ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

DETRMINANT OF INSURANCE COMPANIES' PROFITABILITY IN ETHIOPIA

BY

DAGNACHEW BELETE

ID NO. SGS/0290/2007B

JUNE, 2017

ADDIS ABABA ETHIOPIA

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DECLARATION

I, the undersigned, hereby declare that the thesis work entitled “The Determinant of profitability in insurance company in Ethiopia submitted by me for the award of Master of MBA in Accounting and Finance from St University, is my original work and has not previously been submitted for a degree at this or any other University, and that all references materials contained therein have been duly acknowledged.

Place: Addis Ababa, Ethiopia Signature:_____

Date: June, 2017 Name: Dagnachew Belete

ENDORSEMENT

This Thesis has been submitted to St. Mary's University College, School of Graduate Studies for Examination with my Approval as a university advisor.

_____ _____

Advisor Signature

St. Mary's University College, Addis Ababa **June, 2017**

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ABSTRACT

Determinants of Insurance Companies' Profitability in Ethiopia

This study address that internal factors((size of company, leverage ratio, liquidity Ratio, tangibility of assets, growth and volume of capital) and macroeconomic Factors (economic growth and inflation) effect on profitability lighten by ROA during the period of 2011-2017 for six year panel data. This study is quantitative research. From the total of seventeen insurance company nine insurance company were selected by the purposive sampling and secondary data were used which was obtained from the financial statements (Balance sheet and Income statement) of insurance companies. From the result of regression tangibility of asset, inflation, and economic growth are negatively related but significant determinants of profitability. However firm volume of capital, leverage, Liquidity, Firm Growth, Size. Not significant determinants of profitability. Generally the insurance managers should give high attention on firm macroeconomic Factors determinants of profitability. In the end, in order undoubtedly investigate the effect of determinant of profitability of insurance company the insurance manager have to give special attention by considering long period study on macroeconomic variables on profitability of insurance companies and further research should investigate based on insurance type (life and non-life) that would allowed better addressee for determinants of insurance company profitability.

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List of Abbreviations

Lev.: Financial Leverage

NBE: National Bank of Ethiopia

OLS: Ordinary Least Square

ROA: Return on Asset

ROE: Return on Equity

ROIC: Return on Invested Capital

TOA: Tangibility of Assets

GDP: Economic Growth

UK: United Kingdom

US: United States of America

VCA: Volume of Capital

GR: Growth Rate

LQ: Liquidity

IR: Inflation Rate

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CHAPTER ONE:

INTRODUCTION

This chapter consist of introduction of the study which include of background of the study, background of insurance companies in Ethiopia, statement of the problem, the objectives of the study, methods adopted, hypothesis of the study, significance of the study, scope of the study, limitations of the study, and organization of the paper

1.1 Background of the study

The background of the study deals with 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. Recent research, as surveyed by Naveed et al (2011), shows that the efficiency of financial intermediation and transfer of risk 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. Insurance companies are not only providing the mechanism of risk transfer but also helps to channelizing the funds in an appropriate way to support the business activities in the economy. Insurance companies have importance both for businesses and individuals as they indemnify the losses and put them in the same positions as they were before the occurrence of the loss. In addition, insurers provide economic and social benefits in the society i.e. prevention of losses, reduction in anxiousness, fear and increasing employment. Therefore, the current business world without insurance companies is unsustainable because risky businesses have not a capacity to retain all types of risk in current extremely uncertain environment.

According to Hifza Malik (2011) profitability is one of the most important objectives of financial management since one goal of financial management is to maximize the owners‟ wealth, and, profitability is very important determinant of performance. Therefore, insurance companies have importance both for businesses and individuals as they channel funds and indemnify the losses of other sectors in the economy and put them in the same positions as they were before the occurrence of the loss respectively. In addition, insurance companies provide economic and

social benefits in the society by prevention of losses, reduction in anxiousness, fear and increasing employment.

Renbao Chen (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. Every firm is most concerned with its profitability. One of the most frequently used tools of financial ratio analysis is profitability ratios which are used to determine the company's bottom line. Profitability measures are important to company managers and owners alike. If a small business has outside investors who have put their own money into the company, the primary owner certainly has to show profitability to those equity investors. There has been a growing number of studies recently that test for measures and determinants of firm profitability. Financial industry's profitability has attracted scholarly attention in recent studies due to its importance in performance measurement. However, in the context of the Insurance sector particularly in developing countries or emerging markets, based on literature reviews, it has received little attention and also the existing studies consider only firm specific factors they ignored the effects of macroeconomic factors.

1.2 Background of insurance company in Ethiopia

Financial institutions are the most important energy of economic growth for any economy in the world.the major financial institutions operating In Ethiopia are banks, insurance companies and micro-finance institutions. Currently the Ethiopian financial institutions shown thatincreases in terms of number and service which not only creates the employment opportunities but also enhances the business activities in the Ethiopian economy. The history of insurance service is as far back as modern form of banking service in Ethiopia which was introduced in 1905. At the time, an agreement was reached 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, which were introduced in Ethiopia by foreigners, mark out their origin as far back as 1905 when the bank of Abyssinia began to transact fire and marine insurance as an agent of a foreign insurance company. According to a survey made in 1954, there were nine insurance companies that were providing insurance service in the country. With the exception of Imperial

Insurance Company that was established in 1951, all the remaining of the insurance companies were either branches or agents of foreign companies. In 1960, the number of insurance companies increased considerably and reached 33. At that time insurance business like any business undertaking was classified as trade and was administered by the provisions of the commercial code. The history of insurance service is as far back as modern form of banking service in Ethiopia which was introduced in 1905. At the time, an agreement was reached 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, which were introduced in Ethiopia by foreigners, mark out their origin as far back as 1905 when the bank of Abyssinia began to transact fire and marine insurance as an agent of a foreign insurance company. According to a survey made in 1954, there were nine insurance companies that were providing insurance service in the country. With the exception of Imperial Insurance Company that was established in 1951, all the remaining of the insurance companies were either branches or agents of foreign companies. In 1960, the number of insurance companies increased considerably and reached 33. At that time insurance business like any business undertaking was classified as trade and was administered by the provisions of the commercial code.

According to Hailu Zeleke (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.

Accordingly as stated by the office mentioned above, the law required an insurer to be a domestic company whose share capital (fully subscribed) not to be less than Ethiopian Birr.400,000 for a general insurance business, Birr 600,000 in the case of long-term insurance business and Birr 1,000,000 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.

After four years that is after the enactment of the proclamation, the military government that came to power in 1974 put an end to all private enterprises. Then all insurance companies operating were nationalized and from January 1, 1975 onwards the government took over the ownership and control of these companies & merged them into a single unit called Ethiopian Insurance Corporation. In the years following nationalization, Ethiopian Insurance Corporation became the sole operator. After the change in the political environment in 1991, the proclamation for the licensing and supervision of insurance business heralded the beginning of a new era. Immediately after the enactment of the proclamation in the 1994, private insurance companies began to increase. Based on the previous study know this research try to find out the determinant of insurance company profitability in Ethiopia. Currently, there are 17 insurance companies in operation. Both public owned and private insurance companies which are operating as on January 2012 throughout the country are listed in the following table 1.1

Table 1.1 List of insurance companies operating in Ethiopia as on 2016

S/N	Name	Type	Establishment year
1	Ethiopian Insurance Corporation	General	1975
2	Africa Insurance company S.C	General	1994
3	Awash Insurance company	General	1994
4	National Insurance Company of Ethiopia S.C	General	1994
5	Nyala Insurance Company S.C	General	1995
6	Nile Insurance company S.C	General	1995
7	The United Insurance S.C	General	1997
8	Global Insurance company S.C	General	1997
9	NIB Insurance Company	General	2002
10	Lion insurance company S.C	General	2007
11	Ethio-Life and General Insurance S.C	Life and General	2008
12	Oromia Insurance Company S.C	General	2009
13	Abay Insurance Company	General	2010
14	Birhan Insurance Company S.C	General	2011
15	TsehayInsurance S.C	General	2012
16	Lucy Insurance Share Company	General	2012
17	Buna Insurance Company	General	2013

Source National Bank of Ethiopia (2016)

1.3 Statement of the Problem

Financial institution have significant role in the world to enhance economic growth of the country. The better performance of insurance company has increase the market value of specific firm.

In Ethiopia work done on determinants of profitability is more on banks rather than insurance. The studies conducted in the areas of insurance are few in number and did not give such an emphasis on the factors considered to be determinants of profitability of insurance industry in Ethiopia. For instance, (Abate, 2012) studied factors affecting insurance companies' profitability in Ethiopia. He focused only on internal factors and have not considered external factors like macroeconomic (economic growth, Inflation) are potentially accountable for determinant of insurers' profitability (Lee 2014) & (Shiu 2014). Khan (2013) revealed that leverage, size, earnings volatility and age of the firm are significant determinants of profitability while growth opportunities and liquidity are not significant determinants of profitability. A study of Ahmed (2008) examined the determinants of insurers' profitability indicated that size, volume of capital, leverage & loss ratio are significant determinants of profitability. Other studies conducted in the area of insurers' profitability (Curak, 2012; Shiu, 2014; Maria and Ghiorghe, 2014) verified that there is a direct association between profitability of insurance companies and it's both internal and external determinants Therefore, the factors which affect the profitability of insurance companies have not been adequately investigated. So that current paper extended prior research and contributes to the literature on the determinants of profitability in a number of ways. This research is to address this gap by determining some of the determinants of profitability of insurance firms in Ethiopia to help insurance firms increase profitability ,governmentktothnow which company is success and failure to take the necessary action and investors to predict Ethiopia's insurance firms profitability. This study, therefore sought to find out the determinants of profitability of insurance firms in their quest to manage risk

1.4 Objectives:

1.4.1 General objective

The main objective of the study is to identify factors determining of the financial performance of the Ethiopia insurance companies.

1.4.2 Specific Objectives

Based on the above general objective, the researcher elucidates the following specific objectives:

1. To identify the internal or specific factors determinants (Liquidity, The volume of capital, The company size, The growth rate of the company, Tangibility Of Asset) affecting insurance companies profitability in Ethiopia.
2. To measure the effect of macroeconomic variables (inflation ,Economic Growth)on he profitability of insurance in Ethiopia)
3. To measure the effect to which these determinants exert influence on insurance companies profitability.

1.5. Research Hypothesis

These hypotheses are predicted about the effect of the consequences. The following were the variables & hypotheses used in order to achieve the abovementioned objective based on different empirical research reviews. For example Renbao Chen and Rie Ann Wong (2004) stated that leverage beyond the optimum level could result in higher risk and low value of the firm. Empirical evidences with regard to leverage found to be statistically significant relationship but negative. A growth in assets that extends an optimal ratio may have negative effects, due to increased bureaucracy (Yuqi, 2007) and Daneiel and Tilahun (2013) meazaMelese (2014) conduct a study to investigate the impact of firm level characteristics on performance of insurance companies in Ethiopia and its result show statistically significant and positively relation of tangibility with return on total asset are some of them.

H1: There is a positive relationship between size and profitability of insurance companies in Ethiopia.

H2: There exists a positive relationship between any increase in volume of capital and profitability of insurance companies in Ethiopia.

H3: There is a negative relationship between leverage and profitability for Ethiopian insurance companies.

H4: There is a positive relationship between growth and profitability of Insurance companies in Ethiopia.

H5.Economic growth has positive and significant impact on profitability of insurance companies in Ethiopia.

H6. Inflation has negative and significant impact on profitability of insurance companies in Ethiopia.

H7: Tangibility of assets of insurance companies and their profitability is negatively related.

H8: Liquidity ratio and profitability of insurance companies are negatively related.

1.6 Significance and expected outcome of the study

Government interested in knowing which companies operate successfully or failed to take the necessary measures to avoid crises of the bankruptcy in these companies. 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. Investors interested in such studies in order to protect their investment, and directing it to the best investment. Customers interested unknowing the ability of insurance companies to pay their obligations based on the indicators of success of the companies. Accordingly, government, management, investor and customer benefit from the result that emerged from this study.

Thus research also has a significant role to better understand what determines the financial institution's such as insurance companies profitability in Ethiopia. Moreover, the research is also expected to potentially serve as a stepping stone for further research in the area.

1.7 **Scope and limitation of the study**

Even though there are other formal, semiformal and informal financial institutions, the study focused only on the determinants of profitability of the following insurance companies in Ethiopia.such as Nile Insurance companies SC Oromia Insurance Company S.C, Lion insurance company S.C, NIB Insurance Company, Global Insurance company S.C Lucy Insurance Share Company, Buna Insurance Company, Tsehay Insurance S.C and Abay Insurance Company for the period of six year(2011-2016)financial data for determinant of insurance company in

Ethiopia. To find out, which determinant of the company significantly affect their profitability scope of the study confined merely on the quantitative measure of determinates of insurance companies profitability in Ethiopia without any overall performance measurement tool. The period of 2011 –2016 was selected because, in Ethiopia, large numbers of private insurance established following 1994 financial liberalization and the period has significant structural change in profitability in Ethiopian insurance industry. In addition, six years is assumed to be relevant because five years and above is the recommended length of data to use in most finance literatures (Abate Gashaw (2012). This is the reason to start the investigation of this research from 2011 until 2016 year. The Insurance companies operating for less than six years included in this study, however they do not have full data for the study period due to recent establishment. but the researcher Used unbalanced panel data to get new information from them which is not studied previously. The secondary data collection from income statement, balance sheet and revenue account was limited to only general insurance business, because income statement of life assurance business is not prepared at the end of each year. It may be prepared one time in three years or five years due to difficulty to prepare income statement of life assurance business and it needs an actuary which is high cost and also not all insurance company in Ethiopia gives life assurance services.

1.8 Organization of the paper

The reminder of this paper is organized as follows: chapter two deals with review of related literatures. Chapter three presents the research design, methodology and hypotheses development. Chapter four presents the analysis, findings and results and chapter five presents the conclusions and implications of the results.

CHAPTER TWO

LITERATURE REVIEW

The financial system comprises of financial institutions, financial instruments and financial markets that provide an effective payment, credit system and risk transfer and thereby facilitate channelizing of funds from savers to the investors of the economy. According to Frederic S. Mishkin& Stanley G. Eakins (2009), financial markets and institutions not only affect your everyday life but also involve huge flows of funds – trillions of dollars-throughout our economy, which in turn affect business profits, the production of goods and services, and even the economic well-being of countries other than the United States. Indeed, a well-functioning financial markets and institutions are one of the most important key factors in producing high economic growth, and poorly performing financial markets and institutions are one of the reasons that many countries in the world remain desperately poor. Every firm is most concerned with its profitability. One of the most frequently used tools of financial ratio analysis is profitability ratios which are used to determine the company's bottom line. Profitability measures are important to company managers and owners alike. If a small business has outside investors who have put their own money into the company, the primary owner certainly has to show profitability to those equity investors. There has been a growing number of studies recently that test for measures and determinants of firm profitability. Financial industry's profitability has attracted scholarly attention in recent studies due to its importance in performance measurement.

2.1 Theoretical review

In this section concept of insurance companies, definition and measurement of profitability and profitability related theories are presented.

2.1.1 Concept of insurance company and their financial performance

Renbao Chen et.al (2004) stated in their investigation that "higher profits provide both the means (greater availability of finance from retained profits or from the capital market) and the incentive (a high rate of return) for new investment". Therefore, we can understand from the above explanation that insurance companies have double responsibility: in one way they are required to be profitable so as to have high rate of return for new investment. On the other hand, insurance

companies need to be profitable in order to be solvent enough so as to make other industries in the economy as they were before even after risk occurred

Insurance serves a number of valuable economic functions that are similar and largely distinct from other types of financial intermediaries. According to Malik (2011) insurance plays a crucial role in development commercial and infrastructural businesses. From the latter perspective, it promotes financial and social stability; mobilizes and channels savings; supports trade, commerce and entrepreneurial activity and improves the quality of the lives of individuals and the overall wellbeing in a country. Michae lKoller (as cited in Meaza Melese 2014) suggests that insurance companies are playing the role of transferring risk and channeling funds from one unit to the other (financial intermediation). This implies that insurance companies are helping the economy of a country one way by transferring and sharing of risk which can create confidence over the occurrences of uncertain event and in another way insurance companies like other financial institutions plays the role of financial intermediation so as to channel financial resources from one to the other.

According to a study conducted by Ahmed et al (2011) on the determinants of performance, it indicated that size, risk and leverage are important determinants of performance of life insurance companies of Pakistan. According to their study Return on Asset (ROA) has statistically insignificant relationship with growth, profitability, age and liquidity. According to Wright (1992), due to the unique accounting system used by life insurance companies, profitability of the industry has always been difficult to measure as compared with other financial institutions or corporations. For insurers, profitability is affected by a host of factors including actual mortality experience, investment earning, capital gains or losses, the scale of policyholder dividends, and federal and state taxes. Kasturi (2006) argued that the performance of insurance company 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 can be classified as profit performance measures and investment performance measures.

2.1.2 Profitability

Profit is what is left over from income earned after you have deducted all costs and expenses related to earning the income and it is one of the main reasons for the continued existence of every business organization and also it is expected so as to meet the required return by owners and other outsiders. Profitability means ability to make profit from all the business activities of an organization, company, firm, or an enterprise.

According to Hamdan Ahmed Ali Al-Shami (2008) there are different ways to measure profitability such as: ROA, return on equity (ROE) and return on invested capital (ROIC). ROA is an indicator of how profitable a company is relative to its total assets. It gives us an idea as to how efficient management is in using its assets to generate earnings whereas ROE measures a company's profitability which reveals how much profit a company generates with the money shareholders have invested. ROIC is a measure used to asses 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. Comparing a company's ROIC with its weighted average cost of capital (WACC) reveals whether invested capital is used efficiently or not. In contrast, William H. Greene and Dam Segal (2004) 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, return on equity. These measures could be classified as profit performance measures and investment performance measuresTherefore, being profitable means that insurance companies are earning more revenues than being disbursed as expenses. As explained above just to analyze the drivers of profitability, it is useful to decompose either the return on asset ROA or ROE into their main components. 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. The first division of the decomposition shows that an insurer's ROE is determined by earnings after taxes realized for each unit of net premiums (or profit margin). However, most researchers in the field of insurance and their profitability stated that the key indicator of a firm‟s profitability is ROA defined as the before tax profits divided by total assets. Philip Hardwick and Mike Adams (1999), Hafiz Malik (2011) are among others, who have suggested that although

there are different ways to measure profitability it is better to use ROA. Amount of capital funds used to finance and secure the risk exposure of each premium unit (solvency). That is why most researchers use ROA as a measure of profitability in financial institutions. The term profit can take either its economic meaning or accounting concept which shows the excess of income over expenditure viewed during a specified period of time. On one hand, profit is one of the main reasons for the continued existence of every business organization. On the other hand, profit is expected so as to meet the required return by owners and other outsiders. John J. Hampton (2009) clarified profitability ratio as a class of financial metrics that are used to assess a business's ability to generate earnings as compared to its expenses and other relevant costs incurred during a specific period of time. Accordingly, the term 'profitability' is a relative measure where profit is expressed as a ratio, generally as a percentage. Profitability depicts the relationship of the absolute amount of profit with various other factors. Similarly, Michael Koller (2011) argued that profitability is the most important and reliable indicator as it gives a broad indicator of the ability of an insurance company to raise its income level. In practice, executives define profits as the difference between total earnings from all earning assets and total expenditure on managing entire asset-liabilities portfolio Kaur and Kapoor, (2007). The variation of profit among insurance companies over the years in a given country would result to suggest that internal factors or firm specific factors play a crucial role in influencing their profitability. It is therefore imperative to identify what are these factors as it can help insurance companies to take action on what will increase their profitability and investors to the variation of profit among insurance companies over the years in a given country would result to suggest that internal factors or firm specific factors play a crucial role in influencing their profitability. It is therefore imperative to identify what are these factors as it can help insurance companies to take action on what will increase their profitability and investors to forecast the profitability of insurance companies in Ethiopia. to do so, it is better to see what factors were considered in previous times by different individuals. The following points are some of the work of others among many others.

2.1.3Profitability related theories

There is no universal theory on the determinants of profitability. There are several useful conditional theories that attempt to approach the determination of profitability, each from different aspect. This section discussed those theories

2.1.3.1 Traditional theory

This theory suggests that minimizing the cost of capital when the optimal level of debt capital is Employed maximizes the value of the firm (Brealey and Myer 2013). It's based on the argument that at low levels of debt, increased leverage doesn't increase the cost of debt hence; the replacement of an expensive source of capital (equity) with a cheaper source (debt) translates to an increase in the value of the firm. This creates borrowing incentives to firms. The main reasons behind this are: first, investors who hold debt are informed of the increased risk at moderate' debt levels and will continue demanding the same return on debt. They argue that it's only at 'excessive' debt levels that they demand a higher return. The Second reason is that debt funds are cheaper than equity funds carries it implies that the cost of debt plus the cost of equity together on weighted basis will be less than the cost of equity, which existed on equity before debt financing; that's the weighted average costs of capital will decrease with the use of debt The validity of the traditional view is questioned on the ground that the market value of the firm depends upon its net operating income and risk attached to it. The form of financing doesn't change net operating income nor the risk attached to it but simply the way in which the income is distributed between equity holders and debt holders (Kaguri 2013).Modigliani and Miller criticize the traditional view on the ground that the assumption that the cost of equity remains unaffected leverage up to some reasonable limit does not provide sufficient justification for such an assumption. They do not really add very much to the riskiness of the share (Kaguri 2013).

2.1.3.2 Resource based theory

This theory addresses performance differences between firms using asymmetries in knowledge (Chen 2013). At the corporate strategy level, theoretical interest in economies of scope and transaction costs focus on the role of corporate resources in determining the industrial and geographical boundaries of the firms' activities. At the business strategy level, explorations of the relationships between resources, competition and profitability include the analysis of competitive imitation, the appropriate ability of returns to innovations, and the role of imperfect information in creating profitability differences between competing firms. A firm's ability to

earn a rate of profit in excess of its cost of capital depends upon the attractiveness of the industry in which it is located and its establishment of competitive advantage over rivals. Industrial organization economics emphasizes industry attractiveness as the primary basis for superior profitability, the implication being that strategic management is concerned primarily with seeking favorable industry environments, locating attractive segments and strategic groups within industries and moderating competitive pressures by influencing 16 industry structure and competitors behavior. Thus, a resource based theory of the firm entails a knowledge based perspective.

2.1.3.3Pecking order theory

Pecking order refers to a hierarchy of financing beginning with retained earnings followed by debt financing and finally external equity financing. The theory basically suggests that companies with high profitability may use less debt than other companies because they have less need to raise funds externally and because debt is the 'cheapest' and most 'attractive' external option when compared to other methods of capital raising (Kaguri 2013). Donaldson followed by Myers suggests that management follows a preference ordering when it comes to financing.

First, internal financing of investment opportunities is preferred because it avoids the outside scrutiny of suppliers of capital and also there no floatation costs associated with the use of retained earnings. Secondly, straight debt is preferred. Not only does debt result in less intrusion in management by suppliers of capital, but floatation costs are less than with other types of external financing. Also asymmetric information and financial signaling considerations come into play. The third in order of preference is preferred stock, which carries some features of debt. This is followed by various hybrid securities such as convertible bonds. Finally the least desirable security to issues straight equity. The investors are the most intrusive, floatation costs are highest and there's likelihood to be an adverse signaling effect (Saeed, Lodhi, Rauf, Rana, Mahmood & Ahmed, 2013).

2.1.3.4Agency theory

Agency theory states that management and owners have different interests (Jensen and Meckling 2013). According to this theory agency costs arise from conflicts of interest between

shareholders and managers of the company. Agency costs are defined as the sum of monitoring costs incurred by the principal, bonding costs incurred by the agent, and residual loss.

Lower agency costs are associated with better performances and thus higher firm values, all other things being equal. Companies that separate the functions of management and ownership will be susceptible to agency conflicts (Lambert 2013).They show that regardless of who makes the monitoring expenditures, the cost is borne by stake holders. Debt holders, anticipating monitoring costs, charge higher interest. The higher the probable monitoring costs, the higher the interest rate and the lower the value of the firm to its shareholders all other things being the same. The variation of profit among insurance companies over the years in a given country would result to suggest that internal factors or firm specific factors play a crucial role in influencing their profitability and also it is generally agreed the influence of macroeconomic factor on insurance companies' profitability. It is therefore very important to identify what are these factors as it can facilitate management, government, investor and customer. To do so, it is better to see what factors were considered in previous times by different individuals. The following points are some of the work of others among others.

2.2 Determinates of profitability in insurance companies: an empirical review

Profitability in insurance companies could be affected by a number of determining factors. These factors, as explained above could be further classified as internal, industry, and macroeconomic factors. However, as will be discussed in the coming consecutive sections of the review, in most literatures, profitability with regard to insurance companies usually expressed as a function of internal determinants. Rather, most researches concerning the determinants of profitability in insurance companies are divided into two, such as determinants of profitability in property/liability or general insurance companies and in life/health insurance companies. Accordingly, Hifza Malik (2011) in Pakistan, SylwesterKozak (2011) in Poland, Hamadan Ahamed Ali Al-Shami (2008) in the United Arab Emirates (UAE), Swiss Re (2008) in Egypt and Jay Angoff Roger Brown (2007) in United Kingdom conducted their research concerning the determinants of profitability in general insurance companies were as Naveed Ahmed, Zulfqar Ahmed, Ahmad Usman (2011), in Pakistan, Adams M., Hardwick P. and Zou H., (2008) in Canada, Desheng Wu Z., Sandra V. &Lianga (2007), Wright, K. M. (1992), and others conducted their study on determinants of life and health insurance companies. Hence, most of the

researchers focused on internal factors affecting profitability and most of the factors considered are age of company, size of company, leverage ratio, growth rate, volume of capital, the tangibility of assets and liquidity ratio. Now let us see empirical evidences for each variable independently.

2.2.1 Internal Determinants

The internal determinants of insurance companies‟ profitability are those management controllable factors which account for the inter-firm differences in profitability, given the external environment. Accordingly Hafiz Malik (2011) defines internal determinants of profitability as factors that could be influenced by management decisions. As stated by Hamadin Ahamed Ali-Al-Alshami (2011) internal determinants can be broadly classified into two sub-categories, namely financial statement variables and non-financial statements variables. The financial statement variables are determining factors which are directly driven from items in a balance sheet and profit & loss accounts of the insurance companies. On the other hand, the non-financial statement variables are those factors which are not directly displayed in the financial statement accounts.

According to Yuqi Li (2007) financial institutions‟ non-financial statements, variables are classified as management quality, efficiency and productivity, age and number of branches. Most researches concerning insurance companies are conducted with respect to only financial statement variables. Hence, HamadinAhamed Ali Al-Shami (2008) in his dissertation regarding UAE used financial statement variables such as size, leverage, liquidity, tangibility of assets, volume of capital, and premium growth. Similarly, Hafiz Malik (2011) in Pakistan used such variables mentioned above and age as a non-financial statement variable. SylwesterKozak (2011) in Poland, Hamadan Ahamed Ali Al-Shami (2008) in United Arab emirates (UAE), Swiss Re (2008) in Egypt and Jay Angoff Roger Brown (2007) in United kingdom, Naveed Ahmed, Zulfqar Ahmed, Ahmad Usman (2011), in Pakistan, Adams M., V. &Lianga (2007), Wright, K.M. (1992), Flaminiet..all (2009) in Sub-Saharan countries are among others used financial statement variables as independent variables. This following are the variables used in researches concerning profitability of insurance companies and related financial institutions and the details of internal financial statement and one non-financial statement variable are discussed in DETAIL in this section.

2.2.1.1 Firm size and Age

The company size can be expressed by many variables such as number of employees, number of branches, or total assets. Most researchers of the field use total assets to express the size of the company (Omondi&Muturi, 2013); (Burca&Batrinca, 2014); (Al-Shami, 2013); (Swiss Re, 2008); (Çekrezi, 2015); (Malik, 2011). The size of the company is considered as an influential factor because it shows that larger companies are better positioned in the market, operate with economies of scale, and thus enjoy higher benefits (Flamini, McDonald, & Schumacher, 2015). Most studies conclude that there is a statistically significant positive correlation between the size of the company and its profitability, expressed by ROA (Swiss Re, 2008); (Malik, 2011); (Al-Shami, 2013). However, there are discussions about the optimal size of the company, which positively affects profitability. A growth in assets that extends an optimal ratio may have negative effects, due to increased bureaucracy (Yuqi, 2007).

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*et al.*, (2005). Similarly, Yuqi li (2007) indicate that older banks expected to be more profitable due to their longer tradition and the fact that they could build up a good reputation. Obviously, the above empirical studies those include age as one of their explanatory determinant indicates a positive relationship between age and profitability. Several studies have been conducted to examine the effect of size and age on firm profitability. However, the empirical evidences of the linkage between profitability and firm size are somewhat inconsistent. For example, evidence collected by Philip Hardwick and Mike Adams (1999) from UK companies suggests that there is an inverse relation between profitability and firm size. Jay Angoff Roger Brown (2007) found that there is a positive and significant relationship between the age of a company and its profitability as measured by ROA. Similarly, the research conducted on the relationship among firm characteristics including size, age, location, industry group, profitability and growth by Swiss Re (2008) indicated that larger firms are found to grow faster than smaller and younger firms found to grow faster than older firms. In contrast, Hamadan Ahamed Ali Al-Shami (2008) found nosignificant statistical relation between age and profitability of insurance companies in UAE but there exist a positive and statistical significant

relation between firm size and profitability. Similarly, Hafiz Malik (2011) in his Pakistan study found that there is significantly positive association between age & size of the company and profitability. The older the firm the more may be the profitability of the firm. This could be justified as experience and efficiency in the operation process may decrease cost of production and he found even that age is the strongest determinant of profitability.

In most literatures the effect of size on banks profitability are represented by total asset. Flamini et.al (2009) indicated that **s**ize is used to capture the fact that larger firms are better placed than smaller firms in harnessing economies of scale in transactions and enjoy a higher level of profits. One of the most important questions underlying bank policy is which size optimizes bank profitability. According to Athanasoglou*et al.*, (2005) the effect of a growing size of a bank on profitability has been proved to be positive to a certain extent. Consequently, a positive relationship is expected between size and profitability by many insurance area researchers. However, for firms that become extremely large, the effect of size could be negative due to bureaucratic and other reasons Yuqi Li (2007). Hence, the size-profitability relationship may be expected to be non-linear. Therefore most studies use the real assets in logarithm and their square in order to capture the possible non-linear relationship. Athanasoglou*et al.* (2005 and Yuqi Li found positive relationship between size and profitability

2.2.1.2 Liquidity

Liquidity from the context of insurance companies is the probability of an insurer to pay liabilities which include operating expenses and payments for losses/benefits under insurance policies, when due then shows us that more current assets are held and idle if the ratio becomes more which could be invested in profitable investments. For an insurer, cash flow (mainly premium and investment income) and liquidation of assets are the main sources of liquidity Renbao Chen and Kie Ann Wong (2004). Empirical evidences with regard to liquidity revealed almost inconsistent results. For instance, Naveed Ahmed et.al. (2011) in his investigation in Pakistan found that ROA has statistically insignificant relationship with liquidity. Similarly, several other studies also have been conducted to measure the performance of the insurance companies. In contrast, Chen and Wong (2004) examined that, liquidity is the important determinants of financial health of insurance companies with a negative relationship. Similarly, Hakim and Neaime (2005) observed that liquidity, current capital and investment are the

important determinants of banks profitability. ValentinaFlamini, Calvin McDonald, and Liliana Schumacher (2009) in their investigation regarding Sub-Saharan countries found significant and negative relationship between bank profitability and liquidity.

2.2.1.3 Leverage

The trade of theory suggests a positive relationship between profitability and leverage ratio and justified by taxes, agency costs and bankruptcy costs push more profitable firms towards higher leverage. Hence more profitable firms should prefer debt financing to get benefit from tax shield. In contrast to this pecking order theory of capital structure is designed to minimize the inefficiencies in the firms' investment decisions. Due to asymmetric information cost, firms prefer internal finance to external finance and, when outside financing is necessary, firms prefer debt to equity because of the lower information costs. The pecking order theory states that there is no optimal capital structure since debt ratio occurs as a result of cumulative external financing requirements. Insurance leverage could be defined as reserves to surplus or debt to equity. 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.

For instance Renbao Chen and Rie Ann Wong (2004) stated that leverage beyond the optimum level could result in higher risk and low value of the firm. Empirical evidences with regard to leverage found to be statistically significant relationship but negative. For instance Renbao Chen and Kie Ann Wong (2004), in Canada, Hamadan Ahamed Ali Al-Shami (2008) in UAE, Hifza Malik (2011) in Pakistan, SylwesterKozak (2011) in UK Swiss Re (2008) in Egypt and Flaminiet..al (2009) in Sub-Saharan countries found that negative but statistically significant relationship between leverage and profitability of firms. 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.

2.2.1.4 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. These studies have shown that there is a statistically significant positive relation between the volume of capital insurance companies with their profitability, expressed by ROA (Al-Shami, 2013); (Malik, 2011).in some cases it is measured by the ratio of equity capital to total asset. Insurance companiesequity capital can be seen in two ways. Narrowly, as stated by Uhomoibhi T. Aburime (2008), 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. The later definition includes reserves, and is also termed as total shareholders‟ funds. No matter the definition adopted, volume of capital is widely used as one of the determinants of insurance companies‟ profitability since it indicates the financial strength of the firm. As it has been expected positive relationship between profitability and capital has been demonstrated byAthanasoglou*et al.* (2005).Studies conducted in different countries found that for non-life insurance companies, size of capital isone of the important factors that affect ROA,Hifza Malik (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. Similarly HamadanAhamed Ali Al-Shami (2008), found in his investigation that there exists a positive and significant relationship between volume of capital and profitability of the UAE insurance companies.

2.2.1.5 Tangibility of assets

Tangibility of assets in insurance companies in most studies is measured by the ratio of fixed assets to total assets. 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, size, liquidity, volume of capital, leverage, firm growth, economic growth, Inflation and tangibility are selected as explanatory variables while ROA is taken as dependent variable. The results of panel regression analysis revealed that leverage, size

and Economic growth are most important determinant of insurance company. Some studies have been conducted to examine the effects of Tangibility of asset on insurance companies profitability, the result are conflicting. The general objective of the Boadiandet al (2013) study was to find out the determinants of the profitability of insurance firms in Ghana by using Secondary data on financial reports collected from sixteen insurance firms in Ghana for the period 2005 to 2010. This study discovered negative relationship between tangibility and profitability. On the other hand, Daneiel and Tilahun (2013) MeazaMelese (2014) conducted a study to investigate the impact of firm level characteristics on performance of insurance companies in Ethiopia and its result show statistically significant and positively relation of tangibility with return on total asset. In the study of Abate Gashaw (2012) tangibility of assets is not significantly related with profitability.

2.2.1.6 The growth rate of the company.

The growth rate for companies is generally expressed through the change in percentage of total assets of the company from year to year. In particular, for insurance companies growth rate expresses the percentage change in the total amounts of signed premiums from insurance companies. Studies related to these field show that there is a statistically significant positive correlation between the growth rate of the company and its profitability (Malik, 2011); (Yuqi, 2007); (Curak, Pepur, &Poposki, 2011). It is also argued about the fact that a company always has to increase its resources to have a better performance, and consequently to be more profitable. However, the relationship between the growth rate of the company and its profitability may not be positive, as it is expected to be, because in some cases, a greater growth rate could expose an insurance company to a higher risk and that means that the company needs to increase its technical reserves (Burca&Batrinca, 2014).

2.2.1.7 Liabilities

Total liabilities are the sum of borrowed funds, used to finance the operation of a company. Researchers use ratio of liabilities to equity, to express this factor in analyzing the impact of liabilities on the profitability of insurance companies. Taking into account the effect of financial leverage, i.e. the use of debt to increase benefits, we must assume a positive relationship

betweenliabilities and profitability.Companies driven to the use of liabilities due to tax incentives. Theories of optimal capital structures indicate that profitability increases as the level of debts increase to the optimal ratio and then falls if the debts continue to grow beyond this point. Increasing debts beyond a certain point, increase company risks and depreciate company value (Chen & Wong, 2004). However, studies related to this topic (Omondi&Muturi, 2013); (Burca&Batrinca, 2014); (Chen & Wong, 2004); (Malik, 2011) show that there is a statistically significant negative relation between liabilities and profitability of insurance companies. Titman and Wessels (1988) concluded that there was a statistically significant negative relation between the profitability of insurance companies in the US and the level of liabilities. We explained this conclusion by the fact that the theories of capital structure argue that insurance companies with high rates of liabilities have lower ROA, but higher ROE (Harrington, 2005

2.2.1.8 Fixed assets

Fixed assets are represented by the ratio between fixed assets to total assets. Results of various studies on the impact of fixed assets in the profitability of insurance companies have been contradictory. Hifza Malik (2011) in his study of the factors affecting the profitability of insurance companies in Pakistan in 2011 shows that there is a statistically significant relationship between fixed assets and profitability of companies. He argues that due to the fact that the greater the weight of fixed assets in total assets, the greater is the insurance company, profitability will be even greater. However, a study conducted in the UK by Yuqi Li (2007) shows that there is no statistically significant relationship between fixed assets and profitability of insurance companies.

2.2.2 The effects of macroeconomics variables on profitability: -Economic growth and Inflation

Turning to the external determinants, several factors have been suggested as impacting on profitability and these factors include macroeconomic environment such as economic growth and inflation. The effect of economic growth and inflation on the profitability of insurance company is not adequately investigated, Olaosebikan (2012); Poposki and et al (2012); Hussain (2012) and Chen-Ying Lee (2014) are among other investigate the effects of economic growth and inflation on insurance company profitability. There are more empirical evidences on the effects of

economic growth and inflation on banking sector profitability compared to insurance company profitability. Poposki and et al (2012) provides an overview of performances of insurance sector in the Republic of Macedonia, including SWOT analysis, as well as analysis of determinants of the insurance companies' profitability for the period from 2002 to 2011. Findings of the profitability analysis confirm that in addition to expense ratio and claims ratio, economic growth and inflation as important factors that determine Macedonian insurance companies' profitability. Hussain (2012) in his study uses firm level data of 39 companies of insurance industry of Pakistan for the period 2006-11. Findings of this study suggest that based on overall regression results, macroeconomic environment and inflation significant impact on profitability of insurance companies in Pakistan.

The study by Vong and Chan (2005) examines the impact of bank characteristics as well as macroeconomic and financial structure variables on the performance of the Macao banking industry. Their results show that rate of inflation exhibits a significant relationship with banks' performance. Kozak (2011) conclude that increases of the GDP growth positively impact profitability of non-life insurance companies during the integration period. HabtamuNegussie (2012) study empirical results show that levels of GDP have a strong influence on the profitability of private commercial banks in Ethiopia. On the study of BirhanuTsehay (2012) also GDP has positive and significant effect on both asset return and interest margin of the bank. Chen-Ying Lee (2014) investigates the relationship between firm specific factors and macroeconomics on profitability in Taiwanese property-liability insurance industry using the panel data over the1999 through 2009 time period. By using operating ratio and return on assets (ROA) for the two kinds of profitability indicators to measure insurers' profitability. With related to economic growth rate the results show that it has significant influence on profitability in operating ratio model but insignificant influence on profitability in ROA model.

Sufian and Chong (2008) study suggests that inflation has a negative impact on bank profitability, while the impacts of economic growth have not significantly explained the variations in the profitability of the Philippines banks. Naceur (2003) paper investigates the impact of bank's characteristics, financial structure and macroeconomic indicators on bank's net interest margins and profitability in the Tunisian banking industry for the 1980-2000 period. The paper finds that the macro-economic indicators such inflation and growth rates have no impact on bank's interest margins and profitability. AmdemikaelAbera (2012) in his study also the

relationship inflation and profitability is found to be statistically insignificant. As for the impact of the macroeconomic indicators, Ayadi and Boujelbene (2012) also conclude that the macroeconomic variables, GDP growth and inflation, do not have a significant effect on bank profitability.

2. 3 Summary of the literature review

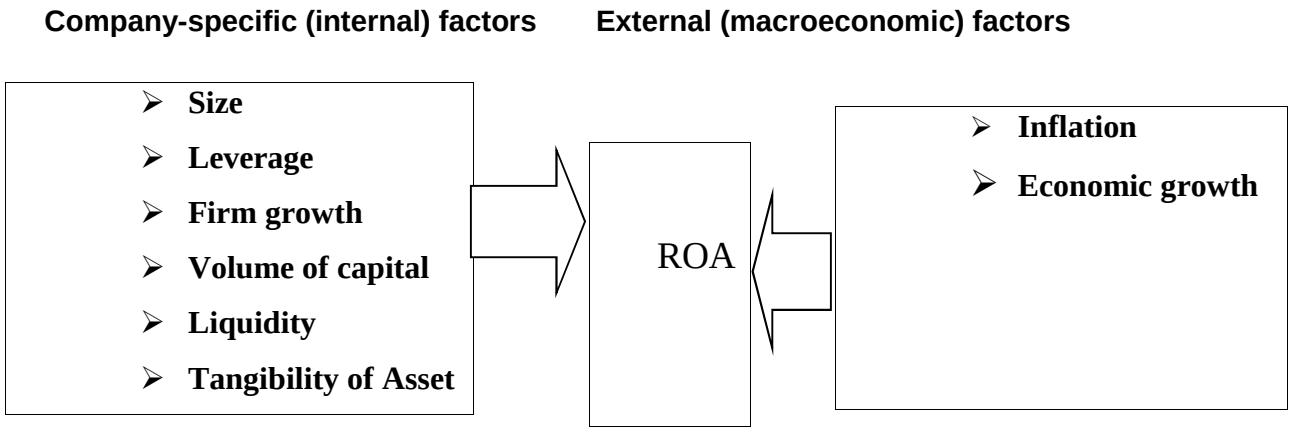
Most literatures focus on factors affecting profitability of banks rather than insurance companies. Therefore, there are fewer literatures concerning insurance companies as compared to banks. Empirical evidences regarding determinants of insurance companies focused most of them on internal factors such as age, size, leverage, firm growth, volume of capital, tangibility of assets liquidity and macroeconomic factor such as Economic growth, inflation and. As per knowledge of the researcher there are few researches which considered the effects of macroeconomic factors on the profitability of insurance companies such as Kozak (2011); Hussain 2012; Poposki and et al (2012) and Chen-Ying Lee (2014). And also in Ethiopia it has received little attention. Accordingly, this research includes both firm specific and macroeconomic factors of insurance companies' profitability and adds literature on determinants' of profitability of insurance companies in Ethiopia For the reason that its importance in performance measurement financial industry's profitability has attracted scholarly attention in recent studies and there has been a growing number of studies recently that test for measures and determinants of insurance companies profitability. Liao and Chen (2006); Boadi and et al (2011); Malik (2011); Kozak (2011); Charumathi (2012); Al-Soub and et al (2012); Abate Gashaw (2012); Olaosebikan (2012); Hussain (2012); Poposki and et al (2012); BoadiSumaira and Amjad (2013); Daneiel and Tilahun (2013); and Chen-Ying Lee (2014) are some of researchers who conduct about the determinants of insurance companies profitability. The results found by the researchers mentioned above in the empirical revealed inconsistencies For example, evidence collected by Philip Hardwick and Mike Adams (1999) from UK companies suggests that there is an inverse relation between profitability and firm size. Jay Angoff Roger Brown (2007) found that there is a positive and significant relationship according to the country in which the research is conducted regarding some variables, Naveed Ahmed et.al. (2011) in his investigation in Pakistan found that ROA has statistically insignificant relationship with liquidity In contrast, Chen and Wong (2004) examined that, liquidity is the important determinants of financial health of insurance companies

with a negative relationship. Boadiandet al (2013negative relationship between tangibility and profitability. On the other hand, Daneiel and Tilahun (2013) MeazaMelese (2014) conduct a study to investigate the impact of firm level characteristics on performance of insurance companies in Ethiopia and its result show statistically significant and positively relation of tangibility with return on total asset. In the study of Abate Gashaw (2012) tangibility of assets is not significantly related with profitability.

2.4. Conceptual Framework

Different empirical evidences suggested that profitability of financial institutions affected by internal and external factors. This study used both internal and external determinantsof insurance's profitability includes (size, leverage, growth, volume of capital, tangibility of assets liquidity ratio economic growth and inflation) the study was identified how these variables determine the profitability of insurance company in Ethiopia.

Figure 2.1. Conceptual framework model: Relation between insurance companies Profitability and its determinants



Source: Adopted from: (Suheyli 2015)

The conceptual framework would develop to explain the determinants of profitability. By summarizing previous studies, firm size, leverage, liquidity, tangibility of assets, economic growth and inflation are select to be including as independent variables that expected to influence insurance companies' profitability as measured by ROA. Accordingly, the following hypotheses will tests by the study.

H1. Size has a positive and significant effect on profitability of insurance companies in Ethiopia.

H2. Leverage has a negative and significant effect on profitability of Ethiopian insurance companies.

H3. Tangibility of assets of insurance companies has negative and significant impact on their Profitability

H4. Liquidity ratio has a negative and significant impact on profitability of insurance companies inEthiopia.

H5. There is a positive and significant impact of firm growth on profitability of Insurance Companies in Ethiopia

H6. Economic growth has positive and significant impact on profitability of insurance companies in Ethiopia.

H7. Inflation has negative and significant impact on profitability of insurance companies in Ethiopia.

H8: There exists a positive relationship between any increase in volume of capital and profitability of insurance companies in Ethiopia**.**

The model of the study and expected relation between profitability of insurance companies and Determinants are shown in Table 3.1.

Table 2.1 Expected relation between profitability in insurance companies and determinant

Determinants	**Expect relation**
Size	**+**
Leverage	**-**
Firm growth	**+**
Volume of capital	**+**
Economic growth	**+**
Liquidity	**-**
Inflation	**-**
Tangibility of Asset	**-**

Source Self Develop (2017)

CHAPTER THREE

3. RESEARCH DESIGN AND METHODOLOGY

This chapter provides the detail steps and procedures use to conduct the analysis of determinants of insurance companies' profitability in Ethiopia. It includes the approach adopted to examine the effect of main determinants on profitability, the type of data would use and the techniques employee to collect the data, the sampling mechanism including sample size, the methods will utilize to manage and analyze the data, and the process of constructing empirical model with identification and measurement of its components, measurement and selection of variables, expected relations between the dependent and independent variables.

3.1 Research approach

Basically there are three common research approach of the problem are adopted in the study. Those are quantitative, qualitative.and mixed Creswell (2009).Quantitative research is a means for testing objective theories by examining the relationship among variables. On the other hand, 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 Finally, mixed methods approach is an approach in which the researchers emphasize the research problem and use all approaches available to understand the problem (Creswell 2009) as settled by (Suhayli 2015). In order to achieve the objective of the study the researcher was used quantitative research approach.

3.2 Data and Data Sources

The study is explorative in nature and therefore the information presented is based on secondary data collected from annual reports of individual insurance companies, NBE and financial publication of the Ministry of Finance and Economic Development (MOFED). The information on selected Insurance firms in Ethiopia was collected for the period 2011 to 2016for six year. Six year is assume tobe relevant because five years and above is the recommended of data to use in most financial literatures (Abate Gashaw 2012). This study shows the extent of relationship that exists between the dependent variable (profitability) and the explanatory variables (leverage, tangibility, size, liquidity, and firm growth, volume of capital, inflation andEconomic growth).

3.3 Sampling Mechanism

The total population of this study is 17 insurance firms in Ethiopia. This was to provide the researchers the opportunity to know the number of insurance firms in Ethiopia and the types of product they offer and also what determines their profitability. However, Punch (1998) stated that, one cannot study everyone; everywhere, and everything, so sampling decisions are required. Based On this the researcher used purposive sampling so as to include all insurance companies and serving with in the specified period of time from June 2011 to June 2016 and the size for sample is nine insurance companies selected depends on the availably of the data and the researcher need to included new insurance company which is include previously in the study that operating over the period of 6 years as show on table 3.1 below. This type of sampling can be very useful in situations when you need to reach a targeted sample quickly Ashley Crossman (2017).

Table 3.1 List of insurance companies established and serving from June 2011 to June 2016 as per the year of their establishment

No	Insurance company	Type	Date of Establishment
1	Nile Insurance company S.C	General	1995
2	Oromia Insurance Company S.C	General	2009
3	Lion insurance company S.C	General	2007
4	NIB Insurance Company	General	2002
5	Global Insurance company S.C	General	1997
6	Lucy Insurance Share Company	General	2012
7	Buna Insurance Company	General	2013
8	Abay Insurance Company	General	2012
9	TsehayInsurance S.C	General	2012

Source: - National bank of Ethiopia (2016)

3.4 Data Analysis

Data analysis section of this study was based on descriptive analysis and regression analysis. It means that the this section provides the descriptive analysis of the panel data and variables for the study in collaboration with some important test such as normality of data, discusses the correlation analysis between dependent and independent variables, deals the results of the linear

regression and data analysis that constitute the main findings of this study. The data collection would analyzed by using E-views 8.

3.4.1. Descriptive Analysis

The study examine determinant of profitability for nine selected insurance company over the year 2011 to 2016.The descriptive statistics of the dependant and independent (explanatory) variable for the sample insurance was present by mean, standard division, maximum, median and minimum value for the dependant and explanatory variable.

3.4.2. The Correlation Analysis

A correlation analysis used to examine the relationship (the nature, direction and significant) between the dependent variable and explanatory variables.

3.4.3. Regression Analysis

To show the relationship between profitability and independent variables such as Tangibility of Asset, Firm growth, size, leverage, liquidity, volume of capital, Economic growth and Inflation regression model has been used. This model used when dependant variable (profitability) and independent variable are correlated each other (Al-Shami 2008). 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 then digenetic issue by incrementing potentially endogenous variables, it also assumes that the individual firm effects are uncorrelated with the exogenous variables. On the other hand, the fixed effect\ 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. so that the fixed effect regression model is preferable for this study. The result of a regression analysis an equation that represents the best prediction of a dependent variable from several other independent variables. The following regression equation is estimated as follow:

$ROA_{i,t} = \alpha + \beta 1Size_{i,t} + \beta 2Lev_{i,t} + \beta 3ToA_{i,t} + \beta 4LQ_{i,} + \beta 5GR_{i,t} + \beta 6IR_{i,t} + \beta 7GDP_{i,t} + \varepsilon_{i,t}$

Where:

- **ROAi,t**: the profitability in insurance company i at time t (dependent variable) in this study Return on assets (the return on assets (ROA) defined as the insurance companies before tax is used to measure profitability.
- **Size**: Size of companies;
- **Lev**: Leverage;
- **TOA**: Tangibility of assets;
- **LQ**: Liquidity;
- **GR**: Firm Growth
- **IR**: Inflation rate
- **GDP**: Economic growth
- **β1… β9**: coefficient of independent variables
- **ε**is error term.
- **i** is insurance companies 1 to 9
-

3.5 Variable Selection and Measurement

According to Hamadan Ahamed Ali Al-Shami (2008), three important measures of firm's performance are: profitability, size and survivorship. Profitability indicates the firm's ability to achievement of the rate of return on a company's assets and investment funds. With regard to size, it is revealed in his work as "a firm's ability to expand its size could be a reflection of it success as earnings are reinvest and external funding could be easily found". Whereas survivorship indicates the ability to earn sustainable9 development concerning competitive advantages beyond initial opportunities like an economic upturn or the early growth stage of an industry.

This research is concerning only on profitability of insurance companies in Ethiopia as a financial performance and the internal factors and external factor that determine profitability. Hence, six and two characteristics will use as internal and external determinants of performance respectively. Referring to previous studies, the use of ratio in measuring leverage, liquidity, tangibility and profitability performance is common in the literature of finance and accounting practices. Hafiz Malik (2011) Hamadin Ali AL-Shami (2008) and Chen and Naveed Ahmed (2011) used ratio in measuring insurance companies financial performance. The greatest advantage for using ratio index in measuring performance is that it compensates disparities

created by size Yuqi Li (2007). In line with earlier studies that examined the determinants of insurance companies‟ profitability, accounting ratios are used as measurement of individual variables. In specific, the dependent variable, profitability of insurance companies, is measured by ROA. In order to select the determinants as explanatory variables in the model, previous studies have also been reviewed and literature suggests that the following factors exert strong impact on insurance companies‟ profitability as internal and external determinants; therefore, they are adopted in the constructed model. And following is the details of variables selected.

Profitability

There are many different ways to measure profitability, as shown in previous studies. In this study net income before tax to total assets (ROA) is used to measure profitability, because most of the studies regarding the subject used this ratio to determine the profitability of insurance companies.

Volume of capital

Previous studies used the book value of equity as a measure of volume of capital. Similarly book value of equity is taken as a measure of volume capital for this study. Total equity capital= book value of equity measured by the natural logarithm of book value of equity.

Tangibility

Tangibility is defined in respect to the model as the ratio of fixed assets to total assets.

Company size

Size is an additional determinates of profitability in company finance literature. Its substitute in general is natural log of sales or total assets (Al-Shami (2008).

Leverage

The amount of debt used to finance a company’s assets. A company with significantly more debt than equity is considered to be highly leveraged. This variable is measured by total debt to total equity value of the company.

Firm growth

Growth is simply the change in size of the company as measured by the percentage change in total assets.

Liquidity

Liquidity from the context of insurance companies is the probability of an insurer to pay liabilities which include operating expenses and payments for losses/benefits under insurance policies, when due and therefore, measured by total current assets to total current liabilities.

Economic growth: The yearly real Gross Domestic Product (GDP) growth rate was used.

Inflation rates (IR): The annual inflation rate was used.

Tangibility of asset = Fixed assets divided by total assets

ANALYSIS AND FINDINGS

4. Data analyses and Interpretation

Chapter presents the empirical test results based on the linear regression to test the outcomes of the analysis for nine insurance companies in Ethiopia during the period of 2011 to 2016. The investigation is with regard to the relationship between profitability as dependent variable and Volume of capital of insurance companies, size of insurance companies, leverage ratio, growth rate, tangibility of company assets, Economic Growth, Inflation rate and liquidity ratio as independent variables. Therefore, this chapter provides the results from the analysis of data and its interpretation.

4.1 Descriptive Analysis

As Show in table 4.1 presents a review of the descriptive statistics of the dependent and independent variables for nine insurance companies for a period of six years from 2011-2016 with a total of 48 observations (Unbalanced). Input information, including mean, maximum, and minimum and standard deviation value were reported.

Table 4.1 Descriptive statistics of variables

	ROA	SIZE	LEV	GR	VCA	GDP	LQ	IR	TOA
Mean	0.072660	18.97624	0.266292	0.363315	17.86545	0.100158	1.218979	0.129458	0.125030
Median	0.075384	19.00577	0.103204	0.300059	18.14741	0.100400	1.128905	0.125720	0.088224
Maximum	0.393986	20.52507	1.354773	1.000000	19.48840	0.112000	2.452507	0.228000	0.454034
Minimum	-0.173974	16.43856	0.000000	0.070192	15.89845	0.087000	0.699646	0.085000	0.027523
Std. Dev.	0.090863	0.969310	0.367765	0.244354	0.993745	0.007146	0.340041	0.045796	0.100796
Skewness	0.298331	-0.533701	1.660989	1.428421	-0.483736	-0.351835	1.761624	1.203431	1.514169
Kurtosis	5.683218	2.795650	4.633654	4.498504	2.211527	2.773164	6.418323	3.550572	4.593952
Jarque-Bera	15.11133	2.362211	27.40871	20.81412	3.115384	1.093214	48.19643	12.19223	23.42303
Probability	0.000523	0.306939	0.000001	0.000030	0.210622	0.578911	0.000000	0.002252	0.000008
Sum	3.487689	910.8595	12.78200	17.43913	857.5416	4.807600	58.51100	6.213960	6.001462
Sum Sq. Dev.	0.388037	44.15943	6.356804	2.806319	46.41389	0.002400	5.434507	0.098572	0.477515
Observations	48	48	48	48	48	48	48	48	48

Source: - E-views 8 output from financial statement of insurance companies

The mean ROA of the Insurance was 7.2 percent with the standard deviation of 9.1 percent. This Shows that most of the selected insurance have reached a profitability rate of 7.2 percent for the Period taken and the standard deviation shows that there is Moderate variance on the reported Profitability. Even if there were insurance company that reported a ROA which was as high As

39% percent, there were also Insurance company with low profitability reported at -1.7 percent Profitability for the sample period has ranged from -1.7 percent to 3.9 percent with a standard deviation of 9.1 percent

The mean value of size is 18.97. Therefore, with regard to size as shown in the table above, there exists significant variation across the sample insurance companies for the reason that the value of the standard deviation is 9.6 Hence the highly variated size among insurance companies may have significant impact on profitability of insurance companies that we are going to see in the regression result. The maximum and minimum values of size were 20.52 and 16.43 respectively.

Leverage is defined as total debts divided by total assets. The leverage in this study is defined as total debts divided by total equity. This study used leverage as one of the determinants variables of profitability of insurance firms in Ethiopia. From the descriptive statistics insurance firms in Ethiopia total debts as a proportion of their total equity were the maximum of 1.35%. This shows that insurance firm's total debts to their equity are at a minimum of 0% and at a maximum of 1.35%. This indicates that the variations of insurance firms in Ethiopia as debt to equity will not be increased above 1.35%.

Table 4.1 shows the average growth of Ethiopian insurance companies' were 36.33percent over studied period and the value of standard deviation of growth is 24.43 which shows that there were no important variations among the level of growth as measured by the change in total assets over the years across the Ethiopian insurance companies. The maximum growth was 100 percent and the minimum growth was 70.19 percent.

The average value for volume of capital Asset (VCA) has become 17.86545 with a standard deviation of 0.993745. This implies that the internal capacity of insurance company are strength than external sources of finance. Whether it is significant important determinant or not we would see in the regression result. Therefore, there exists very significance variation among the values of volume of capital Asset across the sample insurance company incorporated in this study.

Table 4.1 shows the average Gross Domestic Product (GDP) growth rate in Ethiopia over the year is 10.15 with standard deviation of 0.0071. It indicates that there was very low variation in economic growth. Within the studied year the maximum real GDP growth rate was 11.20 and the minimum real GDP growth rate was 8.7

The average inflation that occurred over the years is 12.94 percent with the standard deviation of

0.045. This indicates that there was no significant variation in inflation within the study period Cover. The maximum and minimum inflation over the year ware 22.80 and 8.5percent respectively.

Liquidity has been defined in the model as the ratio of current assets to current liabilities. According to the descriptive statistics table insurance firm's current assets pay their current liabilities 0.69 times and at most 2.45 times. However the variability of insurance firms with respect to their current assets to current liabilities will not be increased above 4.66 times. The dispersion of current assets to current liabilities is 1.76 times. Insurance firms are able to use their current assets to generate profit.

Tangibility is defined in respect to the model as the ratio of fixed assets to total assets. From the descriptive statistics above insurance firms fixed assets at least constitute 0.02% and at most 45.40%. However the variability of insurance firms with respect to their fixed assets to total assets is 45.38%. The dispersion of fixed assets to total assets is 12.50%. This means that insurance firms 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.

4.2 Correlation Analysis

One of the measures used to identify the degree of linear association between variables is Correlation. Dancey and Reidy's (2004)categorize value of the correlation coefficient and strength of correlation like 1 value of correlationcoefficient means perfect, 0.7-0.9 value of correlation coefficient means strong, 0.4-0.6 value ofcorrelation coefficient means moderate and 0.1-0.3 value of correlation coefficient means weakIn this study, the researcheremployed the Pearson product moment of correlation coefficient in order to find the associationof the independent variables with the profitability of selected Insurance company. Cooper and Schindler, Masher, and Hair and *et al.* (as cited in Habtamu 2012) suggested that the correlation coefficient can be 0.75 but a correlation coefficient above 0.8 between independent variables should be corrected for because it is a sign for multicolinearity problem. They also argued that correlation coefficient below 0.9 may not cause serious multicolinary

Table 4.2Correlation analysis

	ROA	SIZE	LEV	GR	VCA	GDP	LQ	IR	TOA
ROA	1.000000	0.457346	-0.11554	-0.39067	0.495005	-0.05302	-0.14557	-0.143052	0.041293
SIZE	0.457346	1.000000	-0.069693	-0.782244	0.935169	-0.060976	-0.315535	-0.074415	0.047897
LEV	-0.11554	-0.069693	1.000000	-0.056164	-0.227411	-0.059893	-0.299331	0.361491	-0.09686
GR	-0.39067	-0.782244	-0.056164	1.000000	-0.73759	-0.067113	0.367932	0.127273	-0.32954
VCA	0.495005	0.935169	-0.227411	-0.73759	1.000000	-0.079167	-0.096562	-0.117721	0.104206
GDP	-0.05302	-0.060976	-0.059893	-0.067113	-0.079167	1.000000	-0.202495	-0.836801	0.072944
LQ	-0.14557	-0.315535	-0.299331	0.367932	-0.096562	-0.202495	1.000000	0.049924	-0.37651
IR	-0.143052	-0.074415	0.361491	0.127273	-0.117721	-0.836801	0.049924	1.000000	-0.0581
TOA	0.041293	0.047897	-0.09686	-0.32954	0.104206	0.072944	-0.37651	-0.0581	1.000000

Source: - E-views 8 output from financial statement of insurance companies.

As per the table above, the correlation coefficient between ROA and Economic growth (GDP) was -0.053 which is the smallest correlation coefficient as compared to other variables, this mean that Economic growth has small association with profitability which is opposite to privies study's findings. But, Volume of Capital and ROA and size and ROA have highest positive correlation coefficientcomparedto other variables which is 0.49 and 0.45respectively. They are positively correlated with profitability as measured by ROA. This means that as these variables increase ROA also will increase. Leverage has negativitiescorrelation coefficient value with tangibility of asset, inflation rate and economic growth and anegative correlation coefficient value with size, Volume of capital, and Economic growth.Liquidity is negatively correlated with leverage, tangibility of asset, inflation rate and economicgrowth, but it is positively correlated with economic growth.

4.3 Tests for the Multiple Linear Regression Model Assumptions

In order to make the data ready for analysis and to get reliable results from the research, the model stated previously was tested for five multiple linear regression model assumptions.

Among them the major ones are: test for heteroscedasticity, autocorrelation, multicollinearity, normality and constant variable. Accordingly, the following sub-section presents the tests made.

Assumption one: the errors have zero mean (E (ε) = 0) or constant variable

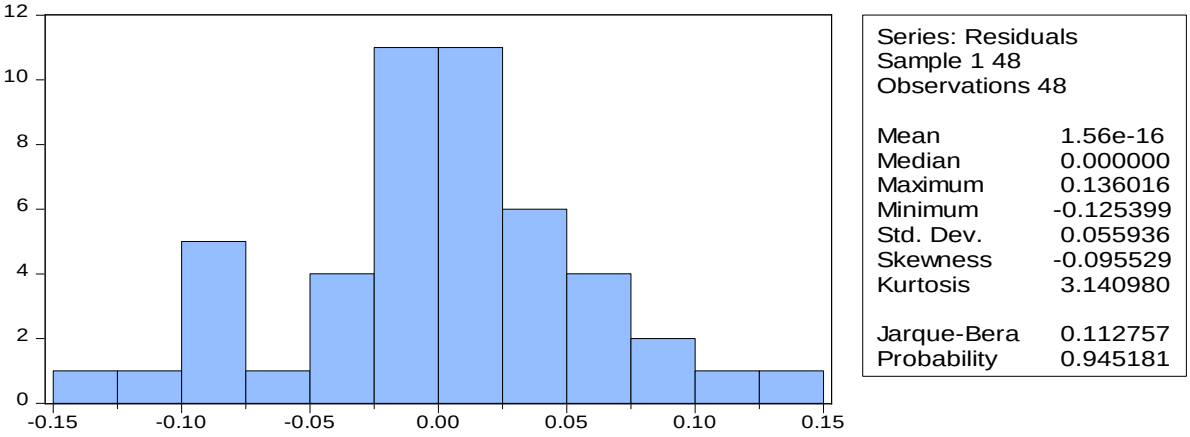
The first assumption states that the average value of the errors should be zero. According to (Brooks 2008) if the regression equation contains a constant term, this presumption will never be breached. Therefore, since from the regression result table 4.3 the constant term (i.e. β0) was included in the regression equation; this assumption holds good for the model.

Assumption two: Normality (errors are normally distributed $\mu_t \sim N(0, \sigma^2)$

A normal distribution is not skewed and is defined to have a coefficient of kurtosis 3. Jarque-Bera formalizes this by testing the residuals for normality and testing whether the coefficient of skeweness and kurtosis are zero and three respectively. Normality assumption of the regression model can be tested with the Jarque- Bera measure. If the probability of JarqueBera value is greater than 0.05, it's an indicator for the presence of normality (Brooks 2008).

The normality tests for this study as shown in Figure 4.1 after inclusive of dummy variables the kurtosis 3.1409 is close to 3, the Skewnes-0.0955 close to zero, and the Jarque-Berastatistic has a p-value of 0.9452 which is well over 0.05 implying that the data were consistent with a normal distribution assumption.

Figure 4.1 Normality Test result



Thus, the study were test for this assumption and as it can be seen from the above figure, the histogram is bell-shaped, the Jarque-Beraresult was a probability of 0.94 and the kurtosis is approach to 3, this implies that the residuals are normally distributed in this study.

Assumption three: homoscedasticity (variance of the errors is constant ($\mathbf{Var}(\mu_t) = \sigma^2 < \infty$)

Heteroskedasticity is a systematic pattern in the errors where the variances of the errors are not constant. When the variance of the residuals is constant it is referred as homoscedasticity, which is desirable. To test for the absence of heteroscedasticity white test was used in this study. In this test, if the p-value is very small, less than 0.05, it is an indicator for the presence of heteroscedasticity (Gujarati 2004).

But from Table 4.4 presents three different types of tests for heteroscedasticity. Since the p-values of all the three tests are considerably in excess of 0.05 after inclusive of dummy variables it's a clear indicator that there is no evidence for the presence of heteroscedasticity. Hence, the model passes the third test

Table 4.3Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.565833	Prob. F(10,37)	0.8307
Obs*R-squared	6.366862	Prob. Chi-Square(10)	0.7836
Scaled explained SS	4.049758	Prob. Chi-Square(10)	0.9451

Assumption four: covariance between the error terms over time is zero (cov (ui, uj) = 0)

This assumption states that covariance between the error terms over time or cross -sectionally, for that type of data is zero. That is, the errors should be uncorrelated with one another. If the errors are not uncorrelated with one another it is an indicator for the presence of Auto correlation or serial correlation (Brooks 2008).

According to Brooks (2008), presence/absence of autocorrelation is by using the Breusch–Godfrey the. the result of the statistic labeled "obs*R-squared" after inclusion of dummy variables, which is the LM test statistic for the null hypothesis of no serial correlation shows a p-value see Appendix B (which is far greater than 0.05) which strongly indicates the absence of autocorrelation.

Assumption five: Multicollinearity Test

According to (Churchill and Iacobucci 2005), multicollinearity is concerned with the relationship which exists between explanatory variables. When there exists the problem of multicollinearity, the amount of information about the effect of explanatory variables on dependent variables decreases and as a result, many of the explanatory variables could be judged as not related to the dependent variables when in fact they are. How much correlation causes multicollinearity, however, is not still clearly defined. Many authors have suggested different level of correlation to judge the presence of multicollinearity. While (Hair, et al. 2006) argued that correlation coefficient below 0.9 may not cause serious multicollinearity problem.

(Malhotra 2007) stated that multicollinearity problem exists when the correlation coefficient among variables is greater than 0.75. (Kennedy 2008) suggests that any correlation coefficient above 0.7 could cause a serious multicollinearity problem leading to inefficient estimation and less reliable results. This indicates that there is no consistent agreement on the level of correlation that causes multicollinearity.

Therefore, in this study correlation matrix for eight of the independent variables is shown below in Table 4.4. The results of the estimated correlation matrix shows that the highest correlation of 0.634 and 0.37 which is between VCA and LQ with size and volume of capital respectively. Since there is no correlation above 0.7, 0.75 and 0.9 according to (Kennedy 2008), (Malhotra 2007) and (Hair, et al. 2006) respectively, it can be concluded that there is no problem of multicollinearity.

Table 4.4: Correlation matrix between explanatory variables

	SIZE	LEV	GR	VCA	GDP	LQ	IR	TOA
SIZE	1.000000							
LEV	-0.069693	1.000000						
GR	-0.682244	-0.056164	1.000000					
VCA	0.635169	-0.227411	-0.637590	1.000000				
GDP	-0.060976	-0.059893	-0.067113	-0.079167	1.000000			
LQ	-0.315535	-0.299331	0.367932	-0.096562	-0.202495	1.000000		
IR	-0.074415	0.361491	0.127273	-0.117721	-0.636801	0.049924	1.000000	

TOA 0.047897 -0.096862 -0.329535 0.104206 0.072944 -0.376507 -0.058104 1.000000

Source: - E-views 8 output from financial statement of insurance companies.

4.4. Regression results

There are two types of panel estimator approaches that can be employed in panel data financial research. Those are fixed effects models (FEM) and random effects models (REM) (Brooks 2008). Even if this two approaches end up with nearly the same result, there are situations that they will deviate widely. To check which of the two (FEM or REM) models provide consistent estimates (is preferred) for this study; Hausman test was employed and the result is presented as follows.

Table 4.5: Correlated Random Effects - Hausman Test

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	19.875728	8	0.0108

Source: Output of E-views 8

The null hypothesis of the Hausman test was that the fixed effect method is the preferred regression method. Table 4.5 showed the p-value for the test is 0.011 (which is well under0.05), which indicates that the null hypothesis was rejected. Hence, the random effect method was preferable. Thus, the relationship between profitability and the explanatory variables was examined by the fixed effects model in this study.

Accordingly, the result obtained by the fixed effect of model is reported in Table 4.5 below which shows regression results between the dependent variable (profitability) and explanatory variables. The R-squared value measures how well the regression model explains the actual variations in the dependent variable (Brooks 2008). Thus, the R-squared value in Table 4.6 below indicates that 59.95 percent variation in profitability (ROA) of the selected insurance companies was explained by the eight independent variables (SIZE, LEV, GR, VCA, GDP, LQ, IR, TOR). The rest 40.05 percent variation in ROA was explained by residuals or other variables

other than the eight variables (for instance, Age of the company Management Efficiency, loss and other factors not included here in the study, since these are beyond the scope of the study). The regression F-statistic (2.9) and the p-value of almost zero attached to the test statistic reveal that the null hypothesis that all of the coefficients are jointly zero should be rejected. Thus, it implies that the independent variables in the model were able to explain variations in the dependent variable.

Table 4.6 Regression analysis result between ROA and explanatory variables

Cross-section random effects test equation:

Dependent Variable: ROA

Method: Panel Least Squares

Date: 06/03/17 Time: 12:35

Sample: 2011 2016

Periods included: 6

Cross-sections included: 9

Total panel (unbalanced) observations: 48

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.424455	1.059314	1.344695	0.1885
SIZE	-0.082673	0.066750	-1.238547	0.2248
LEV	-0.033437	0.057243	-0.584127	0.5634
GR	-0.047486	0.111677	-0.425212	0.6736
VCA	0.072802	0.049243	1.478435	0.1494
GDP	-7.458473	3.502373	-2.129549	0.0413
LQ	-0.081554	0.060512	-1.347730	0.1875
IR	-1.123389	0.557716	-2.014266	0.049
TOA	-0.524611	0.209001	-2.510088	0.0175

Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.599547	Mean dependent var	0.072660

Adjusted R-squared	0.392861	S.D. dependent var	0.090863
S.E. of regression	0.070800	Akaike info criterion	-2.186802
Sum squared resid	0.155391	Schwarz criterion	-1.524085
Log likelihood	69.48325	Hannan-Quinn criter.	-1.936360
F-statistic	2.900765	Durbin-Watson stat	2.373233
Prob(F-statistic)	0.005371		

Source: Output of E-Views 8

Adjusted R-squared show that the integrity of fit of the independent variables in explaining the Variations in insurance companies profitability measure ROA. As clearly described in Table 4.6Adjusted R-squared value for the regression model was 0.39 this indicates the independent Variables in this study jointly explain about 39 percent of the variation in the profitability of insurance companies' measure by ROA. The remaining 61 percent of the variation in the profitability of insurance companies explained by other variables which are not included in the model this research.

Size.

The results of the Fixed effect regression model in Table 4.6 indicated that size have a negative relationship with profitability of the selected insurance companies but this relationship was found to be insignificant (p-value = 0.2248). Therefore, since the probability of committing type I error as indicated by the p-value is very high, it is possible to reject the null hypothesis. The beta coefficient value -0.0826) even if not significant shows that, a percentage change in the size will result an inverse change in the profitability of the selected insurance companies. negative coefficient between the insurance size and profitability clearly indicated that larger insurance of the country are not better placed than smaller insurance of the country in harnessing economies of scale in transactions. It is inconsistent with Other researcher describe about size ,***BilalJavaria et al*** (2013) and Daneiel and Tilahun (2013) study from the regression results identified size as most important determinant factors of profitability and it is positively related. Malik (2011) finds significantly positive association between size of the company and profitability of insurance companies. Sumaira and Amjad (2013) study also suggests size as significant determinants of profitability. Even if the total asset of the company increases year to year the number of branch

have no effect on profitability .Therefore in this study it is possible conclude that the management of the company have no pay attention on size in relation to company profitability.

Leverage.

The result of the Fixed effect regression model in Table 4.6model indicated that the Leverage have negative relationship with the profitability of selected insurance companies, and this relationship is statistically insignificant (p-value = 0.56) . This result indicates as the amount of leverage are protected with a higher percentage, the smoother will the operation be running and thus the higher the profitability will be. It is inconsistence to the previous study. for example in the study of Renbao Chen and Rie Ann Wong (2004), SylwesterKozak (2011) ,Abate Gashawand(2012),***Bilal Javaria et al (2013***) leverage have significantly influence on insurance company profitability but negative From the regression table 4.6 significant value for leverage is 0.56 which is greater than 0.05 and with a correlation value of -0.033 we therefore reject the null hypothesis. This shows that there isnorelationship between leverage and profitability. However, the extent of the relationship even though negative, it is still insignificant and that all other things being equal a change in leverage will have a weak or no effect on profitability. Thus if an insurance company is highly geared or lowly geared there is the likelihood that its profitability will not be much affected by a unit change in levera.ge. The highly geared means that more than 50% of insurance firm resources are owned by outsiders whiles lowly geared indicates that the insurance firm resources owned by outsiders are less than 50%.

Firm Growth

The results from table 4.6 show that Firm growth have a negative correlation with the profitability of selected insurance company .this relationship statically insignificant (p-value=0.67))it is possible to reject the null hypothesis. It is inconsistent with Other researcher describe about growth for example MeazaMelese (2014) and AbdelkaderDerbali (2014) Abate Gashaw (2012) in their study, they statistically significant but positive. The result of this study show that even if Insurance companies having more and more assets over the years they have no better chance of being profitable for the reason that they do not have internal capacity though it

depends on their ability to exploit external opportunities. Thisshowsthat insurance companies are increasing their premiums and growing very rapidly but their growth does not produce any outcome to the insurance companies.

Volume of Capital

The results from table 4.6 show that there is a positive relationship with the profitability of selected insurance companies but it is insignificant (p-value-0.149) correlation between VCA and ROA. Hence finding in this study is inconsistent with previous studies. as show the above in the regression result coefficient of volume of capital is 0.072t-statics 1.478 and p-value 0.149 For instance, HamadinAhamed Ali-Alshami (2008) in UAE, Hafiz Malik (2011) in Pakistan Yuqi Li (2007) in UK) indicates that well capitalized insurance companies face lower costs of going bankrupt, which reduces their cost of funding or that they have lower needs for external funding which results in higher profitability. This implies that an insurance company witha sound capital position has no power to able to pursue business opportunities and not flexibility to deal with problems arising from unexpected losses.

Economic growth and Inflation

Regarding external variables table 4.6 show economic growths and inflation rate of the country has significant effect on profitability of insurance companies in Ethiopia. As shown above in the regression result, the regression coefficient, t-statistics and significance value of economic growth is -7.458, -2.129 and 0.04 respectively and coefficient of inflation rate is -1.123 with a t-statistics of -2.014 including significance p-value of 0.049. Thus from the results it can be concluded that there exists relationship between economic growth and inflation rate with profitability of insurance companies in Ethiopia but negative. It is consistence with the hypothesis of the study. For instance Vong and Chan (2005); Poposki and et al (2012); Hussain (2012); HabtamuNegussie (2012); and BirhanuTsehay (2012) suggested economic growth and inflation as important factors that determine insurance companies' profitability and those have positive and negative effect on insurance companies' profitability respectively.

Oshinloye et al (2009) showed that 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. 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. If GDP grows, the likelihood of selling insurance policies also grows and insurers are likely to benefit from that in form of higher profits. depends on the this study result, the beta coefficient value of economic growth and inflation is(-7.458 and -1.123) respectively shows that, a percentage change in the economic growth and inflation rate have will result an inverse change in the profitability of the selected insurance companies.it indicating that growth in *economic condition measured in terms of gross domestic product have negative impact on profitability of Ethiopian insurers for the study period.*

Tangibility of assets

The regression results relating to tangibility of assets show that there is negative but statistically Significant relationship between tangibility of assets and profitability of insurance companies in Ethiopia at 5% significant level. The regression coefficient is -0.524, t-statistics -2.5100 and p-value of 0.017. The regression result of this study regarding the effect of tangibility of assets of insurance companies on their profitability is not similar with empirical evidences by Abate Gashaw 2012) there is no statistically significant relationship between tangibility of assets and profitability of insurance companies in Ethiopia. However it is similar with MeazaMelese (2014), Daneiel and Tilahun (2013) in Ethiopia It revealed that there exists a significant relationship between tangibility of assets and profitability of insurance companies in Ethiopia but positive. Based on this study result that insurance firms have no assets that can be used for more than one accounting year to generate revenue and cover operation expenses of the company.

Liquidity

From the regression table the t-calculated significant value for liquidity is 0.1875 which is greater than 0.05, we therefore reject the null hypothesis which says there is no relationship between profitability and liquidity. The extent of the relationship as shown in the correlation table indicates negative relationship (-0.081554) between liquidity and profitability but it is insignificant and all other things held constant, Hence this result is not consistent but negatively correlated with the hypothesis of the study by Chen and Wong (2004) in Canada examined that,

liquidity is the important determinants of financial health of insurance companies with a negative relationship. Similarly, Hakim and Neaime (2005) observed that liquidity negatively related with profitability. Valentina Flamini, Calvin Mc Donald, and Liliana Schumacher (2009) in Sub-Saharan countries found significant but negative relationship between bank profitability and liquidity. But Consistent with the finding of Daneiel and Tilahun (2013) and Sumaira and Amjad (2013) and Meaza Melese (2014) study which revealed that liquidity has statistically insignificant relationship with ROA. Although the results show no statistical significance between these variables, it can be concluded that the liquidity ratio of a firm still explains the variation in profitability of insurance companies negatively. if current assets pay insurance firm's current liabilities it will have indirect impact on profitability but its effect on profitability will be insignificant.

Table 4.7 Expected relation between profitability in insurance companies and determinant

Determinants	**Expect relation**	Actual result	Statistical Significance test
Size	+	-	Insignificant
Leverage	-	-	Insignificant
Firm growth	+	-	Insignificant
Volume of capital	+	+	Insignificant
Economic growth	+	-	Significant
Liquidity	-	-	Insignificant
Inflation	-	-	Significant
Tangibility of Asset	-	-	Significant

- Regression coefficient of economic growth at -0.073 indicates that when firm economic growth increases by 1% the ROA will decrease by 7.3%.
- Regression coefficient of inflation at -1.12 indicates that when leverage increases by 1% the ROA will decrease by 11.2%.
- Regression coefficient of Tangibility at -0.052 indicates that when firm growth increases by 1% the ROA will decrease by 5.2%.

To summarize, this chapter presents the results of the hypotheses of the independent variables tested on the dependent variable (ROA). Empirical results provide detailed discussions on sample descriptive statistics and mean comparison between ROA and independent variables (size, leverage, growth, volume of capital, tangibility of assets liquidity ratio economic growth and inflation) followed by correlation analysis to determine the relationship between dependent variable and towards independent variables. Fixed effect regression analysis is also used to describe the profitability among insurance companies. ROA and eight other variables that represent size, leverage, growth, volume of capital tangibility, liquidity, economic growth hand inflation were developed to test which factors best describes profitability of Ethiopian insurance companies.

The results show that economic growth, inflation and tangibility of asset are the important factors affecting profitability of insurance companies in Ethiopia. And also size of company, firm growth, leverage, volume of capital and liquidity has no relationship between profitability of insurance companies in Ethiopia.

Chapter Five

Conclusions and Recommendations

5.1 Conclusions

A strong and healthy financial system is a precondition for sustainable economic growth of a given country. In order to survive negative shocks and maintain a good financial stability, the financial managers and policy makers should identify the key performance determinants of insurance companies. Because of this, the current study specified an empirical framework to examine the firm specific and macroeconomic factors affecting profitability of insurance companies as measured by ROA. This study used secondary data during the period 2011-2016 and the sample of 9 insurance companies. Descriptive statistics and regression analysis were performed to describe the profitability of insurance companies among insurance companies. The following sections discussed about the final conclusion remarks of the study and applicable recommendations.. For this purpose, size, volume of capital, tangibility of asset, leverage, liquidity, firm growth , economic growth and inflation are selected as explanatory variables while ROA is taken as dependent variable. The results of regression analysis reveal that leverage, size, volume of capital, firm growth and liquidity has statistically insignificant relationship whereas ROA with economic growth, inflation and tangibility of asset are important determinants of performance of life insurance sector.

Descriptive analysis revealed the presence of good variations of profitability across the insurance companies included for this study and the mean value of tangibility of asset implies 12.5 percent of total asset of considered insurance companies is fixed asset. The economic growth means value results shows that the economic growth rate has significant and negative influence on insurers' profitability which is inconsistency with the theory of if economy grows, the likelihood of selling insurance policy grows and insurers are likely to benefit from that in form of higher profits. The inflation mean value results show12.94 means that the economic growth of the country is increase by two digits the inflation rate is also increase by 12.94 percent Ethiopian insurance. On the other hand, inflation has little impact on the profitability of Ethiopian companies. The adjusted value of R square (0.6) indicates the independent variables in this study i.e. size, leverage, liquidity, tangibility of asset, volume of capital, firm growth, economic growth and inflation rate jointly explain about 60 percent of the variation in the profitability of insurance

companies. The analysis suggest that a negative and significant relationship between tangibility of asset and growth as independent variable and profitability of insurance companies in Ethiopia. It implies that insurance companies with low rate of fixed asset and growth in terms of their total assets are not better position of being profitable.

In general, tangibility of asset, economic growth and inflation) significant key drivers of profitability of insurance companies in Ethiopia whereas size, leverage, growth, volume of capital, liquidity ratio) insignificant determinant of insurance companies' profitability in Ethiopia.

5.2 Recommendations and future research

Based on the analysis and subsequent finding from the study the following recommendation is forward to the management and regulatory bodies.

I. The impartial of this study was to inspect the specific and macroeconomic factors touching profitability of insurance companies as stately by ROA for the period of 2011-2014.The studied period is measured inflated period so further research on profitability in insurance companies, it is better to use longer period of observation to adequately investigate the effects of Firm specific variables on profitability of insurance based on insurance type.

II. Administration bodies of insurance companies have to attempt to give highlighting to firm internal factors like tangibility of asset and external factors like Inflation and Economic growth. Because, the above mention factors have major effect on profitability of the company.

III. General these empirical effects deliver suggestion that the profitability of Ethiopian insurance companies is formed by firm-specific factors and macroeconomic factors that are affected administration. So, the insurance managers should have pay attention on macroeconomic factors as well as firm specific factors. Finally, the study sought to investigate the determinant of insurers' profitability in Ethiopia. However, the variables used in the statistical analysis did not include all factors that can affect Ethiopian insurers' profitability. Thus, future research shall conduct research on the issue like

impact of government regulation policy and other directives and non- financial determinant of insurance profitability such as management Quality efficiency and productivity.

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Appendix A

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	19.875728	8	0.0108

** WARNING: estimated cross-section random effects variance is zero.

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
SIZE	-0.082673	-0.073756	0.001930	0.8392
LEV	-0.033437	0.020290	0.001798	0.2052
GR	-0.047486	-0.052185	0.005769	0.9507
VCA	0.072802	0.093981	0.000449	0.3174
GDP	-7.458473	-6.641508	2.012359	0.5647
LQ	-0.081554	-0.099678	0.000919	0.5500
IR	-1.123389	-1.036632	0.036830	0.6512
TOA	-0.524611	-0.179502	0.021782	0.0194

Appendix B

Cross-section random effects test equation:

Dependent Variable: ROA

Method: Panel Least Squares

Date: 06/03/17 Time: 12:35

Sample: 2011 2016

Periods included: 6

Cross-sections included: 9

Total panel (unbalanced) observations: 48

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.424455	1.059314	1.344695	0.1885
SIZE	-0.082673	0.066750	-1.238547	0.2248
LEV	-0.033437	0.057243	-0.584127	0.5634
GR	-0.047486	0.111677	-0.425212	0.6736
VCA	0.072802	0.049243	1.478435	0.1494
GDP	-7.458473	3.502373	-2.129549	0.0413
LQ	-0.081554	0.060512	-1.347730	0.1875
IR	-1.123389	0.557716	-2.014266	0.0527
TOA	-0.524611	0.209001	-2.510088	0.0175

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.599547	Mean dependent var	0.072660
Adjusted R-squared	0.392861	S.D. dependent var	0.090863
S.E. of regression	0.070800	Akaike info criterion	-2.186802
Sum squared resid	0.155391	Schwarz criterion	-1.524085
Log likelihood	69.48325	Hannan-Quinn criter.	-1.936360
F-statistic	2.900765	Durbin-Watson stat	2.373233
Prob(F-statistic)	0.005371		

Appendeix C

Variables	Calculation Mechanism
Size	**Natural Log of Total Asset**
Leverage	Total Debt Total Equity
Firm growth	current Asset Fixed Asset
Volume of capital	Natural Log Of book value Of equity
Economic Growth	Yearly GDP
Liquidity	Current Asset current Liability
Inflation	Annual Influation Rate
Tangibility of Asset	Fixed Asset Total Asset
ROA	Net profit before tax per Total Asset

Appendix D

Year	I	Size	Lev	GR	VCA	GDP	LQ	IR	TOA	ROA
2016	Nile	20.29533	0.092386	0.166172	19.197	0.1004	0.848161	0.13074	0.252936	0.067
2016	Oromia	20.18429	0.117786	0.209451	18.81737	0.1004	1.139848	0.13074	0.028268	0.057
2016	Lion	19.63033	0.048347	0.19274	18.31739	0.1004	0.699646	0.13074	0.331294	0.050
2016	Nib	20.52507	0.101926	0.074589	19.4884	0.1004	1.055975	0.13074	0.145063	0.055
2016	Global	19.21176	0.029002	0.15478	18.51261	0.1004	1.469099	0.13074	0.147838	0.117
2016	Lucy	18.97166	0	0.284284	18.40441	0.1004	1.821035	0.13074	0.047431	0.006
2016	Buna	18.95207	0	0.42317	17.97896	0.1004	1.182719	0.13074	0.060713	0.091
2016	Abay	18.95038	0.003127	0.292992	18.82316	0.1004	1.421186	0.13074	0.042211	0.148
2016	Tsehay	19.28065	0	0.406256	18.1893	0.1004	1.237353	0.13074	0.042041	0.06
2015	Nile	20.16865	0.092272	0.094144	19.18338	0.096	1.153412	0.1207	0.148142	0.393
2015	Oromia	19.94927	0.09788	0.164808	18.71299	0.096	2.125971	0.1207	0.031071	0.116
2015	Lion	19.41622	0.083959	0.145186	18.28502	0.096	0.810513	0.1207	0.327629	0.081
2015	Nib	20.44755	0.115475	0.142016	19.34354	0.096	1.099381	0.1207	0.139113	0.075

2015	Global	19.04361	0.0293	0.173519	18.37382	0.096	1.631958	0.1207	0.180427	0.136
2015	Lucy	18.63719	0	0.566091	18.10552	0.096	2.097464	0.1207	0.044389	-0.07
2015	Buna	18.40186	0	0.747868	17.46685	0.096	1.25207	0.1207	0.078123	0.108
2015	Abay	19.35934	0.005057	0.400467	18.44535	0.096	1.442723	0.1207	0.054123	0.138
2015	Tsehay	18.75934	0	0.402075	17.69737	0.096	1.274126	0.1207	0.049172	0.082
2014	Nile	20.00032	0.128028	0.227583	18.91612	0.103	1.089974	0.085	0.163981	0.069
2014	Oromia	19.76917	0.081784	0.332487	18.52274	0.103	1.201785	0.085	0.027523	0.082
2014	Lion	19.25934	0.104482	0.308936	18.22828	0.103	0.866691	0.085	0.34835	0.087
2014	Nib	20.29438	0.203808	0.205195	19.09348	0.103	1.107935	0.085	0.089675	0.112
2014	Global	18.85303	0.033578	0.193922	18.0092	0.103	1.351905	0.085	0.225981	0.160
2014	Lucy	17.80226	0	0.45659	16.83724	0.103	1.345791	0.085	0.104358	-0.05
2014	Buna	17.02405	0	1	16.03267	0.103	1.344834	0.085	0.085723	0.217
2014	Abay	18.84774	0.020156	0.357666	17.62983	0.103	1.256635	0.085	0.055416	0.201
2014	Tsehay	18.24505	0	0.431299	17.008	0.103	1.148201	0.085	0.070095	0.048
2013	Nile	19.86315	0.193107	0.264282	18.81222	0.104	1.110828	0.135	0.151065	0.139
2013	Oromia	19.36498	0.274658	0.277536	17.96665	0.104	1.122837	0.135	0.039574	0.109
2013	Lion	18.88982	0.253739	0.248621	17.67659	0.104	1.188512	0.135	0.055851	0.101
2013	Nib	20.06473	0.490659	0.081945	18.74475	0.104	1.05178	0.135	0.091648	0.111
2013	Global	18.63745	0.072428	0.246446	17.59484	0.104	1.134974	0.135	0.271524	0.153
2013	Lucy	17.19237	0.34093	1	15.95626	0.104	1.204175	0.135	0.064671	0.002
2013	Abay	18.40509	0.140493	0.505463	16.284	0.104	1.015818	0.135	0.058192	-0.01
2013	Tsehay	17.68065	0.003504	0.711223	15.89845	0.104	0.989219	0.135	0.086774	-0.17
2012	Nile	19.71315	0.524923	0.401223	18.68756	0.087	1.089122	0.228	0.129103	0.174
2012	Oromia	19.03989	0.687619	0.481675	17.49116	0.087	1.114344	0.228	0.03992	0.064
2012	Lion	18.60398	1.354773	0.344362	17.11598	0.087	1.063512	0.228	0.057038	0.10
2012	Nib	19.97923	0.99563	0.356719	18.44434	0.087	0.969346	0.228	0.091818	0.075
2012	Global	18.3545	0.398272	0.301678	17.21045	0.087	0.915967	0.228	0.348862	0.020
2012	Abay	17.70096	0.990737	0.424703	16.14958	0.087	1.062156	0.228	0.068173	-0.06
2012	Tsehay	16.43856	0.172798	1	16.16911	0.087	2.452507	0.228	0.142447	-0.10
2011	Nile	19.40498	0.513272	0.271477	18.36388	0.112	0.964231	0.085	0.176461	0.002
2011	Oromia	18.38273	1.023236	0.420904	16.99135	0.112	1.053797	0.085	0.081971	0.022
2011	Lion	18.18183	1.275825	0.298439	16.66796	0.112	1.019315	0.085	0.06435	0.053
2011	Nib	19.53806	1.083007	0.177955	18.18955	0.112	0.999923	0.085	0.113232	0.068
2011	Global	17.99542	0.374218	0.070192	17.14176	0.112	0.919467	0.085	0.454034	0.036
2011	Abay	17.14809	0.229821	1	16.3652	0.112	1.592782	0.085	0.093666	-0.0