are not statistically different from zero. On the other hand contrary to the above explained variables, the correlation coefficients of management competence index.51, interest rate .43 and liquidity (current ratio) .15 had positive relationship with return on equity but statistically not different from zero.

4.2 Result on Regression analysis

This section presents the empirical findings from the econometric results on the factors affecting insurance profitability in Ethiopia. The section covers the empirical regression model used in this study and the results of the regression analysis.

Table 4.7 Regression Results for determinants of Ethiopian insurance companies' profitability

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TLTA	0.225231	0.076569	2.941557	0.0042**
MCI	51.72059	4.246035	12.18091	0000***
INT	2.957426	0.371650	7.957553	0000***
INF	-0.028266	0.020493	-1.379289	0.1712
GDP	0.177484	0.273484	0.648976	0.5180
FATA	0.007219	0.038823	0.185948	0.8529
COE	-0.048798	0.015391	-3.170487	0.0021**
CIEP	-0.044960	0.022523	-1.996199	0.0489**
CACL	0.015949	0.015754	1.012391	0.3141
C	-0.213007	0.065299	-3.262033	0.0016

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.866953	Durbin-Watson stat	1.633582
Adjusted R-squared	0.841822		
F-statistic	34.49726		
Prob (F-statistic)	0.000000		

***, **, * indicates significant at 1%, 5%, and 10% significance level respectively.

Source: Financial statements of sampled insurance companies and own computation

The above table shows that the result of the relationship between ROA and explanatory variables. As indicated the regression result shows the reasonable explanatory power of Adjusted (R²), approximately .84 which endorses that 84percent of the variation in the dependent variable which is return on asset is explained by the independent variables of the model. Hence, the remaining 16 percent of the variation in the dependent variable is left unexplained by explanatory variables of the study, which shows that this change is explained by other factors

which are not included in the model. From the table all explanatory variables except two variables i.e. management competency index and interest rate were significant impact on profitability since the p-value for those variables were 0.000, loss ratio (claim incurred to earned premium), technical provision ratio (claims outstanding to equity) were significant at 5% and 10% significance level respectively. Regarding the coefficient of explanatory variables; inflation, loss ratio (claim incurred to earned premium), technical provision ratio (claims outstanding to equity) were negative against profitability as far as the coefficients for those variables were -0.0282, -0.0498 and -0.0449 respectively. On the other hand, variables like GDP, FATA (fixed asset to total asset) and current ratio (current asset to current liability) had a positive relationship with profitability and their respective coefficients were 0.177, 0.007 and 0.0159 respectively.

The following section details the results of in-depth interview which was conducted with nine senior officials (three from Ethiopian Insurance Corporation and six from six private insurance companies are interviewed by using unstructured face to-face interviews). The senior officials includes Finance , operation and claims division managers The interview questions were fully unstructured and focused on the identification of factors affecting Ethiopian insurance industry profitability. More specifically, the interview questions were also tried to identify how those factors can influence profitability and what measures taken by the insurance to reduce the negative influence of controllable factors and their general opinion regarding the matter. respondents presented various factors and a number of factors were mentioned by particular interviewees about factors affecting insurers' profitability. The most common determinants of profitability includes variables such as loss ratio , investment opportunity, market risk, reinsurance dependency , lack of new products, fear of risky investments, stiff insurance market (price cutting), technical reserve, liquidity, large amount of motor claims, moral hazard, quality of underwriter, lack of professional and experienced employee, size, age of company, contagion and related part, operational, technological risk, legal and regulatory, gross domestic products, low interest rate and inflation.

4.3 Discussion of the study

Empirical results provide detailed discussions on sample descriptive statistics and comparison between dependent variable ROA and independent variables (Management competence index, loss ratio, technical reserve solvency ratio tangibility of asset liquidity ratio, GDP , inflation and interest rate) the comparison followed by correlation analysis to determine the relationship between dependent variable and towards independent variables. Regression analysis is also used to describe the profitability of insurance companies. The results show that loss ratio, technical and provision has statistically significant and negative relationship with insurers' profitability. Variables like management competency index, interest and solvency ratio have a positive and statistically significant relationship with insurers' profitability. Whereas fixed asset to total asset, GDP and inflation have insignificant influence on insurers' profitability.

Based on regression result, interview and previous empirical studies the factors that affecting insurances companies' profitability is individually discussed in the next Paragraph.

Loss ratio or underwriting risk: - From table 4.7 the coefficient of loss ratio which is measured by claim incurred to earned premium was negative and statistically significant at 5% significance level. It indicates that higher underwriting risk have adverse effect on the firm's profitability the increase of loss ratio indicates the efficiency of the insurer's underwriting activity and the exposure to financial loss resulting from the selection and approval of risks to be insured. It is a risk of losses from underpriced products, insufficient volume of premium, improper underwriting controls, and new product development that are not properly priced. . Ying Lee (2014) concluded that underwriting risk or loss ratio has a negative influence on the insurer's profitability, since taking an excessive underwriting risk can affect the company's stability through higher expenses. As well as the interviewee results suggested that underwriting is a fundamental objective to produce profitable book of business. And they add the major causes of underwriting risk are lack of adequate pre risk evaluation, difficulty of standard criteria for risk evaluation; claims handling practice of insurance companies .on top of this the most insurance industry branch managers are production oriented instead of profit oriented they ran to fulfill the budget what the company budgeted to them. Other basic reason for insurance industry is moral

hazard; the possibility that insured's may deliberately cause an insured event that such an event occurred to obtain insurance payments.

Liquidity:- The regression results in this research indicate that the relation between liquidity and ROA are not found to have a significant impact rather it has a positive impact on insurance profitability but is insignificant. Liquidity is current ratio that needs to settle the immediate obligation these emphasized that the availability of funds is the ability of the insurers to fulfill their immediate commitments towards policyholders. Therefore in this study liquidity of the insurers is found insignificant determinant of insurers' profitability

Technical provision risk: - The regression result of this study show that the coefficient of technical provision which is measured by claims outstanding to equity was negative and statistically significant at 1% significance level (p-value=0.0002), The result indicates that companies holding insufficient provision for outstanding will have negative impact on profitability because understatement can result in the company being unable to discharge its entire obligation to the public. According to the interview results, the major causes of inadequate provision problems are lack of optional reserve arrangement such as claims fluctuation reserve, absence of reserve like man-made or moral hazard and this may lead to overstatement of current year's profit but actually not. Technical provision risk is a liability to the company liability to policyholder's .The high level of technical provision risk indicators may signal a bad use of capital resources or failure to generate its portfolio. An insurance company is obliged to determine, at the end of accounting period, the technical reserve for settling liabilities from insurance contracts and they serve for settling liabilities set forth in the issued insurance policies.

Solvency ratio (Capital Adequacy):- The coefficient of solvency ratio which is measured by total liability to total asset was positive and statistically significant at 1% significance level (p-value=0.004). This means that the more solvent a company is (i.e. more equity or less underwrite premium), the less profitability it will have. Companies become financial soundness it is necessary to meet favorable solvency ratio. Insurance companies with higher solvency ratio are

considered to be sound financially. Financially sound insurance companies are better able to attract prospective policyholders and are better able to adhere to the specified underwriting guidelines. By adhering to the guidelines, the insurance companies can expect a better underwriting result. It follows then that the smaller the equity base in relation to the liabilities of the company, the lower the company's ability to absorb unforeseen shocks and unable to guarantee repayment to all claimants. On the other hand the interview result suggested that adequate capital is the principal element to kick off business, insure continuous operation, sustainability and growth of the business and to increase retention capacity of the insurers. While underwrite premium increase, Durinck (1997) found that companies are required to use some degree of liabilities to finance their activities if they want to increase profit. Assuming that the company is in its first stage, the manager will choose to invest using the retained earnings in order to increase profitability. As a company grows, the solvency ratio will thus become smaller. Therefore one can conclude that solvency ratio was a key driver of profitability of insurance companies in Ethiopia.

Gross domestic product: - The coefficient of GDP is positive and it is not statistically significant, thus, the effect of the findings suggested that GDP is not a determinant of insurance companies' profitability in Ethiopia, as far as the parameter for this variable is insignificant as illustrated by the large p-values of 0.5180. Theoretically GDP has positive and significant influence on profitability of insurance companies. Murungi (2014), GDP growth positively affects insurers profitability that is, growth of overall economic activity encourages demand for insurers services and indirectly result in higher insurers income. No country can experience meaningful development without the presence of formidable insurance industry, thereby making insurance business in any nation indispensable irrespective of its quota to the gross domestic product. According to Ezirim (2002), insurance industry is perceived as an indispensable tool of economic progress, growth and development. The interview results suggests that while the country's continuous economic growth, the growth of insurance industry in is not good, because the level of awareness about insurance in the public is very low. While economic growth increases activities like automobile insurance, home owner insurance, worker compensations; the

demand for insurance coverage for such activities are relatively inelastic. Lack of innovative products or investment opportunity and fear of risky investments by insurance company themselves.

Inflation: - The result of this study clearly indicates that inflation has a negative impact on profitability and not statistically significant determinant of Ethiopian insurance companies' In expectation of inflation, claim payments increases as well as reserves that are required in anticipation of the higher claims, consequently reducing technical result and profitability. From table 4.7 the coefficient of inflation was negative, but it was not statistically significant, (p-values 0.1712), thus the effect of inflation on Ethiopian insurers' profitability is not significant. The result suggested that inflation is not a determinant of insurers' profitability in Ethiopia. On the other hand the interview result reveals inverse to regression results. According to the interviewees, inflation has negative impact on insurer's profitability because inflation affects results of underwriting premiums, since policies are typically not adjusted periodically. For example, the price of spare parts increased from time to time, but the price of rate chart is not adjusted accordingly for underwrite premiums as a price increased, that resulting in costs increased faster than revenues. Negative influences of inflation on insurers' profitability were confirmed in empirical studies by Shiu et al. (2014).

Management competency index: - The coefficient of management competency index show that positive and statically significant i.e. (p-values 0.0000) The management competency index on insurance companies as an effective factor in impacting financial performance the result suggested that the insurance companies should focus on employee efficiency by choosing the employee who completes higher education. The level of education of professionals affects the assessment of quality of their competence and thus the company's ability to achieve future success. As indicated in the result Management competency is significantly affect insurance profitably.

Tangibility of Asset: - The regression results of tangibility of assets show that the coefficient is 0.0072 and p-value of 0.8529 this is therefore, tangibility of assets is found positive and has

insignificant impact on the profitability of insurance companies in Ethiopia. Insurance firms with low investment in assets have lower profits therefore insurance firms should invest heavily in assets if substantial gains have to be realized. These investments should be economically viable to guarantee returns.

Interest Rate: - The result of this study has coefficient of 2.957426 and p-value of 0.0000. This implies that interest rate have positive and statically significant impact in insurance industry. The positive relationship encourages insurers to keep on increasing their investment, this increase will also result increase in their profitability. The more investment in bank, the higher additional income insurers obtain. This is therefore investment income and net interest income influence the profitability of insurance firms directly.

CHAPTER FIVE: CONCLUSION AND RECOMANDATION

5.1 conclusions

The objective of this work was to assess the impact of 6 internal factors and 3 external factors; Management competency index ,loss ratio, technical reserve, asset tangibility, solvency ratio , liquidity and external factors GDP, Inflation and Interest rate that affect the profitability of insurance companies in Ethiopia. To achieve the objectives of the paper the researcher used multiple regression analysis, for 9 companies operating in the Ethiopian insurance market during the period 2005- 2016. This study has investigated the major factors affecting insurance companies' profitability by employing multiple regressions to predict the magnitude of each explanatory variables impact on the dependent variable. The appropriate econometric methodology for estimation of variables coefficient is employed under fixed effect regression model. Efficient financial system contributes for sustainable economic growth of a given country. Hence, in order to convey this efficiency, researches should be conducted in an orderly manner by incorporating up to date information to assist managements to focus on relevant issues. This study specified an empirical framework to investigate the effect of company specific and macroeconomic determinants of Ethiopian insurance companies' profitability. This chapter presents the concluding remarks of

The study and possible recommendations for practice and suggestions for further research. As indicated in table of regression results, internal and macroeconomic determinants are able to explain a substantial part of insurance companies' profitability in Ethiopia. ROA was used as a proxy for profitability; the study is designed to determine the relationship between profitability of insurance companies and the selected internal as well as external (macroeconomic) factors. As internal factors, the study revealed that the selected variables explained 85% of the variability in ROA of insurance companies in Ethiopia. The empirical findings on the impact of insurers'

profitability in Ethiopia for the sample suggest the following conclusions. The results of the regression analysis showed negative relationship between the ratios of underwriting risk (claims incurred to earned premium) and profitability with strong statistical significance. This shows that as minimizing underwriting risk it will certainly improve the insurers' profitability since taking an excessive underwriting risk can affect the company's stability through higher expenses. Again, A negative relationship between profitability and technical provision ratio implies inadequate provision hold decrease insurance companies' ability to pay claims and will result unable an insurer to underwrite more policies which may decrease the underwriting profit and the total net profit. A positive relationship between profitability and liquidity implies a good liquidity position increases insurance companies' ability to pay claims incurred and will have positive impact on insurers' profitability inflation has little or no impact on the profitability of Ethiopian companies, since inflation was not significant even at 10% significance level.

5.2 Recommendations

Based on the result of analysis conducted in the previous chapter and the above conclusions, the researcher has drawn the following recommendations

- ✓ The major activity of insurance company is underwriting, insurance companies should reduce the impact of underwriting risk (amount of losses). To reduce underwriting risk firstly, insurance companies improve their underwriting performance through the techniques of risk and product selections Secondly, to reduce the amount of losses the company should also increase claim handling practice with continues improvement on claim leakage management in both side, which is from the company employee (the engineering, inspection and claim management department) and from the customer side, to do this the company should develop immediate investigation mechanism on reported claim with crossed confirmation mechanism, Thirdly, to reduce the impact of underwriting risk insurance company should gathering sufficient information based on the risk to readjust the existing risk price, and it also help detail about subject matter risk assessment before issuing the policy. However, inflation rate was negative relation with

profitability and insignificant but claim settlement directly related with risk cost, regarding this, inflation affect the price of the new good by increasing some amount, therefore, insurance companies during setting of the premium, they should incorporate the effect of inflation.

- ✓ The National Bank of Ethiopia and investors which helps them to focus on the most important determinant of profitability. As it is indicated in the literature and in this research also supports that the development of the insurance sector is not as such as expected as compared to country growth the sector is still at the early stage of development.
- ✓ In order to increase insurance companies profitability insurance companies need to innovate new products, have health competition between them, avoid price cutting and fear of risky investments by insurers themselves, moral hazards are also factors that can affect Ethiopian insurance profitability negatively; insurers should try their best in order to provide new product developments, new insurance services and to participate in risky investment areas.
- ✓ Finally, the study sought to identify the factors that affect profitability of insurance companies' in Ethiopia. However, the variables used in the statistical analysis did not include all factors that can affect profitability of insurers' company in Ethiopian it only include few firm specific and macroeconomic quantitative variables. Hence, the research advises scholars to do further investigation to assist the insurance industry in Ethiopia like government regulation policy and other directives.

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