DETERMINANTS OF PROFITABILITY IN CASE OF ETHIOPIAN INSURANCE COMPANIES

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Contents

Acknowledgment i

Contents ii

ABSTRACT iv

List of Abbreviations and Acronyms v

CHAPTER ONE 1

1. INTRODUCTION 1

1.1 Background of the study 1

1.2 Statement of the problem 2

1.3 Objective of the study 5

1.3.1 General Objective of the study 5

1.3.2 Specific objectives 5

1.4 Research hypothesis 6

1.5 Significance of the study 6

1.6 Scope of the study 7

1.8 Organization of the Paper 7

2. LITERATURE REVIEW 8

2.1 Theoretical review 8

2.1.1 Concept of insurance companies 8

2.1.2 Profitability 9

2.1.3 Profitability Related Theories 11

2.2 Empirical literature review 14

2.2.1 The effects of firm specific factors on profitability 14

2.3 Conclusion and Knowledge gap 16

CHAPTER THREE 18

RESEARCH DESIGN AND METHODOLOGY 18

3.1 Research Approach 18

3.2 Research Design 18

3.3 Sources and Types of Data 18

3.4 Data Collection Instruments 19
3.5 Population and Sampling Techniques 19
3.6 Method of Data Analysis 19
3.7 Model Specification 20
4. DATA ANALYSIS AND INTERPRETATION 22
4.1. Descriptive Statistics 22
4.2. CLRM assumptions and Diagnostic tests 24
4.2. The Errors have zero mean (E (ut) = 0) 24
4.2.1 Heteroscedasticity Test 24
4.2.2 Test for Autocorrelation 25
4.2.3 Multicollinearity Test 26
4.2.4 Normality Test 27
4.3 Model Selection 28
4.4. Regression Analysis 28
4.5 Summary of Analysis 31
CHAPTER FIVE 33
5. CONCLUSIONS AND RECOMMENDATIONS 33
5.1 CONCLUSION 33
5.2 RECOMMENDATIONS 33
Reference 35
APPENDIX 38

ABSTRACT

The profitability of insurance companies has been the focus of several studies in emerging economies across the world. However, when it comes to Ethiopia it received little attention. Therefore, the researcher conducts this study entitled "The Determinants of Insurance Companies Profitability in Ethiopian". The major objective of this study was to investigate the most important determinant of profitability in the insurance sector of Ethiopia by using regression analysis. This study was based on entirely secondary data collected from NBE and MOFEC. This study covers the time period from 2008 – 2018 in order to increase numbers of observations. In addition, this study used Explanatory research design to check cause and effect relationship between dependent variable and independent variables besides, fixed effect model was used. Under this study, both internal and external factors were included. Internal factors used in this study include, leverage, liquidity, and tangibility of asset) whereas, the external factor, inflation. The regression result reveals that have significant impact on the profitability of Ethiopian insurance companies measured by liquidity, leverage and inflection have negative and significant effect on profitability of Ethiopian insurance companies, Whereas Tangibility is positive and significant effect on profitability of Ethiopian insurance companies.

List of Abbreviations and Acronyms

CACL	Current Asset to Current Liability
CR	Current Ratio
DW	Dublin Watson
EIC	Ethiopian Insurance Corporation
FEM	Fixed Effect Model
HO	Null Hypothesis
H1	Alternative Hypothesis
INF	Inflation
LIQ	Liquidity
LV	Leverage
NBE	National Bank of Ethiopia
OLS	Ordinary List Square
REM	Random Effect Model
FEM	Fixed effect model
CLRM	Classical regression model

CHAPTER ONE

1. INTRODUCTION

This chapter deals with introduction of the study which consists 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 profit of any firm not only plays the role to increase the market value of that specific firm but also leads towards the growth of the whole industry which ultimately leads towards the overall affluence of the economy. 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 Mishkin and Stanley (2009), financial markets and institutions not only affect our 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 like insurance companies 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.

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.

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. This study would examine both firm specific factors and macroeconomics variables.

1.2 Statement of the problem

In the contemporary era, strong financial institution systems such as banks and nonbank financial institutions and insurance companies are playing a dynamic role in the economic development of a given country (Daare, 2016). Financial institutions serve as the essence of the economy by facilitating the flow of capital among an organization. Insurance firms, in particular, reinforce monetary and investment activities by providing long-term funds for physical and social infrastructure while simultaneously boosting risk-taking abilities (Cudiamat and Siy, 2017). The risk transfer and indemnification sfunctions of insurance are captured by its non-life insurance business component whereas the financial intermediation aspect is reflected in the life insurance business (Kugler and Ofoghi, 2005).

In this circumstance, it is critical to know and insight the major drivers of insurance companies' profitability instead of solely measuring the financial performance of insurers and showing by figurative numbers since the identification of factors that determine profitability in the industry is a major problem to be studied. Unfortunately, there is no common internationally accepted standard for accounting, reserve and provisioning to measure the profitability and capital adequacy of an insurance company. Despite, the accounting system used by an insurance companies is complex and totally different from other corporate business (Davies et.al., 2003).

Therefore, assessing and valuing the performance of a non-life insurance company is difficult due to unique format of insurance company's financial Statement which does not lend itself to traditional financial accounting analysis (Boyjoo and Ramesh, 2017).

An investigation of major factors determines insurance company's profitability has always attracted the attention of academics, policy makers and practitioners. In this circumstance, a lot of scholars are conducted studies on determinants of insurance companies' profitability and revealed in different conclusions. For instance, the insurance company's profitability can be affected by many exogenous factors including macroeconomic factors like real GDP growth rate and inflation (Doumpos et.al., 2012 and Nyamu, 2015), industry related factors like diversifications and industry concentration ratios (Hussain, 2015; Moro and Anderloni, 2014; Datu, 2016 and Lee, 2014) and other endogenous variable like actual mortality experience, investment earning, capital gains or losses, the scale of policyholder dividends, and federal and state taxes (Wright, 1992).

A lot of studies have been conducted vis-à-vis determinants of profitability across different sectors for a century, and the issues of which factor determine profitability are still questionable and mysterious in finance literatures. Particularly, a study of Malik (2011) examines the impact of firm-specific factors on insurer's profitability, and the result revealed that financial leverage and claim to premium ratio has negative and significant impact on profitability. Hussain (2015) also assesses the impact of macroeconomic and firm specific factors on profitability of Pakistan general insurance companies and their results indicate that financial leverage have negative and statistically significant determinants of the general insurers profitability.

And other large numbers of studies are conducted in factor influencing insurers' profitability. For instance, Hussain (2015), Nyamu (2015), Datu (2016), Doumpos et.al., (2012), Moro and Anderloni (2014), Jovovic et.al., (2014), Boyjoo and Ramesh (2017), Lee and Lee (2012), Lee (2014), Burca and Batrinca (2014)) and they insight as both external and internal factor have direct relationship with that of general insurance company's profitability.

In Ethiopian financial sector as far as the knowledge of the researcher is concerned, there are a lot of researches that are conducted about factor influencing the profitability of banking sectors; but few studies are done on profitability determinants of insurance companies. Despite to that, the studies conducted by Simon (2016), Mehari and Aemiro (2013) and Ayele and Sambasivam (2013) on determinants of insurance companies' profitability mostly focus on firm specific factors and fail to consider the macroeconomic and overall industry related variables affecting the profitability of insurers. Teklit and Jasmindeep (2017), Asrat and Tesfahun (2016), Demis (2016), Suheyli (2015), Hanna (2015), Mistire (2015), Meaza (2014) and Hadush (2015) all are considering both firm specific and macroeconomic variable, but their studies are ignoring the industry specific related variable which have an impact on profitability of the selected sectors.

As per National Bank of Ethiopia report of (2016), the Ethiopian insurance sectors growth rate of revenue from gross premium of insurance sector exhibits decline over time. The amount of revenues collected from the general insurance was low in comparison to revenue collected from life insurance service. Most of non-life insurance businesses have taken a hit on their profitability in the previous fiscal year. For instance, National insurance companies, Nile insurance companies and Nyala insurance companies have suffered net profit decline by 10.5%, 57% and 24%, respectively in the year end of 2016 on their policies underwritten by non-life insurance business.

Despite, Lion insurance companies, United insurance companies and Awash Insurance Companies are also report low amount of profit on their policies underwritten by the non-life insurance business. But, few of them were profitable companies in the period of year-ago. As a whole the premium portfolio of insurance companies operating in Ethiopian were dominated by general insurance line, but more revenues are collected from the policies written by long-term insurance companies. Particularly, the Ethiopian insurance sector are also remains underdeveloped and they are targeted at the corporate market, focusing on general insurance and almost 90 percent of the population does not have any type of formal insurance (Gieger and Moller, 2015).

Therefore, this paper coming up with these two variables such as, liquidity and leverage and extends previous study by adding its own contribution to the determinants of profitability and literatures which was not included in the previous studies in Ethiopia. Based on the forgoing research gap, the researcher tried to know the prime factors that affect profitability. Despite to that, determination of major problem and an analysis of prime factors affecting profitability is an important for this emerging sector in Ethiopia. Therefore, the present study was an attempt to fill the afore mentioned research gap by providing information about the specific and macroeconomic factors influencing the profitability of Ethiopian General insurance companies particularly.

1.3 Objective of the study

In this section the general and specific objective of the study was discussed.

1.3.1 General Objective of the study

The main objective of the study is to identify and compare the determinants of insurance companies' profitability in Ethiopian.

1.3.2 Specific objectives

- ✓ To identify the effect of liquidity on profitability of insurance companies in Ethiopia.
- ✓ To examines the impacts leverage on profitability of insurance companies in Ethiopia.
- ✓ To identify the effects of tangibility on profitability of insurance companies in Ethiopia
- ✓ To examines the impacts of Inflation on profitability of insurance companies in Ethiopia.

1.4 Research hypothesis

H1. Liquidity ratio is negatively and significantly related to profitability of insurance

Companies in Ethiopia

H2. Firm financial leverage has negatively and significantly related to profitability of

Insurance companies in Ethiopia.

H3. Tangibility is positive and significant impact on profitability of insurance companies in Ethiopia.

H4. Inflation is negative and significant impact on profitability of insurance companies in Ethiopia.

1.5 Significance of the study

The key reason for this study is that the researchers have not paid enough attention to this subject in Ethiopia.

Most of the studies previously focused on banks not on insurance companies as well as some focused on only analysis of financial performance not on factors affecting financial performance.

Despite there are some studies would have examined factors that affect the profitability of insurance companies in Ethiopia but they focused only on firm specific factors. Therefore, this study drops light on the scarcity of these types of study in Ethiopia.

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 in knowing 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.

This research also has significant role to better understand what determines financial institution's such as insurance companies' profitability in Ethiopia. Moreover, the researcher also contributes that this study can potentially serve as a stepping stone for further research in the area.

1.6 Scope of the study

This study would focus only on the determinants of profitability of insurance companies in Ethiopia and also the scope of the study confined merely on the quantitative measure of determinates of insurance companies' profitability in Ethiopia

The scope of the study determined by the objective of the research which is stated earlier and it's emphasizes on identify and examining the determinants of profitability. Secondary annual balanced panel data of selected insurance companies for years (2008-2018) would use in this study; the time period is used to get relevant and recent data for the study.

The study focused on both firm's specific determinants like (, liquidity, leverage, tangibility and) and macroeconomics determinants like (inflation).

1.8 Organization of the Paper

The paper is organized in five chapters. Chapter one is the introduction part that addresses; background of the study, statement of the problem, objective of the study, hypothesis of the research, scope of the study, significant of the study, Chapter two presents theoretical and empirical review of the literature related. Chapter three provides research design and methodology employed for the research, Chapter four Data analysis and interpretation, Chapter five Summary, Conclusions and Recommendations

CHAPTER TWO

2. LITERATURE REVIEW

This chapter deals with the concept of insurance companies and profitability, profitability related theories and studies on determinants that determine the profitability of insurance companies. The review is divided into three sections. The first section discusses about theoretical reviews within it concept of insurance companies and Profitability and profitability related theories are presented. Reviews of related literature on determinants of profitability of insurance companies and conclusion and knowledge gap presented in the second and third section respectively.

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 companies

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 (Boadi and et al 2013). As part of financial institution, social welfare created by insurance companies is unquestionable. A well-developed and evolved insurance sector is a boon for economic development as it provides long-term funds for infrastructure development at the same time strengthening the risk taking ability of the country (B. Charumathi 2012). Chen and wong (2004) also suggests that a strong and healthy insurance sector is of utmost importance for all groups and sectors of the economy.

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. Michael Koller (as cited in Abate 2012) 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.

Even if there are numerous type of insurances it can be divide in to two broad categories based on their role to the economy. Those are general insurance companies and life insurance companies. General insurance companies and life insurance companies are different each other in terms of operation, investment activities, vulnerability and duration of liabilities. Life insurers are said to function as financial intermediaries while general insurers function as risk takers (Chen and Wong 2004).

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. It shows how efficiently the management can make profit by using all the resources available in the market. According to kaguri (2013), profitability is the ability of a given investment to earn a return from its use. Profitability is an index of efficiency; and is regarded as a measure of efficiency and management guide to greater efficiency. Profitability is one of the most important objectives of financial management because one goal of financial management is to maximize the owner` s wealth and profitability is very important determinants of performance (Malik 2011).

Profitability ratios are an indicator for the firm's overall efficiency (Kabajeh and et al 2012). It's usually used as a measure for earnings generated by the company during a period of time based on its level of sales, assets, capital employed, net worth and earnings per share. Profitability ratios measures earning capacity of the firm, and it is considered as an indicator for its growth, success and control. Accordingly, the term 'profitability' is a relative measure where profit is expressed as a ratio, generally as a percentage.

According to Kabajeh and et al (2012) there are different ways to measure profitability such as: Return on assets (ROA) ratio, return on owner's equity (ROE) ratio and return on investment (ROI). ROA ratio is calculated as net profit after tax divided by the total assets. This ratio measure for the operating efficiency for the company based on the firm's generated profits from its total assets whereas ROE ratio is calculated as net profit after tax divided by the total shareholders' equity. This ratio measures the shareholders rate of return on their investment in the company. Activity ratios are another group of ratios; it's usually used to measure the ability to optimize the use of the available resources.

These ratios are other measures of operational efficiency and performance. Among this group of ratios is the turnover to capital employed or return on investment (ROI) ratio. ROI ratio is calculated as net profit after tax divided by the total paid in capital. It measures the firm's efficiency in utilizing invested capital. In other words, this ratio expresses company's ability to generate the required return (expected return) based in using and managing the invested resources by the shareholders. Kabajeh and et al (2012) also suggest that ROA and ROE are the most used profitability ratios in the analysis.

Al-Shami (2008) similarly argued that ROA, return on equity (ROE) and return on invested capital (ROIC) are measurement of profitability. 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. Hardwick and Adams (1999) and Malik (2011) are among others, who have suggested that although there are different ways to measure profitability it is better to use ROA.

According to the study by 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) and by the amount of capital funds used to finance and secure the risk exposure of each premium unit (solvency). Try 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 Profitability Related Theories

There is no universal theory on the determinants of insurance companies' profitability. Because of this, this study tries to view some theories which are nearer to the concept of insurance profitability and its determinants.

2.1.3.1 Modern Portfolio Theory

Modern portfolio theory was developed by Harry Markowitz in 1952. This theory suggested that insurance firms are investments by themselves its standard practice for them to invest in a diversified portfolio to minimize risk and harness the returns of the various investment options on offer. When choosing a portfolio investor should maximize the discounted (or capitalized) value of future returns. Since the future is not known with certainty, it must be expected or anticipated returns which are discounted. Through combining different assets whose returns are not perfectly positively correlated, MPT seeks to reduce the total variance of the portfolio return. MPT also assumes that investors are rational and the markets are efficient.

MPT emphasizes maximizing returns while minimizing risks, while giving recognition to the existence of systematic and non-systematic risks. These concepts are usually referred to when discussing financial investments. Insurance being influenced by risks and returns as well, also finds meaning through MPT. Diversification is the solution against being a victim of concentration risk. Over-reliance on similar assets' profitability and hopes that contingent liabilities do not become actual obligations are risks that can wipe-out risk portfolios in an instant.

Non-systematic risks and alphas are the main items that give underwriting skills meaning. Non-systematic risks can be eliminated by widening the coverage of insurance over more assureds. In doing so, diversification is achieved. Alphas, on the other hand, represent the surprise return or inherent profitability of an asset and in converting this concept onto the insurance industry, this is perhaps the inherent characteristics of an insured property and how the hazards and other circumstances are minimized, wherein it is more probable that the premiums paid by the assured will eventually be kept at the end of the insurance policy coverage period. While financial assets are capable of delivering abnormal returns, insurable risks are also able to remain abnormally intact and avoid transforming into real obligations for the insurance company. The fewer obligations an insurance company has, the more the profit they have.

2.1.3.2 Arbitrage Pricing Theory

Arbitrage Pricing Theory (APT) was proposed by Stephen Ross in 1976. APT agrees that though many different specific forces can influence the return of any individual firm, these particular effects tend to cancel out in large and well diversified portfolio. This is the principle of diversification and it has an influence in the field of insurance. An insurance company has no way of knowing whether any particular individual will become sick or will be involved in an accident, but the company is able to accurately predict its losses on a large pool of such risk. However, an insurance company is not entirely free of risk simply because it insures a large number of individuals. Natural disaster or changes in health care can have major influences on insurance losses by simultaneously affecting many claimants.

Cummins (1994) states that insurance companies are corporations and insurance policies can be interpreted as specific types of financial instrument or contingent claim thus it is natural to apply financial models to insurance pricing. The models are designed to estimate the insurance prices that would pertain in a competitive market. Charging a price at least as high as the competitive price (reservation price) increases the market value of the company. Charging a lower price would reduce the company's market value.

2.1.3.3 Pecking 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 issue is straight equity. The investors are the most intrusive, floatation costs are highest and there's likelihood to be an adverse signaling effect (Kaguri, 2013).

2.1.3.4 Dynamic theory

The dynamic theory of profit was developed by J.B Clark, according to this theory profit accrues because the society is dynamic in nature. When a society is said to be dynamic when there is a change in its population, change in people's life trend, change in stock of capital, change in the supply of entrepreneurs etc. since this dynamic nature of the society make future uncertain and any act result of this has to come in future, involves risk. Thus profit is the price of risk taking and risk bearing. it arises only in a dynamic society which means a society where changes don't occur or static by nature the risk element disappear and the profit element does not exist at.

According Clark, profit is the result of an adjustment, which is brought about by the entrepreneurs themselves. In a dynamic economy, if an entrepreneur produces a new thing and creates demand for this product, then he is likely to obtain big profit. But the profit of the entrepreneurs cannot continue to exist for long period.

2.2 Empirical literature review

Insurance profitability is influenced by both internal and external factors. Whereas internal factors focus on an insurer's specific characteristic, the external factors concern both industry features and macroeconomic variables. However, in most literatures, profitability with regard to insurance companies frequently expressed in as a function of internal determinants. Besides internal determinants, in this research the researcher was included a set of macroeconomic determinants. The relevant literature may be categorized as: the effects of firm specific factors on profitability and the effects of macroeconomics factors on profitability. The following are the variables used in researches concerning profitability of insurance companies and related financial institutions.

2.2.1 The effects of firm specific factors on profitability

Studies dealing with internal determinants employ variables such as firm Size, liquidity, and leverage, firm growth, and inflation. The details of internal variable are discussed in this section.

2.2.1.2 The Liquidity (LIQ)

Liquidity measures the capability of an insurers to fulfill their immediate commitment to policyholders and other creditors without having to increase profits from underwriting activities and investment activities and/or liquidate financial assets or when they due (Mwangi and Murungi, 2015). It is measured by ratio of current assets to current liabilities and indicate an organizational ability to meet its current obligations when they fall due (Burca and Batrinca, 2014; Kazeem, 2015). Therefore, it is measured by ratio of current assets to current liabilities (Mehari and Aemiro, 2013; Asrat and Tesfahun, 2016).

The studies conducted by the Hussain (2012); and Ayele and Sambasivam (2013) found negative relationship between profitability and liquidity. However, the studies of Teklit and Jasmindeep (2017), Daare (2016) and Kazeem (2015) observe the positive relationship. The influence of liquidity on insurance company's profitability is unclear. There are two possible scenarios. The first scenario indicates insurance company who has high amount of current asset is more profitable; whereas the second scenario indicates the insurance companies who have more current asset is less profitable.

2.2.1.3 Tangibility of Asset

The tangibility of Assets (TAN): It is a ratio that measures the share of Fixed Assets from Total Assets.

TAN = Fixed Assets / Total Assets

Tangibility has two conflicting effects on profitability. On the one hand, according to Himmelberg and et al. (1999) tangibility of asset has positive effect on profitability and they show that tangible assets are easily monitored and provide good collateral and thus they tend to mitigate agency conflicts between shareholders and creditors. On the other hand, tangibility of asset may have 23 negative correlations, because firms with high levels of tangible assets tend to be less profitable. Firms with high levels of intangible assets (in form of liquidity) have more investment opportunities in the long term, innovation and research and development (Deloof 2003, and Nucci and et al. 2005)

2.2.1.4 Financial Leverage (LEV)

Leverage is the amount of debt used to finance a company's assets. It was measured by total debt to total equity value (Capital and reserve) of the company (Mehariand Aemiro,2013; Asrat and Tesfahun, 2016). Insurer generates leverage from unearned premiums, from unexpired policies and any outstanding claim amount (Lee, 2014).Large insurance companies who has high total gross written premium have a higher leverage coefficient (Pervan and Kramaric, 2012). Leverage measures the degree to which a business is utilizing debt fund (Kazeem, 2015). Therefore, the studies conducted by the by Simon (2016), Kazeem (2015), Sumaira and Amjad (2013) and Ayele and Sambasivam (2013) states that bad investments decisions lead to a negative leverage-profitability relationship which suggesting that highly leveraged companies tend to achieve less profitability of the non-life insurance business.

However, the studies conducted by Teklit and Jasmindeep (2017), Malik (2011), Sumaira and Amjad (2013), Ayele and Sambasivam (2013), Jovovic et.al., (2014) and Mehari and Aemiro (2013) have found evidence in support of a positive relationship which suggesting that a highly leveraged insurer has better enjoyed financial performance achieved. Therefore, these conflicting results provide genuine incentives for further investigation of this relationship.

From the above theoretical explanations, the researchers anticipate that the relationship between the profitability of the general insurance companies and leverage is negative sign.

There are a lot of empirical evidence c effects of macroeconomics variables on profitability.

Inflation

Inflation is defined as a sustained increase in the general level of prices for goods and services. It is measured as an annual percentage increase.

A study conducted by Chen-Ying Lee (2014) found that inflation rates exhibit negative correlation with ROA, but is not significantly different from zero.Curak et al. (2012) examined the determinants of the profitability of the Croatian composite insurers' between 2004 and 2009.The finding showed that inflation and return on equity have a significant influence on insurers' profitability. Michael Doumpos et al (2012) Using a sample of over 2000 nonlife insurance firms operating in 91 countries between 2005 and 2009,they found that macroeconomic inflation influence the overall performance of firms and a statistically Significant effect on the overall performance of insurers.(ViktoriaNikolaus, 2015) examines determinants of firm performance of Indonesian and Dutch firms over the period of 2009-2013. The study found that Inflation, which is high in Indonesia, has a negative influence.

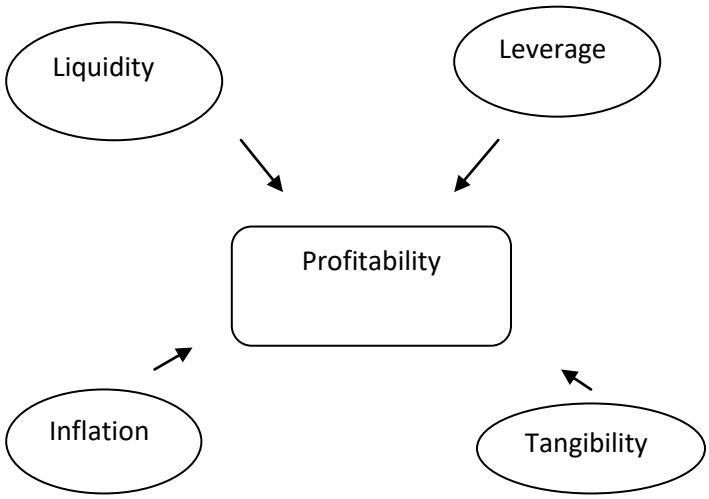
2.3 Conclusion and Knowledge gap

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 according to the country and the type of insurance company in which the research is conducted regarding selected variables.

Moreover, as it can see in empirical evidences, 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 and most of them focus on firm specific factors. 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 will examine both firm specific and macroeconomic factors of insurance companies' profitability and adds literature on determinants' of profitability of insurance companies in Ethiopia.

2.3.1 Conceptual framework

This conceptual framework reflect that the relation between dependent and independent variable. There is positive relationship between liquidity and profitability, while tangibility, leverage, and inflation have negative affect on profitability.



CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Research Approach

This section discusses the research methodology that applied for the study. The methodology of this research constructed based on the objectives of the study. In line with the objective of the study the researcher used a quantitative and qualitative research approach. Quantitative research is a means for testing objective theories by examining the relationship among variables (Creswell, 2009). And according to Kothari (2004) quantitative research is based on the measurement of quantity or amount. It is applicable to phenomena that can be expressed in terms of quantity.

3.2 Research Design

In order to show the casual relationship of the variables the researcher used an explanatory research design. If the objective is to determine which variable might be causing a definite behavior, i.e. whether there is a cause and effect relationship between variables, explanatory research must be undertaken (Shields, 2013).

3.3 Sources and Types of Data

In order to carry out any research activity; information should be gather from proper sources. According to Yugi (2006), secondary data has its own advantages. Compared to primary data, secondary data gives higher quality data, the feasibility to conduct longitudinal studies and the permanence of data which means secondary data generally provide a source of data that is both permanent and available in a form that may be checked relatively easily by others. Therefore, to increase the dependability of the data, the study was used secondary data which is based on the audited annual financial statement of the insurances companies which are readily available on their website and archives as well as the macroeconomic data will collected from National Bank of Ethiopia annual reports, and other published and unpublished documents.

3.4 Data Collection Instruments

In the data collection process different data collection instruments used. According to the source of data that have to be collected to conduct the study, the researcher uses secondary data by reviewing the annual audited financial statements of Ethiopian insurance companies from year 2008 to 2018. On the other hand, in order to analyze the relationship that exists between profitability and macro-economic variables, macroeconomic data will be gathered from the records held by NBE and MoFEC through structured document review.

3.5 Population and Sampling Techniques

The target populations of the study are all insurance companies registered by NBE and under operation in Ethiopia. Currently, seventeen insurance companies are working in Ethiopia. As they are already few in numbers and in order to minimize a sampling risk there is no need to sample from the seventeen insurance companies, But, because of lack of 15 years data in most of the newly established insurance companies, the number of sample is reduced to seven insurance companies'. such as,Awash,Global,Nile,Nice,Africa,Nib,Niyala insurance companies. According to Singh, (2006) when the subjects used in the sample is homogeneous, using purposive sampling technique is appropriate. Therefore, the researcher will be used purposive sampling method to draw the sample from the population.

3.6 Method of Data Analysis

Once the data will be collected, it will be analyzed by using descriptive statistics, correlations analysis and multiple linear regression analysis. Mean values and standard deviations was used to analyze the relationship between variable based on the data from 2008 to 2018 based on the sector sample of 7 insurance companies and a correlation matrix will also use to examine the relationship between the dependent variable and explanatory variables. In addition, ordinary least square (OLS) is conducted using statistical package to determine the most significant and influential explanatory variables affecting the profitability of the insurance industry in Ethiopia.

3.7 Model Specification

The researcher formulates the econometric model which is a representation of the basic features of an economic phenomenon so as to achieve the broad research objective. It is an abstraction of the real world. The specification of a model is based on the available information relevant to the study in question. This is to say, the formulation of an economic model is dependent on available information on the study as embedded in standard theories and other major empirical works, or else, the model was theoretical. In order to determine the dynamic and simultaneous inter-relationship between banking industry profitability and its determinants, an empirical model used by (Davydenko,2010) According to William (2010), model building involves specifying relationships between two or more variables; perh In addition, as noted in Gujarati (2004) if the number of time series data is larger than the number of cross-sectional units there is likely to be little difference in the values of the parameters estimated by fixed effect model and random effect model. Hence, the choice here is based on computational convenience. Therefore, fixed effect model may be preferable than random effect model (Gujarati, 2004). aps extending to the development of descriptive or predictive equations. In order to achieve the objectives of this research study, the panel data regression model used to identify the relationship between the profitability of insurance companies and explanatory variables like ,tangibility, leverage ratio, liquidity ratio, , and, inflation. the collected panel data would be analyzed using descriptive statistics, correlations, multiple linear regression analysis and inferential statistics.

In light of the above, to investigate the effect of insurance-specific and macroeconomic determinants of insurers profitability, the following general multiple regression model was adopted from different studies conducted on the same area.

$$Yit = \alpha + \beta 1\ (ISD)xt + \beta 2(MED)yt + Єit$$

Where;

Yit represents the dependent variables of insurance i for time period t.

α is the intercept

(ISD) xt represent the x-th insurance specific determinants at time t;

(MED) yt represent the y-th macroeconomic determinants at time t ;

Єit is the error term

In this models, all independent variables would be entering to the regression equation at once to examine the relationship between the whole set of forecaster and dependent variable. The aim of this analysis will be to determine which independent variables are highly significant to determine the company's profitability. The following regression equation is estimated as follow:

1) $PROi,t= \alpha + \beta 1INFi,t + \beta 2LVi,t + \beta 3LQi,t + \beta 4TNGi,t + Єi,t$……..…(1)

Where:

- PROAi,t =Profitability of Insurance i at time t
- LV=leverage
- LQ= liquidity
- INF = inflation
- ING= tangibility
- Є =is the error component for company i at time t

 α = Constant

 β1… β9= coefficient of independent variables

 i = Insurance company i = 1. . . 5; and t = the index of time periods

CHAPTER FOUR

4. DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of the results of the study. The data were analyzed by using E-views 8 software. The descriptive statistics and the correlation analysis were discussed. Followed by the diagnostic test, which is necessary to fulfill the assumption of the classical linear regression model. Then, econometric analysis and discussion of the main finding of the study were presented. Finally, the results of the regression analysis were discussed by supporting empirical evidence.

4.1. Descriptive Statistics

This section presents the descriptive statistics of dependent and independent variables used in the study for the sample insurance companies. The dependent variables used in the study were PRT while the independent variables were, leverage, liquidity, tangibility of asset, and inflation. Thus, the total observation for each dependent and explanatory variable was 77 (panel data of 7 insurance companies for 11 years). The table 4.1 demonstrates the mean, standard deviation, minimum and maximum values for the dependent and independent variables for sample insurance companies over the year 2008 to 2018..

Table 4.1summery of descriptive statics for dependent and in dependent variable

	PRT	INF	LEV	LIQ	TANG
Mean	0.080519	0.156545	0.692338	1.062181	0.201688
Median	0.080000	0.099000	0.690000	0.999000	0.180000
Maximum	0.180000	0.364000	0.820000	2.918900	0.540000
Minimum	0.030000	0.028000	0.500000	0.543100	0.040000
Std. Dev.	0.030775	0.109707	0.064704	0.345931	0.111502
Observations	77	77	77	77	77

Source: Own estimation via Eviews-8, Descriptive statistics result

The dependent variables used in the study were profitability while the independent variables were tangibility, leverage, liquidity, and inflation. Thus, the total observation for each dependent and explanatory variable was 77.

The PRO measured has a mean value of 0.080519 this indicates that the sample insurance on average earned net profit before tax of the total asset. Since PRO indicates the efficiency of the management of a company in generating net profit before tax from all the resources of the institutions, the higher PRO shows that the company is more efficient in using its resources. The maximum value of PRO was 0.180000 and minimum value of 0.030000 That means the most profitable and least profitable insurance company among the sampled insurances earned net income before tax for a single birr invested in the total assets of the firm respectively. And 0.030775 standard devetion of PRO.

Regarding the independent variables,

Leverage ratio (LR) shows the long term solvency position of a company and it has a lowest value of 0.500000 (this shows that from every 1 br. Of total shareholders' equity noting is financed thorough liability by awash insurance company in 2004. While maximum leverage ratio is 0.820000 (this shows that 82% of the total shareholders' equity of the insurance company are financed through liability or by creditors). On average, insurance companies have leverage ratio of 0.692338, which means 69% total shareholders' equity are financed through liability. Leverage ratio deviated from the mean is 0.064704. This implies that there were large differences among leveraged level as measured by debt to equity ratio across the sample insurance companies under this study and it also indicates those insurance companies are leveraged because they used debt than equity for financing purpose. The trade of theory suggests a positive relationship between profitability and leverage ratio. It says more profitable firms should prefer debt financing to get benefit from tax shield.

Liquidity measures the ability of insurance companies to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses (LIQ) is measured by dividing current asset to current liability. As clearly shown in the above table LIQ resulted a maximum of 2.918900 and minimum of 0.543100. The mean value of the companies LIQ is 1.062181 this implies

on average the companies have br. 1.06 current assets to pay every 1 br. Current liability and standard deviation is0.345931. This asset huge gap comes from their operational success and history of their existence.

Tangibility of assets (TAN) which is measured by dividing fixed asset by total asset shows the composition of the total asset with regards to current and fixed asset. It shows that, the maximum values of 0.540000 which means for every Br. 1 of total asset there is 54% cents of fixed asset. This implies that, insurance companies are highly composed of current assets which may lead them to positive effect on profitability because tangible assets are easily monitored and provide good collateral and thus they tend to mitigate agency conflicts between shareholders and creditors. and minimum of 0.040000. The mean value of the companies TAN is0.201688. standard deviation is 0.111502.

Inflation rate of the country on average over the past fifteen years was 94%. The maximum inflation was recorded 0.364000 and the minimum was about 0.028000 The rate of inflation was highly dispersed over the periods under study towards its mean with standard deviation of 0.109707 This implies that inflation rate in Ethiopia during the study period was somehow unstable which may affect the insurance company's profitability.

4.2. CLRM assumptions and Diagnostic tests

4.2. The Errors have zero mean (E (ut) = 0)

According to Chris B. (2008), if a constant term is included in the regression equation, this assumption will never be violated. Thus, since the regression model used in this study included a constant term, this assumption was not violated.

4.2.1 Heteroscedasticity Test

The homoscedasticity is one of the assumptions of the CLRM which states that the variance of the errors must be constant. If the errors do not have a constant variance, they are said to be heteroskedastic (Chris B., 2008). If heteroscedasticity occur, the estimators of the ordinary least square method are inefficient and hypothesis testing is no longer reliable or valid as it will under estimate the variances and standard errors.

Heteroskedasticity Test: White

F-statistic	2.930904	Prob. F(14,62)	0.0018
Obs*R-squared	30.66518	Prob. Chi-Square(14)	0.0062
Scaled explained SS	21.26758	Prob. Chi-Square(14)	0.0950

Source: computed via E-views 8, Heteroscedasticity result.

In this study as shown in table 4.2 and 4.3 above both the F-statistic and Chi-Square versions of the test statistic gave the same conclusion that there is evidence for the presence of heteroscedasticity in both models, since the p-values were in excess of 0.05 or 5%.

4.2.2 Test for Autocorrelation

It is assumed that the distribution errors are uncorrelated with one another and that the errors are linearly independent of one another. Autocorrelation error happens when there is a serial correlation between residuals and their own past values. In this study, Breusch Godfrey Serial Correlation LM Test is used to carry out the autocorrelation test. The pvalue is obtained to examine whether the autocorrelation problem occurs in the model. If the p-value is more than 5% significant level, it implies that there is no autocorrelation problem in the model.

The hypothesis for the model specification test was formulated as follow; H_0: There is no autocorrelation problem.

H_1: There is autocorrelation problem.

$\alpha = 0.05$

Decision Rule: Reject H_0 if P value is less than significant level 0.05. Else, do not reject H_0.

Table 5: Result of Autocorrelation Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	2.222958	Prob. F(35,37)	0.0921
Obs*R-squared	52.18369	Prob. Chi-Square(35)	0.2310

From table 5, it can be concluded that this research do not reject null hypothesis (H_0), since the p-value is 0.0921, which is greater than significance level of 0.05. Thus, it can be concluded that the model does not consists of autocorrelation problem

4.2.3 Multicollinearity Test

Multicollinearity means the existence of a "perfect" or exact, linear relationship among some or all explanatory variables (Gujarati D, 2004). If multicollinearity is perfect, the regression coefficients of the explanatory variables are indeterminate and their standard errors are infinite. If multicollinearity is less than perfect, the regression coefficients, although determinate, possess large standard errors (in relation to the coefficients themselves), which means the coefficients cannot be estimated with great precision or accuracy. If there is no relationship between the explanatory variables (independent variable), they would be said to be orthogonal to one another. If the explanatory variables were orthogonal to one another, adding or removing a variable from a regression equation would not cause the values of the coefficients on the other variables to change (Chris B, 2008). According to Gujarati, (2004) multicollinearity could only be a problem if the pair-wise correlation coefficient among repressors is above 0.80. In addition, (Hair JF, 2006) argued that correlation coefficient below 0.9 may not cause serious multicollinearity problem.

	PRT	INF	LEV	LIQ	TANG
PRT	1.000000				
INF	-0.045020	1.000000			
LEV	-0.488938	0.170259	1.000000		
LIQ	0.362151	-0.058251	-0.367293	1.000000	
TANG	-0.313921	0.130916	0.078416	-0.075470	1.000000

Source: Computed via E-views 8, correlation matrix result

Table 4.4 above showed that there is no strong pair-wise correlation between the explanatory variables (LV, PRO, TAN, INF and LQDT). In this study the highest correlation coefficient is -0.488938. Thus, it can be concluded using the rule of both Gujarati, (2004) and (Hair JF, 2006) the all variables have low correlation power.

4.2.4 Normality Test

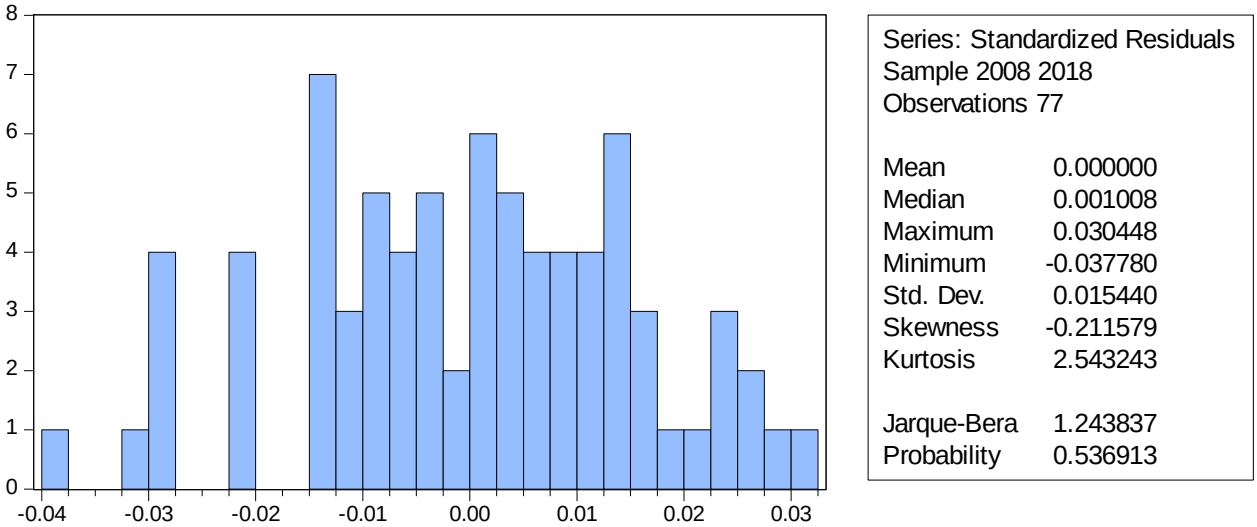
The normality test for this study is shown in figure 3, If the residuals are normally distributed, the histogram should be bell-shaped and the Bera-Jarque statistic would not be significant meaning disturbance to be normally distributed around the mean. This means that the p-value given at the bottom of the normality test screen should be bigger than 0.05 to not reject the null of normality at the 5% level. A normal distribution is not skewed and is defined to have a coefficient of kurtosis of 3 (Chris B., 2008). The hypothesis for the normality test was formulated as follow:

H0: Error term is normally distributed

H1: the error term is not normally distributed

Decision Rule: Reject H0 if P value of JB less than significant level. Otherwise, do not reject H0.

Figure 3. Normality test for PRO model



Source: Own estimation via Eviews-8, Bera-Jarqu normality test

As shown in figure 3 since, the normality tests for this study the coefficient of kurtosis was greater than 3, and the Bera-Jarque statistic has a P-value of 0.536913 implies that the p-value for the Jarque-Bera test for models is greater than 0.05 which indicates that the errors are normally distributed. Based on the statistical result, the study rejects the null hypothesis of normality at the 5% significance level this implying that the data were not normally distributed

4.3 Model Selection

Fixed Effect versus Random Effect

There are generally two classes of panel estimator approaches that can be employed in financial research: fixed effects models (FEM) and random effects models (REM). It is also necessary to determine whether the fixed effect or random effect approach is appropriate. A common practice in corporate governance research is to make the choice between both approaches by running a Hausman test (Chris B., 2008). To conduct a Hausman test the number of cross section should be greater than the number of coefficients to be estimate. We can conduct 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	7.458225	4	0.0136

Source: E-views 8

The Hausman test shows that p-value < 0.5 thus we can use Fixed Effect Model.

4.4. Regression Analysis

This section presents the overall results of the regression analysis on the determinants of Ethiopian insurance companies' profitability. In this study profitability were used as proxy for measure. The regression analysis result is presented by using table for model.

4.4.1. Regression result of model PRT

Table 4.5 below shows the regression analysis for PRT. In this regression analysis the dependent variable is PRT while the independent variables are leverage, liquidity, tangibility and inflation. The following regression equation estimated as follow.

$$PRT_{i,t} = \alpha + \beta 1LV_{i,t} + \beta 2LQDT_{i,t} + \beta 3TNG_{i,t} + \beta 4INF_{i,t} + Є_{i,t}$$

Dependent Variable: PRT
Method: Panel Least Squares
Date: 01/04/21 Time: 23:51
Sample: 2008 2018
Periods included: 11
Cross-sections included: 7
Total panel (balanced) observations: 77

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.084166	0.030550	2.755009	0.0076
INF	-0.001547	0.018034	-0.085766	0.9319
LEV	-0.002164	0.041129	-0.052605	0.9582
LIQ	0.010863	0.006214	1.748235	0.0851
TANG	-0.066661	0.024646	-2.704755	0.0087

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.748276	Mean dependent var	0.080519
Adjusted R-squared	0.710137	S.D. dependent var	0.030775
S.E. of regression	0.016569	Akaike info criterion	-5.231016
Sum squared resid	0.018119	Schwarz criterion	-4.896186
Log likelihood	212.3941	Hannan-Quinn criter.	-5.097087
F-statistic	19.61924	Durbin-Watson stat	1.186062
Prob(F-statistic)	0.000000		

Source: Each insurance companies annual report, NBE and own computation via E-views 8

The regression results reported in the above Table depicted that, The R-squared and Adjusted R2 values of 0.748276 and 0.710137 respectively is an indication that the model is a good fit.

The R2 value is 0.7482 (74. %) which implies that 74% of fitness can be observed in the sample regression line. This can be further explained as 74% of the total variation in profitability is explained by the independent variables (leverage, liquidity, tangibility and inflation) jointly.

The remaining 26% of change is explained by other factors which are not included in the model. Furthermore, the F-statistic was 19.61924 and the probability of rejecting the null hypothesis that there is no statistically significant relationship existing between the dependent variable (PRO) and the independent variables, is 0.000000 indicates that the overall model is highly significant and that all the independent variables are jointly significant in causing variation in return on asset at 1% significance level.

Leverage

Leverage is measured by debt ratio (LV). The coefficient of leverage ratio is negative (-0.0002164) and statistically insignificant with p-value of -0.052605. The negative result shows that there is inverse relationship between PRO and LV. To support this the theories of capital structure tells us that the insurance companies with lower leverage will generally report higher PRO. Therefore, this negative relationship is expected and the result is consistence with previous studies which found a negative relationship between leverage and PRO, for instance Abate (2012), Hifza.M (2011) Teklit & Jasmindeep (2012), Nikhel B. et al. (2015), Andres & Stephen (2013) and several others. This shows higher the insurance companies assets financed through debt the lower will be its return on asset

Liquidity

Liquidity is measured by Current Ratio (CR). The above table depicted that, the coefficient of liquidity measured by current assets to current liability is 0.010863 and its P-value is 1.748235 Holding other independent variables constant at their average value, when liquidity increased by 1%, (PRO) of sampled Ethiopian insurance companies would increase by 1.08%, but the relationship is statistically insignificant at 5% of significance level. In other words, there is insignificant positive relationship between liquidity and (PRO) of sampled Ethiopian insurance companies. Therefore, the researcher rejects the null hypothesis that there is negative relationship between liquidity and PRO. This means, there is no sufficient evidence to support the negative relationship between liquidity and PRO. This positive relationship is not expected but the result is consistence with previous studies which found a positive relationship between liquidity and PRO, for instance, Suheyli (2015), Nikhel et al. (2015), Charumathi B. (2012) and Edlira.L (2016). The higher the insurance company's liquidity the higher will be its return on asset as well.

Tangibility of assets

Tangibility of asset is measured by dividing fixed asset by the total asset (TAN). The coefficient of TAN is negative -0.066661and statistically significant with p-value of -2.704755 which is less than 0.05. The negative result shows that there is indirect relationship between tangibility of asset and PRT. The regression result is in consistent with the hypothesis of the study. The regression result of this study regarding the effect of tangibility of assets of insurance companies

on their profitability is similar with empirical evidences by Meaza M. (2014), Kalkidan (2016) and Malik (2011). It revealed that there exists a negative relationship between tangibility of assets and profitability of insurance companies in Ethiopia due to the fact that lower the firm's total assets are composed of fixed asset the lower will be its PRT because tangible assets provide less collateral for the insurers.

Inflation

Inflation (INF) is measured by the growth in selling price of products in the country. The regression result shows that inflation has a positive and insignificant impact on profitability of Ethiopia insurance companies, since the beta coefficient and probability of INF are -0.001547 and -0.085766 respectively. This means when inflation increased by 1%, profitability of sampled Ethiopian insurance companies would decrease by -0.001547 the relationship is statistically significant at 5% of significance level.So, the researcher rejects the null hypothesis that there is negative and significant relationship between inflation and PRO, since it is inconsistent with the regression result of the study. From the actual result one can conclude that inflation do not have influence on Ethiopian insurance companies' profitability since the study could not get enough statistical result that support PositivDe and significant relationship between inflation and PRO. This result is also consistent with findings by Andres C. (2017), Godfrey (2012), and Hadush G. (2015) who found significant positive relationship between inflation and PRO.

4.5 Summary of Analysis

Table 4.7: Summary and Comparison of test result with expectation for ROA model

Dependent variable		PRT		
Explanatory variables	Expected relationship	Actual relationship	Statistical significance Test	Hypothesis status
LIQ	Negative	Positive	significant	Rejected
LV	Negative	Negative	Insignificant	Rejected
TAN	Positive	Negative	Insignificant	Accept
INF	Negative	Negative	Insignificant	Rejected

As shown from the above summary table 4.7 the independent variables: liquidity and inflation were deviated from the expected results it implies the researcher hypothesized negative relationship between liquidity and PRT but the finding result is positive. So, the possible reason for the positive association between liquidity and PRT could be attributed to the fact that, Ethiopian insurance companies are more liquid.

Companies with a more level of liquidity will have more cash and will have less difficulty in repaying to policyholders when loss occurred. In additions the insignificant positive relationship between inflation and PRO while the researcher expected negative relationship is due to the reason of transferring effect which implies as inflation increases insurance companies forced to raise their premium in order to maintain their profit margin. Therefore, the researcher rejected the null hypothesis of both liquidity and inflation.

CHAPTER FIVE

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSION

Profitability is the central issues to the company's overall operational activities. Improving the company's financial performance is highly contributing to the development of the country economy. Recently there is highly an increasing interest in research on profitability of the companies. However, major determinants of profitability in the insurance companies are not well understood in the current different finance literatures in both developed and less developed countries because profitability determinants are not the same from one country to another country; even from one sector to another sectors. In some countries, the firm-specific factors are highly affects profitability of the organizations whereas industry-specific and macroeconomic factor are most powerful determinants of profitability in some or other countries.

Based on the findings, it can be concluded that Liquidity has positive impact on profitability; which means any increase/decrease on the value of Liquidity variable lead to an increase/decrease on the profitability of Ethiopian insurance company. And also tangibility, leverage and inflation have negative impact on profitability. Which means any increase/decrease on the value of these variables leads to a decrease/increase on profitability of Ethiopian insurance companies.

5.2 RECOMMENDATIONS

Depend on this study; there is long run relationship between Ethiopian insurance profitability and Economic growth. Hence there is a need for more efforts to increase transparency and efficiency in Ethiopian insurance industry through legislation and risk management product innovations and education in insurance industry. Overall these empirical results improve evidence that the profitability of Ethiopian insurance companies is shaped by firm-specific factors that are affected by firm-level management. However, macroeconomic variables do not look to significantly affect. So, the insurance managers and policy makers should give high

concern to firm-specific determinants of profitability. Management bodies of insurance companies should attempt to give an emphasis to firm specific factors like liquidity, leverage ratio and tangibility of asset. Because, those firm specific factors have significant effect on Profitability of the company.

The objective of this study was to examine the internal and external factors affecting profitability of insurance companies as measured by ROA for the period of 2008-2018.

The study finds insignificant effect of macroeconomic factors. The studied period is considered as inflated period so further research on profitability in insurance companies, it is better to use longer period of observation to effectively examine the effects of macroeconomic variables on profitability of insurance companies and further research should examine based on insurance type (life and non-life) that would provide better insight for determinants of insurance company profitability.

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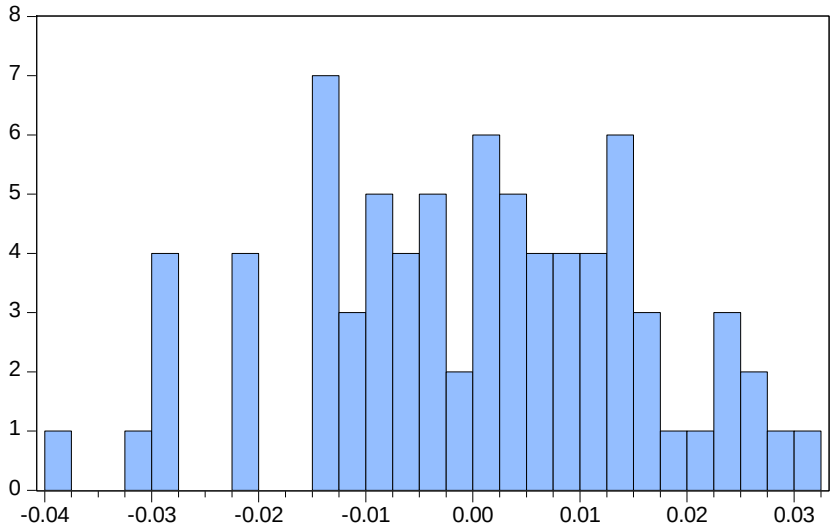
APPENDIX

	PRT	INF	LEV	LIQ	TANG
Mean	0.080519	0.156545	0.692338	1.062181	0.201688
Median	0.080000	0.099000	0.690000	0.999000	0.180000
Maximum	0.180000	0.364000	0.820000	2.918900	0.540000
Minimum	0.030000	0.028000	0.500000	0.543100	0.040000
Std. Dev.	0.030775	0.109707	0.064704	0.345931	0.111502
Observations	77	77	77	77	77

correlation

	PRT	INF	LEV	LIQ	TANG
PRT	1.000000				
INF	-0.045020	1.000000			
LEV	-0.488938	0.170259	1.000000		
LIQ	0.362151	-0.058251	-0.367293	1.000000	
TANG	-0.313921	0.130916	0.078416	-0.075470	1.000000

normality



Series: Standardized Residuals
Sample 2008 2018
Observations 77

Mean	0.000000
Median	0.001008
Maximum	0.030448
Minimum	-0.037780
Std. Dev.	0.015440
Skewness	-0.211579
Kurtosis	2.543243
Jarque-Bera	1.243837
Probability	0.536913

Heteroskedasticity Test: White

F-statistic	2.930904	Prob. F(14,62)	0.0018
Obs*R-squared	30.66518	Prob. Chi-Square(14)	0.0062
Scaled explained SS	21.26758	Prob. Chi-Square(14)	0.0950

Auto correlation

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	2.222958	Prob. F(35,37)	0.0921
Obs*R-squared	52.18369	Prob. Chi-Square(35)	0.2310

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	7.458225	4	0.0136

Regression

Dependent Variable: PRT
Method: Panel Least Squares
Date: 01/04/21 Time: 23:51
Sample: 2008 2018
Periods included: 11
Cross-sections included: 7
Total panel (balanced) observations: 77

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.084166	0.030550	2.755009	0.0076
INF	-0.001547	0.018034	-0.085766	0.9319
LEV	-0.002164	0.041129	-0.052605	0.9582
LIQ	0.010863	0.006214	1.748235	0.0851
TANG	-0.066661	0.024646	-2.704755	0.0087

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.748276	Mean dependent var	0.080519

Adjusted R-squared	0.710137	S.D. dependent var	0.030775
S.E. of regression	0.016569	Akaike info criterion	-5.231016
Sum squared resid	0.018119	Schwarz criterion	-4.896186
Log likelihood	212.3941	Hannan-Quinn criter.	-5.097087
F-statistic	19.61924	Durbin-Watson stat	1.186062
Prob(F-statistic)	0.000000		