

THE EFFECTS OF FINANCIAL RISK ON THE PERFORMANCE OF INSURANCE
COMPANIES IN ETHIOPIA

A RESEARCH PROPOSAL SUBMITTED TO THE DEPARTMENT OF ACCOUNTING AND
FINANCE IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARDED
BACHLOR OF DEGRE IN ART (BA) IN ACCOUNTING AND FINANCE



COLLEGE OF BUSINES AND ECONOMICS

DEPARTMENT OF ACCOUNTING AND FINANCE

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AUGUST, 2021

WOLKITE, ETHIOPIA

ACKNOWLEDGEMENT

First of all, I would like to thank Almighty God and his mother for all their help. Next, I would to thank my advisor Demelash Getnet (Msc) for your unreserved advice for the completion of this thesis. I would like to pass my deepest gratitude to my family for their moral and material support throughout my life especially for my priceless friend Dagnachew Ayalew. In addition, my gratitude goes to managers of industry selected in this study for their support to provide data for the study.

Abstract

The study focused the analysis of the effects of financial risk on the performance of selected insurance company in Ethiopia. Financial risks are an important factor which the insurance company must attend to achieve its financial performance. From this perspective effects of financial risk becomes one of the most important to be used on insurance company in order to get higher returns. Therefore, this study attempted to ascertain the relationship between effects of financial risk and performance of selected insurance companies in order to achieve this objective, the study used explanatory research design, quantitative research approach and panel data covering 14 years (2002-2015).The study used panel data techniques spastically Hausman random effect model on the regression analysis and used E-view 9 software. The study used dependent variable, return on asset (ROA), and five independent variables such as credit risk solvency risk, liquidity risk, technical provisional risk and underwriting risk. The results of Hausman random effect regression model indicated that technical provisional risk, underwriting risk, liquidity risk and credit risks had negative and significance impact on the ROA (performance of Ethiopia insurance corporation, Africa insurance, Awash insurance, Nice insurance, Nayala insurance and Niel insurance companies). The study led to the conclusion technical provision risk, underweighting risk, liquidity risk and credit risk are the factors for the financial performance of the above selected insurance companies. On the basis findings, the study recommends that the insurance companies needs of attention for listed risks

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ACCRONYM

BPR	Business Process Reengineering
CR	Credit Risk
ISD	Insurance Supervision
GDP	Gross Domestic Product
LR	Liquidity Risk
NBE	National Bank of Ethiopia
OLS	Ordinary Last Square
ROA	Return on Asset
RBS	Risk Based Supervision
SR	Solvency Risk
TPR	Technical provisional Risk

CHAPTER ONE

1. Background of the study

Financial risk is uncertainly in returns and many include risks such as ; credit risk, underwriting risk, solvency risk, liquidity risk and technical provision risks(Panigrahi, 2013).

In a modern economy, the importance of financial institutions such as Banks, Insurance, saving and credit unions, cooperatives and the likes is unarguable. These institutions play a great role in facilitating and lubricating the economy of nations. A Saunders and M.M Cornett (2004) the financial institutions perform essential function of channeling funds from those with surplus funds (supplier of funds) to those with shortage of funds (user of funds) Frederic & Eakins (2009) financial institutions not only affect our everyday life but also involve huge flows of funds, which in turn affect business profits, the production of goods and services, and even the economic well-being of countries. Dereje Workie (2012) stated that financial institutions serve as a medium of exchange and facilitate business activities, support mobilization of resources through savings and allocate resources to activities with highest returns, follow up investments and exert corporate governance, and offer a diversity of financial instruments.

Abate (2012) stated that financial institutions such as insurance companies play in insuring economic activity and contribute to the stability of the financial system in particular and the stability of the economy of concerned country in general. Naveed et al(2011) the efficiency of financial intermediation and transfer of risk can affect economic growth while at the same time institutional insolvencies can result in systemic crises which have unfavorable consequences for the economy as a whole. As part of the important segment of the financial sector Hails and Sumegi (2008) , the insurance industry plays an important role in the economy of most 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.

Insurance companies have importance both for businesses and individuals as they indemnify the losses and put them in the same positions as they were before the occurrence of the loss. In addition, insurers provide economic and social benefits in the society, that is, prevention of

losses, reduction in anxiousness, fear and increasing employment. 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 re insurers. Insurance makes possible ventures that would otherwise be prohibitively expensive if one party had to absorb all the risk.

Pfeiffer (1956) defines Insurance is a device for the reduction of uncertainty of one party called the insured, through the transfer of particular risks to another party, called the insurer, who offers a restoration, at least in part of economic losses suffered by the insured. Pritchett, et al (1996) defines Insurance as a social device, in which a group of individuals (called “Insured”) transfer risk to another party (called the “insurer”) in order to combine loss experiences, which statistical prediction of losses and provides for payment of losses from fund contributed (premiums) by all members who transferred risk. Therefore, the current business world without insurance companies is unsustainable because risky businesses have no capacity to retain all types of risk in the current extremely uncertain environment.

1.2 Statement of the Problem

Anthony et al. (1997) stated that insurers are in the risk business. In the process of providing insurance and other financial services, they assume various kinds of actuarial and financial risks. Risk arises from raising funds via the issuance of insurance policies and other liabilities. It is the risk that the firm is paying too much for the funds it receives or, alternatively, the risk that the firm has received too little for the risks it has agreed to absorb. If an insurer invests these funds in efficiently traded securities, it should expect to have, on average, a zero net economic profit on those securities. Therefore, if the insurer pays too much for its funds, it cannot expect to earn a satisfactory profit in the long run agreement is one of the most important practices to be used especially in insurance companies in order to get higher returns (Gabriel et al., 2008). Managing financial risk involves setting appropriate risk environment, identifying and measuring the insurances risk exposure, mitigating risk exposure, monitoring risk and constructing controls for protecting the insurance companies from financial risk (Tcankova, 2002). As identified by NBE (2010), credit risk, liquidity risk, reinsurance risk, technical provisions risk and underwriting risk are major risks that can affect Ethiopian insurance companies’ performance.

Arif et al. (2015) and Amal (2012) imply that liquidity risk had a positive and significant impact on performance of insurance companies. However, Adrian (2014) result showed that liquidity risk negatively affected the performance of insurance companies. In contrary, Mirie (2015) investigated that liquidity risk had no significant effect on performance of insurance companies.

Mirie (2015) and Arif et al. (2015) confirmed that underwriting risk hadn't significant effect on performance of insurance companies. Nevertheless, (Hifza (2011); Emine (2015); AnaMaria, et al. (2014); and Ijaz (2015)) studies indicates underwriting risk had a negative and statistically significant effect on performance of insurance companies. Previous Empirical results in different hemisphere of the world indicate various out comes while using the same variables to examine the effect of financial risk on performance of insurance companies. Hence, as far as the researcher knowledge, a single study corresponding with this research is conducted by Eneyew (2013) about financial risk and profitability of commercial banks in Ethiopia. However, this research is quite different in its industry selection and incorporates additional financial risk variables of insurance companies. These are, underwriting risk, solvency risk, technical provision risk and reinsurance risk. Prior studies, like (Abate (2012); Yuvaraj et al. (2013); Meaza (2014); Hadush (2015)) conducted on determinant of profitability in Ethiopian insurance companies and Daniel et al. (2013) studied on determinant performance in Ethiopia insurance companies. However, these all researches didn't mainly concentrate on the effect of financial risk area keeping credit risk, solvency risk, technical provision risk and reinsurance risk. Another study conducted by Mistre (2015) on determinant of profitability in Ethiopian insurance companies didn't include credit risk and technical provision risk variables. Similarly, Suheyli (2015) had also studied on the same topic, but the study didn't examine the effect of credit risk and solvency risk on performance of insurance companies in Ethiopia. Hence, NBE (2010) has also given a due emphasis and stressed to track credit risk, liquidity risk, reinsurance risk, technical provisions risk and underwriting risk as they are pointed out to affect performance of Ethiopian insurance companies. Thus, due to the severity of financial risk problem and absence of empirical studies on Ethiopia insurance companies pertaining to this topic incorporating crucial financial risk variables collectively is what motivated the researcher to examine how performance of Ethiopian insurance companies have been affected and tries to bridge the gap specifically the effects of financial risk on performance of insurance company in Ethiopia.

1.3 Hypotheses of the study

Based on the objective, the study would be tested the following hypotheses

H1. Liquidity risk has a significant and negative effect on performance of Ethiopian insurance company.

H2. Solvency risk has negative and positive effect on the performance of insurance company in Ethiopia.

H3. Credit risk has significance influence on the performance of insurance company in Ethiopia.

1.4 Objective of the Study

1.4.1 General Objective

The general objective of the study is to investigate the effect of financial risk on performance of insurance companies in Ethiopia.

1.4.2 Specific Objectives

The specific objectives of the study targeted to;

- To examine the effect Liquidity risk on performance of insurance companies in Ethiopia.
- To analyses the effect solvency risk on performance of insurance companies in Ethiopia.
- To investigate the effect of Credit risk on performance of insurance companies in Ethiopia.

1.5 Scope of the Study

This study is limited to examine the effect of financial risk on performance of insurance companies in Ethiopia and made the analysis using secondary source of data. The study would be taken in to account the performance of insurance companies for the last 14 years that is from 2002 to 2015. As a result, this study would be conducted on Ethiopian insurance corporation, Africa insurance, Awash insurance, Nice insurance company, Nyala insurance and Niel insurance from 17 insurance companies in Ethiopia. The study included five financial risk variables such as, liquidity risk, Credit risk, solvency risk, technical provisions risk and underwriting risk. As the result, these variables explained the topic properly by referring previous empirical works.

1.6 Limitations of the Study

For this purpose, the following are major limitations. These are:

Limitations are concentrates which are largely beyond the researcher's control but could affect the study's outcomes. Insufficiency of the secondary data about insurance companies may affect the study. This study was carried out by collecting secondary data. The data were obtained from audited financial statements of insurance companies under investigation obtained from national bank of Ethiopia an annual financial report of each insurance company. This is based on entirely secondary data and the limitation of using secondary data may affect the result and the secondary data collected from income statement, balance sheet was some limited to prepare at the end of each year. In addition to that some insurance company manager's they were not voluntary to give necessary information i.e. annual financial statement was one limitation.

1.7 Significant of the Study

This study will have the following significant.

This study will have huge value to Insurance companies, Management Administration will be interested in identifying indicators of success and failure to take the necessary actions to improve the performance of the company and choose the right decisions. Investors will be fascinated in such studies in order to protect their investment, and directing it to the best investment. Customers may possibly involve in knowing the ability of insurance companies to pay their obligations based on the indicators of success of the companies. Academician will have a chance to know the severity of financial risk problem on insurance companies which support students to be familiar with it and find out a solution on their teaching and learning process. Moreover, this research have significant role to play in shading light on how to better understand what variables that have an impact on Ethiopia insurance companies' performance. Additionally, this study has a paramount importance in providing a better ground for insurance managers, business professionals, business initiatives and policy makers. The subject matter of this study and the result lesson drawn from this study is likely to benefit different classes of people in the future. In addition to this, the research also contributes an insight point as a stepping stone for further study in the area to future researchers.

1.8 Organization of the study

This research paper is organized in to five chapters. The first chapter dealt with an introduction part where back ground of the study, statement of the problem, hypotheses, objectives of the study, scope, significance and limitation of the study. The second chapter is concerning review of literature in which theories, empirical evidence and conceptual frame work are identified. The third chapter contained research methodology where research design, research approach,

population, sampling method, sample size, sources of data, instruments, data analysis technique, model specification, variable definition and hypothesis development covered. The fourth chapter would be focused on the results and discussion in which the findings results that interpreted and analysis and the final chapter would include summary, conclusion and possible recommendations of the study.

CHAPTER THWO

2. LITERATURE REVIEW

This chapter would present theoretical and empirical review on the effect of financial risk on performance of insurance companies' in Ethiopia. Accordingly, the first parts presented theoretical literature about different financial risks in insurance and also explained risk management theory. Next to these, it presented the relationship between financial risk and insurance performance. The gaps in existing literature described in the third part and the conceptual framework depicted in the fourth part.

2.1 Theoretical Literature

2.1.1 Meaning of risk:

As Ralph (2000) defined risk as the existence of uncertainty about future outcomes. Risk is a key factor in economic life because people and firms make irrevocable investments in research and product development, plant and equipment, inventory, and human capital, without knowing whether the future cash flows from these investments will be sufficient to compensate both debt and equity holders. If such real investments do not generate their required returns, then the financial claims on these returns will decline in value.

2.1.2 Meaning of financial risk:

According to Holton (2004) financial risk is often defined as the unexpected variability or volatility of returns and thus includes credit risks, liquidity risks and market risks. In line with this, Kithinji (2010) also stated that financial risk management practices are those activities and procedures that are employed by managers in an effort of safeguarding an organization from credit risks, liquidity risks and market risks. Financial risk management practices fall into three major categories; credit risk practices, liquidity risk management practice as and market risks. Insurers are in the risk business. In the process of providing insurance and other financial services, they assume various kinds of actuarial and financial risks. The risks contained in the insurer's product sales-that is, those embedded in the products offered to customers to protect against actuarial risk-are not all born directly by the insurer itself.

2.1.3 Financial risk in insurance:

Financial risks associated with the provision of insurance services are risks related to the

financial operation of a business, such as credit risk, liquidity risk, reinsurance risk, market risk, solvency risk, technical provisions risk, underwriting risk. Then, the following subsections discuss these risks in details.

Credit risk As stated by Anthony et al. (1997) it is the risk that a borrower will not perform in accordance with its obligations. Credit risk may arise from either an inability or unwillingness on the part of the borrower to perform in the per-committed contracted manner. As per NBE (2010) risk management guide line credit risk is the risk of financial loss, despite realization of collateral security or property, resulting from the failure of a debtor to honor its obligations to the company. The area of credit risk includes default risks related to an insurer's portfolio of bonds (credit through investment) and other fixed income investments, counter party risk on derivative contracts and the risk of default on loans or insured debts and trade debtors. The major risk that arises from a weakening of the credit portfolio is the impairment of capital or liquidity. For most companies, extending credit through investment and lending activities comprises an important portion of their business. Therefore, the quality of an institution's credit portfolio contributes to the risks borne by policyholders (liquidity) and shareholders (capital impairment).

Typical areas of concentration for credit risk

These are the following points that NBE (2010) risk management guide line has located the areas which focus on credit risk.

Investing/lending activities, Trade debtors/Financing of premiums, Reinsurance

Credit Risk Management

Accordingly NBE (2010) referred that managing credit risk is a fundamental component in the safe and sound management of companies. Sound credit risk management involves establishing a credit:

Identifying existing or potential credit risks to which the company is exposed, on or off balance sheet, in conducting its investment and lending activities and developing and implementing sound and prudent credit policies to effectively manage and control these risks;

Developing and implementing effective credit granting, documentation and collection

procedures;

Developing and implementing procedures to effectively monitor and control the nature, characteristics, and quality of the credit portfolio; and developing processes for managing problem accounts.

Liquidity risk As indicated by Gerald et al. (2001) liquidity risk is the risk of not being able to meet payment liabilities when due. The liquidity of an investment is defined by how quickly and to what extent it can be converted into cash. The ability to convert the investment into cash is, however, dependent on several factors which influence the scope of the liquidity risk. As indicated by Liargovas et al. (2008) explained liquidity risk as degree to which debt obligations coming due in the next 12 months can be paid from cash or assets that will be turned into cash. It is usually measured by the current assets to current liabilities (current ratio). It shows the ability to convert an asset to cash quickly and reflects the ability of the firm to manage working capital when kept at normal levels. A firm can use liquid assets to finance its activities and investments when external finance is not available or it is too costly. On the other hand, higher liquidity would allow a firm to deal with unexpected contingencies and to cope with its obligations during periods of low earnings .Liquidity is the availability of funds, or assurance that funds will be available, to honor all cash outflow commitments (both on and off-balance sheet) as they fall due. These commitments are generally met through cash inflows, supplemented by assets readily convertible to cash or through the company's capacity to borrow. The risk of liquidity increases if principal and interest cash flows related to assets, liabilities and off-balance sheet items are mismatched (NBE, 2010).

Liquidity risk management

The following points are liquidity risk management practices that are sated by NBE (2010) risk management guideline;

Managing liquidity is a fundamental component in the safe and sound management of companies.

Sound liquidity management involves prudently managing assets and liabilities (on and off-balance sheet) to ensure that cash inflows have an appropriate relationship to the size of approaching cash outflows.

Liquidity planning assesses potential future liquidity needs, taking into account various possible

changes in economic, market, political, regulatory, and other external or internal conditions

Solvency risk As defined by AARDLB (2010) solvency is defined as having enough value in the form of assets in your business to cover all of the liabilities of the business. Based on the accounting equation that $\text{assets} = \text{liabilities} + \text{equity}$, this definition means that a business has positive equity. When a businesses' equity becomes negative it is said to be insolvent. Bankruptcy is just around the corner for an insolvent business if it does not generate enough cash flow income to meet its debt requirements in a timely manner.

Similarly, Cummins et al., (2002) suggest that insurers with greater ratings are perceived as safer which results in higher returns. A positive linkage between solvency margin and the insurer's financial performance is expected, since the insurers financial stability is an important benchmark to potential customers.

Technical provisions risk According to NBE (2010) technical provision risk is that the company's liability to policyholders could be understated. Clearly from the perspective of financial safety and soundness, the concern is with possible understatement of liability because any such understatement can result in the insurer being unable to discharge all of its obligations to the public. Thus, focus will be given on controlling the risk of liability understatement. As referred by Jasmina (2003) it is a risk of holding insufficient technical provisions or holding unjustifiably excessive provisions, where provisions are set at a lower level than actually required then this could present the company's financial position in a better light than it actually is. This could result in inappropriate underwriting decisions being made. For example, more risky policies may be underwritten on the basis that more capital is available to support this than is actually the case, or higher levels of business may be written. In addition, Technical provisions affect the assessment of insurer solvency.

Underwriting risk As stated by Adams et al. (2003) underwriting risk emphasizes the efficiency of the insurers underwriting activity and is measured through the loss ratio, which is computed as a ratio of gross claims to gross written premium. Underwriting risk reflects the adequacy or otherwise of insurers' underwriting performance. As mentioned by Arif et al. (2015) underwriting guidelines are pivotal to an insurers' financial performance. The underwriting risk depends on the risk appetite of the life insurers'. For instance, as per Fama et al. (1983) argued that organizations that engage in risky activities are likely to have more volatile cash flows than entities whose management is more averse to risk taking. Therefore, a negative connection between the underwriting risk and the insurers' financial performance is expected, since taking

an excessive underwriting risk can affect the company's stability through higher expenses. The following points are underwriting risk management practices that are stated by NBE (2010) risk management guideline. Managing underwriting risk is a fundamental component in the management of safety and soundness of an insurer. Sound underwriting and risk management involves understanding the risk and prudently managing the company's risk/reward relationship.

2.1.4 Risk Management

Theory Risk management is the identification, assessment, and privatization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities. Effective risk management can bring far reaching benefits to all organizations, whether large or small, public or private sector. These benefits include, superior financial performance, better basis for strategy setting, improved service delivery, greater competitive advantage, less time spent firefighting and fewer unwelcome surprises, increased likelihood of change initiative being achieved, closer internal focus on doing the right things properly, more efficient use of resources, reduced waste and fraud, and better value for money, improved innovation and better management of contingent and maintenance activities (Wenk, 2005). With the aim of achieving radical and fundamental changes in all areas of its operation (core and support), the National Bank of Ethiopia has carried out Business Process Re engineering (BPR) studies and currently its implementations have been well in progress. With respect to insurance supervision, the move from compliance based to risk based supervision (RBS) is among the major initiatives taken up by the BPR study. To carry on RBS, building up its infrastructures is essential, which in turn calls for the direct involvement, participation and collaboration of all stakeholders. In view of the foregoing, Insurance Supervision Directorate (ISD) has compiled the first draft of the risk management guideline for eight commonly identified and known as inherent and significant risks of insurers. In the process of these risks management, the role to be played by the board of directors, management, internal control system and other concerned parties are clearly addressed need to formulate (NBE, 2010).

2.1.5 Performance of insurance companies

According to Yuvaraj et al. (2013) as cited in William et al. (2004) suggested that although there are different ways to measure profitability it is better to use ROA. In addition to this, performance of insurance companies in financial terms is normally expressed in net premium

earned, profitability from underwriting activities, annual turnover, return on investment and return on equity. These measures could be classified as profit performance measures and investment performance measures. However, most researchers in the field of insurance and their profitability stated that the key indicator of a firm's performance is ROA defined as before tax profits divided by total assets. Measuring the performance of insurance companies has gained the momentum from the last couple of years, because insurance sector is not only an avenue for money saving, but also serves as a vehicle to channel funds in an appropriate way from surplus economic sectors to deficit sectors so as to support the investment activities in the economy. Technically, performance is defined as a subjective measure which determines how well the organizations use their available resources to generate more revenues. Performance measures the financial soundness and health of the organization in monetary terms and thus, can be used to compare the performance of different corporations within any particular industry or between the industries. The performance of the insurance companies plays a pivotal role in the growth of the industry as a whole, which ultimately contributes to the success of an economy. The insurance companies endanger their performance by assuming different types of risks. In order to have full and fuller understanding of the impact of financial risk on the profitability of insurance companies the present study will take into consideration various ratios like solvency, liquidity, profitability (Arif et al., 2015).

2.1.6 Financial risk and performance in insurance

As mentioned by Arif et al. (2015) insurance companies are engaged in the business of taking risks. Throughout the globe, these companies deal with a host category of risks which have a direct impact on the performance of these companies. These risks prove to be a greater setback in the process of achieving growth in terms of size, assets and performance of the company which is measured in the form of returns. Thus, such a crippling situation in the organization necessitates a better approach being in place in order to understand these risks and develop an instrumental structure or framework to handle such risks. The key risks which hamper the performance of insurance companies include underwriting risks, market risks, credit risks, operational risks, liquidity risks, and strategic risks (reputation risk, compliance risk or legal risk, agency risk, and so on). Most of these risks can be categorized under a single umbrella term of financial risk. In a similar vein, Allen et al. (1997) have explained the increased importance of financial or corporate risks because of a variety of reasons stemming from price fluctuations,

interest rate fluctuations, increased competition and greater deregulation. To put the financial risk in simpler terms, it can be defined as an umbrella term for multiple categories of risk associated with financial transactions. It can further be explained as the possibility where the investors lose money if they are investing in the company whose cash flows are inadequate to meet the matured obligations (Arif et al., 2015).

2.2 Review of Empirical studies

The study will review various empirical studies that are related with the effect of financial risk on insurance companies' performance by incorporating various empirical studies conducted in developed countries, emerging market countries and African countries.

Omasete (2014) conducted a research on effect of risk management on financial performance insurance companies in Kenya. The study adopted a census survey of all the 49 registered insurance companies operating in Kenya and took the whole population of insurance companies as a sample. Secondary data for the period 2008 to 2012 was used in this study. The independent variables were risk identification, risk assessment, risk mitigation and risk management implementation and monitoring also financial performance (measured using ROA) was dependent variables. At 5% level of significance and 95% level of confidence, risk identification, risk mitigation, risk management program implementation & monitoring and risk assessment & measurement all significantly influenced the financial performance of insurance companies in Kenya. The study found risk identification to be the most significant in influencing the financial performance of Kenyan insurance companies, followed by risk mitigation, risk management program implementation & monitoring and risk assessment & measurement respectively.

Yuvaraj et al. (2013) studied on the performance of insurance companies in Ethiopia. The study took nine insurance companies within the specified period of time from June 2003 to June 2011. They employed Return on Assets (ROA) as dependent variables and independent variables are age of insurance companies, size of insurance companies, volume of capital, leverage ratio, growth rate, tangibility of company assets and liquidity ratio. Their source of data was secondary data which they had taken from annual reports that contain detailed consolidated balance sheets and income statements. Moreover, they applied quantitative analysis by testing model assumptions and found that significant relationship between age and profitability measured by ROA and also size is positively correlated with ROA. Moreover, there is significant and negative

relationship between leverage ratio and ROA plus significant positive correlation between firm growth and ROA. In line with this, significantly strong correlation between volume of capital and ROA along with significant relationship between tangibility of assets and ROA as well slightly negative correlation between liquidity and ROA.

Hadush (2015) studied on determinants of profitability in Ethiopia insurance Companies. For this purpose, the study took all Ethiopian insurance companies as targeted population then performed for a panel of nine Ethiopian general insurance companies for the study period of 2005-2014. The study has used secondary data or quantitative nature of data obtained from the annual audited financial statements (balance sheet and profit/loss account, and revenue account) of insurance companies, financial publications of NBE by applying a statistical package data called Eviews 7 only. Profitability is dependent variable while liquidity, tangibility, volume of capital, premium growth, claim ratio, real GDP and inflation) are independent variables. He used a quantitative tool of analysis and made a model assumptions test for the model assumptions. Regression result shows that tangibility, volume of capital, premium growth, claim ratio, and real GDP are identified as most important determinants of profitability hence tangibility, volume of capital, premium growth are significant and positively related. In contrast, claim ratio and real GDP are negatively but significantly related with profitability. However, liquidity and inflation are not significantly related with profitability. Meaza (2014) studied on determinants of insurance companies' profitability in Ethiopia by examining the effects of firm specific and macroeconomic factors on profit. For this reason, the study included ten insurance companies for six years (2008-2013). Secondary data obtained from the financial statements (Balance sheet and Profit/Loss account) of insurance companies, and financial publications of MOFED were analyzed. Profitability peroxide by ROA was dependent variables while size of companies, leverage, and tangibility of assets, liquidity, loss ratio, firm growth, managerial efficiency, inflation rate and economic growth were independent variables. All model assumptions test had been done and from regression result; size, leverage, tangibility of asset, loss ratio/ risk, firm growth and managerial efficiency were identified as significant determinants of profitability hence firm size, tangibility of asset, firm growth and, managerial efficiency were positively related. In contrast, leverage and loss ratio/ risk were negatively but significantly related with profitability. Liquidity, inflation and economic growth were not significant determinants of profitability.

Mistre (2015) made a research on determinants of profitability on insurance Sector: Evidence from Insurance Companies in Ethiopia. In order to carry out the study, secondary data of nine insurance companies over the period of 2003-2014 was obtained on the financial performance from the annual reports and audited financial statements. Age of company, size of company, leverage, tangibility of Assets, liquidity, premium growth, loss ratio, reinsurance dependence, solvency margin and growth in gross domestic product were independent variables while profitability measured by ROA(return on assets was dependent variable. The result of the study illustrated that insurers' size and solvency margin were positively related to insurance performance, while loss ratio and leverage ratio were negatively related to profitability (ROA). Whereas, premium growth, growth in gross domestic product, age of insurance companies and liquidity had insignificant impact on profitability of insurance companies in Ethiopia and determinates such as tangibility of asset and reinsurance dependency had insignificant impact on profitability of insurance companies.

2.3 Literature Gap

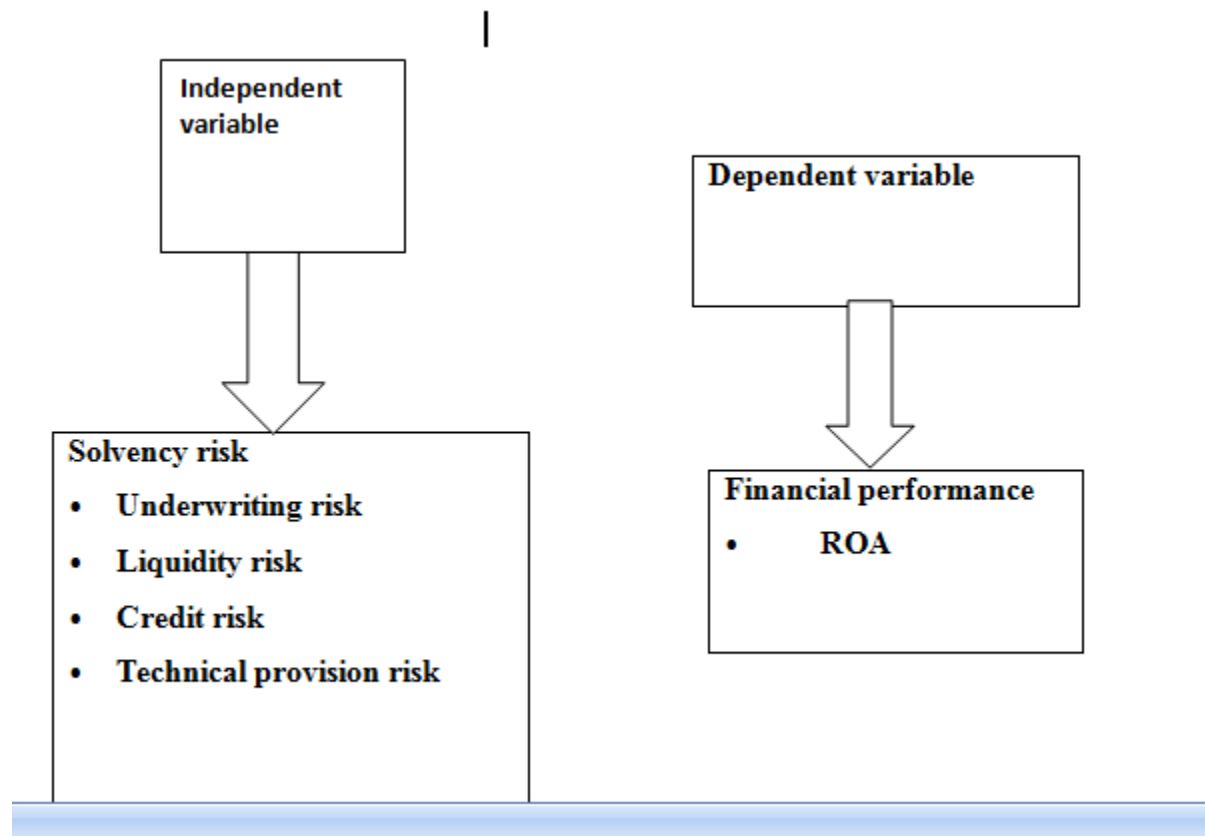
Empirical studies were conducted on relationship between financial risk and financial performance of insurance companies. Ijaz (2015) made a research on effect of macro economy factor on profitability of insurance companies, Hifza (2011) and Emine (2015) had also conducted a study on determent of profitability in insurance companies and another study made by Amal (2012) on determinant of financial performance in insurance companies. However, the study feature is diverse from developing countries due to the characteristics of government regulation, culture of the business, people attitude and economic growth. Thus, the researcher has taken the above gaps in to account for the study and this study might be differ with above other countries empirical studies due to the above mentioned reasons.

In line with this, Suheyli (2015) had also conducted a research on determinant of profitability in Ethiopian insurance companies, but the study didn't include credit risk and solvency risk as measurement of total liabilities over total assets that can show the insurance companies how much they are solvent for their total liabilities. However, this study has included these significant variables. In addition, prior studies conducted on determinant of profitability in Ethiopian insurance companies by (Yuvaraj et al. (2013); Meaza (2014) and Hadush (2015)) and determinant performance in Ethiopian insurance companies by Daniel et al. (2013). Their study

had limited on quantitative approach and their time sires period not more than eleven years. Thus, this study employed a mixed approached by taking sixteen (16) years for 2000 to 2015 period of interval which helps to obtain recent information about the effect of financial risk on Ethiopian insurance companies' performance. As per NBE (2010), credit risk has a great impact on insurance companies' performance by referring credit risk is the risk of financial loss resulting from the failure of a debtor to honor its obligations to the company and the risk arises from a weakening of the credit portfolio is the impairment of capital or liquidity. However, all available previous studies conducted in Ethiopia insurance companies not incorporate this variable on their research work technically. Thus, this study would fill all of the above stated gaps by taking evidences from Ethiopian insurance companies. The research gap exists by the above contradictory findings revealed that there is inconsistency among research findings on effect of financial risk on performance of insurance company in Ethiopia. Therefore, ignoring such important variables from the study leads to failure of filling knowledge gap that exists in the area of the study undertaken. This study would be fill identified gaps by taking correct information from Ethiopian insurance companies.

2.4 Conceptual Framework

Conceptual framework describes the relationship between independent and dependent variables of the study. This research will see to establish effect of underwriting risk, reinsurance risk, technical provision risk, solvency risk and liquidity risk (independent variables) on financial performance (dependent variables)



CHAPTER THREE

3. RESEARCH METHODOLOGY

This chapter discussed the methodology that used in gathering data, processing the data and translating the collect data into meaningful information. It provides the steps and procedures of the study that used to find out the effects of financial risk on performance of insurance company in Ethiopia. The chapter explained about the research design, data type and source, research approaches, population and sample size, data collection instrument, data analysis techniques, variable definitions which encompasses choice of dependent variable and independent variables, and model specification.

3.1 Research Design

Research design can be defined as an outline of the actual measures, adopted by an investigator for testing the correlation involving dependent variables as well as independent variables (Kothari, 2008). A research design is a master plan that specifies the methods and procedures for collecting analyzing the needed information (William G.Zikmund, et al 2013). The research design constitutes the blue print for collection, measurement, and analysis of data. This research is used Explanatory research design because the study identifies the cause and effect of financial risk and performance of insurance companies which is appropriate for the objectives of the study. The researcher only used six selected insurance companies.

3.2 Research Approach

There are different ways of approaching the problem, when conducting a research. According to Creswell (2009), there are three approaches of research: Qualitative, Quantitative and Mixed approaches. Quantitative research is a means for testing objective theories by examining the relationship among variables. On the other hand, qualitative research approach is a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem with intents which the researchers emphasize the research problem and use all approaches available to understand it.

Therefore, in this study used quantitative approach to ensure effectiveness of the research process and meet the objective of the research. The quantitative research approach, which constructs an econometric model, used to identify and measure the effect of financial risk on

performance of insurance companies and levels of significance.

3.3 Study population

The study populations are all insurance companies registered by NBE. Currently, there are seventeen insurance companies in Ethiopia that are one government owned and sixteen privately owned insurance companies these are; Ethiopian insurance corporation, Awash insurance S.C, African insurance S.C, National insurance company of Ethiopia S.C, Nyala insurance S.C, Nile insurance S.C, United insurance S.C, Global insurance S.C, Nib insurance S.C, Lion insurance S.C, Oromia Insurance S.C, Abay insurance S.C, Berhan insurance S.C, Tsehay insurance S.C, Ethio life and general insurance S.C, Lucy insurance S.C and Bunna insurance S.C.

3.4 Sample and Sampling Techniques

The total populations of insurance companies are seventeen but for the study purpose the researcher used sample of two insurance companies. Therefore, the study covered a period of sixteen (16) years from 2000-2015. The researcher used simple random sampling method to draw the sample from the population and meet the study objective. The matrix for the frame is 6×14 that include Eight Four (84) observation.

3.5 Data Sources and collection instruments

Data collection makes mention of the organization of data in such a way that it can be used to give results. For this study the researcher used secondary data. This type of data readily available from insurance company audited financial statements, annual report of NBEs, journals and Websites.

3.6 Data analysis

Based on the reviewed both empirical and theoretical studies to achieve objectives of the study, mainly concentrated on quantitative analysis. Hence, the researcher is used economic model to identify and measure effects of financial risk on performance of Ethiopian insurance corporation, Africa insurance, Awash insurance, Nile insurance, Nyala insurance and Nile insurance used Eviews-9 econometric software package for the study.

3.7 Independent variables

This section describes the independent variables that are used in the econometric model to estimate the dependent variable. To measure the predictor variables of the corporation performance, five factors used as independent variables which are extract from different studies. Variables are Liquidity, solvency, technical reserve, reinsurance and underwriting.

Liquidity risk: It measure by liquidity ratio. The liquidity ratio measures retire its

liabilities to the corporation abilities to use its near cash or quick assets.

Liquidity ratio=current asset /current liability

Technical reserve risk: The most common reserves in insurance are outstanding claim reserves.

A technical reserves is measured by a **safety ratio**=outstanding claim reserves/Equity.

Solvency risk: It is calculated as ratio of total liabilities to total assets and represented that when there is inability existed for a company to meet its long term fixed expenses and to accomplish long term expansion and growth (Sommer, 1996).Solvency risk is about a company's inability to meet its financial obligation. It measured by

Total liabilities/Total assets

Underwriting risk: The underwriting risk emphasizes the efficiency of the corporation underwriting activity and it was measured by the change rate of net premium. It is measured by percentage change in gross written premium that shows the growth of current net written premium from previous year's net written premium in any single insurance firm as well as insurance sector. Proxy for Premium Growth is the percentage increase in Net Written Premium (NWP). The equation is expressed as follows.

Underwriting risk =Loss or claim incurred/Premium earned

Credit risk: It is measured the ratio of premium debtors plus due from reinsurer and other receivable to net asset of insurance company (premium debtor +due from reinsurer + other receivable /net asset). Currently, Ethiopian insurance companies have employed this ratio to grading their credit risk NBE (2010). In accordance with NBE (20110), area of credit risk includes counterparty risk on derivative contracts and the risk of default on insured debits and trade debtors.

3.8 Model specification

According to William et. Al (2010), model building involves specifying relationships

between two or more variables; perhaps extending to the development of explanatory or predictive equation. In order to achieve the objectives of this study , the secondary data regression model is used to identify the relationship between the financial performance of Ethiopian Insurance Companies and explanatory variables liquidity risk ,technical risk ,solvency risk, reinsurance risk ,and underwriting risk .In addition ordinary last square (OLS) conducted statistical package EVIEW-9 to determine the most significant and influential explanatory variables affecting the financial performance of the Ethiopian Insurance corporation. Modeling is based on panel data techniques.

According to Books(2008),it is very easy to generalize the simple model to one with k independent variables. $Y_i = \beta_1 + \beta_2 x_{1i} + \beta_3 x_{2i} + \dots + \beta_k x_{ki} + \epsilon_i$, $i=(1,2\dots i)$. so, Where Y_i , is the i^{th} observation of the dependent variables, $x_{1i}, \dots, x_{ki}$ are the i^{th} observation observation of the independent variables $\beta_0, \dots, \beta_k$ are the regression coefficients, ϵ_i is the i^{th} observation of the stochastic error term.

$$ROA_{it} = \beta_0 + \beta_1 UR_{it} + \beta_2 LR_{it} + \beta_3 CR_{it} + \beta_4 SR_{it} + \beta_5 TPR_{it} + \epsilon$$

Sources developed by researcher mainly based on Arif et.al. (2015) and NBE(2010).

Where;

ROA=Return on Asset

LR =Liquidity Risk

TRR= Technical provision Risk

CR=Credit Risk

SR=Solvency Risk

UR=Underwriting Risk

ϵ =is the error component for company i at time assumed to have mean zero $\epsilon (\epsilon_{it})=0$

β_0 =constant

$\beta=1, 2, 3, \dots, 5$ are parameters to be estimated;

I= Insurance company $i=1, 2, 3, \dots, 6$; and the index of time periods and $t=1, \dots, 14$

Chapter Four

4. Data Analysis and Presentation

4.1. Descriptive statistics

Table 4.1 provides a summary of the descriptive statistics of the dependent and independent variables for six insurance companies from the year 2002 to 2015 with a total of 84 observations. The table shows the mean, minimum, maximum, standard deviation and number of observations for the dependent variable firms' performance (ROA) and independent variables (liquidity risk, solvency risk, technical provisions risk, underwriting risk and credit risk).

	ROA	SR	TPR	UR	LR	CR
Mean	0.079236	0.644922	0.805390	0.688534	1.119342	0.732323
Median	0.072460	0.636000	0.544955	0.678745	1.106950	0.641025
Maximum	0.393990	0.874590	4.039900	1.287720	2.599900	1.865900
Minimum	-0.047140	0.524000	0.100210	0.203300	0.390910	0.079100
Std. Dev.	0.055512	0.073342	0.790586	0.160618	0.352529	0.410389
Skewness	1.992614	0.695453	2.501601	0.325138	1.478963	0.579153
Kurtosis	13.88048	3.490176	9.056190	4.627483	8.392490	2.805257
Jarque-Bera	469.9337	7.612125	215.9831	10.75045	132.3990	4.828597
Probability	0.000000	0.022236	0.000000	0.004630	0.000000	0.089430
Sum	6.655830	54.17346	67.65280	57.83686	94.02470	61.51512
Sum Sq. Dev.	0.255773	0.446455	51.87712	2.141245	10.31498	13.97876
Observations	84	84	84	84	84	84

Source: - annual report of insurances using E-views 9

The descriptive result included mean, maximum, minimum and standard deviation. the table of firms' performance measured by return on asset shows that sampled of Ethiopian insurance companies achieved 7.9236% on average before tax profit over the last fourteen years from 2002 to 2015. From the total sample, return on asset had a maximum of 39.4% and minimum of -

4.71%. It means that the most profitable insurance company among the sampled earned 39.4 cents of profit before tax for a single birr (1.00) invested in the assets of the firm. On the other hand, not profitable insurance company of the sampled lost -4.71 cents of profit before tax for each birr (1.00) invested in the assets of the firm and the value of return on asset deviate from its mean by 5.55%.

The solvency risk measured by total liabilities over total assets was 64.49% on average. It implies that there are 1birr total assets to cover 64.49 cents of liabilities. The maximum and minimum values were 87.459% and 52.4% respectively for the study period. the standard deviation of solvency risk deviate from its mean by 7.33%.

From the descriptive statistics result the mean of technical provisions risk as proxy by claims outstanding to net asset was 80.54%. It refers that there is 1 birr of net asset to meet 80.54 cents of claims outstanding. The maximum value of claims outstanding to net asset ratio was 403.99% and a minimum value of 10.021% respectively for the study period. With regard to the standard deviation, the value of technical provisions risk deviate from its mean by 79.058%.

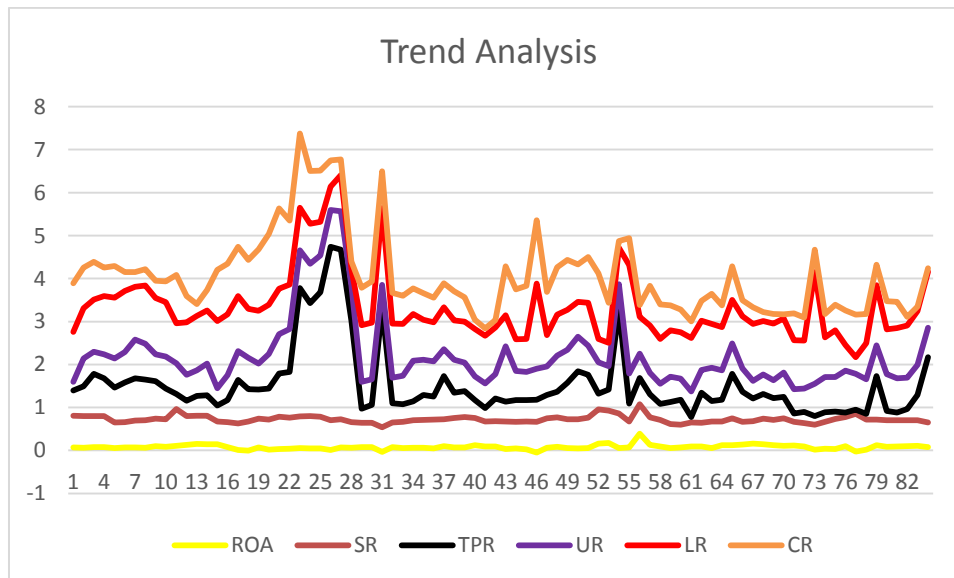
Descriptive statistics result shows the mean of underwriting risk as proxy by claims outstanding to net asset was 68.85%. It refers that there is 1 birr of net asset to meet 68.85 cents of claims outstanding. The maximum value of claims outstanding to net asset ratio was 128.77% and a minimum value of 20.33% respectively for the study period. With regard to the standard deviation, the value of underwriting risk deviates from its mean by 16.06%.

The average value for credit risk as measured by ratio premium debtors and other receivable to net asset of insurance company was 73.23% with a maximum of 186.59% and a minimum of 7.91%. It means that the average rate of credit risk was 73.23, sampled of Ethiopian insurance companies who have excess uncollected amount has 1 birr and 0.866 cents from the total receivable birr (1.00) which is above the standard rate and the value of credit risk deviate from its mean by 41.0389%.

The liquidity risk measured by current ratio was 111.94% on average. The mean value indicates that for each one-birr current liability, there was 1.11-birr current asset to meet obligation. The maximum and minimum values were 259.99% and 39.091% respectively. The standard rate and the value of liquidity risk deviate from its mean by 35.25%.

The probability value of all variables is high accepting that the normal distribution for all the variables indicating a normality of their unused conditional distributions. The Jarque bera test is used to check hypothesis about the fact that a given is a sample of normal random variable with unknown mean and dispersion. Jarque bera test has the null hypothesis of normal residual hence its rejection requires low probability that a Jarque bera statistics exceeds the observed value.

Fig 4.1 Trend Analysis



Source: - annual report of insurances

The trend analysis between ROA and SR, TPR, UR, LR & CR from the study year 2002 to 2015. The minimum and maximum CR value from the trend analysis was 0.1689 and 1.72829. the trend analysis of ROA minimum (-0.047) in 2005 Nice Insurance S.C and also the maximum of ROA (0.3939) in 2015 of Nice Insurance S.C.

4.2 Correlation Analysis

The correlation analysis measures the degree of linear association between variables. Values of the correlation coefficient are always ranged between the range +1 and -1. A correlation coefficient of +1 indicates that the existence of a perfect positive association between the two variables, while a correlation coefficient of -1 indicates perfect negative association. A correlation coefficient of zero indicates the absence of association between two variables (Brooks, 2008).

Table 4.2 Correlation between the variables

	ROA	SR	TPR	UR	LR	CR
ROA	1					
SR	-0.1740	1				
TPR	-0.2329	0.2012	1			
UR	-0.3793	0.32069	0.2268	1		
LR	-0.0872	-0.4176	-0.1867	-0.2773	1	
CR	-0.3656	0.4723	0.0665	0.2494	-0.1159	1

Source: - annual report of insurances using E-views 9

The correlation result in Table 4.2 shows solvency risk, technical provisions risk, underwriting risk, credit risk and liquidity risk have negative correlation with return on asset for measurement of Ethiopian insurance companies' performance. Therefore, the risks increase on insured companies, performance of Ethiopian insurance companies slop will be move down.

The coefficient estimates of correlation result in the table shows -0.1740, -0.2329, -0.3793, 0.3656 and -0.0872 solvency risk, technical provisions risk, underwriting risk, credit risk and liquidity risk respectively are highly negatively correlated with return on asset.

4.3 Panel Regression model Selection (Random versus Fixed Effect Models)

Brooks (2008) discuss on his book, there are broadly two classes of panel estimator approaches that can be employed in financial research: fixed effects models and random effects models. The choice between both approaches is done by running a Hausman test. To conduct a Hausman test the number of cross sections should be greater than the number of coefficients to be estimated. In this study the numbers of cross section are greater than the number of coefficients to be estimated so it is possible to conduct a Hausman test. Therefore, a random effect is specified in

the estimation so as to capture unobserved idiosyncratic effects of different insurance companies.

The hypothesis test was formulated as;

H0: Random effects model is appropriate.

H1: Fixed effects model is appropriate.

$\alpha = 0.05$

Decision Rule: Reject H₀ if P value is less than significant level 0.05. Otherwise, do not reject H₀.

4.4 Digenetic test

Table 4.4.1 Hausman Test

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	9.243767	5	0.0997

Source: - annual report of insurances, using E-views 9

The Hausman model selection test for this study has a p-value of 0.0997 for the regression models. Thus, the null hypothesis which is random effect model appropriate, we failed to rejected the null hypothesis and the research used the random effect model.

Gujarati (2004) (T is the number of time series data) is large and (N is the number of cross-sectional units) is small, there is likely to be little difference in the values of the parameters estimated fixed effect model and random effect model. Hence the choice here is based on computational convenience. On this score, random effect model may be preferable. Therefore, the study has 14 time series and 6 cross sectional which is relevant to random effect model.

Every estimator of the model should have to meet the Ordinary Least Squares (OLS) assumptions when the estimation carried out. If the estimators of the model satisfy the OLS assumption, it is possible to say the estimators are blue (best linear unbiased estimator) (Brooks, 2008). The econometric estimation technique that used in this study is ordinary least square (OLS). In order to this, the researcher test for normality, Heteroscedasticity assumptions to check the accuracy and reliability of the regression result in this study.

A normal distribution not skewed and defined to have a coefficient of Kurtosis 3. Jarque Bera formalizes this by testing the residuals for normality and testing whether the coefficient of skewness and kurtosis are zero and three respectively. Skewedness measures the extent to which a distribution is not symmetric about its mean value and kurtosis measures how far the tails of the distribution. The Jarque-Bera probability, statistics /P-value/ is also expected not to be significant even at 10% significance level (Brooks, 2008). The study develops the following hypothesis to check the normality: Ho: The residuals are normally distributed, H1: The residuals are not normally distributed.

As shown the histogram in the appendix 3, the value of kurtosis is 3.632344 and the Jarque-Bera statistics was not significant even at the 10 % level of significance as per the P-values shown in the histogram (i.e., 0.186043). Hence, the null hypothesis of normally distributed failed to reject at 5 percent of significant level. This implies that there is no significant evidence for the presence of not normally distributed. The Jarque Bera P-value of the model also supports the presence of normally distributed of the residuals. Therefore, the researcher could conclude that the residuals are asymptotically normal during this study.

4.5 Analysis of regression and interview result

Regression result

The model used to identify the effect of financial risk on insurance companies' performance

$$ROA_{it} = \beta_0 + \beta_1 SR_{it} + \beta_2 TPR_{it} + \beta_3 UR_{it} + \beta_4 LR_{it} + \beta_5 CR_{it} + \varepsilon$$

Dependent Variable: ROA

Method: Panel EGLS (Cross-section random effects)

Date: 08/04/21 Time: 17:32

Sample: 2002 2015

Periods included: 14

Cross-sections included: 6

Total panel (balanced) observations: 84

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SR	0.008623	0.088551	0.097378	0.9227
TPR	-0.013002	0.006750	-1.926202	0.0577*
UR	-0.115108	0.034935	-3.294904	0.0015***
LR	-0.038527	0.016398	-2.349524	0.0213**
CR	-0.041114	0.014381	-2.858909	0.0055***
C	0.236636	0.064511	3.668146	0.0004

Effects Specification

	S.D.	Rho
Cross-section random	1.96E-08	0.0000
Idiosyncratic random	0.046659	1.0000

Weighted Statistics

R-squared	0.299961	Mean dependent var	0.079236
Adjusted R-squared	0.255086	S.D. dependent var	0.055512
S.E. of regression	0.047912	Sum squared resid	0.179051
F-statistic	6.684458	Durbin-Watson stat	1.778591
Prob(F-statistic)	0.000031		

Unweighted Statistics

***, ** and * indicate **1%**, **5%** and **10%** level significance respectively.

The above Table, result was developed to examine the performance insurance.

$$0.236636 + 0.008623SR - 0.013002TPR - 0.115108UR - 0.038527LR - 0.041114CR + \epsilon_i$$

In this section we discuss in detail the random effect model result analysis of explanatory variable and their effect on selected Ethiopian insurance companies' performance.

The coefficient for LR is -0.038527 on ROA which refers that liquidity risk had negative and significant relation with ROA at 5 % level of significant. And also, the CR is -0.041114 on ROA which indicates that the credit risk of the insurances had negative relationship with ROA and also the relationship is significant at 1% level of significant. Next to this, the coefficient for underwriting risk is -0.115108 on ROA which refers that underwriting risk had negative and significant relation with ROA at 1 % level of significant. Finally, technical provisions risk with coefficient of -0.013002 had negative and significant relation with ROA at 10 % level of significant respectively.

However, solvency risk is 0.08623 on ROA which implies that solvency risk had positive relation with ROA but it is insignificant. The negative relationships indicate that there is an inverse relationship between independent variables and dependent (ROA). Increasing independent variables will lead to a decrease in ROA of Ethiopian insurance companies.

The one unit increase in technical provisions risk, will lead to a decrease in ROA of Ethiopian insurance companies by 0.013002 unit. And the unit increment of underwriting risk will lead to decrease ROA of selected Ethiopian insurance companies by 0.115108 units.

The regression result of credit risk (CR) has a negative relationship with Ethiopian insurance companies' performance by a coefficient estimate of -0.041114. This means that holding other independent variables constant and when one percent increases in credit risk, consequently it reduces return on asset (ROA) of Ethiopian insurance companies by 4.11% and the p value of credit risk (CR) is 0.0055 reveals that it is statistically significant at 1% level of significance. Accordingly, the result supports the working hypothesis that credit risk has negative and statistically significant effect on performance of insurance companies in Ethiopia.

The liquidity risk (LR) has a negative relationship with Ethiopian insurance companies' performance by a coefficient estimate of -0.038527. This means that holding other independent

variables constant and the one percent increases in liquidity, consequently it decreases return on asset (ROA) of Ethiopian insurance companies by 3.85 % and the p value of LR is 0.0213 shows that it is statistically significant at 5% level of significance. Accordingly, the result supported the working hypothesis that liquidity risk has negative and statistically significant effect on performance of insurance companies in Ethiopia.

The P-value indicates the precession level of each variable is significant except solvency risk. The R-squared value measures how well the regression model explains the actual variations in the dependent variable (Brooks, 2008). R-squared statistics and the adjusted- R squared statistics of the model was 29.99% and 25.50% respectively. The adjusted R^2 value 25.50% indicates that the dependent variable of return on asset (ROA) of Ethiopian insurance companies is well explained by the independent variables that are listed in the model. The regression F-statistic (6.684458) and the p-value of 0.000031 attached to the test statistic reveal that the null hypothesis that all of the coefficients are jointly significant.

Table 4.5 Summery and comparison of expected hypothesis result and actual hypothesis result and its significant test

Independent variable	Expected hypothesis result	Actual hypothesis result	Statically significance test	Status of hypothesis result	Dependent variable
SR	–	+	Insignificant	Rejected	Return on asset (ROA)
TPR	–	–	Significant	Failed to reject	
UR	–	–	Significant	Failed to reject	
LR	–	–	Significant	Failed to reject	
CR	–	–	Significant	Failed to reject	

Chapter Five

5. CONCLUSION AND RECOMMENDATION

This chapter shows the summary of the results of the prior chapters, the conclusion drawn from the study findings and relationship shortcomings during the course of the study. The chapter makes also policy recommendations, which can be executed to attain high financial performance and firm's worth. Finally, the chapter shows suggestions for future research studies, which can be helpful to future researchers.

5.1 Summary of findings

The research general objectives were to investigate the effect of financial risk on the performance of insurance companies in Ethiopia. The study used Fourteen (14) years period of time from 2002-2015 data from Six (6) selected insurance companies in Ethiopia. It carried out by constructing a balanced panel random effect regression model using Hausman as per random effect model was adapted for secondary data obtained from the annual financial statement report. The overall results obtained from the regression model indicated that financial risk had an effect on performance of insurance companies in Ethiopia. Dependent variable used to measure insurance performance was return on asset (ROA) and independent variables such as credit risk, Liquidity risk, Underwriting risk, Technical provisional risk and Solvency risk in order to attain the objectives of the study. From the regression result, almost all independent variables had negative relationship and significant except solvency risk, which was insignificant effect on performance of selected insurance companies in Ethiopia.

5.4 Conclusion

The study specifically investigates the effects of financial risk on performance of Ethiopian insurance companies based on the following conclusions.

- ❖ The finding result indicates that negative and significant association between credit risks, technical provisional risk, underwriting risk, liquidity risk and the performance of Ethiopian insurance companies which means an increases in credit risk, underwriting risk, liquidity risk, and technical provisional risk, defiantly lead to decrease in performance of Ethiopian insurance companies.
- ❖ Solvency risk has positive and insignificant effect on the performance of Ethiopian insurance companies. This implies that an increase in solvency risk, certainly not lead to decrease in performance of Ethiopian insurance companies.
- ❖ Generally, the study includes there is relationship between explanatory variables such as credit risk, liquidity risk, underwriting risk and technical provisional risk and financial performance of Ethiopian insurance companies as explained by the model variables explanatory power adjusted R-Squire was 0.255086, which means insurers financial performance is 25.5% explained by explanatory variables and it is explained 74.5% by variables other than the studied variables.

5.3 Recommendation

The study has shown a clear understanding of company specific factors or variables that influence on the performance of Ethiopian insurance companies. Based on the findings of this study, the researcher has drawn the following recommendations.

- Ethiopian insurance companies should pay greater attention to the significant variables such as: credit risk, underwriting risk, liquidity risk, and technical provisional risk.
- The study concluded that the company specific factors are mostly determined to the insurer's financial performance of Ethiopian insurance companies. So, it is recommended that the board and management of insurance companies should high attention by considering the effect of each variable.
- The study analysis demonstrates that technical provisional risk, liquidity risk, underwriting risk, and credit risk had negative and significant risk effect on Ethiopian insurance companies' performance. Consequently, Ethiopian insurance companies should hold sufficient attentions for outstanding claims by doing prerequisite adequate assessment their liabilities and also referring their past experience to develop comprehensive procedures to effectively monitor and control their outstanding claims.

Therefore, Ethiopian insurance companies should effectively the above listed recommendation in order to minimize financial risk and maximize their performance.

5.4 Direction for Future Research

This study focused on effects of financial risk on performance of Ethiopian insurance companies. However, it is recommended to future researchers for further assess other factors or effects of financial risk on performance of Ethiopian insurance companies. Hence, the aspects raised above need further study and the following areas are also recommended for further research.

Besides, other researchers can do the research on the same topic by taking evidence from other companies, increasing the number of observations using longer years of data and including primary data that will collect through questionnaire and interview.

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APPENDIX

Appendix 1 Hausman Test

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	9.243767471547972	5	0.09972...

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

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
UR	-0.10353...	-0.115107...	0.0002283...	0.44383...
LR	-0.03849...	-0.038526...	3.5669407...	0.99628...
CR	-0.06674...	-0.041113...	0.0001600...	0.04274...
TPR	-0.02339...	-0.013002...	3.4438541...	0.07659...
SR	-0.01641...	0.0086228...	0.0028269...	0.63772...

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Appendix 2 Heteroscedasticity Test

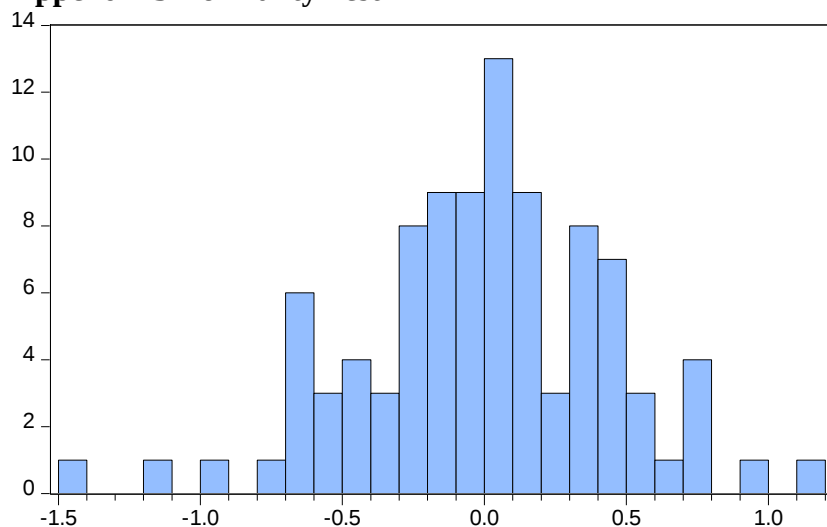
White's test for Ho: homoskedasticity

against Ha: unrestricted heteroskedasticity

chi2(20) = 30.65

Prob > chi2 = 0.0600

Appendix 3 Normality Test



Series: Standardized Residuals
Sample 2002 2015
Observations 84

Mean 7.55e-15
Median 0.005592
Maximum 1.113154
Minimum -1.437584
Std. Dev. 0.443103
Skewness -0.332050
Kurtosis 3.632344

Jarque-Bera 3.363556
Probability 0.186043