COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING AND FINANCE

The Determinants of Profitability on Insurance Sector: Evidence from Insurance Companies in Ethiopia

A thesis Submitted to the Department of Accounting and Finance, College of Business and Economics, Addis Ababa University, in Partial Fulfillment of the Requirements for Degree of Master of Accounting and Finance

Addis Ababa University
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By Mistre sisay GSR/1561/06

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Declaration

I, Mistre Sisay declare that, this thesis entitled: The Determinants of Profitability on Insurance Sector: Evidence from Insurance Companies in Ethiopia is my original work produced under the guidance of my advisor Dr. P. Laxmikantham, and has never been published and/or submitted for any award of Degree in any other University. Any source used is duly acknowledged in this study.

Signed: ---------- Date: ----------

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This is to certify that the thesis prepared by Mistre Sisay, entitled: The Determinants of Profitability on Insurance Sector: Evidence from Insurance Companies in Ethiopia and submitted in partial fulfillment of the requirements for the Degree of Master of Accounting and finance complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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ABSTRACT

Organizational performance has attracted scholarly attention in corporate finance literature over several decades. However, in the context of insurance sector, it has received a little attention in developing economies. The objective of this study is to determine the relationship between factors affecting insurance profitability (Age of companies, Size of companies, Leverage, Tangibility of assets, Liquidity, Premium Growth, Loss ratio, Reinsurance dependence, Solvency margin and GDP growth rate and financial performance of insurance companies in Ethiopia. In order to carry out the study, secondary data of 9 insurance companies over the period of 2003-2014 was obtained on the financial performance from the annual reports and audited financial statements and secondary data supported by primary data obtained through open-ended questionnaires held with insurance companies chief finance officers .Data collected was analyzed using Eviews 7 econometrics software . Regression analysis was used to analyze the data from secondary source and data from primary source were streamlined presented to support regression result. The study findings indicate that the variables are statistically significance to influencing financial performance of insurance companies in Ethiopia. This implies that loss ratio, size of insurance companies, leverage ratio, and solvency margin has significant impact at one percent significance level on profitability of insurance companies operating in Ethiopia and the primary source data also supports that the above variable has an impact on profitability of insurance companies. Based on the findings, the study recommends that insurers must work towards improving their solvency margin, underwriting risk, and increase their size of asset, financing decision and improving management and employee's competency. Further studies should be undertaken to analyze the different sectors in the economy to determine any significant differences in the relationship between firm characteristics and financial performance in the insurance sectors by incorporating other independent variable.

Key Terms: Financial Performance, Profitability, Insurance Companies in Ethiopia, Return On Asset (ROA)

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List of Acronyms and Abbreviations

AGE- Age of Insurance Companies

GDP- Gross Domestic Product

GRP- Gross Written Premium

ISD- Insurance Supervision Directorate

LAV- Leverage Ratio of Insurance Companies

LIQ- Liquidity Ratio of Insurance Companies

LOR- Loss Ratio of Insurance Companies

NBE – National Bank of Ethiopia

OLS – Ordinary Least Square

RED- Reinsurance Dependency

ROA- Return on Asset

ROE- Return on Equity

SIZE- Size of Insurance Companies

SOM – Solvency Margin of Insurance Companies

TAN- tangibility of asset

CHAPTER ONE

INTRODUCTION

1.1. Background of the study

The importance of insurance in modern economies is unquestioned and has been recognized for centuries. Insurance is practically a necessity to business activity and enterprise. But insurance also serves a broad public interest far beyond its role in business affairs and its protection of a large part of the country's wealth. It is the essential means by which the disaster to an individual is shared by many, the disaster to a community shared by other communities; great catastrophes are thereby lessened, and, it may be, repaired.

Without insurance coverage, the private commercial sector would be unable to function. Insurance enables businesses to operate in a cost-effective manner by providing risk transfer mechanisms whereby risks associated with business activities are assumed by third parties. It allows businesses to take on credit that otherwise would be unavailable from banks and other credit-providers fearful of losing their capital without such protection, and it provides protection against the business risks of expanding into unfamiliar territory new locations, products or service which is critical for encouraging risk taking and creating and ensuring economic growth. Beyond the commercial world, insurance is vital to individuals. Lack of insurance coverage would leave individuals and families without protection from the uncertainties of everyday life. Life, health, property and other insurance coverage's are essential to the financial stability, well-being and peace of mind of the average person.

Insurance is a financial product that legally binds the insurance company to pay losses of the policyholder when a specific event occurs. The insurer accepts the risk that the event will occur in exchange for a fee, the premium. The insurer, in turn, may pass on some of that risk to other insurers or reinsurers. Insurance makes possible ventures that would otherwise be prohibitively expensive if one party had to absorb all the risk.

The insurance sector plays important role in the financial services industry in almost developed and developing countries, contributing to economic growth, efficient resource allocation, reduction of transaction costs, creation of liquidity, facilitation of economics of scale in investment and spread of financial losses (Haiss and Sümegi, 2008). The insurance sector of any country can take major part in the economic growth and development (Brainard, 2008; Ward & Zurbruegg, 2000). But this sector in developing countries has an inactive role in the economic growth and development.

The history of insurance service is as far back as modern form of banking service in Ethiopia which was introduced in 1905. At the time, an agreement was reached between Emperor Menelik II and a representative of the British owned National Bank of Egypt to open a new bank in Ethiopia. Similarly, modern insurance service, which were introduced in Ethiopia by foreigners, mark out their origin as far back as 1905 when the bank of Abyssinia began to transact fire and marine insurance as an agent of a foreign insurance company. According to a survey made in 1954, there were nine insurance companies that were providing insurance service in the country. With the exception of Imperial Insurance Company that was established in 1951, all the remaining of the insurance companies were either branches or agents of foreign companies. In 1960, the number of insurance companies increased considerably and reached 33. At that time insurance business like any business undertaking was classified as trade and was administered by the provisions of the commercial code, Hailu Zeleke (2007).

According to Hailu Zeleke (2007), the first significant event that the Ethiopian insurance market observation was the issuance of proclamation No. 281/1970 and this proclamation was issued to provide for the control & regulation of insurance business in Ethiopia. Consequently, it created an insurance council and an insurance controller's office, its strange impact in the sector. The proclamation defined 'domestic company' as a share company having its head office in Ethiopia and in the case of a company transacting a general insurance business at least 51% and in the case of a company transacting life insurance business, at least 30% of the paid-up capital must be held by Ethiopian nationals or national companies. After four years that is after the enactment of the proclamation, the military government that came to power in 1974 put an end to all private enterprises. Then all insurance companies operating were nationalized and from January 1, 1975

onwards the government took over the ownership and control of these companies & merged them into a single unit called Ethiopian Insurance Corporation. In the years following nationalization, Ethiopian Insurance Corporation became the sole operator. After the change in the political environment in 1991, the proclamation for the licensing and supervision of insurance business heralded the beginning of a new era. Immediately after the enactment of the proclamation in the 1994, private insurance companies began to increase.

The performance of any business firm not only plays the role to increase the market value of that specific firm but also leads towards the growth of the whole sector which ultimately leads towards the overall prosperity of the economy. Assessing the determinants of performance of insurers has gained the importance in the corporate finance literature because as intermediaries , these companies are not only providing the mechanism of risk transfer, but also helps to channelize the funds in an appropriate way to support the business activities in the economy. However, it has received little attention particularly in developing economies (Ahmed et al, 2011).

Ethiopia's Insurance sector has shown strong resilience to a challenging macroeconomic environment and global development. Despite slow growth in premiums (3%) in 2014, the total capital of the industry, in which non-life business represents 95% of the total size of capital in 2014, reached Birr 8.1billion as at June showed a 32% growth rate over the preceding year owing to considerable improvements in capital injections and investment returns.

General insurance continued to dominate the insurance business. It took around 94% of the total premium and 95% of the total insurance capital. Private insurers constituted 60% and 79 % of the total market share and capital size respectively. The slow growth of premiums in the current year makes insurance penetration went down to 0.83% from 0.87% in June 2014 .This is still a sign of the low level of progress of insurance in Ethiopia.

The market is dominated by state insurer which comprised about 54% of the total size the market. However the index also indicates the size of market for top 3 and top 4 insurers declined

to 53% and 61% from 61% and 69% in 2010 respectively which in turn signaled the increasing trends of competiveness of the private sector over the years, (NBE,ANNUAL REPORT 2014).
Despite the current insurance companies' development with respect to both total assets and in number, there are some studies conducted to investigate the determinants of performance of insurance sector in Ethiopia. Therefore, the objective of this study is to identify the factors that influence insurance companies' performance in Ethiopia. The significance of this study stems from the fact that various studies in Ethiopia have investigated the determinants of performance only for non-financial and banking sectors. Therefore, the researcher believes that the study fills an important gap in understanding the determinants of performance for insurance companies in the developing economy. Such an understanding is important, because it equips financial managers with applied knowledge for determining factors that affect firms' performance. From a theoretical point of view, it provides an important data for comparing determinants of performance of insurance companies between developed and developing economies.

1.2. Statement of the problem

It has been noted that without the insurance sector, the economy and the wealth creation associated with it can be adversely affected (International Accounting Standards Board, 2007). The insurance industry forms an integral part of the country‘s financial sector and its benefits cannot be over-emphasized. If this crucial sector was missing, the consequence on the economy would be devastating.

The subject of financial performance has received significant attention from scholars in the various areas of business and strategic management. It has also been the primary concern of business practitioners in all types of organizations since financial performance has implications to organization's health and ultimately its survival. High performance reflects management effectiveness and efficiency in making use of company's resources and this in turn contributes to the country's economy at large. (Naser, and Mokhtar, 2004)

Performance represents a difficult concept, both in terms of definition and quantification. It was defined as output of activity, and the appropriate measure selected to assess corporate performance is considered according to the organization type and objectives of evaluation. Researchers in strategic management have offered a variety of models that can be used to

analyze financial performance. Nevertheless, there is no consensus on what constitutes a valid set of performance criteria (Ostroff and Schmidt, 1993).

Profitability, defined as proxy of financial performance, is one of the main objectives of insurance companies' management. Profit is an essential prerequisite for an increasing competitiveness of a company. In addition, profit attracts investors and improves the level of solvency, and thus, strengthens consumers' confidence. The financial analysis of a company is an important tool used by actuaries in the process of decision-making on underwriting and investment activities of the insurance company. The financial performance of insurance companies is also relevant within the macroeconomic context since the insurance industry is one of the financial system' components, fostering economic growth and stability. Therefore, the determinants of insurance company's performance have attracted the interest of academicians, practitioners and institutional supervisors. Hence, these are important issues to be investigated for the insurance managers, professionals, regulators and policy makers to support the sector in achieving the excellence so that required economic outcomes could be obtained from the help of the sector in Ethiopia by understanding the success and failure factors of profitability. In Ethiopia factors affecting financial performance of insurance companies has not been adequately investigated. While taking in to consideration the absence of empirical inquiry into the factors affecting insurance companies' financial performance, the researcher attempts to supplement empirical evidence in the country by incorporating insurance specific determinates (variables) which are untouched by previous researchers. The study's main objective was to identify and to what extent that the factors affecting profitability of insurance companies' operating in Ethiopia.

1.3. Research questions

Therefore, this study seeks to answer the following questions:

- ✓ What are the basic factors affecting profitability of Insurance Companies in Ethiopia?
- ✓ To what level that determinant' of profitability impact the performance of insurance companies in Ethiopia?

1.4. Research hypothesis

The study tasted the following research hypotheses formulated based on prior empirical literature.

H1. Age of a company has a positive impact on performance of insurance companies in Ethiopia.

H2. The size of a company has a positive impact on performance of insurance companies in Ethiopia.

H3. Leverage has a negative impact on performance of insurance companies in Ethiopia

H4. There is a positive relationship between tangibility of assets and performance of insurance companies in Ethiopia.

H5. Liquidity has a positive impact on performance of insurance companies in Ethiopia.

H6.The insurance premium growth has a negative impact on performance of insurance companies in Ethiopia.

H7. Loss ratio has a negative impact on performance of insurance companies in Ethiopia.

H8.Reinsurance dependence has a negative impact on performance of insurance companies in Ethiopia.

H9. Solvency margin has a positive impact on performance of insurance companies in Ethiopia.

H10. Growth of GDP growth has a positive impact on performance of insurance companies in Ethiopia

1.5. Objectives of the study

1.5.1. General objective

The main aim of this study was to investigate the factors that determine the profitability (financial performance) of insurance companies in Ethiopia .

1.5.2. Specific objectives.

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

1. To identify the main determinants of insurance companies profitability.

2. To identify the effect of Age of companies, Size of companies, Leverage, Tangibility of assets, Liquidity, Premium Growth, Loss ratio, Reinsurance dependence and Solvency margin on the financial performance of Ethiopian insurance companies.
3. To determine the relationship between firm characteristics and profitability in insurance companies in Ethiopia.

1.6. Significance of the study

The study importance emerges from the fact that insurance sector plays a significant role in enhancing the country economy, and providing critical services for people in Ethiopia, the current study also empirically supplement a comprehensive analytical framework of financial performance in the case of Ethiopian insurance sector. Other importance of this study could be summarized as the following:

- In Ethiopia, a few researches have been investigated factors affecting Ethiopian insurance companies' financial performance, so the current study will be a base for other studies in the same field, and it will help in adding value to this subject.
- The current study will also provide a comprehensive framework and literature about of firm financial performance, and the factors influencing it in the case of Ethiopian insurance companies.
- To provide some conclusions and recommendations for top management and decision makers at insurance companies to deal with variables that affect financial performance In order to enhance their company financial performance.
- To provide the local libraries with scientific material dealing with variables that affect financial performance on Ethiopian insurance companies.
- Finally the current study will identify the effect of Age of companies, Size of companies, Leverage, Tangibility of assets, Liquidity, Premium Growth, Loss ratio, Reinsurance dependence, Solvency margin, and GDP growth on Ethiopian insurance companies.

1.7. Scope and limitation of the study

The scope of research was limited on the relationship of selected variables that determine the profitability of insurance companies and profitability (financial performance) of insurance companies in Ethiopia. The limitations of the study mean the constraints that the researcher faces during the study which are time, finance, attitude of respondents and source of information.

1.8. Organization of the paper

The research paper organized in main five chapters. The first chapter comprise; background of the study, statement of the problem, research hypothesis, the research objective (general and the specific research objective), significance of the study, and scope and limitation of the study. The second chapter contains the related literature review. The third chapter comprised, research methodology which includes; research design, data used in the research, sampling technique, choice of dependent variable and independent variables their measurement, and model specification. Chapter four incorporated; the research finding, the research analysis and interpretation of the result. Lastly chapter five deals with conclusion drawn and recommendation. The paper also incorporated acknowledgement, abstract, definition of terms, appendix, list of acronyms and reference.

CHAPTER TWO

RELATED LITERATURE

2.1 Introduction

This chapter is structured based on the research objectives. It reviews relevant literature available that focuses on factors that influence the financial performance of insurance companies in Ethiopia. This chapter widely explores Age of companies, Size of companies, Leverage, Tangibility of assets, Liquidity, Premium Growth, Loss ratio, Reinsurance dependence, Solvency margin, and GDP growth and how these factors affect the financial performance of insurance companies. The chapter also presents a theoretical review on firm characteristics.

2.2. Global insurance industry

The insurance industry forms an integral part of the global financial market, with insurance companies being significant institutional investors. In recent decades, the insurance sector, like other financial services, has grown in economic importance. This growth can be attributed to a number of factors including, but not exclusively: Rising income and demand for insurance, Rising insurance sector employment, and increasing financial intermediary services for policyholders, particularly in the pension business (Ward and Zurbruegg, 2002). Expanding on the link between GDP and insurance market development, it must be remembered that the insurance industry‘s primary function is to supply individuals and businesses with coverage against specified contingencies, by redistributing losses among the pool of policyholders. Insurance companies, therefore, engage in underwriting, managing, and financing risks.

The importance of insurance in modern economies is unquestioned and has been recognized for centuries. But insurance also serves a broad public interest far beyond its role in business affairs and its protection of a large part of the country’s wealth. It is the essential means by which the disaster to an individual is shared by many, the disaster to a community shared by other communities; great catastrophes are thereby lessened, and, it may be, repaired. Insurance is an essential element in the operation of sophisticated national economies throughout the world

today. Without insurance coverage, the private commercial sector would be unable to function (Peter R. Haiss and Kjell Sumegi (2008).

Insurance enables businesses to operate in a cost-effective manner by providing risk transfer mechanisms whereby risks associated with business activities are assumed by third parties. It allows businesses to take on credit that otherwise would be unavailable from banks and other credit-providers fearful of losing their capital without such protection, and it provides protection against the business risks of expanding into unfamiliar territory – new locations, products or services – which is critical for encouraging risk taking and creating and ensuring economic growth(Ward and Zurbruegg, 2002).

Beyond the commercial world, insurance is vital to individuals. Lack of insurance coverage would leave individuals and families without protection from the uncertainties of everyday life. Life, health, property and other insurance coverage's are essential to the financial stability, well-being and peace of mind of the average person. Insurance is a financial product that legally binds the insurance company to pay losses of the policyholder when a specific event occurs. The insurer accepts the risk that the event will occur in exchange for a fee, the premium. The insurer, in turn, may pass on some of that risk to other insurers or reinsurers. Insurance makes possible ventures that would otherwise be prohibitively expensive if one party had to absorb all the risk.
Advancements in medicine, product development, space exploration and technology all have become a reality because of insurance. Distribution of insurance is handled in a number of ways. The most common is through the use of insurance intermediaries. Insurance intermediaries serve as the critical link between insurance companies seeking to place insurance policies and consumers seeking to procure insurance coverage (Ward and Zurbruegg, 2002).

According to Hifza 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. Michael Koller (2011) in his investigation identified that insurance companies are playing the role of transferring risk channeling funds from one unit to the other (financial intermediation) such as

general insurance companies and life insurance companies respectively. This implies that insurance companies are helping the economy of a country one way by transferring and sharing of risk which can create confidence over the occurrences of uncertain event and in another way insurance companies like other financial institutions plays the role of financial intermediation so as to channel financial resources from one to the other.

Therefore, we can divide insurance companies in to two broad categories based on their role to the economy; the general insurance companies and life insurance companies. For instance, Renbao Chen et.al (2004) summarized firm specific factors affecting property/liability which is general insurers and life/health insurance profitability separately that again provide valuable guidelines for insurers financial health. This is because life/health insurance companies are different from property/liability insurers in terms of operation, investment activities, vulnerability and duration of liabilities. Life insurers are said to function as financial intermediaries while general insurers function as risk takers, Renbao Chen et..al (2004)

2.3. Historical Development of Insurance in Ethiopia

It is believed that Ethiopians practiced banking for several hundred years. During the Axumite Ethiopian Kingdom (from 1st century to the 7th century), it seems unimaginable that such an advanced society existed at that time without the concept of some kinds of banking facilities. And no one knows when and how the insurance business begun in Ethiopia. According to "Markets of the World", published by the Swiss Reinsurance Company, it is stated: "Although a systematic study of Adulis has not been completed, it has already proved that the Greek merchants reached this thriving port south of Massawa in the 1st Century. During that time it is believed that some form of Marine Insurance was used probably "General Average" along Rhodian Lines.

Financial markets and institutions interact and combine in various ways to form a county’s financial systems. At the centre of the system there are financial instruments in which financial institutions deal in the market. Financial systems evolve over time. They reflect a county’s political and economic history. Financial systems in many African countries, for example, evolved from colonial times. Evolution of modern institutionalized financial system in Ethiopia

started in 1905 following the establishment of the first bank by historically reminiscent name of Bank of Abyssinia (Belay P.69). This Bank introduced for the first time in Ethiopian financial systems history banking services and instruments such as deposit accounts and export financing.

2.3.1. In pre 1974 Ethiopia

The financial system operated in a free market economic environment. However, in 1980s, the financial system was restructured and reorganized to serve centrally planned economic system which was created following the change of government in 1974.

2.3.2. During this period/post 1974

The Government nationalized all financial institutions in the country and created three specialized banks (excluding the central bank) and one insurance company. Private ownership of financial institutions was prohibited. Following the principles of mono-banking, the three state owned banks and the insurance company were administered by the central bank –the National Bank of Ethiopia (NBE). Indeed, the NBE used to run those governments owned financial institutions like its own cost centered functional units. Among the specialized banks, the then Agricultural and Industrial Development Bank (the current Development Bank) was responsible for financing agricultural and industrial projects with medium and long gestation period, while the then Housing and Savings Bank (the current Construction and Business Bank) used to lend for construction of residential and commercial buildings. The third bank, Commercial Bank of Ethiopia, was the only bank engaged in trade and other short term financing activities. The only insurance firm, the Ethiopia Insurance Corporation, was responsible for provision of all types of insurance services. Although there were efforts, to reach the poor through rural and urban cooperatives, particularly, by extending farm input loans, access to finance during the socialist oriented regime was virtually not possible for the rural poor. By the end of the socialist oriented regime, because of the failure of most cooperatives to repay their loans, banks totally pulled out of lending to rural farmers.

2.3.3. In 1990s

As a result of the shift from socialist to market economic system, Ethiopia reformed its financial services industry. The reform measures included comprehensive restructuring of government

owned financial institutions and opening the sector for local private equity participation. The three governments owned banks and one insurance company inherited from socialist regime were made autonomies in terms of managing their business and recapitalized. While there was no change in the role of Commercial Bank of Ethiopia (as short term financer), Development Bank of Ethiopia (as provider of medium and long term development finance) and Ethiopian Insurance Corporation (as provider of both general and life insurance services), Construction and Business Bank has been allowed to engage in short-term financing activities.

Opening of the financial services industry for local private equity participation resulted in establishment of nine banks, ten insurance companies and 28 microfinance institutions until June 2008. The newly established banks and insurance companies are all owned 100% by local private shareholders.

The history of insurance describes the development of the modern business of insurance against risks, especially regarding cargo, property, death, automobile accidents, and medical treatment.

The industry helps to eliminate risks (as when fire insurance companies demand the implementation of safe practices and the installation of hydrants), spreads risks from the individual to the larger community, and provides an important source of long-term finance for both the public and private sectors. The insurance industry is generally profitable and provides attractive employment opportunities.

Following the liberalization process, unlike the pre-reform practice, the pattern of financial intermediation has been largely geared towards the private sector as opposed to the public and cooperative sector. The people are getting more confident of private financial enterprises through time. Private sector participation in the financial sector has facilitated the smooth implementation of the monetary and financial intermediation through the creation of competition there by contributing to the development of the sector.

The new economic policy has contributed to the rise of private sector market share in the banking and insurance business. During the defunct regime, the state - owned Ethiopian Insurance Corporation has been in a position to control the insurance business by monopoly. The new comers privately owned insurance companies have penetrated the financial market and

reduced the market share of Ethiopian Insurance Corporation from 100 percent to 57 percent. (Source NBE)

2.4. Financial Soundness of Ethiopian insurance companies

2.4.1. Capital Adequacy

The total capital of the industry, in which non-life business represents 95% of the total size of capital in 2014, reached Birr 8.1billion as at June 30, 2014. Despite slow growth in premiums (3%), shareholder's fund registered a 32% growth rate over the preceding year of Birr 1.56billion owing to considerable improvements in capital injections and investment returns.

Insurer's capital to total liabilities, which was characterized by volatile trend from 2007 to 2013, registered a year on year result of 33% over the last two years. This ratio, which is expected not to fall below 20%, still could provide a sufficient buffer to absorb losses that occur in the normal course of business.

The gross premium to capital (gross risk ratio) stood at around 2.4 times, which according to early warning test (EWT) ratio standard can run up to 7 times. The net premium to total capital also worked out to 1.8 times which stood at below the standard of 3 times. This gives an indication that the capital employed by the sector was adequate enough to carry the level of risk accepted and also has extra space to accommodate more volume of premium production.

On the other hand as per ISD's solvency rule, the industry's admitted capital should exceed at least 15% of the preceding year net written premium .With less rigorous solvency test (without considering admissibility rules) the capital of the industry are turned out to 66% of last year's net premium which is well above 15% of the industry's net premiums which could provide a 41% (66-15) buffer for consideration of potential disallowed assets. In general As at June 30, 2014, the insurance sector was operating at a relatively safe capital adequacy position, (NBE ISD ANNUAL REPOERT 2014).

2.4.2. Assets quality

As at June 30, 2014, the insurance sector was operating at a sound asset quality position. Dominated by investments of fixed income securities and short term deposits, the assets of the insurance business grew by 19% to reach Birr 8.18billion in 2014 from Birr 6.86billion in 2013 driven by significant improvements in these invested assets.

Short term investments comprised 55% the total assets during the last two years. In the same period investment in equity shares accounted for only 9% of the total investments and 23% of the total net worth where insurers are allowed to invest up to 100% of their net worth. The industry complied with the investment directives in which case investment in short term securities and deposits must be greater than 65% of admitted assets. However as the investment opportunities available to insurers are so limited in variety and with low interest rate, tiding more than 85% of the total investments to bank deposits and fixed income securities (treasury bills) in effect generate less return to its capital structure, (NBE ISD ANNUAL REPOERT 2014)

2.4.3. Reinsurance Business

The industry retained Birr 3.63billion in its account registering retention ratio of 73% in the year 2014 which can be considered fairly outside ISD's threshold, which is expected not to exceed 70%. The state insurer, influenced by the emergence and acceptance of billion size exposures in recent years, retained 65% of its business and complied with the requirement of 70% maximum threshold.

On the other hand during the period under review private insurers retained 78% of their business with 13 of which surpasses the 70% maximum threshold. While it can be argued that with 1.8 of net risk ratio, the industry can retain more to the point that net risk ratio should not exceed 2.5 times its capital base. This might hold true under normal circumstances. However under abnormal cases where return on premiums fall by 50%-100%, retention in excess of 70% result return on equity to fall significantly only to affect its capital base, ((NBE ISD ANNUAL REPOERT 2014)).

2.4.4. Adequacy of technical provisions

Insurance regulators often ensure the adequacy of technical provisions by measuring the level of capital adequacy ratios and safety ratios. Safety ratio, reserve for outstanding claims to equity that need to be at most 2.5 times, stood at 0.87 times. This indicates the adequacy of reserves for outstanding claims. All insurers reported below the threshold. On the other hand the average equity to liability ratio of the industry stood at 33% which is higher than the minimum standard of 20%. This is an indication that the industry has been setting aside adequate reserves to meet claims obligations and other liabilities without affecting the capital base, (NBE, ISD ANNUAL REPOERT 2014).

2.4.5. Management Soundness

The latest assessment of management and governance practices of most of Ethiopian insurers was found to be moderate. As part of good practice, audit, risk management and Human resource sub committees have been established in most of the insurance companies. The board has been conducting regular meetings with special focus on claims approval, sales of Company share, budget approval and staff and management benefit matters. Although the aforementioned issues could also be the domain of the board, the strategic roles that should be played by the board did not get the required attention and initiation. Strategic plan was not approved and risk management program which is the main responsibility of the board has not get the required attention by the board, policies and procedure manuals were not revised and not established for some tasks such as with respect to disposals and recovery yard management, (NBE ISD ANNUAL REPOERT 2014).

2.4.6. Premiums

While Table 5 showed that gross written premiums rose by 3 % to reach 4.98billion in June 2014 from the previous year of 4.82billion, the growth in net premiums stood at 17% to 3.63billion. Please not in the appendix that general insurance business continues to dominate by constituting 94 % the total market size. The change in underwriting results stood at 10% which in turn lower than the year before (23%) due to low underwriting performances in engineering classes and

property classes of businesses.

2.4.7. Profitability

Insurers registered claims ratio of around 72% during the current year higher by 12% from last year. About six companies reported claims ratio of more than 70% three of which reported more than 80%.This may be attributed by low growth rate of premiums, higher claims ratio of some classes (motor) and may be higher retention ratio as insurers are required retain more obligations.

Whilst insurance companies reported total profit of Birr 777million for the year ended June 30, 2014 and grew by 10% from 2013, ROE showed 38% in 2014 that is by far exceeded the acceptable standard of 10%.The current year result of ROE was lower than the year before (45%) mainly due to lower growth in premiums higher claims ratio, and lower underwriting result. However this was somehow compensated by yield on average invested assets as it went to 9% in 2014 higher than a year before (7%). This was attributed by substantial returns from real estate investment by few insurers, (NBE ISD ANNUAL REPOERT 2014)

2.4.8. Liquidity management

As at June 30, 2014, the insurance industry was operating at a marginally acceptable current ratio position of 100% which is higher than last year of 98%

2.5. Theoretical Review

2.5.1. Traditional Theory

This theory holds that there exists an optimal level of leverage. The implication is that minimizing the cost of capital when the optimal level of debt capital is employed maximizes the value of the firm (Brealey and Myer 1998). It’s based on the argument that at low levels of debt, increased leverage doesn’t increase the cost of debt hence the replacement of an expensive source of capital (equity) with a cheaper source (debt) translates to an increase in the value of the firm. It’s this that creates borrowing incentives to firms. Brealey and Myers (1998) observe that this argument holds because investors who hold debt are informed of the increased risk at

‘moderate’ debt levels and will continue demanding the same return on debt. They argue that it’s only at ‘excessive’ debt levels that they demand a higher return. Alexander (1963) better explains the fact that debt funds are cheaper than equity funds carries the clear implication that the cost of debt plus the cost of equity together on weighted basis will be less than the cost of equity, which existed on equity before debt financing; that’s the weighted average costs of capital will decrease with the use of debt.

The validity of the traditional view is questioned on the ground that the market value of the firm depends upon its net operating income and risk attached to it. The form of financing doesn’t change net operating income nor the risk attached to it but simply the way in which the income is distributed between equity holders and debt holders (Brealey & Myers 1998).Modigliani& Miller (1958), criticize the traditional view on the ground that the assumption that the cost of equity remains unaffected leverage up to some reasonable limit does not provide sufficient justification for such an assumption. They do not really add very much to the riskiness of the share.

2.5.2. Resource Based Theory

This theory addresses performance differences between firms using asymmetries in knowledge (Chen, 1996). At the corporate strategy level, theoretical interest in economies of scope and transaction costs focus on the role of corporate resources in determining the industrial and geographical boundaries of the firms’ activities. At the business strategy level, explorations of the relationships between resources, competition and profitability include the analysis of competitive imitation, the appropriate of returns to innovations, and the role of imperfect information in creating profitability differences between competing firms.

A firm’s ability to earn a rate of profit in excess of its cost of capital depends upon the attractiveness of the industry in which it is located and its establishment of competitive advantage over rivals. Industrial organization economics emphasizes industry attractiveness as the primary basis for superior profitability, the implication being that strategic management is concerned primarily with seeking favorable industry environments, locating attractive segments and strategic groups within industries and moderating competitive pressures by influencing

industry structure and competitors behavior. Thus, a resource based theory of the firm entails a knowledge based perspective.

2.5.3. Pecking Order Theory

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

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

However, Pecking order hypothesis suggests that corporations don't have a well throughout capital structure. Rather a company finances overtime with the method providing the least resistance to management and there's little capital market discipline on management's behavior. The capital structure that results is a by- product and changes whenever there's an imbalance between cash flows and capital investments.

2.5.4. Agency Theory

According to the Agency theory developed by Jensen and Meckling, agency costs arise from conflicts of interest between shareholders and managers of the company. Agency costs are defined as the sum of monitoring costs incurred by the principal, bonding costs incurred by the agent, and residual loss. Lower agency costs are associated with better performances and thus higher firm values, all other things being equal. Agency theory states that management and owners have different interests (Jensen and Meckling, 1976).Companies that separate the functions of management and ownership will be susceptible to agency conflicts (Lambert, 2001).They show that regardless of who makes the monitoring expenditures, the cost is borne by stake holders. Debt holders, anticipating monitoring costs, charge higher interest. The higher the probable monitoring costs, the higher the interest rate and the lower the value of the firm to its shareholders all other things being the same. There are three types of agency costs which can help explain the relevance of capital structure.

Asset substitute effect: as debt to equity increases, management has an increased incentive to undertake risky projects. This is because if the project is successful, shareholders get all the upside, where as if it is unsuccessful, debt holders get all the downside. If the projects are undertaken, there's a chance of firm value decreasing and a wealth transfer from debt holders to shareholders. Underinvestment problem: if debt is risky, the gain from the project will accrue to debt holders rather than shareholders. Thus, management has an incentive to reject positive net present value projects, even though they have the potential to increase firm value. Free cash flow: unless free cash flow is given back to investors, management has an incentive to destroy firm value through empire building and perks etc. Increasing leverage imposes financial discipline on management.

Complete protection would require the specification of extremely detailed protective covenants and extra ordinary enforcement costs. As residual owners of the firm, the stock holders have an incentive to see that monitoring costs are minimized up to a point. Monitoring costs may limit the amount of debt that's optimal for a firm to issue. It's likely that beyond a point the amount of monitoring required by debt holders increases with the amount of debt outstanding. When there's

little or no debt, lenders may engage in only limited monitoring. Costs associated with protective covenants are substantial and rise with the amount of debt financing. Shareholders incur monitoring costs to ensure manager's actions are based on maximizing the firm's value. Jensen and Meckling (1976) noted that with increasing costs associated with higher levels of debt and equity an optimal combination of debt and equity might exist that minimizes total agency costs.

2.5.5. Efficiency Hypothesis

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

This hypothesis stipulates that a bank which operates more efficiently than its competitors gains higher profits resulting from low operational costs. The same bank holds an important share of the market. Consequently, differences at the level of efficiency create an unequal distribution of positions within the market and an intense concentration Mensi S and Zouari A (2010).

Smirlock (1985) performed empirical examination of the Efficiency Hypothesis where he considered market share as a proxy to efficiency. In his empirical study of 2700 banks, Smirlock (1985) was able to demonstrate that there was no association between market concentration and bank profitability while significant relationship between bank profitability and market share was present. Thus by his work, the Structure-Conduct-Performance (SCP) model was invalidated.

However, Rhoades (1985) doubted the conclusion that the positive relation between market share and profitability was due to efficiency. He stated that this pattern might occur because of product diversification and correspondingly, ability of some banks to set higher prices on their services.

According to Grygorenko (2009), further empirical investigations did not bring clarification to the issue as to which of the theories mentioned above is best in explaining bank profitability: Ahmad N.H and Haron S (1998) and Yu P and Neus W (2005) confirmed Structure-Conduct-Performance (SCP) theory, while Mamatzakis C and Remoundos C (2003) and Naceur (2003) found evidence for Efficient-Structure Hypothesis.

2.5.6. Capital Asset Pricing Model (CAPM)

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

The Capital Asset Pricing Model (CAPM) has not gone unchallenged. It takes a very simplistic view of the relationship between risk and return neglecting the effects of market imperfections. As a result of these challenges it does not reflect the reality in the market. The Asset Pricing Theory (APT) extends the idea of the Capital Asset Pricing Model. This theory asserts that in a competitive market arbitrage will assure equilibrium pricing according to risk and return. The security expected return is the risk-free rate plus risk premiums for risk factors which are uncertain Horne (2008). The notion is the same as that of the Capital Asset Pricing Model (CAPM) with the exception that we now have multiple risk factors.

2.6. The Concept of Profitability

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 which in turn indicates better financial performance. Renbao Chen et.al (2004) stated in their investigation that

“higher profits provide both the means (greater availability of finance from retained profits or from the capital market) and the incentive (a high rate of return) for new investment”. Therefore, we can understand from the above explanation that insurance companies have double responsibility: in one way they are required to be profitable so as to have high rate of return for new investment. On the other hand, insurance companies need to be profitable in order to be solvent enough so as to make other industries in the economy as they were before even after risk occurred. 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 which in turn indicates better financial performance. According to Hafiz 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.

William H. Greene and Dam Segal (2004) argued that the performance of insurance companies in financial terms is normally expressed in net premium earned, profitability from underwriting activities, annual turnover, return on investment, return on equity. These measures could be classified as profit performance measures and investment performance measures. However, most researchers in the field of insurance and their profitability stated that the key indicator of a firm’s profitability is ROA defined as the before tax profits divided by total assets. Philip Hardwick and Mike Adams (1999), Hafiz Malik (2011) are among others, who have suggested that although there are different ways to measure profitability it is better to use ROA. Therefore, being profitable means that insurance companies are earning more revenues than being disbursed as expenses. As explained above just to analyze the drivers of profitability, it is useful to decompose either the return on asset ROA or ROE into their main components. According to Swiss Re (2008) Profits are determined first by underwriting performance (losses and expenses, which are affected by product pricing, risk selection, claims management, and marketing and administrative expenses); and second, by investment performance, which is a function of asset allocation and asset management as well as asset leverage. The first division of the decomposition shows that an insurer’s ROE is determined by earnings after taxes realized for each unit of net premiums (or profit margin) and by the 14 amount of capital funds used to

finance and secure the risk exposure of each premium unit (solvency). That is why most researchers use ROA as a measure of profitability in financial institutions.

The term profit can take either its economic meaning or accounting concept which shows the excess of income over expenditure viewed during a specified period of time. On one hand, profit is one of the main reasons for the continued existence of every business organization. On the other hand, profit is expected so as to meet the required return by owners and other outsiders. John J. Hampton (2009) clarified profitability ratio as a class of financial metrics that are used to assess a business's ability to generate earnings as compared to its expenses and other relevant costs incurred during a specific period of time. Accordingly, the term 'profitability' is a relative measure where profit is expressed as a ratio, generally as a percentage. Profitability depicts the relationship of the absolute amount of profit with various other factors. Similarly, Michael Koller (2011) argued that profitability is the most important and reliable indicator as it gives a broad indicator of the ability of an insurance company to raise its income level. In practice, executives define profits as the difference between total earnings from all earning assets and total expenditure on managing entire asset-liabilities portfolio Kaur and Kapoor, (2007).

The variation of profit among insurance companies over the years in a given country would result to suggest that internal factors or firm specific factors play a crucial role in influencing their profitability. It is therefore imperative to identify what are these factors as it can help insurance companies to take action on what will increase their profitability and investors to forecasts the profitability of insurance companies in Ethiopia.

2.7. Determinates of Profitability in Insurance Companies: An Empirical Review

While there have been many studies aimed at isolating the characteristics, behavior and performance determinants of insurance companies in developed countries, there are few that focus on developing countries of Africa, and indeed none in Ethiopia. For instance, Chen et al. (2009) examined the determinants of profitability and the results showed that profitability of insurance companies decreased with the increase in equity ratio. Sloan and Conover (1998) deduced that the functional status of insurers does not affect the profitability of being insured but public coverage has significant impact on profitability of insurance companies. Chen and Wong

(2004) found that size, investment, liquidity are the important determinants of financial health of insurance companies.

Profitability in insurance companies could be affected by a number of determining factors. These factors, as explained above could be further classified as internal, industry, and macroeconomic factors. However, as will be discussed in the coming consecutive sections of the review, in most literatures, profitability with regard to insurance companies usually expressed in as a function of internal determinants. Rather, most researches concerning determinants of profitability in insurance companies are divided in to two, such as determinants of profitability in property/liability or general insurance companies and in life/health insurance companies.

According to Yuqi Li (2007) financial institutions' non-financial statements variables are classified as management quality, efficiency and productivity, age and number of branches.
Most researches concerning insurance companies are conducted with respect to only financial statement variables. Hence, newly established banks are not particularly profitable in their first years of operation, as they place greater emphasis on increasing their market share, rather than on improving profitability Athanasoglou *et al.*, (2005). Similarly, Yuqi li (2007) indicate that older banks expected to be more profitable due to their longer tradition and the fact that they could build up a good reputation. Obviously, the above empirical studies those include age as one of their explanatory determinant indicates a positive relationship between age and profitability.

According to Athanasoglou *et al.*, (2005) the effect of a growing size of a bank on profitability has been proved to be positive to a certain extent. Consequently, a positive relationship is expected between size and profitability by many insurance area researchers. However, for firms that become extremely large, the effect of size could be negative due to bureaucratic and other reasons Yuqi Li (2007). Hence, the size-profitability relationship may be expected to be non-linear. Therefore most studies use the real assets in logarithm and their square in order to capture the possible non-linear relationship.

Renbao Chen and Rie Ann Wong (2004) stated that leverage beyond the optimum level could result in higher risk and low value of the firm. Empirical evidences with regard to leverage found to be statistically significant relationship but negative. The relationship between leverage and profitability has been studied extensively to support the theories of capital structure and argued also that insurance companies with lower leverage will generally report higher ROA, but lower ROE. Since an analysis for Return on Equity (ROE) pays no attention to the risk associated with high leverage.

Studies conducted in different countries found that for non-life insurance companies, size of capital is one of the important factors that affect ROA; Hafiz Malik (2011) examined the relationship between volume capital and return on asset for Pakistan insurance industry and found positive and statistically significant relationship between insurance capital and profitability. Tangibility of assets in insurance companies in most studies is measured by the ratio of fixed assets to total assets.

A study by Naveed Ahmed et.al... (2011) investigates the impact of firm level characteristics on performance of the life insurance sector of Pakistan over the period of seven years. For this purpose, size, profitability, age, risk, growth and tangibility are selected as explanatory variables while ROA is taken as dependent variable. The results of Ordinary Least Square (OLS) regression analysis revealed that leverage, size and risk are most important determinant of performance of life insurance sector whereas ROA has statistically more of insignificant relationship with, tangibility of assets. However, Hafiz Malik (2011) found that there exists a positive and significant relationship between tangibility of assets and profitability of insurance companies and argued that the highest the level of fixed assets formation, the older and larger the insurance company is. In contrast to this, Yuqi Li (2007) in UK found no significant relationship between tangibility of assets and profitability of insurance companies.

In developing countries, the importance of the insurance industry as an essential component of the financial system it is not fairly appreciated. In this context, Mehari and Aemiro (2013) assess the impact of the Ethiopian insurance companies' characteristics on their performance. The study includes 9 insurance companies which are analyzed through panel data technique, during 2005–

2010. According to the results, company size, loss ratio, tangibility and leverage represent important determinants of insurers' performance, while growth of gross written premiums, age and liquidity have an insignificant statistical power.

The following are the variables used in researches concerning profitability of insurance companies and related financial institutions and the details of internal financial statement and one non financial statement variable are discussed in detail in this section.

2.7.1. Firm size and age

Firm size is one of the most influential characteristics in organizational studies. Chen and Hambrick (1995), and Mintzberg (1979) provide a summary and overview of the importance of firm size. Firm size has also been shown to be related to industry- sunk costs, concentration, vertical integration and overall industry profitability (Dean et al., 1998).

Newly established banks are not particularly profitable in their first years of operation, as they place greater emphasis on increasing their market share, rather than on improving profitability Athanasoglou *et al.*, (2005). Similarly, Yuqi li (2007) indicate that older banks expected to be more profitable due to their longer tradition and the fact that they could build up a good reputation. Obviously, the above empirical studies those include age as one of their explanatory determinant indicates a positive relationship between age and profitability.

Several studies have been conducted to examine the effect of size and age on firm profitability. However, the empirical evidences of the linkage between profitability and firm size are somewhat inconsistent. For example, evidence collected by Philip Hardwick and Mike Adams (1999) from UK companies suggests that there is an inverse relation between profitability and firm size. Jay Angoff Roger Brown (2007) found that there is a positive and significant relationship between the age of a company and its profitability as measured by ROA. Similarly, the research conducted on the relationship among firm characteristics including size, age, location, industry group, profitability and growth by Swiss Re (2008) indicated that larger firms are found to grow faster than smaller and younger firms found to grow faster than older firms. In contrast, Hamadan Ahamed Ali Al-Shami (2008) found no significant statistical relation between

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

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

2.7.2. Liquidity

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

determinants of financial health of insurance companies with a negative relationship. Similarly, Hakim and Neaime (2005) observed that liquidity, current capital and investment are the important determinants of banks profitability. Valentina Flamini, Calvin McDonald, and Liliana Schumacher (2009) in their investigation regarding Sub-Saharan countries found significant and negative relationship between bank profitability and liquidity.

2.7.3. Leverage

Firm leverage is the degree to which a company uses fixed-income securities, such as debt and preferred equity. With a high degree of financial leverage come high interest payments. The trade-off between agency costs of debt and equity (Jensen and Meckling, 1976); the limited liability effect of debt (Brander and Lewis, 1986); and the disciplining effect of debt (Grossman and Hart, 1983; Jensen, 1986) all suggest a positive effect of leverage on performance. Bolton and Scharfstein, 1990; Chevalier and Scharfstein, 1996; Dasgupta and Titman, 1998; suggest that leverage opens up opportunities for rivalry predation in concentrated product markets, thus conditioning the performance effect of leverage on the degree of competition in the insurance industry.

The trade of theory suggests a positive relationship between profitability and leverage ratio and justified by taxes, agency costs and bankruptcy costs push more profitable firms towards higher leverage. Hence more profitable firms should prefer debt financing to get benefit from tax shield. In contrast to this pecking order theory of capital structure is designed to minimize the inefficiencies in the firms' investment decisions. Due to asymmetric information cost, firms prefer internal finance to external finance and, when outside financing is necessary, firms prefer debt to equity because of the lower information costs. The pecking order theory states that there is no optimal capital structure since debt ratio occurs as a result of cumulative external financing requirements. Insurance leverage could be defined as reserves to surplus or debt to equity. The risk of an insurer may increase when it increases its leverage. Literatures in capital structure confirm that a firm's value will increase up to optimum point as leverage increases and then declines if leverage is further increased beyond that optimum level.

For instance Renbao Chen and Rie Ann Wong (2004) stated that leverage beyond the optimum level could result in higher risk and low value of the firm. Empirical evidences with regard to leverage found to be statistically significant relationship but negative. For instance Renbao Chen and Kie Ann Wong (2004), in Canada, Hamadan Ahamed Ali Al-Shami (2008) in UAE, Hifza Malik (2011) in Pakistan, Sylwester Kozak (2011) in UK Swiss Re (2008) in Egypt and Flamini et..al (2009) in Sub-Saharan countries found that negative but statistically significant relationship between leverage and profitability of firms. Harrington (2005) stated that the relationship between leverage and profitability has been studied extensively to support the theories of capital structure and argued also that insurance companies with lower leverage will generally report higher ROA, but lower ROE. Since an analysis for ROE pays no attention to the risk associated with high leverage.

2.7.4. Loss ratio (LOSS):

Insurance companies could prosper by taking reasonable leverage risk or could become insolvent if the risk is out of control. Adams and Buckle (2000) provide evidence that insurance companies with high leverage have better operational performance than insurance companies with low leverage. Nevertheless, more empirical evidence supports the view that leverage risk reduces company performance. Carson and Hoyt (1995) find that leverage is significantly positively related to the probability of insolvency. Moreover, a negative relationship between leverage and performance has also been found in Browne et al. (2001).

The variable risk is found to have a negative and statistically significant (at the 1 % level of significance) relationship with ROA according to study by Daniel Mehari and Tilahun Aemiro on Ethiopian insurance . According to the nature of the insurance industry, the ratio of net claims paid in net premiums earned (loss ratio) is used as a proxy to measure the risk of the insurance companies in Ethiopia. This shows that insurers that underwrite risky business (e.g., catastrophe coverage) will need to ensure that good standards of management are applied to mitigate their exposure to underwriting losses ex-ante and maximize returns on invested assets ex-post. Otherwise, they will turn out to be poor performers. Excessive risk-taking could adversely affect the performance of insurance companies. Malik (2011) and Ahmed et al. (2011) also found the

same result. The results of this study also indicate that having a large proportion of fixed assets to total assets (tangible) entails significant and positive impact on performance.

2.7.5. Tangibility of assets

Tangibility of assets in insurance companies in most studies is measured by the ratio of fixed assets to total assets. A recent study by Naveed Ahmed et.al... (2011) investigates the impact of firm level characteristics on performance of the life insurance sector of Pakistan over the period of seven years. For this purpose, size, profitability, age, risk, growth and tangibility are selected as explanatory variables while ROA is taken as dependent variable. The results of OLS regression analysis revealed that leverage, size and risk are most important 22 determinant of performance of life insurance sector whereas ROA has statistically more of insignificant relationship with, tangibility of assets. However, Hafiz Malik (2011) found that there exists a positive and significant relationship between tangibility of assets and profitability of insurance companies and argued that the highest the level of fixed assets formation, the older and larger the insurance company is. In contrast to this, Yuqi Li (2007) in UK found no significant relationship between tangibility of assets and profitability of insurance companies.

2.7.6. Growth Rate

Growth as measured by the percentage change in total assets or sometimes percentage change in premiums of insurance companies is expected to positively related with profitability of insurance companies in Ethiopia. Insurance companies having more and more assets over the years have also better chance of being profitable for the reason that they do have internal capacity though it depends on their ability to exploit external opportunities. Emperical evidence by Naveed Ahmed et al (2011) in Pakistan, Yuqi Li (2007) in UK and Hamadin Ahmed Ali Al-Shami (2008) in UAE of their investigation found a positive and statistically significant relationship between growth and profitability of insurance companies.

Premium growth measures the rate of market penetration. Empirical results showed that the rapid growth of premium volume is one of the causal factors of insurers' insolvency (Kim et al. 1995).

Being too obsessed with growth can lead to self-destruction as other important objectives may be neglected.

Ahmed et al., 2011 also investigated the impact of firm level characteristics on the performance of the life insurance sector of Pakistan over the period of seven years from 2001 to 2007. The results of the OLS regression analysis revealed that leverage is negatively and significantly related to the performance of life insurance companies. Growth of written premium and age of a firm has also negative relation to performance of life insurance companies but they are statistically insignificant.

2.7.7. The 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. Although reinsurance improves the stability of the insurance company through risk dispersion, achievement of solvency requirements, risk profile equilibration and growth of the underwriting capacity, it involves a certain cost. Therefore, a negative connection between the reinsurance dependence and the insurer's financial performance is expected. According to research from Romania the reinsurance dependency has positive influence on the insurer's financial performance, as reinsurance involves a certain cost.

2.7.8. The solvency margin

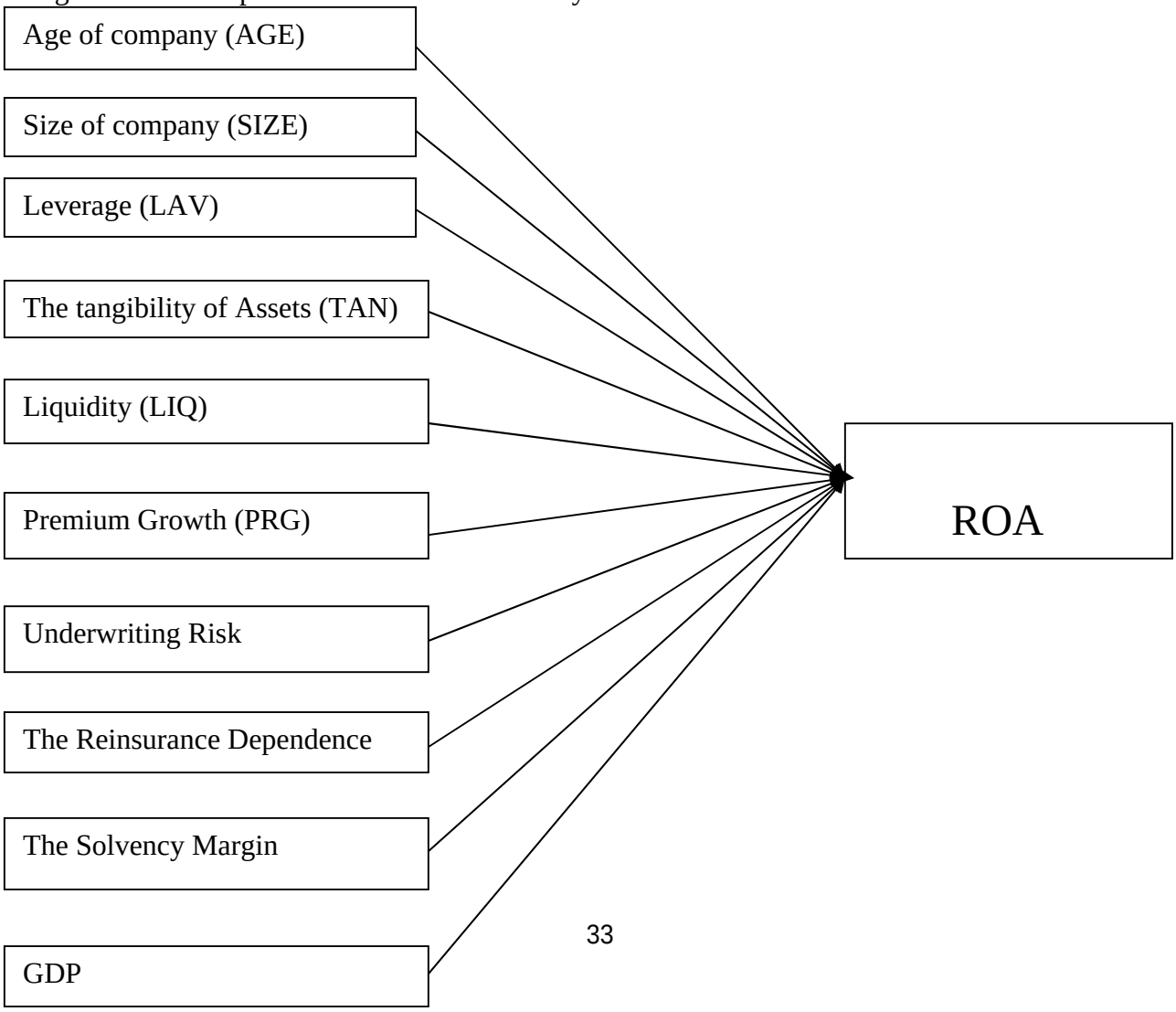
The solvency margin is calculated as ratio of net assets to net written premiums, and represents a key indicator of the insurer's financial stability. A positive linkage between this variable and the insurer's financial performance is expected, since the insurer's financial stability is an important benchmark to potential customers. According to research from Romania the solvency margin, has s a positive linkage between this variable and the insurer's financial performance, because the insurer's financial stability is an important benchmark to potential customers.

2.7.9. Growth in gross domestic product

The use of GDP growth as a variable does not feature extensively in the literature. However, Hoggarth et.al. (1998) conclude that the behaviour of real GDP fails to explain the greater variability of banking sector profits in the UK than in Germany. But they do not say that GDP variability did not affect profits, only that they could not use it to explain different UK/German banks performance. This is because the default risk is lower in upturn than in downturn economy. In addition, higher economic growth may lead to a greater demand for both interest bearing and non-interest bearing financial services sector Athanasoglou (2005) and Kosmidou (2008).

2.8. Conceptual frame work. The conceptual frame work of this stud sows the linkage between independent variables to the dependant variable. The conceptual frame work is shown bellow as Figure 2.1.

Figure 2.1. Conceptual frame work of the study



CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Research design

The primary objective of this study is to examine the impact of Age of companies, Size of companies, Leverage, Tangibility of assets, Liquidity, Premium Growth, Loss ratio, Reinsurance dependence ,Solvency margin and GDP growth on insurance companies financial performance(profitability). To achieve the research objective explanatory type of research design with a mixed approach, more of quantitative, was employed. The explanatory type of research design helps to identify and evaluate the causal relationships between the different variables under consideration (Marczyk et al., 2005). So that, in this study the explanatory research design was employed to examine the relationship of the stated variables. Mixed methods research provides better (stronger) inferences. Therefore, by using a mixed approach it is able to capitalize the strength of quantitative and qualitative approach and remove any biases that exist in any single research method (Creswell, 2003). A panel data study design which combines the attributes of cross sectional (inter-firm) and time series data (inter-period) was used. The advantage of panel data analysis is that more reliable estimates of the parameters in the model can be obtained (Gujarati, 2004), Diction of cause and effect (Cassell & Symon, 1994).Panel data comprise data sets consisting of multiple observations for each sampling unit. By using panel data, we can get better estimations and we can test more sophisticated behavioral models, with less restrictive assumptions (Baltagi, 2008).

Working with panel data allows using various techniques to estimate models with specific effects. The cross-sectional or cross-temporal specific effects can be identified and analyzed by using techniques for fixed effects or random effects.

3.2. Source of data and collection methods

The researcher mainly used secondary data sources and supplements the result by using primary data source to accomplish his objective. The secondary data was collected from the consolidated financial statements of the selected insurance companies; this data was comprised 12 years data

from insurance company's financial statement and annual GDP growth rate from annual report of national bank. The secondary data are available from national banks which is convenient for the researcher. Primary data was obtained by questioner to support the result from secondary data. The questioners were unstructured and open-ended & they are addressed by selected insurance company's chief finance officers.

3.3. Sampling design

The population size of insurance companies in Ethiopia is all 17 insurance companies, which one is public insurance companies and the other 16 are private insurance companies. From the above population to select sample insurance companies, purposive sampling technique was employed. In the sample insurance companies that have complete financial statement for the study period were included purposively i.e. based on the age and availability data for the study period. According to the information obtained from National Bank of Ethiopia there are only 9 insurance companies that have complete financial statements for the study period out of the total insurance companies operating in Ethiopia i.e. 17 insurance companies as of December 2014. Thus, these nine insurance companies were selected as a sample (See appendix III)

3.4. Choice of Dependent Variable and its Measurement

In line with earlier studies that investigated the determinants of Insurances' and Banks' profitability, this study relies on one commonly used measure of performance, which is return on total assets (ROA). Return on total assets (ROA) is calculated as net profit before tax by total assets. This is probably the most important single ratio in comparing the efficiency and financial performance of insurance companies as it indicates the returns generated from the assets that Insurers owns. William H. Greene and Dam Segal (2004) argued that the performance of insurance companies in financial terms is normally expressed in net premium earned, profitability from underwriting activities, annual turnover, return on investment, return on equity. These measures could be classified as profit performance measures and investment performance measures. However, most researchers in the field of insurance and their profitability stated that the key indicator of a firm's profitability is ROA defined as the before tax profits divided by total assets. Philip Hardwick and Mike Adams (1999), Hafiz Malik (2011) are among others, who

have suggested that although there are different ways to measure profitability it is better to use ROA. The formula for the performance measure is given as follows:

ROA = Net profit before tax (t) / Total Assets (t)

3.5. Choice of Explanatory Variables and their Measurement

The choice of explanatory variables is based on their theoretical relationship with the dependent variable. Generally speaking, the chosen explanatory variables are expected to partly explain the variation of the dependent variable. In this paper, firm specific variables affecting the performance of Ethiopian insurance companies were accounted. These explanatory variables and their measurement are as follows.

1) Age of company (AGE): Firm age (measured as the number of years a company is operating in the market since it was founded) is an important determinant of financial performance. Past research shows that the probability of firm growth, firm failure, and the variability of firm growth decreases as firm's age (Evans, 1987; Yasuda, 2005).According to the life cycle effect, younger companies are more dynamic and more volatile in their growth experience than older companies (Evans, 1987).Maturity brings stability in growth as firms learn more precisely their market positioning, cost structures and efficiency levels. This variable is measured as the number of years from date of establishment
2) Size of company (SIZE): Firm size is one of the most acknowledged determinants of a financial performance (Beard & Dess, 1981). The causal relationships between size and financial performance have been widely tested with ambiguous results. Several studies suggest that a positive relationship exists between company size and financial performance. Bigger firms are presumed to be more efficient than smaller ones. The market power and access to capital markets of large firms may give them access to investment opportunities that are not available to smaller ones (Amato and Wilder, 1985). Firm size helps in achieving economies of scale. Performance is likely to increase in size, because larger firms will have better risk diversification, more economic scale advantage, and overall better cost efficiency. In this study, total asset will be used as a proxy for Company Size. Company Size = Natural log of total assets

3) Leverage (LAV): It is a financial ratio that indicates the percentage of a firm's assets that are financed with debt. The Leverage Ratio is measured as: Leverage Ratio= Total Liabilities/Total Asset

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

5) Liquidity (LIQ): The Liquidity Ratio measures the firm's ability to use its near cash or "quick" assets to retire its liabilities. Maintaining high liquidity can reduce management's discipline as regards both underwriting and investment operations. Moreover, according to the theory of agency costs, high liquidity of assets could increase agency costs for owners because managers might take advantage of the benefits of liquid assets (Adams and Buckle, 2000). Liquidity Ratio = Current Assets / Current Liabilities.

6) Premium Growth (PRG): Proxy for Premium Growth is the percentage increase in Gross Written Premiums (GWP). The equation is expressed as follows: PRG = (GWP (t) – GWP (t-1)) / GWP (t-1).

7) The Underwriting Risk Emphasizes/Loss ratio/ (LOR): The efficiency of the insurer's underwriting activity and it is measured through the loss rate, which is computed as a ratio of gross claims to gross written premiums. Loss ratio = Net claims incurred / Net earned premiums.

8) 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. Although reinsurance improves the stability of the insurance company through risk dispersion, achievement of solvency requirements, risk profile equilibration and growth of the underwriting capacity, it involves a certain cost. Therefore, a negative connection between the reinsurance dependence and the insurer's financial performance is expected.

9) The Solvency Margin (SOM): *Solvency margin* is one of the indicators of financial soundness. 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. It's calculated as ratio of net assets to net written premiums, and represents a key indicator of the insurer's financial stability. A

positive linkage between this variable and the insurer's financial performance is expected, since the insurer's financial stability is an important benchmark to potential customers.

10) Growth in gross domestic product (GDP):- This is measured by the real GDP growth rate and it is hypothesized to affect insurance company's profitability positively. This is because the default risk is lower in upturn than in downturn economy. In addition, higher economic growth may lead to a greater demand for both interest bearing and non-interest bearing financial services sector Athanasoglou (2005) and Kosmidou (2008). In line with the previous literatures can expect a positive relation between the economic growth (GDP) and the profitability of insurance companies in Ethiopia.

3.6. Model specification

The researcher used the multiple regression econometric model through which the financial performance of the insurance companies in the Ethiopian market is analyzed. Based on the hypotheses and previous study, the following general empirical research model is developed. To capture the tendency of profits to be persistent over time (due to market structure imperfections or high sensitivity to auto-correlated financial factors), the researcher tried to adopt a dynamic specification of the model, with a lagged dependent variable among the repressors. Cheris Brooks (2008) in his book for introductory econometrics for finance argued that lagged values of variables may capture important dynamic structure in the dependent variable that might be caused by a number of factors such as inertia of the dependent variable and overreactions. This yields the following model specification:

$$\mathbf{Y}it = \boldsymbol{\beta}0 + \Sigma\boldsymbol{\beta}\mathbf{K}\mathbf{X}it + \boldsymbol{\varepsilon}it$$

Where:

- Y*it* represents the dependent variables (ROA) of insurance i for time period *t.*
- β0 is the intercept
- βK represents the coefficients of the X*it* variables
- X*it,* represents the explanatory variables (Age of companies, Size of companies, Leverage, Tangibility of assets, Liquidity, Premium Growth, Loss ratio, Reinsurance dependence ,Solvency margin and GDP/capita) of insurance *i* for time period *t.*

- εit is the error term

The above general empirical research model is changed into the study variables to find out the impact of Age of companies, Size of companies, Leverage, Tangibility of assets, Liquidity, Premium Growth, Loss ratio, Reinsurance dependence ,Solvency margin and GDP on insurance companies financial performance(profitability) as follows:

ROA = β o+ β1AGEi,t + β2SIZEi,t + β3LAVi,t +β4TANi,t +β5LIQi,t + β6PRGi,t + β7LORi,t + β8REDi,t + β9SOMi,t + β10GDPi,t +Є it

Where:

- ROA = Return+ on total assets;
- AGE = Age of companies;
- SIZE = Size of companies;
- LAV = Leverage;
- TAN = Tangibility of assets;
- LIQ = Liquidity;
- PRG = Premium Growth;
- LOR = Loss ratio;
- RED = Reinsurance dependence
- SOM = Solvency margin
- GDP= GDP/capita
- Є = is the error component for company i at time t assumed to have mean zero E [Є it] = 0
- β o= Constant
- β **1,** 2, 3, …..9 are parameters to be estimated;
- i = Insurance company i = 1, . . . , 9; and t = the index of time periods and t = 1, . . . , 12

3.7. Methods of data analysis

The multiple regression model was used to identify the relationship between the profitability of insurance companies and Age of companies, Size of companies, Leverage, Tangibility of assets, Liquidity, Premium Growth, Loss ratio, Reinsurance dependence ,Solvency margin and GDP

growth. In this study to analyze the collected data; descriptive, correlation and multiple panel linear regression data analysis method were employed. The descriptive statistics was used to quantitatively describe the important features of the variables using mean, maximum minimum and standard deviations. The correlation analysis was used to identify the relationship between the independent, dependent and using Pearson correlation analysis. The correlation analysis shows only the degree of association between variables and does not permit the researcher to make causal inferences regarding the relationship between variables (Marczyk et al., 2005). Therefore, multiple panel linear regression analysis was also used to test the hypothesis and to explain the relationship between profitability of insurance companies and Age of companies, Size of companies, Leverage, Tangibility of assets, Liquidity, Premium Growth, Loss ratio, Reinsurance dependence ,Solvency margin and GDP growth. Qualitative analysis also used for qualitative data collected through open ended questionnaire. Eviews 7 econometric software was used for analysis of secondary data and the results were presented through table's graphs and also the primary data collected through questioner were streamlined and presented to support result from regression analysis.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1. Introduction

This chapter presents the descriptive statistics, correlation analysis, multiple panel linear regression analysis of the study variables and qualitative result of study. It has four sections. The first section is the descriptive statistics which summarizes the main features of the study variable such as mean, maximum, minimum and standard deviation. The second section is the correlation analysis which shows the degree of association between the study variables. The third sections of the chapter, regression results report the OLS estimation output of the regression models. The last section present result for qualitative result from unstructured questionnaires were streamlined and presented.

4.2. Descriptive statistics of the study variables

This section discussed the summery statistics of each variables of the study. The variables include the dependent and independent variables. The dependent variables used in this study in order to measure the sample insurance companies financial performance is return on asset (ROA) whereas the explanatory variables (independent variables) are Age of companies, Size of companies, Leverage, Tangibility of assets, Liquidity, Premium Growth, Loss ratio, Reinsurance dependence ,Solvency margin and GDP growth.

The researcher conducted descriptive statistic using Eviews.7 software in order to give the audience more understanding about the study variables that are being analyzed. According to (Abdul Raheman and Mohamed Nasr, p.286, 2007) Descriptive statistics is the first step in our analysis. Descriptive Statistics is the foundation stone for any type of analysis which enables the researcher to describe the relevant aspects to all the study variables that will entail detailed information about each relevant variable (Saswata Chatterjee, p. 24, 2012). Descriptive statistics is derived from statistical analysis before another test performed using multiple regression analysis (Djoko Suhardjanto, et al, p. 240, 2009).

Descriptive studies produced the mean, minimum, maximum and standard deviation for each variable. Accordingly, the descriptive statistics for all variables are presented below in table 4.1.

Table.4.1. descriptive statistics of study variables

Variables	Mean	Median	Maximum	Minimum	Std. Dev.	Observations
ROA	0.077834	0.079972	0.192055	-0.102274	0.052642	108
TAN	0.173053	0.149674	0.541653	0.022029	0.110432	108
LIQ	0.672148	0.775628	2.604086	0.022029	0.551622	108
SOM	0.859503	0.727071	2.772665	0.29924	0.473253	108
LOR	0.626205	0.650834	0.913137	0.158603	0.152891	108
PRG	0.149198	0.145955	0.863892	-1.096688	0.196964	108
SIZE	18.96337	18.92308	21.55226	16.52656	1.083744	108
AGE	14.83333	13	39	1	7.862724	108
LEV	0.665249	0.659541	0.840607	0.334611	0.098545	108
GDP	0.099491	0.108772	0.126442	-0.0210	0.027205	108
RED	0.158201	0.133581	0.47378	0.031715	1.708211	108

Source: Own estimation from Eviews summery Descriptive statistics result

Table 1 shows the descriptive statistics of each variable, computed based on the 108 observations recorded. It can be noticed that the return on total assets ratio fluctuates between -0.102274 and 0.192055, with an average value of 0.077834, ROA deviates from the average value with about 0.052642, which implies the presence of moderate variations among the values of profitability across the insurance companies included for this study. The mean value of tangibility of asset ratio (TAN) is 0.173053 and the value of standard deviation is 0.052642 this implies that low variation in tangibility of asset. The mean value of Liquidity quick ratio (LIQ) is 0.672148 with the standard deviation of 0.551622 which implies moderate variation of liquidity ratio among insurance companies. The mean value of Solvency margin ratio (SOM) is 0.859503 while the value of standard deviation is 0.473253 this implies moderate variation of solvency margin ratio. The mean value of Los (LOR) is 0.626205 and the value of standard deviation is 0.551622 which implies moderate variation of underwriting risk among insurance companies. The mean value of Growth written premium ratio is 0.149198 and the value of standard deviation is 0.196964 this

implies that low variation in growth written premium among insurance companies. The mean value of Company size (SIZE) is 18.96337 and the value of standard deviation is 1.083744. The mean value of Company age (AGE) is 14.83333 and the value of standard deviation is 7.862724, there are big differences between values of company age because of standard deviation is high at 7.862724. The mean value of Leverage ratio (LEV) is 0.665249 and the value of standard deviation is 0.098545 which implies low variation of leverage ratio among insurance companies operating in Ethiopia. The mean value of GDP growth ratio (GDP) is 0.099491 and the value of standard deviation is 0.027205 this implies there is low variation of GDP growth in the country. The mean value of Reinsurance dependency ratio (RED) is 0.158201 and the value of standard deviation is 1.708211 this implies high variation of reinsurance dependency ratio among insurance companies .Table 4.1 shows that the values of standard deviation ranges from 0.027205 to 7.862724, revealing that there is not much of variation, and this also implies that the model of multiple regression analysis will be lead into significant results indicating the strength of data and also The positive values imply that the variables under the model are significant in determining the financial performance of insurance companies in Ethiopia.

4.3. Correlation Test

This section of the study presents the results and discussions of the Pearson correlation analysis. To identify the relationship between profitability of insurance companies and Age of companies, Size of companies, Leverage, Tangibility of assets, Liquidity, Premium Growth, Loss ratio, Reinsurance dependence, Solvency margin and GDP growth, Pearson correlation coefficients were used. The correlation coefficients show the extent and direction of the linear relationship between profitability of insurance companies and Age of companies, Size of companies, Leverage, Tangibility of assets, Liquidity, Premium Growth, Loss ratio, Reinsurance dependence ,Solvency margin and GDP growth. According to (Wajahat Ali, p.35, 2010) before the start of regression analysis it is important to check the correlation test between dependent variable and independent variables. In this study the researcher used Pearson's correlation coefficient matrix generated through the Evies.7 software which shows the cross-relationship between all of the variables. Pearson correlation coefficient is the most commonly used to measure the association between two quantitative variables (Robert Hutchinson, p. 110, 2007). Pearson's correlation coefficients are test in order to determine the strength of the relationship between independent

and dependent variables. The Pearson correlation scale ranges from -1 to +1, any value greater than zero indicates a positive direct relationship between the two variables, which implies that every increase in the independent variable will led to the increase in dependent variable, while any value less than zero indicates a negative indirect relationship between the two variables, that means that every increase in the independent variable will led to the decrease in dependent variable (Abdul Hafiz, p.14, 2012). The correlation coefficients are also checked for the presence of high collinearity among regressors. Since the correlation analysis shows only the degree of association, it is followed by multiple regression analysis. The Pearson's correlation coefficient matrix for all variables is presented below in table 4.2.

Table.4.2. Pearson's correlation coefficient matrix

Correlation	ROA	TAN	LIQ	SOM	LOR	GRP	SIZE	AGE	LAV	GDP	RE
ROA	1.0000										
TAN	-0.0718	1.0000									
LIQ	-0.0683	0.0284	1.0000								
SOM	0.1343	0.1186	0.3670	1.0000							
LOR	-0.3896	-0.0077	0.0135	-0.4453	1.0000						
GRP	0.2192	0.0749	-0.0842	-0.2280	-0.1087	1.0000					
SIZE	0.5312	-0.2488	-0.1893	-0.4422	0.0936	-0.0107	1.0000				
AGE	0.4184	-0.1542	0.2423	-0.3446	0.1866	-0.0317	0.7746	1.0000			
LAV	0.0997	-0.1662	-0.2523	-0.7862	0.3253	0.0605	0.6690	0.5629	1.0000		
GDP	0.2545	0.0357	-0.0657	-0.2104	0.0531	0.0345	0.3045	0.2188	0.2610	1.0000	
RED	-0.3554	-0.3182	-0.1873	-0.1534	-0.3150	0.1979	0.5006	0.4514	0.3654	0.0299	1.0

Source: Own estimation from Eviews summery of Pearson's correlation

Correlation test shows that return on assets (ROA) has strong and positive correlation between size of insurance companies with the value of (0.5312) , age of insurance companies with the value of (0.4184), Growth in GDP with the value of (0.2545), growth in gross written premium with the value of (0.2192), and solvency margin with the value of (0.1343). Leverage ratio with the value of (0.0997) has weak and positive correlation with ROA. Reinsurance dependency with the value of (-0.3554) and loss ratio with the value of (-0.3896) has strong and negative

correlation between ROA, and also liquidity ratio with the value of (-0.0683) and tangibility of asset with the value of (-0.0718) has weak and negative correlation.

4.4. Regression Analysis

In order to test multiple linear regression models, the researcher must assess the study data collected through five assumption tests; these tests include the following taste;

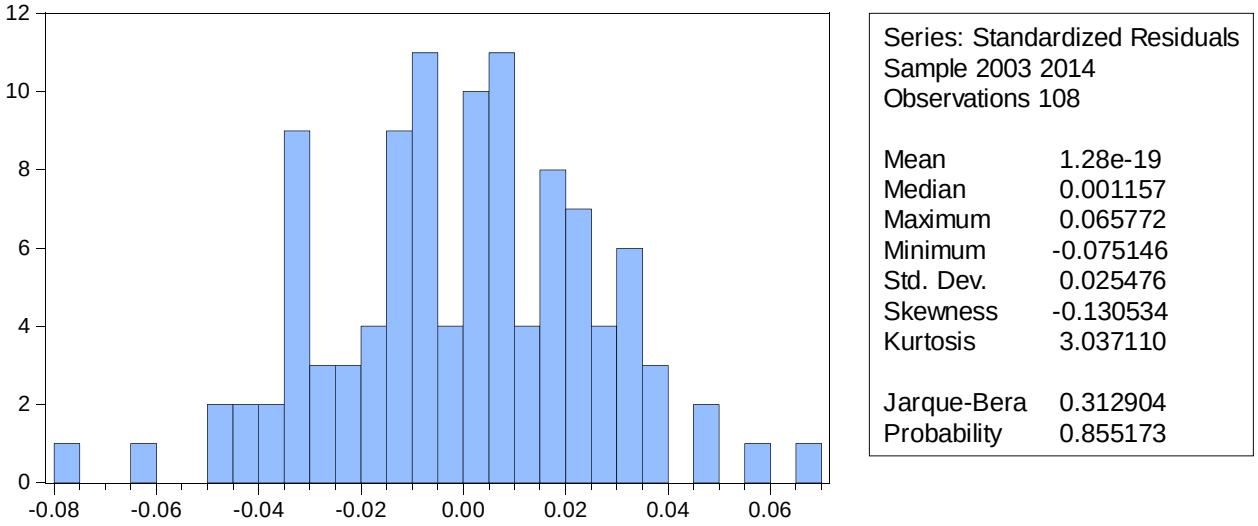
4.4.1. The average value of the errors is zero.

If a constant term is included in the regression equation, this assumption will never be violated. So that in the model of this study a constant term is included. As a result this assumption was not violated.

4.4.2. Normality Test

The examination of the normal distribution of the data of the study is one of the fundamental requirements for linear regression analysis between the study variables. Normality tests are used to determine whether a data set is well-modeled by a normal distribution or not, or to compute how likely an underlying random variable is to be normally distributed (Gujarati, 2009). This assumption requires the disturbances to be normally distributed. Bera-Jarqu normality test which is the most commonly used normality test was conducted for the model. Based on the results shown below, the p-values is insignificant for the model and the researcher failed to reject the null hypothesis, which says the residual value is normally distributed. Therefore, there is no normality problem on the data used for this study.

Graph.4.1.Jarqu-Bera Normality Test



Source: Own estimation from Eviews, Bera-Jarqu normality test

4.4.3. Autocorrelation Test

According to (Rafika and Muhamad, p. 149. 2012) autocorrelation test objective to test the linear regression model there is a correlation between the errors in period t with bullies' error in period t-1 (previous period). Durbin-Watson (DW) is use to test the independent variables of errors (autocorrelation), for a level of significance of 0.05 (Nagib, et al, p. 13). (Nagib, et al, p. 13.2012) quoted (Field, 2009). It is assumed that the errors are not correlated with one another. If the errors are correlated with one another, it would be stated that they are 'serially correlated'. A test of this assumption is therefore conducted. The test for Durbin-Watson which is shown below regression output of the models. As per this test the values of Durbin--Watson for the model is 1.843878 which is near to two. So there is no problem of autocorrelation.

Table.4.3. Durbin Watson, Autocorrelation Test

R-squared	0.765803	Mean dependent var	0.077834
Adjusted R-squared	0.718437	S.D. dependent var	0.052642
S.E. of regression	0.027933	Akaike info criterion	-4.159647
Sum squared resid	0.069443	Schwarz criterion	-3.687790
Log likelihood	243.6209	Hannan-Quinn criter.	-3.968326
F-statistic	16.16788	Durbin-Watson stat	1.843878
Prob(F-statistic)	0.000000		

Source: Own estimation from Eviews, Durbin Watson, Autocorrelation Test

4.4.4 Heteroscedasticity Test

According to (Gujarati, 2003, p. 387) Heteroscedasticity test an important assumption of linear regression model, is that the disturbances appearing in the population regression function are homoscedasticity; that is, they all have the same variance. Heteroscedasticity test aims to test whether the regression has difference variance from the residue between observations (Djoko, et al, p. 240, 2009). If this assumption is not satisfied, there is heteroscedasticity. This assumption requires variance of the errors to be constant. To check this assumption White test was conducted for the model as shown below. The model has no problem of heteroskedasticity or the error variance is constant since the p-value is not significant. This means the null hypothesis was not rejected which says that the error variance is constant.

Tabale 4.4. Heteroskedasticity Test: White

F-statistic	2.359166	Prob. F(65,42)	0.1019
Obs*R-squared	84.77964	Prob. Chi-Square(65)	0.1503
Scaled explained SS	85.21456	Prob. Chi-Square(65)	0.1471

Source: Own estimation from Eviews, Heteroskedasticity White Test

4.4.5. Multicollinearity Test

According to (Gujarati, 2003, p. 374) one of the assumptions of linear regression model is that there is no multicollinearity among the explanatory variables. The multicollinearity test helps to identify the correlation between explanatory variables and to avoid double effect of independent variable from the model.

Table.4.5. Multicollinearity Test: correlation analysis of independent variables

variables	TAN	LIQ	SOM	LOR	GRP	SIZE	AGE	LAV	GDP	RED
TAN	1.0000									
LIQ	0.0284	1.0000								
SOM	0.1186	0.3670	1.0000							
LOR	-0.0077	0.0135	-0.4453	1.0000						
GRP	0.0749	-0.0842	-0.2280	-0.1087	1.0000					
SIZE	-0.2488	-0.1893	-0.4422	0.0936	-0.0107	1.0000				
AGE	-0.1542	0.2423	-0.3446	0.1866	-0.0317	0.7746	1.0000			
LAV	-0.1662	-0.2523	-0.7862	0.3253	0.0605	0.6690	0.5629	1.0000		
GDP	0.0357	-0.0657	-0.2104	0.0531	0.0345	0.3045	0.2188	0.2610	1.0000	
RED	-0.3182	-0.1873	-0.1534	-0.3150	0.1979	0.5006	0.4514	0.3654	0.0299	1.0000

Source: Own estimation from Eviews, Multicollinearity Test

A correlation is a single number that describes the degree of relationship between two variables. In other words, multicollinearity describes the relationship among explanatory variables. As indicated on the correlation matrix almost all correlations that have occurred among explanatory variables are surprisingly weak correlations; this indicates there is no the existence of multicollinearity problem on the study. Even if, relatively high positive correlation existed between size and age with value of correlation (**0.7746**) and leverage and size with value of positive correlation of (**0.6690**) the researcher ignored this near multicollinearity problem. Because Cooper and Schindler (2009) and Hailer et al (2006) suggested that multicollinearity problem should be corrected when the correlation extent to be above 0.8 and 0.9 respectively.

4.5. Fixed effect Versus Random effect

It is also necessary to determine whether the fixed effect or random effect approach is appropriate. A common practice in corporate governance research is to make the choice between both approaches by running a Hausman test. To conduct a Hausman test the number of cross section should be greater than the number of coefficients to be estimated. But, in this study the numbers of coefficients are greater than the number of cross sections so it is not possible to conduct a Hausman test. Therefore, a redundant fixed effects test was conducted to determine whether the fixed effect is appropriate for the models. As a result the time-fixed effect approach was used. In this case the cross section fixed is appropriate, so cross section fixed approach was applied. Simple pooled multiple regression techniques also used on which fixed or random effect test is not allowed to test hetrocedakisty.

All the above tests of basic classical linear regression model assumptions for OLS estimation proved that, the results obtained from the regression model in this study are consistent, free from bias and efficient since the assumption holds and the next step is analyzing and discussing the outputs of the regressions.

4.6. Finding and Regression Result

The results of the regression model that have been estimated to examine the impact of Age, Size of companies, Leverage, Tangibility of assets, Liquidity, Premium Growth, Loss ratio, Reinsurance dependence ,Solvency margin and GDP growth on insurance companies financial performance(profitability) shown below on table 4.6.

Table.4.6.Summary of Regression Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.448732	0.243319	-1.844213	0.0685
TAN	-0.048533	0.037141	-1.306722	0.1947
LIQ	0.010280	0.014276	0.720078	0.4734
SOM	0.102367	0.020848	4.910099	0.0000*
LOR	-0.218063	0.029846	-7.306241	0.0000*
GRP	0.007541	0.018489	0.407840	0.6844
SIZE	0.056062	0.016046	3.493836	0.0007*
AGE	-0.000841	0.003050	-0.275852	0.7833
LAV	-0.441878	0.096944	-4.558055	0.0000*
GDP	0.000973	0.008612	0.113043	0.9103
RED	-0.034888	0.057623	-0.605445	0.5464

R-squared	0.765803	Mean dependent var	0.077834
Adjusted R-squared	0.718437	S.D. dependent var	0.052642
S.E. of regression	0.027933	Akaike info criterion	-4.159647
Sum squared resid	0.069443	Schwarz criterion	-3.687790
Log likelihood	243.6209	Hannan-Quinn criter.	-3.968326
F-statistic	16.16788	Durbin-Watson stat	1.843878
Prob(F-statistic)	0.000000		

Source: Eviews regression results based on the data obtained from sample insurance companies

Note: * significant at 1% level of significance.

As it is presented on the above table, the R2 for the models is 76.58 percent. Which means that 76.58 percent of the variation in return on asset was explained by the independent variables used in this study, only 23.42 percent of variation in return on asset is due to other factor that are not included in this study. The R2 results indicate the overall goodness-of-fit of the models used in this study.

After modification the explanatory power of the model, adjusted R2 values, is 71.84 percent,. This indicates that 71.84 percent, of the variation in the Ethiopian insurance companies return on asset, was explained by the explanatory variables in the model. The adjusted R^2 measures how well the model fits the data by taking into account the loss of degrees of freedom associated with adding extra variables.

In addition, the F-statistic shows the overall significance of variables in other words the significance of model slope parameters. The F-statistics of the models is 16.16788 and the null hypothesis of the model was rejected at 1 percent significance level. Therefore, model variables are significant. The model adequately describes the data. Here one can infer from the results of R-squared and F-statistics that the implemented model of this research are well fitted that independent variables i.e. Age of companies, Size of companies, Leverage, Tangibility of assets, Liquidity, Premium Growth, Loss ratio, Reinsurance dependence, Solvency margin and GDP growth have a significant effect on insurance companies financial performance.

According to the regression result from table 4.6 solvency margin (SOM), loss ratio (LOR), size of insurance companies (SIZE), and leverage ratio (LAV) have significant effects on performance (profitability) of insurance companies in Ethiopia where as tangibility of asset (TAN), liquidity (LIQ), growth written premium (GRP), reinsurance dependency (RED), age of insurance companies (AGE) and growth in gross domestic (GDP) have no significant impact on insurance companies profitability. The above profitability determinants of insurance companies are individually discussed in the next paragraphs referring regression result of table 4.7 and response from respondents of questioners distributed.

Tangibility of asset (TAN):-

The coefficient of the tangibility of asset (TAN) is negative with (-0.048533) and it is statistically insignificant determinants of profitability for insurance companies in Ethiopia with the probability of (0.1947). This finding is consistent with previous studies with Yuqi Li (2007). According to Yuqi Li (2007) study found that there is no significant relationship between tangibility of assets and profitability of insurance companies in UK. But in contrast Hafiz Malik

(2011) found that there exists a positive and significant relationship between tangibility of assets and profitability of insurance companies and argued that the highest the level of fixed assets formation, the older and larger the insurance company.

From result of questioner held with chief finance officers of nine insurance companies tangibility of asset has little impact of their profitability with 4 of the respondents responded yes tangibility of asset can determine insurance company's profitability because a firm with large amount of fixed asset tends to be more profitable because of increasing its future assets value. Firms with large volume tangible assets are more likely to collateralize their assets to raise additional funds with little risk due to the investments diversifications which at the end reduces the risk of bankruptcy. From the finding from both regression and questioner response tangibility of asset has insignificant impact on profitability of insurance companies.

Liquidity (LIQ):

The coefficient of liquidity ratio LIQ) is positive with (0.010280) and it is statistically insignificant determinants of profitability for insurance companies in Ethiopia with the probability of (0.4734). Empirical evidences with regard to liquidity revealed almost inconsistent results. For instance, Naveed Ahmed et.al. (2011) in his investigation in Pakistan found that ROA has statistically insignificant relationship with liquidity. Similarly, several other studies also have been conducted to measure the performance of the insurance companies. In contrast, Chen and Wong (2004) examined that, liquidity is the important determinants of financial health of insurance companies with a negative relationship. Similarly, Hakim and Neaime (2005) observed that liquidity, current capital and investment are the important determinants of banks profitability. Valentina Flamini, Calvin McDonald, and Liliana Schumacher (2009) in their investigation regarding Sub-Saharan countries found significant and negative relationship between bank profitability and liquidity. As stated above this research is consistence with the study of Naveed Ahmed et.al. (2011) study on Pakistan insurance industry.

Liquidity of insurance companies has an impact on the profitability of insurance as per majority of the respondent, because a low liquidity level may lead to increasing financial costs and result in the incapacity to pay its obligations. Also liquidity interpreted as an indicator of the degree of

independence of the company against creditors and its ability to face crises and unexpected difficulties. Thus it is an important task for the financial manager to achieve the appropriate balance between the adequate liquidity and a reasonable return for the company. Though the response form respondents show that liquidity has significant impact on profitability of insurance companies the regression result shows insignificant impact.

Solvency margin:

As shown on table 4.6 the coefficient of solvency margin (SOM) is positive with (0.102367) and it is statistically highly significant determinants of profitability for insurance companies in Ethiopia with the probability of (0.0000) at one percent significance level. A positive linkage between this variable and the insurer's financial performance is expected, since the insurer's financial stability is an important benchmark to potential customers. According to research from Romania the solvency margin, has s a positive linkage between this variable and the insurer's financial performance, because the insurer's financial stability is an important benchmark to potential customers.

The respondent responded that solvency margin has significant impact on insurance company's profitability, because Solvency ratios look at the relationship between what the company owns and what it owes. National bank of Ethiopia also use solvency margin of insurance companies as controlling mechanism for the health of insurance companies. A solvent company has assets that exceed its liabilities sufficiently to provide for reinvestment in the company's growth. The standard for profitability requires that income derived from the company's business activities exceeds the company's expenses. While a company can be solvent and not profitable, it cannot be profitable without solvency. Also Solvency impacts a company's ability to obtain loans, financing and investment capital. From the finding from both regression and questioner response solvency ratio has insignificant impact on profitability of insurance companies.

Loss ratio:

As stated on table 4.6 the coefficient of los ration or underwriting risk (LOR) is negative with (-0.218063) and it is statistically highly significant determinants of profitability for insurance companies in Ethiopia with the probability of (0.0000) at one percent significance level.

According to the nature of the insurance industry, the ratio of net claims paid in net premiums earned (loss ratio) is used as a proxy to measure the risk of the insurance companies in Ethiopia. This shows that insurers that underwrite risky business (e.g., catastrophe coverage) will need to ensure that good standards of management are applied to mitigate their exposure to underwriting losses ex-ante and maximize returns on invested assets ex-post. Otherwise, they will turn out to be poor performers. Excessive risk-taking could adversely affect the performance of insurance companies. Malik (2011) and Ahmed et al. (2011) also found the same result.

Under writing risk also have significant impact as per respondents because Underwriting is a critical risk mitigation mechanism adopted in the insurance industry. The process helps in deciding the appropriate premium for an insured. The underwriter needs to match the premium received with the claims paid with an eye on profitability. In the event of a dichotomy between the two, with the premium received not sufficient enough to cover the claims, the insurer is confronted with the probability of loss. The premium charged by the insurer must incorporate the risk premium that covers not only the claims but also the capital requirements, also called the solvency requirements. In the event that the matching is not done in a sensible manner, the underwriting risk arises. The response from questioner also supports the regression result.

Growth written premium:

The coefficient of growth written premium (GRP) is positive with (0.007541) and it is statistically insignificant determinants of profitability for insurance companies in Ethiopia with the probability of (0.6844). However, this positive relationship is found to be statistically insignificant with the p-value of 0.6844. The result of the study supports the findings of Chen and Wong (2004). In contrast according to Yuqi Li (2007) in UK and Hamadin Ahmed Ali Al-Shami (2008) in UAE of their investigation found a positive and statistically significant relationship between growth and profitability of insurance companies.

Growth in written premium has significant impact on insurance company’s profitability as per the respondents answer. Growth is defined as the annual percentage growth in the firms' total assets between two successive years divided by the preceding year. A rise in growth rate is regarded as an indication of a firm's financial strength and may cause higher demands for raising

equity funds from external sources. Insurance company collects premiums from policy holders, invests the money (usually in low risk investments), and then reimburses this money once the person passes away or the policy matures therefore increase in premium brings more investment opportunity of insurance companies. Even though the questioner response shows significant impact of growth in gross written premium the regression result shows insignificant impact on profitability of insurance companies in Ethiopia.

Size of insurance companies:

The coefficient of Size of insurance companies (SIZE) is positive with (0.056062) and it is statistically highly significant determinants of profitability for insurance companies in Ethiopia with the probability of (0.0007) at one percent significance level. Empirical evidences of the linkage between profitability and firm size are somewhat inconsistent. For example, evidence collected by Philip Hardwick and Mike Adams (1999) from UK companies suggests that there is an inverse relation between profitability and firm size. Jay Angoff Roger Brown (2007) found that there is a positive and significant relationship between the size of a company and its profitability as measured by ROA. This study is consistence with Jay Angoff Roger Brown (2007). This reveals that performance of large size insurance companies is better than small size companies. Large insurers are likely to perform better than small insurers because they can achieve operating cost efficiencies through increasing output and economizing on the unit cost of innovations in products and process development (Hardwick, 1997). Large corporate size also enables insurers to effectively diversify their assumed risks and respond more quickly to changes in market conditions (Wyn, 1998). The finding of this study is congruent with, Gardner and Grace (1993); Sommer (1996); Cummins and Nini (2002); Chen and Wong (2004); Liebenberg and Sommer (2007); Malik (2011) and Ahmed et al. (2011). Hence, firm size is an important determinant of the financial strength of insurers both in developing and developed economies. This predicts that performance of large size life insurance companies is better than small size companies. Flamini et.al (2009) indicated that **s**ize is used to capture the fact that larger firms are better placed than smaller firms in harnessing economies of scale in transactions and enjoy a higher level of profits.

The respondents responded that size of insurance companies has significant impact on financial performance/profitability/of insurance companies. Company size is considered an important issue in determining the nature of relationship for the company within its operating environment and outside it, and the growing influences of the multinational corporations worldwide represents a clear example of the importance of size and the role it can plays in the corporate environment. Large companies are able to benefit from the economies of scale (the average unit cost declines over a range of output), and from the economies of scope (an extra cost savings as a result of the production process where separate products can share some production facilities). On the other hand, large companies are able to benefit from the superior management and the superior capabilities in product development, marketing, commercialization, financial scope, specialization, stronger bargaining power, stronger competitive power, bigger market share, and a more opportunity to work in the fields which require high capital rates since they have much more resources and this situation provides them the opportunity to work in more profitable fields with little competition. In the other hand, large companies have more ability for diversification in their related and unrelated units and it have also more capital cost saving which generates more sales in return. Large sized firms normally have more business diversification than small firms in terms of credit ratings, constant cash flow, and lower risk of bankruptcy. Furthermore large firms are capable of decreasing transaction costs of issuing long-term debt at a favorable low rate of interest. Consequently, since it is easier for large sized firms to raise funds from creditors, a positive sign is expected between firm size and leverage (Titman and Wessels, 1988). The primary source of data also supports that size of insurance companies has significant impact on profitability of insurance companies in Ethiopia.

Age of insurance companies:

As presented on table 4.6 the coefficient of age of insurance companies (AGE) is negative with (-0.000841) and it is statistically insignificant determinant of profitability for insurance companies in Ethiopia with the probability of (0.7833). This study is supported by studies like Hamadan Ahamed Ali Al-Shami (2008) which found no significant statistical relation between age and profitability of insurance companies in UAE and Naveed Ahmed (2007) stated that age has statistically insignificant relationship with profitability. Also this finding is consistent with what (Liargavas and Skandalis, 2008) who found that age has no significant statistical impact on

financial performance. Thus based on this research finding age of insurers' is not considered as a powerful explanatory variable to determine the performance of insurance companies in Ethiopia.

Age of insurance companies has little impact on profitability of insurance companies with the majority respondents responded yes for the question that does age of company determine profitability of insurance companies. Although age has importance for creating strong relationship with customers and good governance experience so it has an impact on profitability. The regression and also the questioner result show that age has little of no impact on profitability of insurance companies in Ethiopia.

Leverage:

The coefficient of leverage ratio of insurance companies (LAV) is negative with (-0.441878) and it is statistically highly significant determinants of profitability for insurance companies in Ethiopia with the probability of (0.0000) at one percent significance level. Empirical evidences with regard to leverage found to be statistically significant relationship but negative which support this study. For instance Renbao Chen and Kie Ann Wong (2004), in Canada, Hamadan Ahamed Ali Al-Shami (2008) in UAE, Hifza Malik (2011) in Pakistan, Sylwester Kozak (2011) in UK Swiss Re (2008) in Egypt and Flamini et..Al (2009) in Sub-Saharan countries found that negative but statistically significant relationship between leverage and profitability of firms. Harrington (2005) stated that the relationship between leverage and profitability has been studied extensively to support the theories of capital structure and argued also that insurance companies with lower leverage will generally report higher ROA, but lower ROE. Since an analysis for ROE pays no attention to the risk associated with high leverage.

The respondents responded that leverage ratio of insurance companies has significant impact on financial performance/profitability/of insurance companies. Leverage is viewed as a result of events that determines companies' source of financing to run the business. Highly leveraged insurance companies are riskier in terms of their return on equity and investment and also financial leverage affects cost of capital, ultimately influencing firms' profitability. Company's financial structure has a great importance in investment and financing decisions, due to its impact on profitability, as well as risk degree faced by the company due to its dependence and

expanding on debt. Financial structure decisions Affect Company's financial risk measured by leverage which is a ratio of borrowed to owned money. The company with high profitability from assets can detain greater part of its net annual profits to finance its needs and thus less dependence on debt, but by deducting debt interest expense. This result also supports the regression result.

Reinsurance dependency:

As presented on table 4.6 the coefficient of reinsurance dependency of insurance companies (RED) is negative with (-0.034888) and it is statistically insignificant determinant of profitability for insurance companies in Ethiopia with the probability of (0.5464). Insurance companies reinsure a certain amount of the risk underwritten in order to reduce bankruptcy risk in the case of high losses. Although reinsurance improves the stability of the insurance company through risk dispersion, achievement of solvency requirements, risk profile equilibration and growth of the underwriting capacity, it involves a certain cost. Therefore, a negative connection between the reinsurance dependence and the insurer's financial performance is expected this supports the outcome of the study result. In contrast According to research from Romania the reinsurance dependency has positive influence on the insurer's financial performance, as reinsurance involves a certain cost.

From result of respondent Reinsurance dependency has little impact of their profitability with majority of the respondents responded yes Reinsurance dependency can determine insurance company's profitability because reinsurance increases cost for insurance companies which decrease the profitability of insurance companies.

Growth in gross domestic product (GDP):

The coefficient of growth domestic product (GDP) is positive with (0.000973) and it is statistically insignificant determinants of profitability for insurance companies in Ethiopia with the probability of (0.9103). It is expected to have a positive influence on the insurers' financial performance, since economic growth improves the living standards and the levels of income,

increasing the purchasing power of population. This result is in line with study form Romania found that positive coefficient of GDP and it's is not statistically significant.

The respondents responded that Growth in gross domestic product has an impact on financial performance/profitability/of insurance companies because increase in GDP led the ability of having insurance policy to the citizens. This result in contrast with regression output which shows insignificant impact of GDP growth on profitability of insurance companies.

The following variables are variables that determine the profitability of insurance companies as per respondents of questioner response. The respondents responded that the following are the basic determinant other than variables discussed on the study:

- **Management competency: -** Management competence has a significant impact on Financial Performance of insurance companies as per respondents answer. Which is consistent with what (Liargavas and Skandalis, 2008) and (Merikas et al, 2006) have found. Hence the level of education of professionals affects the assessment of the quality of their competence and thus the company's ability to achieve future success. Management competency is a multidimensional concept and a number of well documented attempts have been made in the literature to define it. More specifically, the popularity of the term competence can be attributed to (Boyatzi, 1982). In "The Competent Manager"(Boyatzi ,1982) defines competence as "an underlying characteristic of a person", stating it could be, "motive, trait, skill, aspect of one's self-image or social role, or a body of knowledge which he or sheuses"(Woodruffe, 1993) points out, that this definition leaves the term open to a multitude of interpretations and argues that the term 'competence' can be used to refer to a 'set of behaviors, skills, knowledge and understanding which are crucial to the effective performance of a position'. (Nordhaug and Gronhaug, 1994) interpret competence as "work-related knowledge, skills and abilities" while (Rees, 2003) argues that there has been an enormous diversity of interpretation of the term, 'competence', and no agreed definition. (Hamel and Prahalad ,1994) define competence as a bundle of skills and technologies that enable company to provide benefits for customers rather than a single skill or technology.

- **Employee competency and experience: -** All companies realize the importance of nurturing a talented workforce. With it, everything is possible, without it, you can count on numerous unsuccessful strategic efforts. By clearly identifying the right competencies and experience, organizations can make sure they are recruiting and managing talented people in the most strategic way, putting the right people in the right jobs with the abilities to perform at their maximum potential every day. In organizations utilizing best practices, a small set of core leadership and values-based competencies are established across the organization. These competencies are broadly applied to all employees and send a powerful message, reflecting the company's culture, business strategy, expectations and unique market dynamics which led the companies to profitability.

- **National bank supervision and regulation: -** National bank of Ethiopia has significant role for insurance companies profitability by creating fair market competition among insurance companies, licensing and supervising, making directives suites for development of insurance sector in the country. Also national bank of Ethiopia follows each and every insurance company's health continues which important for insurance companies alert on their financial situation.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

It is fact; a strong and healthy financial system is a prerequisite for sustainable economic growth of a given country. In order to survive negative shocks and maintain a good financial stability, the financial managers and policy maker should identify the key performance determinants of insurance industry. Because of this, the current study specified an empirical framework to investigate the effect of insurance sector -specific determinants and one microeconomic determinant on the profitability of Ethiopian insurance sector from 2003 to 2014. The study also used an appropriate econometric methodology for the estimation of variables coefficient under fixed effect regression models. The following sections discussed about the final conclusion remarks of the study, applicable recommendations and future research recommendation.

5.1. Summary

In this study, the empirical analysis of investigating the determinants of the performance of Ethiopian insurance companies was conducted using a panel data set consisting of financial data of nine insurers over the period of 2003 to 2014 and supports the finding with primary source of data. The results of pooled OLS regression analysis revealed that solvency margin; firm size, leverage, and loss ratio/underwriting risk/, were statistically significant to explain performance of insurance companies in Ethiopia. The result of the study also shows that insurers' size and solvency margin were positively related to insurance performance, while loss ratio, and leverage ratio and were negatively related to performance (ROA). Whereas premium growth, growth in gross domestic product, age of insurance companies and liquidity has positive relation with insignificant impact on profitability of insurance in Ethiopia and determinates such as tangibility of asset and reinsurance dependency has negative relation with insignificant impact on profitability of insurance companies.

The data from primary source also support regression output, i.e. negative and significant relation between loss ratio and leverage ratio on ROA (profitability of insurance companies), and positive and significant impact of solvency margin and size of insurance companies on profitability of insurance companies in Ethiopia . Also respondent generally suggested that liquidity, GDP, and growth in written premium has positive and significant relation between

profitability and age of insurance companies, reinsurance dependency and tangibility of asset has positive, negative, negative relation with little significant on profitability of insurance companies respectively. All determinants selected on the study are concluded as follows:

5.2. Conclusions

- **Size of insurance companies:** As per the result from both regression and questioners response size of insurance companies has positive and significant impact on profitability of insurance companies in Ethiopia. The positive relationship between size and ROA implies that **s**ize is used to capture the fact that larger insurance companies are better placed than smaller once in harnessing economies of scale in transactions and enjoy a higher level of profits.
- **Solvency margin:** The result from both regression and primary source reveled that there is positive and significant impact of solvency margin on profit ability of insurance sector in Ethiopia. Positive and significant powerful explanatory of solvency which implies solvent insurance companies generate more profit than insolvent insurance companies.
- **Underwriting risk /loss ratio/:** Negative and significant impact of loss ratio /underwriting risk/ on profitability of insurance companies which implies insurance companies operating in Ethiopia with less underwriting risk will generate more profit than higher underwriting risk.
- **Tangibility of asset: -** Tangibility of asset is not considered as powerful explanatory variables to define the performance of insurance companies in Ethiopia over 12 years with positive relation with ROA.
- **Reinsurance Dependency: -** Reinsurance Dependency is not considered as powerful explanatory variables to define the performance of insurance companies in Ethiopia over 12 years with negative relation of ROA.
- **Age of Insurance Companies: -** Age of Insurance Companies is not considered as powerful explanatory variables to define the performance of insurance companies in Ethiopia over 12 years with positive relation of ROA.
- **Leverage ratio: -** Negative and significant impact of leverage on profitability of insurance companies in Ethiopia. It is implied that highly profitable insurance companies

are more likely relied on internally generated funds and equity capital than debt capital as the source of financing.

- **Growth in gross written premium: -** The positive and statistical insignificant relation between growth rate and profitability of insurance companies in Ethiopia implies that insurance companies their positive relation of growth rate with no impact on profitability of insurance companies in Ethiopia.
- **GDP growth: -** Positive and insignificant impact on GDP growth and insurance company's profitability.
- Management competency, employee competency and experience and national bank supervision and regulation has significant impact on profitability of insurance as per data gathered through open-ended questioners held with chiefs finance office of respective sample insurance companies other than study variables.

5.3. Recommendations

Based on the research findings the following recommendations were presented for this study:

- It is positive to have high consideration of increasing the company assets. Because the size of the company is an important factor as it influences its competitive power. Small companies have less power than large ones; hence they may find it difficult to compete with the large firms particularly in highly competitive markets.

- Great attention should be paid to leverage. Companies that are highly leveraged may be at risk of bankruptcy if they are unable to make payments on their debt; they may also be unable to find new lenders in the future. On the other hand, leverage can increase the shareholders' return on their investment and make good use of the tax advantages associated with borrowing.

- There is a significant need to have highly qualified employees in the top managerial staff and experienced and motivated low and middle staff, as indicated on presentation of primary data management and employee competency get high priority by respondents.

5.4. Recommendations for future research

This study focuses mainly on the internal factors affecting profitability of the insurance sector in Ethiopia with only one macroeconomic variable. By taking this study as a standing point, it could be possible to come up with a better insight and several extensions to this study are possible. Considering the available time and resource the outcome of this study can be more robust, if future researchers conduct a study on this area. First, by further increasing the study population and the sample size to the whole financial sector. Secondly by taking evidence from other industries, increasing the number of observations through the use of large sample size and longer years of data, other issues that could be covered in future research include whether insurance companies effectively and efficiently indemnify risks and intermediate savings for the provision of risk to the other sectors in the economy, or whether they allocate resources and manage risks efficiently hence factors affecting profitability of insurance companies and their implications in risk management practices.

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APPENDICES

Appendix I: Research Questionnaire

ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
ACCOUNTING AND FINANCE MASTERS PROGRAM
RESEARCH QUESTIONNAIRE

This questionnaire contains open-ended question, you are requested replay the entire question. There is no right or wrong answers, simply answer the question based of your working experience and the current knowledge about the business environment of your insurance company in particular and Ethiopia insurance industry in general. You are kindly request to give your honest opinion on each of questions. The information from respondents will be keep confidentially and no any effect on respondents. So, please answer the entire question frankly and honestly, your frank and sincere responses will be highly appreciated.

Thank you in advance

Questionnaire prepared to ask the chief financial officers of the sampled commercial banks of Ethiopia. Please put x for yes or no question and discuss the question.

1. Does tangibility of asset determines your profitability? YES ……., NO……..
   If yes, how and to what extent it contribute profitability of insurance profitability?
   ……
   ……
   ……
   ……
   ……

2. Does liquidity factor to insurance profitability? YES……, NO……..
   If yes, how would Liquidity affect the insurance companies profit and to what extent it determineprofitability?……
   ……
   ……
3. Does solvency margin determine portability of insurance companies? YES……, NO……..
   If yes, how it contribute for your insurance company profitability?

   …….....
   ……
   ……
4. Does loss ratio (underwriting risk) factor to insurance profitability? YES……, NO……..
   If yes, how would loss ratio affect the insurance companies profit and to what extent it determine your profitability?
   ……
   ……
   ……
   ……
5. Does growth in written premium determine portability of insurance companies? YES……, NO……..
   If yes, how it contribute for your profitability and to what extent impact Profitability of insurance company?
   ……
   ……
   ……
6. Does size of insurance companies factor to insurance companies profitability? YES……, NO……..
   If yes how would loss ratio affect the insurance companies profit and to what extent it determine your profitability?

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……
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7. Does age of insurance companies determine portability of insurance companies? YES……, NO……..

   If yes how age of insurance companies contribute for your insurance company profitability and to what extent impact Profitability?

   ……
   ……
   ……

8. Is leverage factor for the insurance company's profitability? YES -------, NO……

   If yes how and to what extent your profitability is determine by Growth in leverage?

   ……
   ……
   ……

9. Does reinsurance dependency factor to insurance profitability? YES……, NO……..

   If yes how would reinsurance dependency affect the insurance companies profit and to what extent it determine your profitability?

   ……
   ……
   ……

10. Is economic growth of the country contributed to the insurance company's profitability?

    YES -------, NO……if yes how and to what extent your profitability is determine by Growth in GDP?

    ……
    ……
    ……

11. What are other determinates that affect your profitability of insurance company other than stated factors above on this study? Specify and discuss them briefly.

    ……
    ……
    ……
    ……
    ……
    ……
    ……

Thank You Once Again!!!

May, 2015

Appendix II: Fixed Effect Regression Output

Sample: 2003 2014

Periods included: 12

Cross-sections included: 9

Total panel (balanced) observations: 108

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.448732	0.243319	-1.844213	0.0685
TAN	-0.048533	0.037141	-1.306722	0.1947
LIQ	0.010280	0.014276	0.720078	0.4734
SOM	0.102367	0.020848	4.910099	0.0000
LOR	-0.218063	0.029846	-7.306241	0.0000
GRP	0.007541	0.018489	0.407840	0.6844
SIZE	0.056062	0.016046	3.493836	0.0007
AGE	-0.000841	0.003050	-0.275852	0.7833
LAV	-0.441878	0.096944	-4.558055	0.0000
GDP	0.000973	0.008612	0.113043	0.9103
RED	-0.034888	0.057623	-0.605445	0.5464

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.765803	Mean dependent var	0.077834
Adjusted R-squared	0.718437	S.D. dependent var	0.052642
S.E. of regression	0.027933	Akaike info criterion	-4.159647
Sum squared resid	0.069443	Schwarz criterion	-3.687790
Log likelihood	243.6209	Hannan-Quinn criter.	-3.968326
F-statistic	16.16788	Durbin-Watson stat	1.843878
Prob(F-statistic)	0.000000		

Appendix III: List of Insurance Companies Operating In Ethiopia

No.	Insurance co.	Establishment year
1	Ethiopian Insurance Corporation	1975
2	Africa Insurance Company S.C	1994
3	Awash Insurance Company S.C	1994
4	National Insurance Company of Ethiopia S.C.	1994
5	Nile Insurance Company S.C	1995
6	Nyala Insurance Company S.C	1995
7	Global Insurance Company S.C.	1997
8	The United Insurance S.C	1997
9	NIB Insurance Company	2002
10	Lion Insurance Company S.C	2007
11	Ethio-Life and General Insurance S.C.	2008
12	Oromia Insurance Company S.C.	2009
13	Abay Insurance Company	2010
14	Berhan Insurance S.C.	2011
15	Lucy Insurance S.C.	2012
16	Tsehay Insurance S.C.	2012
17	Bunna Insurance S.C.	2013