St. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES

FACTORS DETERMINING PERFORMANCE OF NON-LIFE INSURANCE BUSINESS IN ETHIOPIA

BY

MAYETMELKAM ZEYEDE

JUNE, 2018

SMU

ADDIS ABABA, ETHIOPIA

ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES

FACTORS DETERMINING PERFORMANCE OF

NON-LIFE INSURANCE BUSINESS IN ETHIOPIA

BY
MAYETMELKAM ZEYEDE

A THESIS SUBMITTED TO ST.MARY'S UNIVERSITY, SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION IN ACCOUNTING AND FINANCE

ADVISOR:
DR. ABEBAW KASSIE

JUNE, 2018

SMU

ADDIS ABABA, ETHIOPIA

DECLARATION

I, the under signed, declare that this thesis is my original work and has not been presented for a degree in any other university and that all sources of materials used for the thesis have been duly acknowledged.

Name: **MAYETMELKAM ZEYEDE**

Signature: _____

Date: _____

This thesis has been submitted for examination with my approval as University Advisor

Name: **Dr. Abebaw Kassie**

Signature: _____

Date: _____

ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES

FACTORS DETERMINING PERFORMANCE OF
NON-LIFE INSURANCE BUSINESS IN ETHIOPIA

BY
MAYETMELKAM ZEYEDE

APPROVED BY BOARD OF EXAMINERS

_____ _____
Dean, Graduate Studies   **Signature**

Dr. Abebaw Kassie   _____
Advisor   **Signature**

_____ _____
External Examiner   **Signature**

_____ _____
Internal Examiner   **Signature**

ACKNOWLEDGMENTS

TABLE OF CONTENTS

CHAPTER ONE

INTRODUCTION

CHAPTER TWO

LITERATURE REVIEW

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

CHAPTER FOUR:

RESULTS AND DISCUSSIONS

CHAPTER FIVE:

CONCLUSION AND RECOMMENDATION

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS/ABBREVIATIONS

- EIC : Ethiopian Insurance Company
- FEM : Fixed Effect Model
- GDP : Gross domestic Product
- NBE : National Bank of Ethiopia
- ROA : Return on Asset
- SZ: Company Size (size)
- SM: Solvency margin
- LQ: Liquidity Ratio
- RD: Reinsurance dependence
- LR: Loss Ratio
- TeP: Technical provisions
- GDP: Gross Domestic Product
- INF: inflations
- VIF: Variance Inflation Factor
- REM : Random Effect Model

ABSTRACT

The main objective of this study is to examine factors determining performance of General/Non-life Insurance Companies operating in Ethiopia. As a result, this study adopts Explanatory research method to meet the objective of the study. Data collected from National Bank of Ethiopia (NBE) and nine non-life insurance companies operating in Ethiopia from the period 2003-2017. Furthermore, interview is employed as a tool to collect the primary data to meet objectives of the study. Random effect panel data model is employed to analyze the panel data of the study. The finding of the study indicate that, Company Size, Reinsurance dependence, Loss Ratio, Technical provisions, Gross Domestic Product have statistically significant relation with the performance of General Insurance in Ethiopia, which is measured by Return on Asset. On the other hand, the remaining three variables; namely, Solvency margin, Liquidity and inflations independent variables proved to have statistically insignificant influence on the dependent variable. Furthermore, the findings of the study indicate that Low public awareness, Less accessibility/Urban centered service, Identical products/absence of product differentiation, Existence of price based competition only, Scarce man power, Government intervention through NBE, Unfair playing and Weak cooperation among players in the industry are the major challenges on the performance of non-life/general insurance business in Ethiopia. Based on findings of the study, Ethiopian Non-life Insurance needs to give prime emphasis for their Company Size, Reinsurance dependence, Loss Ratio Technical provisions and Gross Domestic Product because those factors have significant influence on their performance.

Key Terms: Insurance, General/Non-Life Insurance, Performance Determinants, Return on Asset (ROA)

CHAPTER ONE

INTRODUCTION

1.1. BACKGROUND OF THE STUDY

The fundamental idea behind establishment of every insurance company is to transfer risks from one economic unit to the other and income from the good state (favorable class of business) to the bad state in order to ease investment and resources arrangements. This leads to define the term insurance as a device which provides protection against loss related with property and life (Malik, 2011).

There are two broad types of insurance service; life & non-life/general insurance service. Life insurance is a contract between an insurance policy holder and an insurer or assurer, where the insurer promises to pay a designated beneficiary a sum of money (the benefit) in exchange for a premium, upon the death of an insured person (often the policy holder). Depending on the contract, other events such as terminal illness or critical illness can also trigger payment. Non-life/general insurance is a contract between an insurance policy holder and an insurer, which is insurer promises to pay a designated beneficiary a sum of money (the benefit) in exchange for a premium upon the damage or loss of properties and liabilities that mainly includes a cover for vehicles, marine, engineering materials, fire related accidents and pecuniary classes of risks (Öner, 2015).

Insurance industry is part of immune and repair systems of an economy by protecting firms and citizens against adverse events and sets impetus for other industries. It is also one of the basic components in the economy and considerably contributes to the development of a given economy by promoting financial and social stability. To help the development of this industry, it is compulsory to know its determinants and how to measure its performance (AGNES, 2013).

Thus, the financial performance analysis of insurance company is becoming an important. The financial performance of insurance companies can be analyzing at macroeconomic level and micro. Macroeconomic context since the insurance industry is one of the financial system' components, fostering economic growth and stability and this regarding connected institutions and macroeconomic environment. And also the financial performance of insurance companies can be analyzing at micro context that is specific characteristics of the company regarding internal factors that determined the financial performance of insurance companies (Abate, 2012).

Different scholars measured the financial performance of the insurance company measured by using its profit. According to (OINO, 2013), stated that a business orientated companies to measure their performance it will be focused on the financial performance the companies (revenue or profit the company's) because, the major objective any business activities of an organization, company, firm, or an enterprise is making profit by using all the resources available in the market and they should earn sufficient profits to survive and grow over a long period.

Generally, factors determining performance of insurance industry can be internal & external. Internal factors are those under control of the company while the external factors include the economic, political, social and environmental situations.

Hence, this paper tried to examine internal and some of the external factors influencing performance of those insurance companies dealing with non-life/general insurance service in Ethiopia. In addition, the paper attempted to assess the trend and challenges being face by Ethiopian general insurance companies.

1.1.1. BACKGROUND OF ETHIOPIAN INSURANCE COMPANIES

When we see the world Insurance practice dates back to around 3,000 BC in China, where merchants and their investors shared the risk of goods lost while shipping overseas. A similar concept evolved in Babylon; Greeks and Romans introduced health and life insurance around 600 BC when they created benevolent societies which cared for the families of deceased members Ethiopian modern insurance history starts from the early twentieth century as a result European entrepreneurs who came from Great Britain, Italy, France and others, founded insurance business; foreigners dominated the sector until 1960s (Hailu, 2007)

the Establishment of the first domestic insurance company, namely Imperial Insurance Limited Company in 1951, paved the way for the creation of more insurance companies in the country. As a manifestation, there were 13 domestic insurance companies in. The sector was fully controlled by foreign companies until the establishment of Imperial Insurance Limited Company, the first domestic insurance company, in 1951.Foreign companies' dominancy in Ethiopian insurance sector continued up to 1960s. To exemplify, there were 33 insurance companies operating in Ethiopia in 1960, of which, Imperial Insurance Limited was the only domestic insurance company But, following the coming of "Derg" as government, all private companies nationalized and merged to

create a single state owned insurance company called Ethiopian Insurance Corporation-EIC. It was happened in 1976 and since then, EIC came to be a monopoly insurance firm until 1994, a point of time when the country made a reform on the financial sector to allow private insurance companies to enter in to the market by proclamation No. 86/1994 (NBE,2017).

The information from (NBE, 2017), There are 17 insurance companies operating with 492 branches in Ethiopia, of which 16 were privately owned and one is public. Of the total 17 insurance companies operating in Ethiopia, ten (10) are dealing with both general (non-life) and life businesses as composite insurers and the remaining seven (5) do only general insurance businesses.

1.2. STATEMENT OF THE PROBLEM

Insurance sector in general plays an important role in reducing impact of large losses, encouraging investment, allowing companies to concentrate on their core businesses and so on. This means that insurance companies also used to provide fund for additional investment, create employment opportunity, increase productivity& creativity of existing business and other organizations. Moreover, it sets synergy on other economic units by giving peace of mind, which means a lot for any society, in addition to indemnifying (Getahun, 2014).

The global insurance sector is dominated by developed nations as any other sectors. World's wealthiest countries; Canada, France, Germany, Italy, Japan, UK and USA, alone accounts for almost 65% of the world's insurance premiums production even though covers only about 10% of the world's population. The worldwide insurance sector penetration rate (premium to GDP ratio) was 6.5% while Africa as a continent registered about 3.6%, which is less almost by half than the world industry average According to (Swisse Re, 2016).

The share of Africa from the global level premium collection as a continent was about 1.6% which is among the lowest in the world. Africa's insurance density (premiums per capita) is the lowest of any region in the world. This is to mean that, on average, each African paid $66.4 insurance premium in 2012, which is roughly one-tenth of the global average. If South Africa, which is known for its well-developed insurance market and among the highest penetration in the world, excluded from the calculation, the average penetration rate for the rest of the nations in the continent would have been only 1.04%.Insurance sector in Africa is characterized by under

development and among the lowest in penetration owing to different factors. The factors mainly include structure of the economy (agriculture based), lack of reliable information/awareness, and shortage of skilled man power, excessive state intervention and most importantly non-affordability of insurance premiums pertaining to poverty of the people living in the continent (Flamini, McDonald, & Schumacher, 2015).

According to (NBE, 2017), witnessed that Ethiopian insurance industry contributed only 0.43% to the national 2014/15 GDP, which is by far lower compared with African average penetration of 3.6%. Ethiopia's insurance market contribution to the gross domestic product (GDP) in 2011 fiscal year was only 0.2%.

Regarding with this, there are several empirical studies conducted by different individuals targeted at investigating factors determining performance of insurance sector in Ethiopia. (Abate, 2012), (Meaza, 2014), (Mistre, 2015 and (Suheyli, 2015) are among the researchers who conducted studies on the determinants of insurance companies in Ethiopian in general. As to the best knowledge of this study, previous papers done on Ethiopian insurance industry focused only on factors affecting performance of insurance companies in general without grouping in to life & none life though the two insurance segments are studied separately in other courtiers context. To mention some of them, (Delhausse, 2015) and (Öner, 2015)are assessed determinants of performance of general/non-life insurance in Kenya and Poland respectively.

Based on this, this study designed in such a way that focuses on the areas not addressed by the preceding studies. Therefore, this study focused on factors/determinants that influencing the performance of non-life insurance. The non-life part is preferred to be studied separately for the reason that it is the significant segment in terms of premium production. According to (NBE, 2017), non-life insurance got the dominant position in Ethiopian insurance market by constituting on average more than 90% of the total national premium production for the last 6 fiscal years. Moreover, factors that determine performance of life & nonlife insurance businesses are supposed not to be the same owing to difference in their nature.

1.3. OBJECTIVE OF THE STUDY
1.3.1. GENERAL OBJECTIVE

The overall objective of this study is to analyze factors affecting performance of the non-life/general insurance business in Ethiopia.

1.3.2. SPECIFIC OBJECTIVES

Bearing the general objective in mind, the paper attempted to address the following specific objectives:-

1. To identify the internal (micro) factors affecting performance of the non-life/general insurance business in Ethiopia
2. To identify the external (macroeconomic) factors affecting performance of the non-life/general insurance business in Ethiopia
3. To investigate challenges faced by non-life insurance firms in Ethiopia

1.4.   SIGNIFICANCE OF THE STUDY

Insurance company play unquestionable role in sustainable economic development of a country through providing the required financial services to the economy. As described in the previous sections, this study is design to investigate the significance of major types of insurance profitability determinants in Ethiopia insurance sector. Based on a result, identifying the insurance profitability determinants and understanding their level of significance in Ethiopia context could have a great importance to both internal and external stakeholders of the insurance.

This study will have a great importance for the management of each insurance company operating in Ethiopia through identifying significant factors that determine the profit and take correct measure to maintain their profitability. It also will have a great importance regulatory an authority which is regulating the sector to gain deep knowledge about the relationship of internal factors and profitability and others who have interest on insurance industry profitability such as investors in their investment decision on the insurance, the community for which the insurance service is provider. In addition, other interested researchers on this area may use as a source for detailed and further studies.

1.5.   SCOPE OF THE STUDY

The main concern of this study is to examine factors which determine performance of non-life/general insurance companies operating in Ethiopia. Performance of non-life/general insurance in Ethiopia can be influenced by internal/company specific and external factors. But, this study focused on the internal factors along with only one of the external factor, which is GDP of the nation. Furthermore, the study assessed the trend, current status and challenges being faced by Ethiopian general insurance companies.

Regarding length of data, 15 years' data is taken for all variables in the study in order to assure significance of correlation & realistic estimation result. Consequently, the study considered all general insurance companies in Ethiopia, except those under 15 years of age. This specification excluded 8 general insurance companies and left with nine companies. Therefore, the study considered only nine of seventeen insurance companies operating in Ethiopia.

1.6. Organization of the paper

The research paper was organized in to five chapters. Chapter one is introduction where overview of the insurance industry in Ethiopia, statement of the problem, objectives of the study, scope and limitation, and significance of the study presented. Chapter two is review of literature in which theories, empirical evidence and conceptual frame work are identified. Chapter three is research methodology. Chapter four is results and discussion in which the finding results are interpreted. Finally, Chapter five brings to an end the research with conclusion and possible recommendation.

CHAPTER TWO
LITERATURE REVIEW

This chapter deals with about concept of insurance, profitability related theories, empirical literature review and their conclusion & knowledge and the conceptual frame work of the study presented by each section respectively.

2.1. CONCEPT OF INSURANCE

According to (Naveed & Ahmad, 2011), Insurance is a risk transfer mechanism that ensures full or partial financial compensation for the loss or damage caused by event(s) beyond the control of the insured party. Under an insurance contract, a party (the insurer) indemnifies the other party (the insured) against a specified amount of loss, occurring from specified eventualities within a specified period, provided a fee called premium is paid. Insurance compensation is normally proportionate to the loss incurred and the basic purpose is to put the insured in same financial position as he/she was before the loss.

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.
The financial system comprises of financial institutions, financial instruments and financial markets that provide an effective payment, credit system, risk transfer, and there by facilitate channelizing of funds from savers to the investors of the economy (Charumathi, 2012)

The term insurance defined by referring two important schools of thoughts: i) transfer school and ii) pooling school. According to transfer school, "insurance is a device for the reduction of uncertainty of one party, called the insured, through the transfer of particular risks to another party ; called the insured, who offers a restoration, at least in part of economic losses suffered by the insured" (Boadi & Lartey, 2013). According to pooling school "the essence of insurance lies in the elimination of uncertainty or risk of loss for the individual through the combination of large number of similarly exposed individuals" (Chen & Wong, 2004), Insurance operates on the principle of pooling risks where the people contribute to a common fund in form of premiums and where the lucky ones who

do not suffer loss help the unlucky ones who suffer loss during a defined insurance period (Kripa, 2016)

It seems Insurance not only facilitates economic transactions through risk transfer and indemnification but it also promotes financial intermediation (Shala, Ahmeti, Berisha, & Perjuci, 2014). More specifically, insurance can have effects such as promote financial stability, mobilize savings, facilitate trade and commerce, and enable risk to be managed more efficiently, encourage loss mitigation, foster efficient capital allocation and also can be a substitute for and complement government security programs (Muriith & Onuonga, 2009)

Insurance provides economic protection from identified risks occurring or discovered within a specified period. Insurance is a unique product in that the ultimate cost is often unknown until long after the coverage period, while the revenue premium payments by policyholders are received before or during the coverage period (Daniel & Tilahun, 2013).

Insurance is an important growing part of the financial sector in virtually all the developed and developing countries a resilient and well regulated insurance industry can significantly contribute to economic growth and efficient resource allocation through transfer of risk and mobilization of savings. Insurance business is usually divided into two main classes namely: a) General insurance business - This is a contract between an insurer and the insured where by the insurer undertakes to indemnify the assured against losses, which may result from the occurrence of specified events within specified periods. General insurance business can be subdivided into: motor, fire, accident, oil and gas, contractors' all risks and engineering risks; marine and credit insurance, bond and surety ship etc. This is a contract between the assurer and the assured whereby the assurer undertakes to pay benefits to the policy holder on the attainment of a specified event. b) Life assurance business: comprises individual life business, group life insurance and pension business, health insurance business and annuities (Mistre, 2015).

2.2.   THE CONCEPT OF INSURANCE PROFITABILITY

According to (Fikre.M, 2015) Profitability could be mentioned as one of the major aims of any kind of economic activity. It is one of the main objectives of financial management of a business in way of maximizing the shareholder's value. In other words, profitability is a measure to analyze whether a business has been successful or not. Profitability is use to determine the company's bottom line and it shows a company's overall efficiency and performance as the result it is so important to company managers and owners alike. Specifically, if a firm has outside investors who have put their own money into the company, the primary owner and/or management certainly has to show profitability to those equity investors. However, a business has to pass through various internal and external obstacles to achieve these objectives.

In a competitive environment, profitability is mean reverting within as well as across industries. Other firms eventually mimic innovative products and technologies that produce above normal profitability for a firm. 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 (Duett & Hershbarger, 1992).

According to (Malik, 2011) insurance plays a crucial role in fostering 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.

(Getahun, 2014) stated in his 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.

Profitability is a measure of evaluating the overall efficiency of the business. The best possible course for evaluation of business efficiency may be input-output analysis. Profitability can be measured by relating output as a proportion of input or matching it with the results of other firms of the same industry or results attained in the different periods of operations. Profitability of a firm can

be evaluated by comparing the amount of capital employed i.e. the input with income earned i.e. the output. This is popularly known as return on investment or return on capital employed. Profitable means that insurance companies are earning more revenues than being disbursed as expenses.

2.3. THEORIES RELATED WITH PROFITABILITY

Different theories of the firm try to explain why firms exist. What forms firm and market boundaries and why there are differences in their organization and performance. This paper aims to determine connection between Age of company, Size of company, leverage, risk / loss ratio, and The volume of capita and its profitability in the insurance industry in Ethiopia. The effect of firm on profitability can be viewed from three categories of theories namely principal agent theory, institutional theory and strategic theories explained below.

2.3.1. PRINCIPAL AGENT THEORY

Agency theory is concerned with the conflicting interests of principals and agents. According to (Jensen & Meckling, 1976) modeled that there is a conflict of interest between the managers and the owners of companies. The theory suggests that the separation of corporate ownership and control potentially leads to self-interested actions by managers. The owners contract the managers to perform the controlling tasks of a firm, and as both seek to maximize their own utility and are self-interested a conflict of interest arises. As the managers have the effective control of the firm, they have the incentive and the ability to consume benefits at the expense of the owners. The management may direct firm resources for their own selfish interest instead of using the resources to acquire assets or increase firm market share.

2.3.2. INSTITUTIONAL THEORY

Institutional theory suggests that organizations seek to behave in ways that will not cause them to be noticed as different and consequently singled out for criticism (Meyer & Rowan, 1977). The organization will ultimately become more similar in behavior over time and adopt approaches to businesses that have been legitimized (Powell & DiMaggio, 1983). As organizations compete for resources, customers, political power, and economic and social fitness, institutional theories speculate that organizations face pressures to conform to these shared notions of appropriate forms

and behaviors, since violating them may affect ability to secure resources and social support (Dimaggio & Powell, 1983). The notion of business growth and that larger is better than smaller is embedded in the institutional environment of organizations. Today's business education usually celebrates growth with the focus on larger firms, thus creating pressure from professional managers on firms to grow and become larger. Larger organizations within each industry are normally perceived as the most successful ones. Organization may enter into more debt in order to acquire more assets or for financing activities meant to increase their market share, all in the hope of being like other large firms. The firms with little resources may fall into liquidation since their might not be able to repay the debt.

2.3.3. STRATEGIC THEORIES

According to (Porter, 1980) there are three generic strategies that firms can use. Firms can attempt to attain overall cost leadership, product differentiation, or focus-based domination. When using product differentiation strategy (also referred to as benefit leadership), the firm's products are capable of commanding price premium relative to competitors, due to the perceived extra benefits of the products. The strategic logic is either to match the price of the rival firms and sell more than they do or to charge a price premium and attain higher price-cost margin than they are able to. When pursuing focus or niche strategy, the company configures its value chain so as to create superior economic value within a narrow set of industry segments. Within these segments, the firm may have lower cost per unit than the broader-scope rivals or it may be capable of commanding a price premium relative to them or both. In order to pursue an overall cost leadership strategy, the firm must be able to produce its products at lower per unit cost than the rivals and either undercut their prices and sell more or match their prices and attain higher price-cost margin than they can.

2.4. EMPIRICAL LITERATURE REVIEW

There are relatively more empirical literatures made on the area under study even though much of them are concentrated on insurance sector as a whole without segregating in to life and non-life. According to a paper done by Majed (2012), there are many financial ratios used by accountants and financial analysts, and most of these ratios can be classified as liquidity, activity (operational) profitability, and debt and market ratio. Among these ratios, profitability is an indicator for the

firm's overall efficiency. It is usually used as a measure for earnings generated by the company during a period of time. Profitability ratios measures earning capacity of the firm, and it is considered as an indicator for its growth, success and control on the top of indicating company's progress and the rate of return on investments. The ratios of the return on assets (ROA) and the return on owner's equity (ROE) are the most used profitability ratios in the analysis.

Firm size

A number of studies have been conducted to examine the effect of firm size on firm profitability (Mehari,D. and Aemiro, T. 2013) ; (Burca, A. M., & Batrinca, G. 2014) ; (Boadi, E. K., Antwi, S., & Lartey, V. C. 2013) ; According to (Öner, 2015).and (Suheyli, 2015) are among other researchers who investigate effect of size on firm profitability. However, the results are inconsistence.In numerous literatures, it has been suggested that company size is positively related to financial performance. For instance, (Suheyli, R. 2015) examines the Determinants of Insurance Companies Profitability in Ethiopia and the results of the study indicate that profitability of insurers is positively and significantly influenced by size. (Malik, 2011) also find significantly positive association between size of the company and profitability. Furthermore, (Abate, 2012) and (Daneiel and Tilahun, 2013) in their study results identified size as most important determinant factors of profitability and it is positively related. The main reasons behind this summarized as follows. First, large insurance companies normally have greater capacity for dealing with adverse market fluctuations than small insurance companies. Second, large insurance companies usually can relatively easily recruit able employees with professional knowledge compared with small insurance companies. Third, large insurance companies have economies of scale in terms of the labor cost, which is the most significant production factor for delivering insurance services. However, (Kripa, D., 2016) examined the Factors Affecting the Profitability of Insurance Companies in Albania. The results indicate that Company size is positively correlated with the profitability of insurance companies', but their impact is statistically insignificant.

Consequently, based on the above analysis, the following hypothesis formulate

H1: There is a positive relationship between company size and profitability of insurance companies in Ethiopia
Solvency Ratio (Capital adequacy)

Available solvency ratio means the excess value of assets over the value of insurance liabilities and other liabilities of policyholders' and shareholders' funds (Charumathi, 2012). The result in his study indicated that there is a significant positive relationship between profitability and solvency ratio. Solvency ratio is an important indicator of the financial health of an insurance firm and denotes its ability to survive in the long run. Insurance companies with higher solvency margin are considered to be sounder financially. Financially sound insurance companies are better able to attract prospective policyholders and are better able to adhere to the specified underwriting guidelines. Insurance companies with higher solvency margin outperform those with lower solvency margin (Suheyli, 2015).On the other hand, assuming that the company is in its first stage, the manager will choose to invest using the retained earnings in order to increase profitability. This means that the internal financing will continue until the retained earnings reach the amount of Zero. Furthermore, (Burca & Batrinca, 2014) found that the faster the growth, the more external financing firms will use. However, this increase in external financing is mainly through an increase in the liabilities, as the increase in external equity financing was not found significant. As a company grows, the solvency ratio will thus become smaller.

Consequently, based on the above analysis, the following hypothesis formulate

H2: There is a significant and negative relationship between Solvency margin and performance of the non-life/general insurance business in Ethiopia.

Liquidity ratio

Liquidity of insurance companies is measured by the ratio of current asset to current liability. This ratio shows that the capacity of insurance companies to meet any payments such as to pay out claims to policyholders. The ability to meet insurers' obligations towards these policy holders is extremely important. Insurers should have a positive cash flow to meet their immediate liabilities without affecting normal operation. The lower ratio of this reveals that the insurance company will face difficulty in meeting payments in the right time and hence its liquidity is low (Chen and Wong, 2004).

Empirical evidences with regard to liquidity revealed almost inconsistent results. For instance,(Boadi, Antwi, &Lartey, 2013) provide the evidence that there is a positive relationship between liquidity and profitability of insurance company's performance in Ghana.(B.Charumathi, 2012) examined the factors determining the profitability of life insurers operating in India taking return on asset as dependent variable. But other researcher result indicates that, (Abate, 2012)

reported negative but significant relation between liquidity ratios with profitability. On the other hand, the result of (Daneiel and Tilahun, 2013) and (Sumaira and Amjad, 2013) study revealed that liquidity has statistically insignificant relationship with ROA. The results of (Daneiel and Tilahun, 2013) Ethiopian insurance companies with more liquid assets are less likely to fail because they can realize cash even in very difficult situations.

Consequently, based on the above analysis, formulate the following hypothesis:

H3. Liquidity ratio has a negative and significant impact on the performance of the non-life/general insurance business in Ethiopia

Reinsurance Dependence

Insurance companies usually take out reinsurance cover to stabilize earnings, increase underwriting capacity and provide protection against catastrophic losses. Nevertheless, there is a cost for reinsurance. As a result, determining an appropriate ceding level is important for insurance companies, and they have to try to strike a balance between decreasing insolvency risk and reducing potential profitability. Although it increases operational stability, increasing reinsurance dependence, i.e. lowering the retention level, reduces the potential profitability. Purchasing reinsurance reduces insurers' insolvency risk by stabilizing loss experience, increasing capacity, limiting liability on specific risks, and/or protecting against catastrophes. However, transferring risk to reinsurers is expensive. The cost of reinsurance for an insurer can be much larger than the actuarial price of the risk transferred. Cummins, Dionne, Gagne, and (Abate, 2012), they analyzed empirically the costs and the benefits of reinsurance for a sample of US property-liability insurers. The results show that reinsurance purchase increases significantly the insurer's costs but reduces significantly the volatility of the loss ratio. With purchasing reinsurance, insurers accept to pay higher costs of insurance production to reduce their underwriting risk. Insurers with higher reinsurance dependence tend to have a lower level of firm profitability. It is possible that an insurer that cedes more business to reinsurer and keeps lower retention more or less operates like a reinsurance broker who only transfers risk without underwriting risk and is likely to report less profit for a relatively high percentage of the premium received is ceded to reinsurers (Suheyli, 2015).

Consequently, based on the above analysis, formulate the following hypothesis:

H4. Reinsurance Dependence of insurance companies has positive and significant impact on the performance of the non-life/general insurance business in Ethiopia

Loss ratio /Risk

Most researches, which investigate effect of risk on profitability, have the same opinion with negative and significant effect of risk on profitability. (Boadi & Lartey, 2013)provide the evidence that risk influence on profitability of insurance company's performance in Ghana. (Malik, 2011) investigated loss ratio determinants of profitability in insurance companies of Pakistan. Regarding to Loss ratio it also finds negative but significant relationship with profitability. The results of (Abate, 2012) study also revealed that Loss ratio (risk) is important determinants of performance of insurance companies in Ethiopia and it has statistically significant and negatively related with ROA. The study of (Charumathi, 2012) indicates that loss ratio on the performance of insurance companies in Indian.

Consequently, based on the above analysis, the following hypothesis formulates:

H5: There is a significant and negative relationship between loss ratio and performance of the non-life/general insurance business in Ethiopia

Technical Provisions risk

Risk of holding insufficient technical provisions or of holding unjustifiably excessive provisions. Where provisions are set at a lower level than actually required then this could present the company's financial position in a better light than it actually is. This could result in inappropriate underwriting decisions being made. For example, more risky policies may be underwritten on the basis that more capital is available to support this than is actually the case, or higher levels of business may be written (Chen & Wong, 2004).

Insurance companies collect premiums in advance and keep them in reserve accounts for future claim settlements. For instance, most premiums collected by insurance companies are kept in outstanding claims and unearned premiums reserves which are two main accounts in the liability side of the balance sheet. Outstanding claims reserve is considered riskier than ordinary long-term corporate debt since neither the magnitude nor the timing of the cash flows is known (Suheyli, 2015).

Consequently, based on the above analysis, the following hypothesis formulates:

H6: There is significant and negative relationship between Technical Provisions risk and performance of the non-life/general insurance business in Ethiopia

Growth rate of GDP

GDP is the most indicator of progress in economic development. If GDP grows, the likelihood of selling insurance policies also grows and insurers are likely to benefit from that in form of higher profits. According to (Shala, A., Ahmeti, S., Berisha, V., & Perjuci, E. 2014) GDP to identify determinants of profitability in insurance companies in Pakistan the Result shows that volume of capital is one of the important factors that affect ROA. Similarly, of capital was significantly related and positively related to profitability.

H7: GDP has positively and significant affects on the performance of the non-life/general insurance business in Ethiopia

Inflation

Inflation certainly plays a role in insurance and has adverse impact on many aspects of insurance operations, such as claims, expenses and technical provisions (Muriith & Onuonga, 2009)Expected inflation is taken into account when actuaries set actuarially fair premiums, inflation itself is unlikely to seriously impact on the performance of insurance companies. Nevertheless, if inflation is significantly greater than expected, it could cause insurance companies financial difficulty. For instance, unexpected inflation makes real returns on fixed-rate bonds lower than expected. As a consequence, profit margins of insurance companies are compressed and financial performance is accordingly impaired (Shala, Ahmeti, Berisha, & Perjuci, 2014). The inflation could affect insurance companies' profitability influencing both their liabilities and assets. In expectation of inflation claim payments increases as well as reserves that are required in anticipation of the higher claims, consequently reducing technical result and profitability. Taking into consideration that inflation affects assets side of the balance sheet, as the bond markets adjust to the higher level of inflation, interest rates begin to rise. This result in bond prices fall, negatively affecting value of investment portfolio. Given the negative relationship between inflation and returns on both fixed-income securities and equities, it is expected that the relationship between profitability and inflation will be negative.

Consequently, based on the above analysis, the following hypothesis formulates:

H8: There is a significant and negative relationship between inflation and performance of the non-life/general insurance business in Ethiopia

2.5. CONCEPTUAL FRAMEWORK

Based on the related literature reviewed earlier, such as (Kaya, 2015), (Suheyli, R. 2015) and (Malik, 2011). And also this study develops the following conceptual framework and this framework indicates the linkage between independent variables to the dependent variable:

Figure 1: Conceptual Framework

Independent /Explanatory Variables

Dependent Variable

Company Size (SZ)

Solvency margin (SM)

Liquidity ratio (LQ)

Reinsurance dependence (RD)

Loss ratio (LR)

Technical provisions (TeP)

Growth domestic product (GDP)

Inflation (INF)

Determine

Return on Asset (ROA)
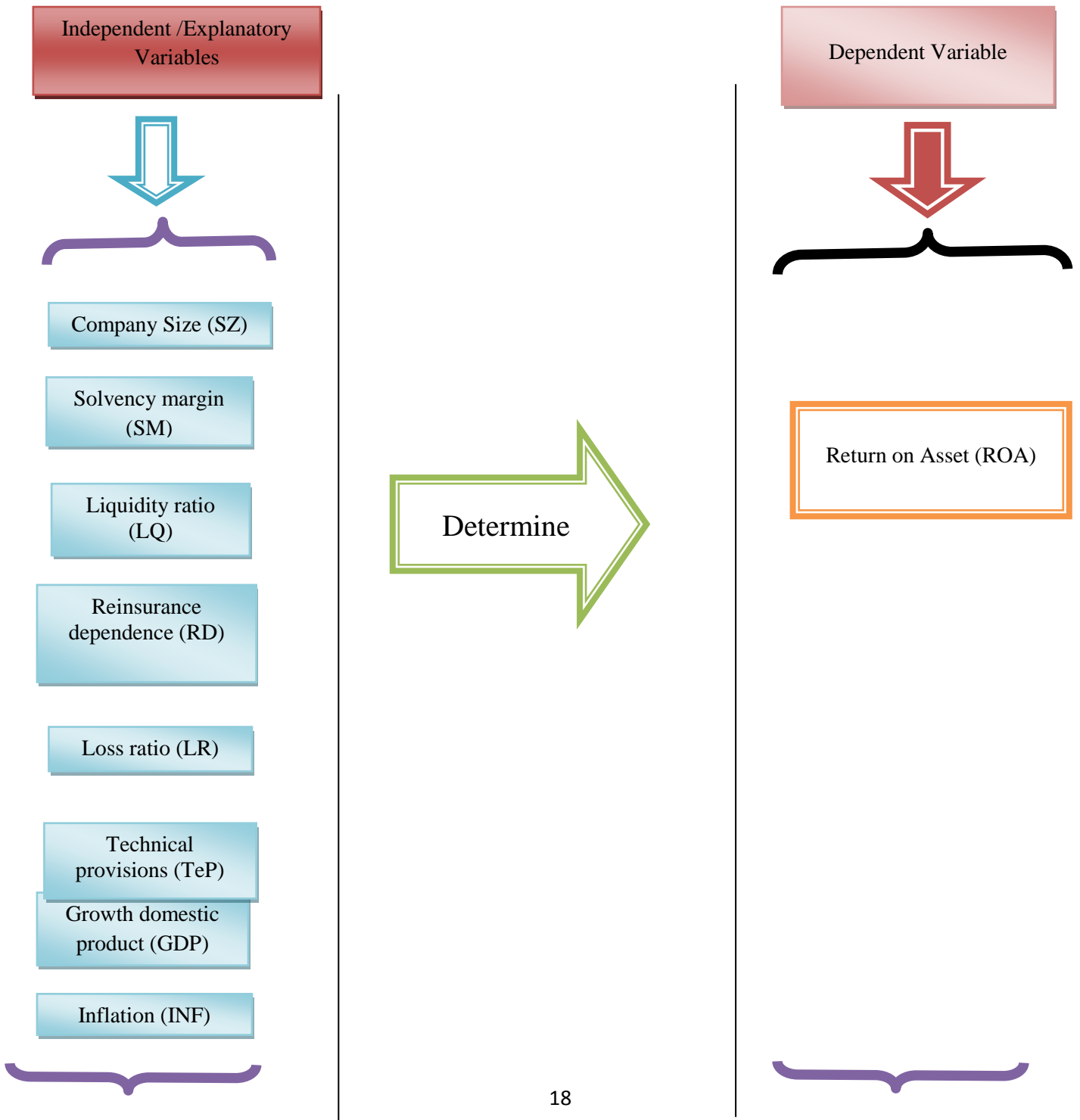
Table 2.1 Expected relation between ROA and determinants

Variables	Symbol	Expected relation between ROA and determinants
Company size	SZ	Positive(+)
Solvency ratio	SM	Negative (-)
Liquidity Ratio	LQ	Negative(-)
Reinsurance dependence	RD	Positive (+)
Loss Ratio	LR	Negative(-)
Technical provision risk	TeP	Positive (+)
Gross Domestic Product	GDP	Positive (+)
Inflation	INF	Negative(-)

CHAPTER THREE
RESEARCH DESIGN AND METHODOLOGY

This chapter provides the detail steps and procedures used to analyze factors affecting performance of the non-life/general insurance business in Ethiopia. It includes the research approach and hypothesis, the type of data used and the techniques employed to collect the data, the sampling mechanism including sample size, the methods will utilizing to manage and analyze the data.,

3.1. RESEARCH DESIGN

Research design is the program that guides the researchers in the process of collecting, analyzing and interpreting the data. Therefore, the nature of problem and objective of any study usually determine the type of research design adopted by researcher. A choice of research design reflects the priority of a researcher about the dimensions of the research process and methods. The major objective of this study is assesses the factors affecting the performance of the non-life/general insurance business in Ethiopia. To analyze in this study, this research adopt Explanatory research method analysis. If the objective is to determine which variable might be causing a certain behavior, i.e. whether there is a cause and effect relationship between variables, explanatory research must be undertaken (Shields, 2013).

3.2. POPULATION AND SAMPLING TECHNIQUES
3.2.1. SAMPLE SIZE

The total population of this study is all insurance Companies operating in Ethiopia. However, (Punch, 1998) stated that, one could not study everyone; everywhere, and everything, so sampling decisions are required about not only which people to interview or which events to observe, but also about settings and processes. Based on this, the sample size of this study was all insurance companies established and serving from June 2003 to June 2017. As a result of this, the sample size of this study is nine insurance companies these were Ethiopian Insurance Corporation, Africa Insurance company S.C, Awash insurance company S.C, National Insurance company of Ethiopia S.C, Nyala Insurance company S.C, Nile Insurance company S.C, The United Insurance S.C, Global Insurance Company S.C and NIB insurance company. Purposely Two Division Managers (Underwriting and Marketing) selected from nine insurance companies and interviewed for the

purpose of getting data pertaining to challenges being faced by the respective insurance companies. These nine selected insurance companies used as source for the primary data.

3.2.2. SAMPLING TECHNIQUE

There are two kinds of sampling techniques; namely, probability and non probability sampling. Probability sampling is based on random selection whereas non probability is a process of selecting desired sample purposely (Punch, 1998). Under this type of sampling, items for the sample is deliberately chosen by the researcher.

This paper employed the non-probability sampling technique to select sample insurance companies. That is, there are seventeen (17) insurance companies operating in Ethiopia. Among these, the study considered only nine of them whose years of operation is not less than 15 and data of fifteen years (2003-2017). In the balanced panel data analysis, five and above year's data is the recommended (Abate, 2012). Fifteen years' data are considered for the purpose of having fairly large enough time series data. This time specification reduced number of companies covered by this study to nine. Therefore, the nine general insurance companies are selected using the purposive sampling technique. As a result, all companies which started operation since 2002 and before are considered in the study. Moreover, interview is employed as a tool to collect the primary data which were essential for the full realization of objectives of the study. Purposely selected professionals form the selected insurance companies used as source for the primary data.

3.3. TYPE OF DATA AND SOURCE
3.3.1. DATA TYPE

In order to, analyze factors affecting performance of the non-life/general insurance business in Ethiopia, this research is used both qualitative and quantitative response. This study secondary data sources and primary data source. The quantitative data were collected, Fifteen years' data (i.e. 2003 - 2017), for all variables of this study. Furthermore, interview is employed as a tool to collect the qualitative data which were important to meet the objectives of the study.

3.3.2. DATA SOURCES

The studies which are based on panel data have an advantage in the following way. First, and perhaps most importantly, we can address a broader range of issues and tackle more complex problems with panel data than would be possible with pure time-series or pure cross-sectional data alone. Second, it is often of interest to examine how variables, or the relationships between them, change dynamically (over time) (Kothari, 2004). Therefore, this study was based on secondary yearly data collected from nine insurance company's audited financial statements and their annual reports filed and NBE. Moreover, interview is employed as a tool to collect the primary data which were essential for the full realization of objectives of the study. Purposely selected professionals form the selected insurance companies used as source for the primary data. Managers from the nine insurance companies are interviewed for the purpose of getting data pertaining to challenges being faced by the respective insurance companies. Interview is used as a tool to collect the necessary data for its merits, like more accuracy and effectiveness of responses than other techniques; like questioner

3.4. METHODS OF DATA ANALYSIS
3.4.1. MODEL SPECIFICATION

Summarizing literatures in the study area indicated that performance of insurance companies is expressed in terms of return on asset and determined by internal and external factors. The major internal determining variables are Company Size, Solvency margin, Liquidity, Reinsurance dependence, loss ratios and Technical provisions. GDP and inflations are external variables. Accordingly, the study considered six internal/firm specific and two external variables as performance determinant for general insurance companies operating in Ethiopia.

Regarding estimation method, since the types of data used is panel; it is apparent that the model to be employed is either of Fixed or Random Effect Model. As stated by Wooldridge (2004), fixed effects model is simply a linear regression model in which the intercept terms vary over individual cross sections. Fixed effect approach takes the intercept to be a group-specific constant term in the regression model.

Random effect model (REM), on the other hand, is explained as a situation happened when the intercept is randomly and identically distributed over cross sections but, varies over time (time

variant). The intercept represents the mean value of all the cross-sectional intercepts. Hence, cross sections have a common mean value for the intercept and the individual differences in the intercept values of each company are reflected in the error term.

Hausman test is applied to decide which model is to employ among the two and the result confirmed that Random Effect Model is the appropriate one. Thus, the study adopted random effect panel data model from previous studies as shown on (equation 1) below and attempted to examine the relationship between performance of general insurance companies (ROA) and its seven determinants. As (Damodar, 2012), REM is appropriate when error terms and explanatory variables are uncorrelated and the variation across entities is assumed to be random.

$Y_{it} = \alpha + \beta x_{it} + \varepsilon_{it}$ (General form) …………………………………. (Equa. 1)

Where,

Y = the dependent variable β

α = Constant term

X = explanatory variables with

β = is coefficient of independent variables

"i" is cross sections and "t" is time period and

ε = error term

From the above general form, it is possible to drive the following specific equation in such a way that captures variables in this study.

$ROA_{it} = \alpha + \beta_0 SZ_{it} + \beta_1 SM_{it} + \beta_2 LQ_{it} + \beta_3 RD_{it} + \beta_4 LR_{it} + \beta_5 TeP_{it} + \beta_6 GDP_{it} + \beta_7 INF_{it} + \varepsilon_{it}$
….. (equa. 2)

Where,

ROA$_{it}$**:** Return on Asset

SZ: Company Size (size)

SM: Solvency margin

LQ: Liquidity Ratio

RD: Reinsurance dependence

LR: Loss Ratio

LR: Underwriting risk

TeP: Technical provisions

GDP: Gross Domestic Product

INF: inflations

ε = Error term

β_0: Constant term/intercept

$\beta_{0, 2, 3 \ldots 7}$: coefficients of the respective explanatory variables (parameters to be estimated)

i = Insurance company (i = 1, 2, 3 ...9)

t = time periods (t = 1, 2, 3 ...15)

3.4.2. MODELS ASSUMPTION TESTS

To maintain the data validity and robustness of the regressed result of the research, the basic classical linear regression model (CRLM) assumptions must be tested for identifying any misspecification and correcting them so as to augment the research quality. According to (Park, 2002) there are four basic CLRM assumptions that need to be satisfied and that are tested in this study, which are: errors equal zero mean test, normality, homoscedasticity, and multicollinearity; these are:

3.4.2.1. ASSUMPTION 1: THE ERRORS HAVE ZERO MEAN (E (E) = 0)

According to (Chatterjee, 1977), if a constant term is included in the regression equation, this assumption will never be violated.

3.4.2.2. ASSUMPTION 2: THE NORMALITY TEST

The normality assumption assumes that the errors of prediction are normally distributed. The Skewness-Kurtosis, used to check the null hypothesis that the sample is drawn from a normally distributed population (Damodar, 2012).

3.4.2.3. ASSUMPTION 3: THE HOMOSCEDASTICITY TEST

Multiple linear regressions require that the variance is homoscedastic. Heteroscedasticity occurs when the variance of the error term does not have constant variance. The parameter estimates for partial regression coefficients including the intercept are not biased if this assumption is violated; however, the standard errors are biased and hence significance tests may not be valid (Damodar, 2012). To test for homoscedasticity, the Breush-Pagan Test and the White test was used

24

3.4.2.4. ASSUMPTION 4: AUTOCORRELATION TEST

According to (Damodar, 2012), objective of autocorrelation test is to check if there is a correlation between residual at time "t" and the prior time, which is "t-1". Error terms are assumed to be random and independent of each other over time to accept and depend on the regression result. Durbin-Watson (DW) value in the main regression table is considered and used to test the presence of autocorrelation in this study.

3.4.2.5. ASSUMPTION 5: THE MULTICOLLINEARITY TEST

Multicollinearity refers to the situation in which independent variables are highly correlated; resulting in a paradoxical effect, whereby the regression model fits the data well, but none of the independent variables has a significant impact in predicting the dependent variable (Gujarati, 2004). Among several ways of multicollinearity tests, Pearson coefficient of correlation between variables and Variance Inflation Factor (VIF) are used detect any problem.

3.5. Definition of variables

The variables will use as dependent and independent variables in this study. The definitions of the variables are describing as follow:

A. Dependent variable

According to (Kabajehet 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 has generated profits from its total assets whereas ROE ratio is calculating as net profit after tax divided by the total shareholders' equity. In most of the previous studies on insurance sector, return on assets (ROA) is being used as a proxy of profitability (Malik, 2011) ;(Sambasivam & Ayele, 2013) ;(Burca & Batrinca, 2014); (Boadi, Antwi, &Lartey, 2013);(Kaya,2015); (Suheyli, 2015). Therefore, this study has attempted to measure profitability by using ROA similar to other researchers. ROA= Net profit before tax / Total Assets.

B. Independent variables

1. Size of company (SZ): Performance is likely to increase in size, because larger firms will have better risk diversification, more economic scale advantage, and overall better cost efficiency.

2. Solvency ratio: The solvency ratio is calculated as ratio of net assets to net written premiums, and represents a key indicator of the insurer's financial stability.

3. 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

4. Reinsurance dependence- The reinsurance dependence is calculated as ratio of gross written premiums ceded in reinsurance to total assets. Insurance companies reinsure a certain amount of the risk underwritten in order to reduce bankruptcy risk in the case of high losses.

5. Loss ratio (LOSS): This variable is measure as the ratio of incurred claims to earned premiums. It is measured as Loss ratio = Net claims incurred / Net earned premiums

6. Technical provision risk: Risk of holding insufficient technical provisions or of holding unjustifiably excessive provisions. Where provisions are set at a lower level than actually required then this could present the company's financial position in a better light than it actually is. This could result in inappropriate underwriting decisions being made. A technical provision is measured by Safety Ratio (claims outstanding to equity ratio).

7. Gross Domestic Product (GDP): is the monetary value of goods and services produced by the nation with in one fiscal year. GDP would obviously influence performance general insurance companies since the major business opportunities for any insurer is directly linked with the level of economic activity prevailed in the given economy. This leads to expect positive and significant relation between GDP and insurers' performance.

8. Inflation- occurs when the prices of goods and services increase over time. Inflation cannot be measured by an increase in the cost of one product or service, or even several products or services. Rather, inflation is a general increase in the overall price level of the goods and services in the economy.

CHAPTER FOUR
RESULTS AND DISCUSSIONS

This chapter analysis is with regard to the relationship between Return to Asset (profitability) as dependent variable and Company Size, Solvency margin, Liquidity, Reinsurance dependence, loss ratios and Technical provisions, GDP and inflations as independent variables. Thus, the chapter presents detailed information on the findings of the study and discussion regarding relation between dependent and independent variables.

4.1. DESCRIPTIVE STATISTICS ANALYSIS

The following Table 4.1 provides a summary of the descriptive statistics of all variables for the nine Ethiopian insurance for a period of fifteen years from year 2003–2017 with 135 observations. The table reports the mean, standard deviation and number of observations and the descriptive statistics is presented and discussed as follow

Table 4.1: Descriptive Statistics

Variable	Observations	Mean	Std. Dev.	Min	Max
ROA	135	0.0879333	0.050137	-.007	.221
SZ	135	19.20987	1.103614	16.527	21.628
SM	135	0.5092259	.2419524	.002	.991
LQ	135	1.027037	.2163901	.365	1.572
RD	135	0.1273259	.0363708	.028	.198
LR	135	0.6157185	.1389184	.123	.895
TeP	135	.7647111	.366809	.081	1.686
GDP	135	0.1068	.0101583	.089	.126
INF	135	2.437933	.6662403	1.03	3.595

Source: STATA, 2018

As shown on above table 4.1, the descriptive statistics is presented for the "overall" observations, "between" cross sections (the 9 insurance companies) and values "within" individual companies. The total number of observations is 135, which is a product of nine (9) general insurance companies (cross sections) and 15 time series data for each company. Regarding ROA, it mean values is 0.08, standard deviation = 0.05 with the minimum value (-0.007) and the maximum value is 0.221. The mean value implies, on average, each general insurance company in Ethiopia generated 8 % from each Birr of their total asset. Standard deviation value implies that, there exists 5% variation in

values of ROA across insurance companies included in the study. This idea supports (Bedru and Yesuf, 2005) the variance measures that how individual values is dispersed Or distributed around its mean or expected value and the value less than one indicate reasonable variation and the standard value greater than one it indicate far from its mean value.

Sizes of the sample insurance a company is measured by natural log of total asset and as indicate Table 4.1, the mean values of Size is 19.20987, standard deviation = 1.103614 with the minimum value 16.527 and the maximum value is 21.628 the period from 2003 to 2017. This implies the companies which have large in size to be in superior performance. This supports by (Flamini, McDonald, & Schumacher, 2015) 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.

The descriptive statistics also revealed that Solvency margin has a minimum and maximum value of 0.002 and 0.991 respectively with mean value of 0.509. The standard deviation from the mean values is about 0.241, indicating Solvency margin varied by 24% across insurance companies included in this study. This implies the insurance companies which have high under writer result involving on other investment to make other income to support the operation result. And also this supports by (Daneiel and Tilahun, 2013) companies with more under write result will part spate acquiring asset.

Liquidity ratio takes the minimum and maximum value of .365 and around 1.572 respectively with 1.02 and 0.216 mean and standard deviation respectively. As can be understood from the mean value, on average, each company has more liquid asset compared with their liability. The mean value of liquidity ratio is 1.07and the value of standard deviation is 0.34 with 2.6 maximum and 0.36 minimum values. This result shows the existence of variation among the liquidity level for insurance companies and also it shows that Ethiopian insurance companies are liquid. This supports by the National bank of Ethiopia Directive No SIB/25/2004; Funds of an insurance company shall be invested in Treasury Bills and bank deposits not less than 65% of admitted assets ("Admitted Assets" shall mean any property, security, item or interest of an insurance company recorded in the financial statements of the insurance company but excluding) According to the theory of agency costs, high liquidity of assets could increase agency costs and reinvestment risk. Unquestionably, agency cost and reinvestment risk would put injure on the profitability of a company. In this case, it

is, therefore, likely that insurance companies with less liquid assets outperform those with more liquid assets (Adams and Buckle, 2000).

Reinsurance dependence, on the other hand, ranges from 0.028 to 0.198. The mean value is 0.127 whereas the standard deviation is 0.036. This implies that, on average 12% percent of gross premium collected as percentage of total asset was ceded to reinsurance reserve. Selecting and working with reinsurers which have a very good capacity and respected ones will help the company in a positive way as it will help the company to reinsure in a reliable reinsurers and if a major loss occurs the company will be in safe hands.

Concerning loss ratio, the maximum value is 0.895   and the minimum is 0.123. The mean value, which is about 0.615, interpreted as each insurance company included in the study experienced on average 61% loss ratio. The value of standard deviation is 0.138, this indicate that 13%, of variation in claim experience across insurance companies. Meaning, 62% of the total annual premium production is paid for policy holders (insured) as compensation. This implies that on average, most non life insurance companies paid 62% loss incurred out of the total premium earned per year which is risky because they incurred an average 62% of claim from a single birr of premium earned. When the company's loss ratio is high its profitability will be low so it has negative impact. If the company collects premium from various clients without being selective, losses could be so high that the company may be in loss. This supports by (Malik, 2011). Most general insurance business is operating with high loss ratio.

Concerning, the mean value of Technical provisions is .7647111, with a maximum and minimum of 1.686 and .081 respectively. The value of standard deviation is 0.366, this indicate that 36%, of variation in technical provision across insurance companies. This implies that, there are cases when the claims incurred this year may not be settled in this year but provision will be held, because at some day the claim will be paid. This has also negative impact on the company's profitability because it is a cost and a reserve for the outstanding claim will be held. But while holding a provision, care should be taken because it should be appropriate as it is not an exact figure rather it is estimation, but it should be close to the exact figure. Because if it is low, the company will pay beyond its target the reverse is true. This supports by (Abate Gashaw, 2012) and (Charumathi, 2012) bosting the provistion expense will have negative impact on the the underesult.

From the descriptive statistics, it is also possible to see that Ethiopia has registered mean real GDP of 10.68 percent over the periods from 2003-2017. There is also around one percent deviation from the mean value across the fifteen years include in the study. The country has been recording double digit growth rate with little dispersion towards the average over the period under study with the standard deviation of one percent. This indicates that Increase in GDP of the country may not have immediate effect on the performance of insurance companies but it could have positive impact in the long run, so government should help the industry not to be stagnant and grow with the economy. Table 4.1 Also showed that, Ethiopia had mean inflation rate of 2.4 across the fifteen years include in the study. There is also around 6.6 percent deviation from the mean value across the fifteen years include in the study

4.2. TESTS FOR THE CLASSICAL LINEAR REGRESSION MODEL (CLRM) ASSUMPTIONS

This section presents the test for the assumptions of classical linear regression model (CLRM) namely the error have zero mean, normality, Homoscedasticity Test and multicollinearity.

4.2.1. THE ERRORS HAVE ZERO MEAN (E (E) = 0)

According to Brooks (2008), if a constant term is included in the regression equation, this assumption will never be violated. Thus, the regression model used in this study will be include a constant term, even if not significant.

4.2.2. NORMALITY TEST

According to Gujarati (2004) Normality can be tested either by graphical or numerical/statistical methods. As the result, this study tests the normality of data by using both graphical and statistical method. A skewness/Kurtosis test is the statistical method used to test normality numerically furthers more the graphical method is normal probability plot (NPP) is used to test the normality of data.

As indicated on Skewness/Kurtosis tests on table 4.2 below, on the test result, "p" value for all variables is greater than the already determined 0.05 level of significance. This leads to accept the null hypothesis, which says that the data is normal.

Table 4.2: Skewness/Kurtosis tests for Normality

Variable	Obs	W'	V'	z	Prob>z
roa	135	0.985	1.72	1.089	0.1380
sz	135	0.988	1.37	0.627	0.2654
sm	135	0.984	1.90	1.293	0.0980
lq	135	0.990	1.23	0.408	0.3415
rd	135	0.990	1.18	0.334	0.3692
lr	135	0.985	1.74	1.119	0.1315
tep	135	0.980	2.34	1.714	0.0432
gdp	135	0.980	2.28	1.665	0.0480
inf	135	0.961	4.52	3.042	0.0012

Source: STATA, 2018

When we see the graphical tests, the normal probability plot (NPP) also confirms that the residuals are normally distributed over its mean of zero.

FIGURE 2 - NORMALITY TEST
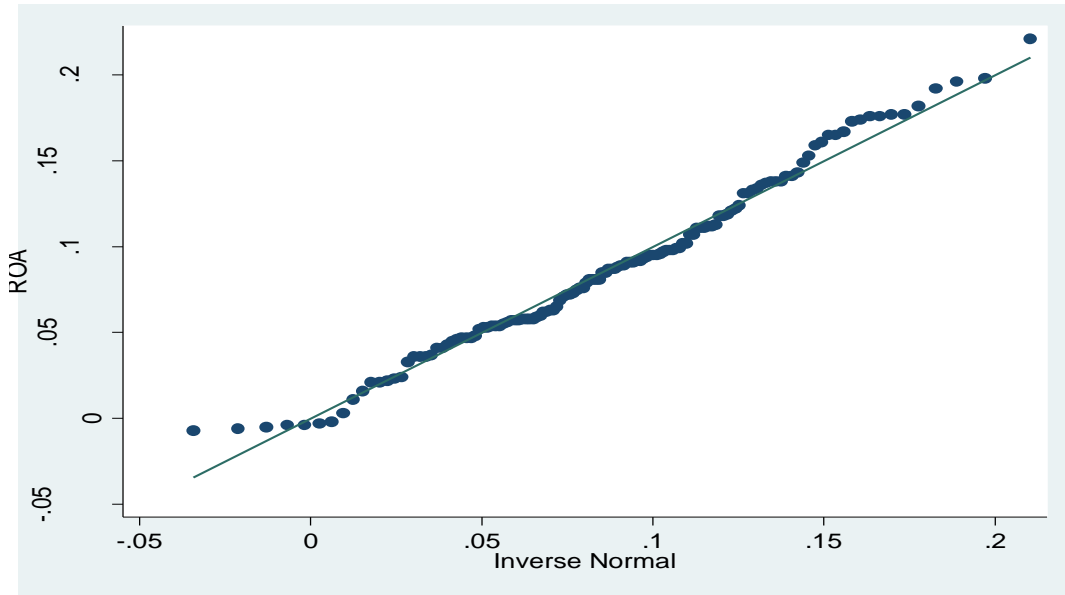
Source: STATA, 2018

Therefore, the statistical and graphical tests assured that normality assumption is fulfilled, which in turn led to conclude that the inference to be made based on the sample data is also valid and consistent for the population too.

4.2.3. HOMOSCEDASTICITY TEST

To test for homoscedasticity, the White test will be used. Results reported in Table 4.2. The result indicate that the p-values of the tests is considerably greater than 0.05. The decision rule is to accept the null hypothesis if "p" value is greater than the level of significance, which is 5% in this case. The null hypothesis assumes homoscedasticity. Hence, the results conclude that there is homoscedasticity

Table 4.3 White tests

White's test
Ho: homoskedasticity
Ha: undetected heteroskedasticity
chi2 = 42.79
Prob> chi2 = 0.5236

Source: STATA, 2018

4.2.4. AUTOCORRELATION TEST

Table 4.4 Durbin-Waston test for autocorrelation

Durbin-Watson d-statistic(9, 135) = 1.84109

Source: STATA, 2018

The Durbin-Waston test statistic value in above table 4.4 is 1.84109, which is a result of 135 observations. There are nine cross section and an intercept term in the model, hence the relevant critical values for the test of 135 observation and nine cross section are:- dL = 1.336, dU = 1.741, and 4 − du which is 4 − 1.741 = 2.259; 4 − dL which is 4 − 1.336 = 2.664.The result of Durbin Watson test statistic of 1.84 is between the upper limit (dU) which is 1.741 and the critical value of 4 − dU which is 2.259. Therefore, result falls under no auto-correlation range, which shows there is no evidence for the presence of autocorrelation.

4.2.5. MULTICOLLINEARITY

Multicollinearity refers to the situation in which independent variables are highly correlated; resulting in a paradoxical effect, whereby the regression model fits the data well, but none of the independent variables has a significant impact in predicting the dependent variable (Gujarati, 2004). Among several ways of multicollinearity tests, Pearson coefficient of correlation between variables

and Variance Inflation Factor (VIF) are used detect any problem. Table 4.3 reports the Pearson correlation of the variables used in the regressions. As observed from the table, multicollinearity is not a serious problem since majority of correlation coefficients are below 0.75 (Malhotra, 2004).

Table 4.5: Correlation between Independent Variables

	roa	sz	sm	lq	rd	lr	tep	gdp	inf
roa	1								
sz	0.5167	1							
sm	0.0431	0.1173	1						
lq	0.251	-0.0285	-0.0015	1					
rd	0.2376	0.358	0.0915	-0.0369	1				
lr	-0.3801	0.0987	0.1871	-0.3787	0.1327	1			
tep	-0.1443	0.4994	0.1063	-0.3778	0.353	0.4428	1		
gdp	-0.4198	-0.4146	0.1096	0.0368	-0.1035	0.1553	-0.1925	1	
inf	-0.0625	-0.0074	0.0424	-0.117	0.1565	0.1914	0.1309	-0.2633	1

Source: STATA, 2018

Furthermore, the existence of multicollinearity is tested by calculating the Variance Inflation Factor (VIF) where a VIF coefficient greater than 10 indicates the presence of multicollienarity (Chatterjee & Price, 1977). The results in Table 4.4 report a mean VIF of 2, which is much lower than the limit of 10. The VIFs for individual variables was also very low, hence, the multicollienarity assumption is fulfilled.

Table 4.6 Variance Inflation Factor (VIF) of the explanatory variables

Variable	VIF	1/VIF
tep	1.94	0.516181
sz	1.8	0.554158
lr	1.54	0.650536
gdp	1.51	0.662279
lq	1.31	0.765789
rd	1.25	0.80118
inf	1.23	0.815972
sm	1.08	0.928242
Mean VIF	1.46	

Source: STATA, 2018

4.3. REGRESSION MODEL FINDINGS

4.3.1. MODEL SPECIFICATION TEST (FIXED EFFECT VERSUS RANDOM EFFECT)

This study uses a panel data; there are two types of panel estimator approaches that can be employed, namely: fixed effects models (FEM) and random effects models (REM) (Brooks, 2008). According to (Maddala, 2001), conducting hausman test for model specifications to decide whether the FEM or REM, the null hypothesis is random effects (REM) and the alternative hypothesis is fixed effect (FEM), if the hausman test result is statically significant then we accept the alternative hypothesis but the result is statically insignificant then we accept the null hypothesis. Therefore, this research to examine for model specifications to decide whether the FEM or REM, Hausman specifications test was conducted and the hypotheses denoted as follows

Null hypothesis: Random effects is appropriate

Alternative hypothesis: Fixed effect is appropriate

Table 4.7 Hausman Fixed test

Hausman Test
chi2(6) =4.34
Prob>chi2 = 0.8254

Source: STATA, 2018

The result providing evidence in favor of the REM model as presented in Table 4.2 the p-value for tests is 82% the probability value is very high meaning that more than 5% meaning that the Random effect model is appropriate to explain the outcome.

4.4. REGRESSION RESULT

This section presents over all the empirical results of the regressions. To examine the relationship between ROA and independent variables regression analysis was undertaken. In the following table coefficients, standard errors, t-values, and p-values for explanatory variables, and R-squared, Standard Error of regression, F-statistic, Prob (Fstatistic) for the regression, and number of observations included in the study are presented.

Table 4.8 Regression Results for factors affecting performance of the non-life/general insurance business in Ethiopia

Random-effects GLS regression				Number of obs	=	135	
Group variable: company(cid)				Number of groups =		9	
R-sq: within = 0.5230				Obs per group: min =		15	
Between = 0.8791				avg =		15.0	
Overall = 0.6069				max =		15	
roa	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]	
sz	0.027036	0.003649	7.41	0.000	0.019884	0.034188	
sm	0.012576	0.012303	1.02	0.307	-0.01154	0.036689	
lq	0.005595	0.014734	0.38	0.704	-0.02328	0.034473	
rd	0.255303	0.08904	2.87	0.004	0.080788	0.429817	
lr	-0.08227	0.025087	-3.28	0.001	-0.13144	-0.0331	
tep	-0.05852	0.011056	-5.29	0.000	-0.08019	-0.03685	
gdp	-.108755	0.34101	-3.19	0.001	-1.75591	-0.41918	
inf	-0.0034	0.004617	-0.74	0.462	-0.01245	0.005651	
_cons	-0.25623	0.090465	-2.83	0.005	-0.43354	-0.07892	

Source: STATA, 2018

The overall of coefficient of R^2 within is 0.52. This means that the 52% variation in ROA is captured or explained by eight independent variables while the remaining change is due to other factors. As (Damodar, 2012) in general, overall of coefficient of values of R^2 below 0.2 (20%) are considered weak, between 0.2 and 0.4, moderate, and above 0.4 (40%), strong. Therefore, R^2 of this study is categorized under "strong" because it's overall of coefficient R^2 is above 40%.

As indicated on the regression result above, of the Five independent variables, Company Size (SZ), Reinsurance dependence (RD), Loss Ratio (LR), Technical provisions (TeP), Gross Domestic

Product (GDP) have statistically significant relation with the performance of General Insurance in Ethiopia, which is measured by Return on Asset (ROA) at 5% level of significance.

On the other hand, the remaining three variables; namely, Solvency margin (SM), Liquidity(LR) and inflations (INF) independent variables proved to have statistically insignificant influence on the dependent variable at 5% level of significance. The study also interprets the significant result as follow:

$$ROA_{i,t} = -0.25623 + 0.027036SZ + 0.255303\ RD - 0.08227\ LR - 0.05852\ TeP - .108755\ GDP - 0.0034\ INF + \varepsilon_{i,t}$$

Size

The results of the random effect regression result of the study revealed that there is a significant and positive relationship between size and relation with the performance of General Insurance in Ethiopia. The coefficient is 0.027, which is interpreted as on average a percentage change in the company size will lead to 2.8 percent change on performance of Ethiopian general insurance companies. Consequently, the result of the regression output is consistent with the hypothesis of the study and it also the result of this study is similar with the finding of different researchers. For instance, Malik (2011) finds significantly positive association between size of the company and profitability of insurance companies. This result shows that, large Ethiopian insurance companies are able to make better profit than the small ones, because large insurance companies normally have greater capacity to absorb in the insurance market than small insurance companies and have more economies of scale in terms of the claim handling, which is the most significant production factor for delivering insurance services, modern information systems and a better expenses management.

Reinsurance dependence (RD)

Reinsurance dependence (RD) is calculated as ratio of gross written premiums ceded in reinsurance to total assets; the results of the random effect regression result of the study revealed that there is a significant and positive relationship between Reinsurance dependence and relation with the performance of General Insurance in Ethiopia. The regression coefficient is 0.25 this indicates that indicates that when the average RD increases by 1% then, ROA will increase by 25% and vice versa. Consequently, the result of the regression output is consistent with the hypothesis of the study and it also the result of this study is similar with the finding of different researchers. Such as,

(Ying lee2014) found a significant relationship between reinsurance dependence and insurance profits. It implies that Selecting and working with reinsurers which have a very good capacity and respected ones will help the company in a positive way as it will help the company to reinsure in reliable reinsurers and if a major loss occurs the company will be in safe.

Loss Ratio (LR),

Loss Ratio (LR), which represents the ratio of claims incurred to volume of collected premium, has a negative significant impact on performance of general insurance companies operating in Ethiopia. It simply reflects the amount of compensation or claims paid to policy holders comparing with the volume of premiums produced in a given fiscal year. As it is obvious, the relation between LR and performance of insurers is negative /indirect. This means that, more claims payment will decrease performance (ROA) of insurers. As shown on table 4.7, coefficient of LR is (-0.082) which implies that on average a percent increase in loss ratio will decrease ROA by 8.2 percent and vice versa. The result also Consistent with the hypothesis of the study which is There is a negative relationship between loss ratio and profitability of insurance company in Ethiopia and Consistent with previous studies Liao and Chen, 2006); (Malik, 2011) and (Daneiel and Tilahun, 2013) found Loss ratio (risk) as important determinant of profitability of insurance companies and it having statistically significant and negatively related with profit of the firm. It implies that higher loss ratio, When the company's loss ratio is high its profitability will be low so it has negative impact. If the company collects premium from various clients without being selective, losses could be so high that the company may be in loss.

Technical provisions (TeP)

A technical provision represent by holding insufficient technical provisions or of holding unjustifiably excessive provisions. Where provisions are set at a lower level than actually required then this could present the company's financial position in a better light than it actually is. On the regression result presented on table 4.7, the coefficient of Technical provisions (TeP) is (-0.058) which implies that on average a percent increase in TeP will decrease ROA by 5.8 percent and vice versa vice versa. Consequently, the result of the regression output is consistent with the hypothesis of the study and it also the result of this study is similar with the finding of different researchers. For instance, (Suheyli, R. 2015) showed that, technical provision has statistically significant and negative relationship with insurers' profitability. It implies that technical provision has also

negative impact on the company's profitability because it is a cost and a reserve for the outstanding claim will be held.

Gross Domestic Product (GDP)

Gross Domestic Product (GDP) of the country is one of the most important external factors which determine performance different business. But, as the regression result confirm, there is a negative relation between GDP and the performance of General Insurance in Ethiopia. Coefficient of GDP, which is (-0.108), interpreted this result as when there is a percent increase in GDP, will decrease ROA by 10.8 percent. Maybe this is the result of weakness in attracting customer by providing special services rather they compete by cutting prices even at loss with in Ethiopian Insurance Company. And again, Customers are also not considering benefits related with service quality and they are price sensitive of insurers reflecting the fact that when economy of the country performs consequently, the result of the regression output is inconsistent with the hypothesis of the study.

The regression result also displayed that Solvency margin (SM), Liquidity (LR) and inflations (INF) have statistically insignificant correlation with performance (ROA) of general insurance companies in Ethiopia. Even though it is statistically insignificant when we see the direction wise, the dependent variable (ROA) is negatively affected by inflations whereas it has a direct (positive) relation with the remaining two variables that are Solvency margin and Liquidity Ratio.

4.5. CHALLENGES FACED BY INSURANCE COMPANIES IN ETHIOPIA

As interviewee told the researcher, the major challenges being faced by Ethiopian insurance companies includes the following:

> ➢ Unfair playing ground and presence of ethnic and religion affiliation: non-business relations like, politics, religion and ethnicity dominated Ethiopian insurance market. As a result, it has become more difficult for those with less relation of such types to get enough business. Moreover, there is also a monopolistic power of Ethiopian Insurance Corporation (EIC). Public/governmental projects buy insurance cover from EIC without letting private insurance companies get chance to compete.

> ➢ Less accessibility/Urban centered service: Most insurance companies concentrate in more urban areas neglecting the huge part living in rural are, which led to lower insurance density compared to peer countries and average of the continent.

➢ Identical products/absence of product differentiation: Ethiopian insurance companies are not attempting to develop new products or customize the existing ones

➢ Existence of price based competition only: weakness in attracting customer by providing special services rather they compete by cutting prices even at loss. Customers are also not considering benefits related with service quality and they are price sensitive.

➢ Scarce man power: there is a serious man power shortage. Moreover, the industry is suffering from lack of professional skill and ethics.

➢ Government intervention through NBE: NBE controls new entrant by setting minimum capital requirement, approves new products & assignment of higher officers, cost of training among others, which hinders them not to operate freely.

➢ Increasing cost of service and materials & moral hazard lead to incommensurate claim payment

➢ Weak cooperation among players in the industry: insurance companies operating in Ethiopia see each other as opponent and rivalry, which made information exchange difficult. It also adversely affected their power to influence the regulatory body in setting commensurate premium rate.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

This chapter deals with summarizes of the major findings, the conclusions drawn from the findings and recommendations based on the findings of the study. This chapter is organized into three subsections. Section 5.1 summarizes of the major findings 5.2 Conclusions and section 5.3 Recommendations.

5.1. SUMMARY OF THE MAJOR FINDINGS

The main objective of this study was to analyze factors affecting performance of the non-life/general insurance business in Ethiopia. As the result, this study used eight explanatory variables considered to meet the objective. from the total explanatory variables considered by this study based on the regression result, Company Size (SZ), Reinsurance dependence (RD), Loss Ratio (LR), Technical provisions (TeP), Gross Domestic Product (GDP) have statistically significant relation with the performance of General Insurance in Ethiopia, which is measured by Return on Asset (ROA) at 5% level of significance. On the other hand, the remaining three variables; namely, Solvency margin (SM), Liquidity(LR) and inflations (INF) independent variables proved to have statistically insignificant influence on the dependent variable at 5% level of significance.

Moreover, the coefficient of determination (R^2) found 0.52 and it is in the acceptable range. It is interpreted as, of the total change in ROA; about 52 % is due to the independent variables included in the study jointly explained the performance of general insurance companies in Ethiopia by 52 %. Furthermore the study explore the major challenges on non-life/general insurance business in Ethiopia; as the result this, Less accessibility/Urban centered service, Identical products/absence of product differentiation, Existence of price based competition only, Scarce man power, Government intervention through NBE, Unfair playing and Weak cooperation among players in the industry are the major challenges on non-life/general insurance business in Ethiopia.

5.2. CONCLUSIONS

The results of regression analysis reveal that Company Size, Reinsurance dependence, Loss Ratio, Technical provisions and Gross Domestic Product are affect the performance of the non-life/general insurance business in Ethiopia.

> ➢ The results of this study indicate that coefficient of the size is positive and it has statistically significant relationship with the performance of the non-life/general insurance business in Ethiopia. This implies that profitability of large size insurance companies in Ethiopia are better than small size companies. Because, larger insurance companies have more advantage to increases their profitability through economies of scale.

> ➢ Regarding with Reinsurance dependence, the results of this study indicate that coefficient of the Reinsurance dependence is positive and it has statistically significant relationship with the performance of the non-life/general insurance business in Ethiopia. This implies that Ethiopian insurance company those company are transfer their some amount of underwritten result that attached with high risk in order to reduce bankruptcy risk. This activity will help to stabilize the performance of the non-life/general insurance business in Ethiopia.

> ➢ The analysis shows that Loss ratio/risk & Technical provisions are negatively related with the performance of the non-life/general insurance business in Ethiopia with statistical significance. This implies that higher level of claims incurred results in lower profit. This shows that as minimizing claims incurred and at the same time increasing earned premium will improve the insurers' profitability. Minimizing claims incurred could be increasing earned premium by reducing risk bearing policy through imposing higher rate on the policy which has higher risk.

> ➢ GDP displays a negative relationship with performance of the non-life/general insurance business in Ethiopia. it will implies that the result of weakness in attracting customer by providing special services rather they compete by cutting prices even at loss with in Ethiopian Insurance Company. And again, Customers are also not considering benefits related with service quality and they are pricing sensitive of insurers reflecting the fact that when economy of the country performs.

Solvency margin, Liquidity and inflations are insignificance effect on performance of general insurance companies in Ethiopia. Furthermore, findings of the study indicate that Less

accessibility/Urban centered service, Identical products/absence of product differentiation, Existence of price based competition only, Scarce man power, Low public awareness, Government intervention through NBE, Unfair playing and Weak cooperation among players in the industry are the major challenges on the performance of non-life/general insurance business in Ethiopia

5.3. RECOMMENDATIONS

This study attempted to examine factors affecting performance of general insurance companies in Ethiopia. Based on findings of the study, general insurance companies in Ethiopia the following pontes are recommended

Company Size has positive effect on the performance of Ethiopian general insurance companies. Through opening various branches which will lead the company to be more accessibility to clients and result in increase of its production which will have add on effect on increase of the company's capital. In addition to this opening various branches it will increase the accessibility of insurance service. This helps the company to have more clients and to identify the need of insurance services for different society and area. The size of company could also help it work with world class reinsurers which are respected and have high capacity. So, the study recommends that general insurance companies operating in Ethiopia should focus on their size in order to improve their performance.

The study also recommend that general insurance companies operating in Ethiopia should Select and working with reinsurers which have a very good capacity and respected ones will help the company in a positive way as it will help the company to reinsure in a reliable reinsurers and if a major loss occurs the company will be in safe hands. In addition its customers will prefer the company from others. The other benefit is it could reinsurer without doubt, so that the company could reach more big clients and take risk without fear of loss. Since the finding of the study shows that Reinsurance Dependence have positive effect on the performance of Ethiopian general insurance companies

Ethiopian insurance companies are operating in high Loss ratio rate; so, the insurers' company should reduce the loss ratio by giving emphasis on underwriting service because the underwriting result insurance companies as its business is taking losses which could lead to major loss if not taken due care. This means underwriting service is the collection of premium this total collected

premium from insured should by far outweigh from the claims which could arise. So, the selection of class of business should be focus on which class of business has high risk, avoid price based competition and working with other insurance companies

Technical Provision has also negative impact on the performance of Ethiopian general insurance companies because it is a cost and a reserve for the outstanding claim will be held. But while holding a provision, care should be taken because it should be appropriate as it is not an exact figure rather it is estimation, but it should be close to the exact figure. Because if it is low, the company will pay beyond its target the reverse is true. Generally, having high provision has negative impact on company's performance as it is considered that it is going to be paid some day and it is a cost to the company. So, general insurance companies operating in Ethiopia should focus on the amount of Technical Provision.

The study would like to recommend that considering the importance of the insurance industry for the overall growth of economy of the country. Because, the finding of the study indicate that the growth of GDP have negative impact on performance of insurance companies, so the insurance companies should be focus on new products which related with the current insurance demand rather than price based competition, because the finding of this study indicate that identical products and price based competition are the challenges of Ethiopia general insurance companies. And also the regulatory body of Ethiopian insurance companies that is NBE should have to work with insurance companies to use and increase their profit from the economy growth of the country.

Finally, the study focuses general insurance companies in Ethiopia for the period of 2003 -2017. But, there are different variables which are not including in this study that can affect Ethiopian insurers' profitability. So, future research should examine on these Variables which affect the performance of general insurance companies in Ethiopia such as the impact of rule and regulation of the regulatory body on profitability of insurance companies and other internal factor which is affect the performance of general insurance companies in Ethiopia.

REFERENCES

Abate, G. A. (2012). Factors Affecting Profitability of Insurance Companies in Ethiopia. *Doctoral dissertation,AAU* .

AGNES, W. K. (2013). Relationship between firm characteristics and financial performance of life insurance companies in Kenya. *Master dissertation, University of Nairobi* .

Bedru, B., & Yesuf, M. (2005). *STATISTICS FOR ECONOMISTS.* Mekelle: Mekelle University, Department of Economics.

Boadi, E. K., & Lartey, V. C. (2013, March 3). Determinants of profitability of insurance firms in Ghana. *International Journal of Business and Social Research* , pp. 43-50.

Burca, A. M., & Batrinca, G. A. (2014, 4(1)). The determinants of financial performance in the Romanian insurance market. *International Journal of Academic Research in Accounting, Finance and Management Sciences* , pp. 299-308.

Charumathi, ,. B. (2012). On the determinants of profitability of indian life insurers–an empirical study. *In Proceedings of the world congress on Engineering* , pp. Vol. 1, pp. 4-6.

Charumathirld congress on Engineering (Vol. 1, p. 4.-6. (n.d.).

Chatterjee, S., & Price, B. (1977). *Regression analysis by example.* New York: Wiley Publisher.

Chen, & Wong. (2004). Determinants of financial health of Asian insurance companies. *Journal of Risk and Insurance* , pp. Vol 71, No 3.

Cummins, J. D., Gagne, R., & Nouira, A. (2008). The costs and benefits of reinsurance. *working paper,Temple Universtiy* .

Daniel, M., & Tilahun, A. (2013). FIRM SPECIFIC FACTORS THAT DETERMINE INSURANCE COMPANIES'PERFORMANCE IN ETHIOPIA. *.European Scientific Journal,* , p. 9(10).

David, T., David, D., & Palminder, S. (2003). Advanced Management Research. *UK British Journal of Management , Vol.14*, pp. 207-222.

Delhausse, B. (2015). Measuring Productive Performancein the Non-Life Insurance Industry:The Case of French and Belgian.

DiMaggio, P., & Powell, W. (1983). The iron Cage revisited: Institutional Isomorphism and Collective rationality in organizational Fields. *American Sociological Review* , pp. 48(2), 147-160.

Duett, E., & Hershbarger, R. (1992). PROFITABILITY OF TITLE INSURANCE COMPANIES. *Journal of Insurance Issues* , pp. 15(1), 13-30.

Fikre, M. (2015). Factors Affecting Profitability in the Airline Industry: An Empirical Study on Major airlines in Sub-Saharan Africa . *(Master dissertation, AAU)* .

Flamini, V., McDonald, C., & Schumacher, L. (2015). The Determinants of Commercial Bank Profitability in Sub-Saharan Africa. *International Monetary Fund* .

Getahun, M. (2014). Determinants of capital structure and its impact on the performance of Ethiopian insurance industry . *(Doctoral dissertation, Jimma University).* .

Gujirat, M. (2001). *Introduction to econometrics* (3rd Edtion ed.). Chichester Wiley.

Hailu, Z. (2007). Insurance in Ethiopia: Historical Development, Present Status and Future Challenges.

Hun, M. P. (2005). *Linear Regression Models for Panel Data Using SAS, STATA, LIMDEP, and SPSS.* Indiana: Trustees of Indiana University.

Insurere of Eruop. (2005). The Contribution of the Insurance Sector to Economic Growth and Employment. *Insurere of Eruop* .

Jensen, M., & Meckling, W. (1976). Theory of the firm: managerial behavior, agency cost, and ownership structure. . *Journal of Financial Economics* , pp. 3, 305-360.

Kabajeh, A. N. (2012). The Relationship between the ROA, ROE and ROI Ratio with Jordanian Insurance Public Companies Market Share Prices. *Journal of Humanities and Social Science. , vol 2.*

Kothari, M. (2004). *Research Methodology: Methods & Techniques.* London: Macmillan.

Kripa, D. (2016, Jan-Apr). Factors Affecting the Profitability of Insurance Companies in Albania. *European Journal of Multidisciplinary Studies* , p. Vol.1 Nr. 1.

Malik, H. (2011). Determinants of insurance company's profitability: an analysis of insurance sector of Pakistan. *Academic Research Internationa* , p. 315.

Meaza, M. G. (2014). Determinants of insurance companies' profitability in Ethiopia. *Meaza Melese Gebremariyam (2014) Determinants of insurance compaMaster dissertation, Addis Ababa University* .

Meyer, J. W., & Rowan, B. (1977). Institutionalized Organizations: Formal Structures as Myth and Ceremony. *American Journal of Sociology* , pp. 83 (2), 340-363. .

Mistre, S. (2015). The Determinants of Profitability on Insurance Sector: Evidence from Insurance Companies in Ethiopia . *Doctoral dissertation, AAU* .

Muriith, K., & Onuonga, M. (2009). *Introduction to Insurance.* Nairob: Focus Publishers.

National Bank of Ethiopia . (2017). National Bank of Ethiopia Annual Report & directives . *Annual Report* .

Naveed, Z., & Ahmad, U. (2011). Determinants of performance: A case of life Insurance sector of Pakistan.

OINO, T. N. (2013). Relationship between firm characteristics and financial performance of life insurance companies in Kenya. *Doctoral dissertation, Doctoral dissertation, University of Nairobi*.

Öner, K. E. (2015, march 3). The Effects of Firm-Specific Factors on the Profitability of Non-Life Insurance Companies in Turkey. *International Journal of Financial Studies* , pp. 510-259.

Paul, R. K., & Maurice, O. (2003). *International Economics: Theory and Policy* (sixth edition ed.). DC: Pearson Education, Inc, Printed in the United States of America.

Porter, M. E. (1980). *Competitive Strategy.* New work: The Free Press.

Shala, A., Ahmeti, ,. S., Berisha, V., & Perjuci, E. (2014). The Factors that Determine the Capital Structure among Insurance Companies in Kosovo. *Empirical Analysis. Academic Journal of Interdisciplinary Studies,* , 3(2), 43.

Shields, N. (2013). *A Playbook for Research Methods: Integrating Conceptual.*

Suheyli, R. (2015). Determinants of Insurance Companies Profitability in Ethiopia . *Master dissertation, AAU*

Swiss Reinsurance Company Limited. (2011). Insurance in Emerging Markets: Growth drivers and profitability. *Sigma* , No 5.

APPENDIX I: NORMALITY TEST (a)
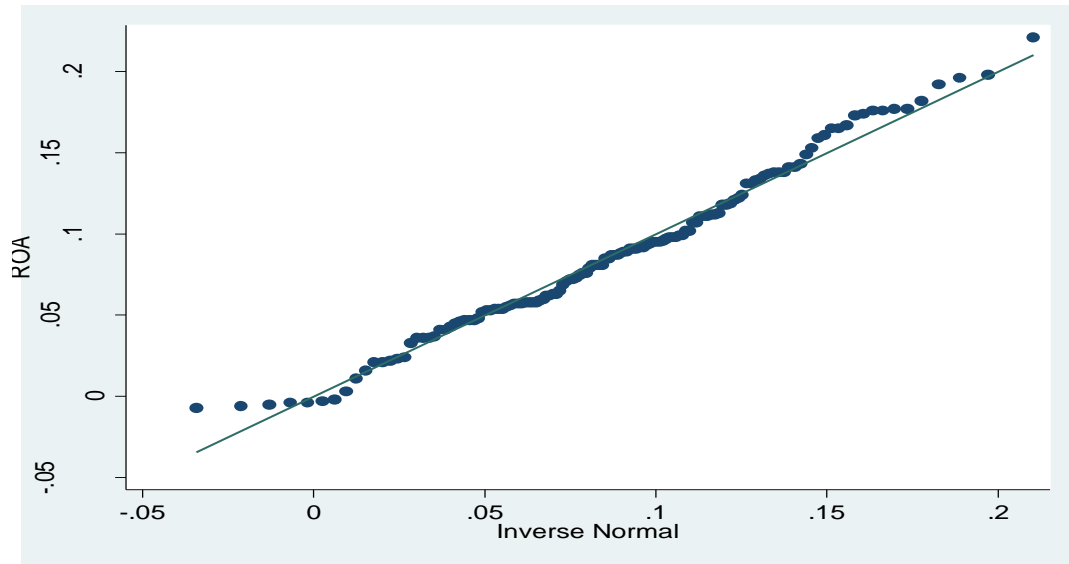
APPENDIX II: Data Collection and Compilation Format

Company's Name: -----------------------------------

Year of Establishment: --------------------------------

Fiscal Years	Variables							

APPENDIX III: INTERVIEW QUESTIONS

Interview Questions for Ethiopian insurance industry professionals

1. What challenges does your insurance companies faced in the Ethiopia insurance industry?

- _____
  _____
  _____
  _____
  _____
  _____

- _____
  _____
  _____
  _____
  _____
  _____

- _____
  _____
  _____
  _____
  _____

- _____
  _____
  _____
  _____
  _____

- _____
  _____
  _____
  _____
  _____

APPENDIX V: LIST OF INSURANCE COMPANIES OPERATING IN ETHIOPIA

S/N	Name	Type insurance service	Establishment year
1	Ethiopian Insurance Corporation	Life and General	1975
2	Africa Insurance company S.C	Life and General	1994
3	Awash insurance company S.C	Life and General	1994
4	National Insurance company of Ethiopia S.C	Life and General	1994
5	Nyala Insurance company S.C	Life and General	1995
6	Nile Insurance company S.C	Life and General	1995
7	The United Insurance S.C	Life and General	1997
8	Global Insurance Company S.C	General	1997
9	NIB insurance company	Life and 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	Life and General	2009
13	Abay Insurance Company	General	2010
14	Birhan Insurance company S.C	General	2011
15	Tsehay Insurance S.C.	General	2012
16	Lucy insurance share company	General	2012
17	Buna insurance company	General	2013