



**ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS
MANAGEMENT DEPARTMENT
MBA PROGRAMME**

**ASSESSMENT OF ENTERPRISE RISK MANAGEMENT
PRACTICES IN THE ETHIOPIAN INSURANCE SECTOR**

“A research report submitted to the School of Graduate Studies of Addis Ababa University in partial fulfillment of the requirements for the Degree of Master of Business Administration (MBA)”

BY: BISRAT GUGSA

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JUNE, 2018

ADDIS ABABA, ETHIOPIA

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This is to certify that this thesis prepared by **Bisrat Gugsu**, entitled: **Assessment of Enterprise Risk Management Practices in the Ethiopian Insurance Sector** and submitted in partial fulfillment of the requirements for the Master of Business Administration (MBA) Degree complies with the regulation of the University and meets the accepted standards with respect to originality and quality.

Approved by the Examining Committee:

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Advisor _____ Signature _____ Date _____

Chair of Department or Graduate Program Coordinator

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List of Abbreviations

AAA	American Academy of Actuaries
CARMELS	Capital adequacy, Asset quality, Reinsurance, Adequacy of claims and actuarial, Management soundness, Earnings and profitability, Liquidity, and Sensitivity to market risk
CAS	Causality Actuarial Society
CEO	Chief Executive Officer
COSO	Committee of Sponsoring Organizations
ERM	Enterprise Risk Management
ERMC	Enterprise Risk Management Committee
FSA	Financial Service Authority
FSI	Financial Soundness Indicator
GDP	Gross Domestic Product
IAA	International Actuarial Association
IAIS	International Association of Insurance Supervision
ICP	Insurance Core Principle
IMF	International Monetary Fund
ISD	Insurance Supervision Directorate
IT	Information Technology
KRI	Key Risk Indicators
NBE	National Bank of Ethiopia
ROA	Return on Asset
ROE	Return on Equity
SIB	Supervision of Insurance Business
SPSS	Statistics Package for Social Science
UK	United Kingdom
US	United States
VAR	Value at Risk

Abstract

In a world full of uncertainties insurers around the globe are using risk management practice as a competitive advantage to stay ahead of their market. As a sector that provides insurance service for different risk exposures, the Ethiopian insurance sector has to benefit more from enterprise wide risk management. This research is an effort to reveal the current risk management practice prevailing in the Ethiopian insurance sector. Thus, the objective of this study is to assess the enterprise wide risk management practice in the Ethiopian insurance sector by identifying the nature, structure and objectives of the practice, review the risk management process in the sector, assessing the level of knowledge and the level of risk frequency, severity perceived for each risk along with insurers risk management ability to mitigate each risk. In addition the study seeks to understand the functions, benefits and challenges encountered in the practice. The study used a descriptive method of research where both primary & secondary data were used for analysis. A sample of eight insurance companies namely Ethiopian Insurance Corporations, Africa Insurance Company S.C, Nile Insurance Company S.C, The United Insurance Company S.C , Nib Insurance Company S.C, Abay Insurance Company S.C, Berhan Insurance Company S.C and Lucy Insurance Company S.C were selected from an entire population of 17 insurance companies in the sector using a probabilistic sampling technique known as stratified random sampling. Subsequently the study used questionnaire survey method to gather primary data from entire population of top, middle level management members of selected insurers as well as randomly selected first level management members while interview method was used for gathering primary data of board members' views. In addition, secondary data such as financial statement and different National Bank publications were used to supplement the data collected from primary source. As a result it is found that the main function of risk management in the sector is compliance with standard rather than a strategic and competitive advantage. The study has identified a weakness in defining a clear risk appetite that is aligned with the organizations strategic objectives. The study also identified the lack of skill and experience specific to risk management in addition to the weakness over risk quantification phase of risk management practice of insurers. Thus, in order to make effective and efficient management decision based on risk adjusted returns the practice of risk management should be supported through continuous trainings, workshops and panel discussions that involve all staff members of insurers from different levels. Similarly risk management should be understood very well particularly by board of directors and top level managers who should implement ERM in a desired way for the desired purpose.

Keywords: Risk, Risk management practice, Insurance sector, insurance risk management, ERM

Chapter 1- Introduction

1.1 Background/Rationale of the Study

In recent years, the values of Enterprise Risk Management (ERM) in different insurance industries have come to a level where it cannot be ignored. For instance Acharyya and Mutenga (2013) found that insurance companies who implement risk management in a holistic manner realize the true benefits of the practice. Furthermore Acharyya and Mutenga (2013) suggest that the more the risk management practice is integrated with the functions of operations, underwriting, investment, human resources, reporting, compliance and IT , the more the quality of value creation would be for insurance companies.

In well developed countries like the United Kingdom (UK) the practice of Enterprise (Integrated) Risk Management have become the ultimate approaches to risk management. Even though the main reason for practicing risk management in UK insurances was to comply with Financial Service Authority (FSA) regulations, four studies made between the year 2003 and 2006 indicate that, extensive application of risk measures such as stress test losses, followed by solvency less than specific level followed by the Value at Risk (VaR) have been observed in the estimation of risk to help set risk appetite and capital allocation of insurance companies and in some cases this estimates were even reported to board (Kevin et al, 2007).

The African insurance industry is currently experiencing a diversified growth with annual premium collections accounting for 16% of the GDP in South Africa while less than 2.5% of the GDP in Tanzania and Ethiopia (Swiss re, 2015). Even though the sub Saharan region low insurance penetration indicates a growth opportunity, for most Sub-Saharan countries the insurance growth is not yet linked with the rapid growth the region is said to be experiencing, especially for Ethiopia who is dubbed as the fastest growing country in Africa (IMF, 2016).

With the exception of South Africa, which has a mature insurance market, many insurance markets on the continent are underdeveloped. The attraction of Africa insurance market lies in countries with large growing populations and strengthening economies usually known as the emerging markets (Proparco, 2009). However in terms of insurance penetration Kenya and Morocco (with level of 3.2% and 2.9%, respectively), are comparable to some developed

markets in Europe as well as Brazil and China. While the rest of Africa historically has a very low demand for insurance and therefore considered underdeveloped (Swiss re, 2015).

Lack of risk management skill has been one of the primary headaches in African insurance industry. Despite legal protective measures, the emerging African market is facing an increasing influence of global insurers in the market share. This is due to the fact that the excess capacity of global insurers the security they provide is valuable to shoulder risk and their immense expertise in risk management are required (Schanz, 2016). Here in Ethiopia, where the regulation is still conservative on foreign investment entry to financial institution, global insurers influence still exist in the form of reinsurance practice by which local insurance firms can extend underwriting capacity and coverage though the loss indemnity benefit they get from their respective reinsurance treaty (Mezgebe, 2010).

Hence, the development of risk management knowledge and expertise becomes one first steps in awakening the unexploited growth potential of the regions capacity (Schanz, 2016). The identification and careful evaluation of risk is the major activity of insurance. Because insurance by itself is a risk management mechanism where one transfers the cost of potential loss to another entity. Therefore the responsibility of developing and practicing a systematic mechanism for indentifying, measuring and controlling risk is highly expected from, and is a major burden for most African insurance companies excluding South Africa (Schanz, 2016).

Thus, the main purpose of this study is to assess and identify the major strengths and weaknesses of insurance companies' enterprise level risk management practices. The study evaluates how much attention and priority has been given to the risk management practice by upper management and its integration with the operation of insurance each activity by reviewing the board's responsibility with respect to risk management. In addition the research attempts to examine the incorporation of a formally delegated risk management body within an insurance company structure, along with the necessary resource allocation, that is based on an established risk management policies, strategies and procedure which provides the guideline for the process of defining the risk appetite and identify & measure the major risks of an insurance company in order to treat and exploit these risks. In addition the research examines the existence of a periodic internal audit review that ensures the implementation of risk management policies and procedures.

1.2 Statement of the Problem

The Global insurance industry has been in a continuous change in the past two decades with respect to risk management. Since the late 1980's, due to the volatility of market in the US investment, different risk management models began to arise, For instance the development of Risk-Metrics for market risk and Credit metrics for credit risk by JP Morgan and the application of the Value at Risk (VaR), which was primarily used by insurers for measuring optimal capital requirement to protect companies portfolio from anticipated and unanticipated loss (Dionne, 2013). According to Nacco and Stulz (2006) although the key principles of risk management are well established the evaluation on risk management is still on demand. In addition further study is needed to understand the distribution of firm's value.

Furthermore, there are various external and internal risks that affect insurance firms. The management of these external and internal risks is interdependent and the question of how these risks are linked and managed should be central to scholarly attention for further research (Huber, 2002).

Even though the importance of risk management in today's insurance industry is highly essential Vaughan and Vaughan (2007), the Knowledge gap over the level of risk management is a prevalent condition in African insurance industry Schanz (2016). Because the financial sector in Africa still show scarcity of research in risk management. The fact that risk management is still at rudimentary stage is an added factor giving rise to a lack of enough research on the practice (Ishaya and Siti 2014).

According to NBE risk management guideline (2010), although underdeveloped, the insurance sector in Ethiopia has observed a significant expansion over the past few years based on increase in terms of in number of insurers, financial products they are offering to the clients & etc. The regulatory body believes that such growth should be matched with strong risk management practices. However, despite the risk management statutory requirements established by the NBE previous literature on risk management practices of insurance sector in Ethiopia is very limited. Therefore, the motivation of this study is to extend the literature by examining the current status and various types of risks faced by selected insurance companies operating in Ethiopia.

1.3 Research Questions

In order to address the objectives stated above the following research questions are closely examined

- I. What are the nature, structure and strategies of risk management practices of Ethiopian insurers?
- II. How is the risk management process of Ethiopian insurers carried out?
- III. What is the level of knowledge of management on the types, significance of impact and frequency of occurrence of each risk Ethiopian insurers are exposed to?
- IV. What are the functions and benefits currently obtained from the risk management practice of Ethiopian insurers?
- V. What are the overall challenges faced by Ethiopian insurance companies in establishing and implementing the risk management practice?

1.4 Objectives of the study

Based on the problems discussed above, the study contains both general and specific objectives

1.4.1 General objective

The general objective of the study is to explore the enterprise wide risk management practices of selected Ethiopian insurers.

1.4.2 Specific objectives

The study particularly examines the following specific objectives:

- To assess the nature of risk management practices, strategies and objectives predominantly used in the insurance sector.
- To evaluate the process of risk management used in conducting the risk management practices of insurers in Ethiopian insurance sector.

- To identify the level of knowledge over each risk types and the impact, frequency of occurrence and effectiveness of ability to mitigate each type of risk Ethiopian insurers are exposed to.
- To assess the functions and benefits obtained so far from the risk management practices of insurers.
- To review the overall challenges faced by insurers in establishing and implementing the risk management practices.

1.5 Scope/Delimitations of the Study

The scope of the study is limited in terms of content, space and time. It assess the level of risk management practice by focusing on the responses of first level, middle level and top level management members. The secondary data is limited to trends of capital adequacy, asset quality, loss ratio, risk retention and liquidity.

Moreover, the study covers the risk management practice of insurance companies within Ethiopian insurance industry. So the study achievements and implications are only the reflection of the property and behavior of the Ethiopian insurance business environment.

1.6 Limitations of the study

It is to be recalled that primary objective of this study is to assess the enterprise level risk management practices of insurance companies within Ethiopian insurance industry. But the study focuses on the views of selected board of directors', top level managers, middle level managers and first level managers who have a direct responsibility and accountability for the day to day risk management activity of every insurer. Therefore the study is limited to the opinion, attitude and perception of board members and management staff of selected insurers. Thus there exists a limitation over the opinions, attitudes and perceptions of Insurance Supervision Directorate, Ethiopian Association of Insurers and finally insurance brokers & agents under this research which might limit the comprehensiveness of the assessment of risk management practice with regards to involving all stakeholders or participants in the sector.

The study only covers corporate firms in the Ethiopian insurance firms because of their market share dominance over the sector. Therefore there exists a limitation over the influence of informal insurance such as *idir* and micro insurance institutions and saving and credit cooperatives have on the study. It is likely that 2.1 million (nearly 5% of adults) have some sort of informal insurance (Smith and Chamberlain, 2010).

1.7 Significance of the study

The findings and conclusion of this study gives a picture of the risk management process used in practice by major insurance companies in Ethiopia. This will be highly informative to the insurance industry, government regulatory bodies (Mainly the National Bank of Ethiopia). It can also be additional resource material for academic and professional society regarding risk management practices. Additionally the study has the following significances:

- It provides the regulatory bodies (Mainly the National Bank of Ethiopia) on the status of Ethiopian insurance's risk management and finding could be used in risk management policy formulation.
- It provides insurance firms essential information in evaluating their operations and in identification and rectification of possible risk exposures.
- It can serve as a base for further studies on the subject of risk management for national or international study undertaking

1.8 Organization of the paper

The organization of the study is into five chapters. Chapter one details an introduction part, which contains background of the study, statement of the problem, objectives of the study, research questions, significance of the study, limitation of the study and organization of the research paper. Chapter two gives a review of literatures, with a focus on the theoretical and empirical literature. While, Chapter three provides detail information on the methodology used by the study, which includes the choice of research, data type, sample design, research instrument, method of data analysis and so forth. Chapter four presents the data analysis and summary of findings of the study. Last but not least, chapter five presents the conclusions and recommendations reached based on the study finding.

Chapter2-Literature Review

2.1 Introduction and Evolution of Risk Management

It is important to defined risk before discussing its management. According to Vaughan and Vaughan (2007), risk is defined as “Risk is a condition in which there is a possibility of an adverse deviation from a desired outcome that is expected or hoped for.” It is therefore believed that any deviation that causes unwanted alteration from an outcome that is predicted and favored to happen is said to be a risk.

In addition Vaughan and Vaughan (2007) defined Risk management as “a scientific approach to the problem of risk that has as its objective the reduction and elimination of risks facing the business firm.” From this definition it is understood that the theory and practice of risk management is not only limited to the insurance business but is involved in the decision making of other business sectors too. Although risk management is a recent thought it is argued that its actual practice date back to the start of human civilization.

Modern risk management is a recent phenomenon which started after 1955 (Dionne, 2013). Risk management is now becoming an administrative paradigm for all firms. Organizations have no choice but to organize in the face of uncertainty. Organizational life is now demanding the inclusion of risk management on decision making process of their business (Power, 2004).

After 1990s, due to an increased literature and thought under the title of Enterprise Risk Management focusing on holistic risk management, organizations slowly moved from the traditional risk management tools and techniques to a holistic perspective in their process of risk management. There are at least four basic characteristics of ERM over the traditional way of managing risk, as Culp (2002) identified, are (i) efforts on consolidating financial and non-financial risk while separating core risks of the business from their non-core risks; (ii) managing all risks facing by a company through a coherent and common framework (e.g., VaR technique of risk measurement); (iii) consolidating the risk management process across the enterprise-wide systems, processes, and people; and (iv) developing more integrated and cross-industry risk management products and solutions for enterprise risks.

2.2 Insurance and Risk Management

One of the widely shared assumptions about insurance is that it revolves around an instrumental notion of risk and its management. According to Huber (2002) risk management is often called for when political conflicts about the handling of infrequent, high-impact events are at stake. Quite the contrary to this tendency, in the financial sector, risk management focuses on frequently occurring events with relatively low monetary impacts. One of the critical institutions for this routine form of risk management is insurance. Therefore it is understood that the practice of Risk management is fundamental for an insurance business.

Risk management is used in all business decision making of insurance i.e. underwriting (including reinsurance), investment, and finance (including treasury) as argued by Acharyya and Mutenga (2013). Similarly Huber (2002) argued that the basic model of insurance, which was merely the exchange of premium for compensation through contract, has to be upgraded to an advanced model, one which includes the investment and insurance sector, for the sake of integrating internal risk.

Ethiopian insurances suffer from a low rate of return on shareholders' funds and an increasing loss ratio which implies the increase of outstanding paid claims more than the net premium earned as indicated by Kokobe and Gemechu (2016). The Study also recommends insurance companies in Ethiopia to adopt enterprise risk management techniques to effectively improve on their return on equity and reduce their loss ratio. Thus it is observed that the risk management is a key factor for the performance of insurance companies (Kokobe and Gemechu, 2016).

2.3 The Ethiopian Insurance Industry

Ethiopia was one of the African countries known for modern insurance industry back in the 1950's and 1960's. The motor policy of the African solidarity insurance in Addis Ababa, 1964 is clear evidence of the insurance market condition at the time (Niels, 2013).

Foreign investors owned insurance industry dominated the lion share of the Ethiopian insurance market during the year 1920's to 1950s. The first domestic insurance company namely, Imperial Insurance Company started issuing fire, life and general accident covers since 1951. However it had small market share. However, the industry was experiencing more domestic participation

during the 1960s that 93% of the domestic insurances were established before the first insurance proclamation in 1970 (Zelege, 2007).

During the Derg regime, the insurance sector in Ethiopia was characterized by monopoly of the sector by government due to a command economic system. Lack of innovation and volatile premium growth rate was a major risk for the industry at the time. Reliance on limited insurance business class combined with nationalization of private insurances companies and restrictions of private business ventures and management of insurance sector became the major cause for the down turn and the major road block the industry (Zelege, 2007).

Following the liberalization, unlike the pre-reform practice, the composition of the Ethiopian insurance industry has been largely engaged towards the private sector as opposed to the public sector. Private sector participation in the financial sector has facilitated the sound functioning of the monetary and financial intermediation through the creation of competition there by contributing to the development of the sector (Zelege, 2007).

Table 1: Ethiopian Insurance Companies

No	Company Name	Date of Establishment
1	Ethiopian Insurance Corporation	1975
2	National Insurance Company of Ethiopia S.C.	23/09/1994
3	Awash Insurance Company S.C	01/10/1994
4	Africa Insurance Company S.C	01/12/1994
5	Nyala Insurance Company S.C	06/01/1995
6	Nile Insurance Company S.C	11/04/1995
7	Global Insurance Company S.C.	11/01/1997
8	The United Insurance S.C	01/04/1997
9	NIB Insurance Company	01/05/2002
10	Lion Insurance Company S.C	01/07/2007
11	Ethio-Life and General Insurance S.C.	23/10/2008
12	Oromia Insurance Company S.C.	26/01/2009
13	Abay Insurance Company	26/07/2010
14	Berhan Insurance S.C.	24/05/2011
15	Tsehay Insurance S.C.	28/03/2012
16	Lucy Insurance S.C.	01/10/ 2012
17	Bunna Insurance S.C.	21/05/2013

Source: website of the National Bank of Ethiopia: (<http://www.nbe.gov.et/aboutus/faq.html>).

Pursuant to Proclamation No. 746/2012 the Licensing and Supervision of insurance business in Ethiopia, there are currently 17 insurance companies of which 1 is public owned and 16 are private owned companies as shown in Table 1.

According to the National Bank of Ethiopia (2016) branch expansion have reached 426 of which 53.5 % of the branches are located in Addis Ababa. In addition the National Bank of Ethiopia annual report of 2015/16 indicates that 83.6 % of the total insurance branches in Ethiopia were opened by the private sector. More over the report disclose that the capital of insurances grew 25.3 % putting the total capital of insurance companies in Ethiopia to 3.6 billion (of which 76.7% is the share of private insurances (NBE, 2016). hence It is becomes difficult to ignore the private sector when discussing about the current Ethiopian insurance industry.

Even though both domestic and foreign insurances were established before 1960, there were no legal framework put in place until the 1960 commercial code and maritime code. Following this regulation various regulations were issued to regulate the insurances business in the country. The current insurance business proclamation has the power and duty in licensing insurances companies (which is still restricted for foreign investors), conducting on-site and offsite supervision, take intervention measures, ensure existence of sound and stable insurance industry and protect the interest of policy holder. However the dependency of local insurers on reinsurances indicates the need for increased economic capacity and operation expansion (Zelege, 2007).

According to the financial analysis of Mohammed (2014), the Ethiopian industry show an average Return on Asset (ROA) of 7.8% for the period 2004-2013 with a deviation of 0.123, which implies that the industry is still profitable with an average net income of 7.8% of the Total Asset with maximum and minimum value of 92.2% and -10% minimum range. Generally empirical studies support that the Ethiopian insurance industry performance is likely to be influenced by firm size, business risk and firm leverage.

2.4 Ethiopian Insurance Institutions and Risk Management

The Ethiopian insurance industry is under legal regulatory control overseen by The National Bank of Ethiopia, the Insurance Supervision Directorate. The National bank has defined

procedures that assess and monitor the safety and soundness of insurance institutions in Ethiopia (NBE, 2016).

In order to bridge the gap with the international practice the National Bank of Ethiopia has upgraded its supervisory policies, procedures and practice of insurance institute to risk based supervision. The process follows a risk based approach and consists of structured methodology designed to establish a forward looking view on the risk profile of insurance institutions.

2.5 Types of risks in Insurance Sector

The researcher would like to discuss further the National Regulation on Risk Management for all insurances operating in Ethiopia. The National Bank of Ethiopia, Insurance Supervision Directorate (NBE, ISD) has prepared a risk management guideline that applies to all insurance companies operating in Ethiopia. This guideline helps as a comprehensive reference of risk classification and management process that directly relates to the economic environment and characteristics of the Ethiopian insurance industry.

As explained in the previous section of the literature review, Due to the absence of capital market in Ethiopia most risk management literatures on security market risk and their risk management techniques on their respective company risk portfolio will not apply to Ethiopian current corporate organizations.

Therefore the need for a local benchmark arises which is why the ISD practical guide is necessary to all Ethiopian insurers risks and in measuring the safety and soundness across all insurance companies in Ethiopia with respect to significant and inherent risks.

The ISD has identified nine inherent and significant risks of insurers in Ethiopia. These are Credit Risk, Market Risk, Liquidity Risk, Underwriting Risk, Technical Reserve Risk, Operational and Technological Risk, Legal and Regulatory Risk, Contagion and Related Party Risk and Reinsurance Risk.

It is important to discuss these risk categories in conjunction with modern risk management literature in order to obtain clarity on the characteristics of each type of risk prevailing in Ethiopian insurance industry.

2.5.1 Credit Risk

According to Vaughan and Vaughan (2007), Credit risk is a risk that arises from financial loss as a result of not meeting financial obligation. Credit risk management of an organization aims at measuring and controlling of the impact of this credit related loss on a company. It deals with the identification and measurement of credit risk and the appropriate measure to be taken in order to ensure the soundness of credit granting policy and procedure.

In the process of identifying their credit risk it will be important for insurance companies consider the likelihood of credit default over the life of the obligation or over a specified time in order to develop the expected credit default frequency (Birla et al, 2008). More over the amount of outstanding obligation and recovery plan is an important consideration to take during the event of default. (Birla et al, 2008).

Therefore conducting credit risk management with the context of each insurance company's strategic plan and asset/liability management is necessary to avoid the risk of liquidity on policyholders and capital impairment on shareholders.

The fundamental component of credit risk management includes risk philosophy (where the procedure and program for risk/reward relationships across variety of dimension is expressed), credit risk philosophy (statement of credit tolerance & extent of credit risk assumed), credit risk management policies and credit risk measurement (NBE, 2010).

2.5.2 Market Risk

A Market risk is a risk that arises due to volatility in market price of components in the portfolio management is necessary for diminishing the impact of uncertain price change on component of company investment portfolio (Vaughan and Vaughan, 2007).

In developing and implementing investment portfolio management companies are expected to follow comprehensive procedures that effectively monitor and control the nature, characteristics and quality of the investment portfolio and the level of risk assumed on each specific investment pursued (Nacco and Stulz, 2006).

Based on the National bank of Ethiopia risk management guideline the extent to which an organization is willing to assume market risk is clearly expressed on a firm's investment portfolio. The primary base for effective market risk management is the establishment of investment portfolio management policies that are clear and formally established in writing. Investment portfolio management policies should also express the objectives and the parameter under which investment activities are to be undertaken and controlled. More over the minimum quality and rate of return expectations for security portfolio need to be estimated in the appropriate manner in order to establish risk areas and measures.

Investment portfolio management policies are also established to record and manage the selection of investment dealers and related counterparties that are related to any investment interaction on a company's portfolio. The objective, selection criteria, level of portfolio concentration and risk exposure limit are clearly defined on an investment portfolio management policy (Enterprise Risk Management Committee, 2003).

It will be necessary here to discuss the National Bank of Ethiopia directive no.SIB/25/2004 which instructs investment limits regulation on insurance businesses in Ethiopia. The directives limits investments in treasury bills and bank deposit to not less than 65% of the "admitted assets", investment in stocks not exceeding 15% of "the total admitted assets", while investment in real estate's should not exceed 10% of the total asset . In addition 10% of the admitted asset can be invested in any investment based on the insurance company choice. This regulation surly will affect the nature and structure of investment portfolio of insurance in Ethiopia because it's mandatory , must be complied with by all insurance companies in Ethiopia and affects the investment decision of each insurance company (NBE, 2004).

2.5.3 Liquidity Risk

Liquidity risk is a financial risk that arises due to insufficient liquid asset to meet operational obligation. The availability of funds is necessary for insurance companies so that cash out flow commitments both on and off balance sheet. These commitments are usually met by assets readily convertible to cash or through the capacity to borrow. The liquidity risk for insurance companies is the risk of going illiquid i.e. shortage of availability of funds (Vaughan and Vaughan, 2007).

One of the building elements of a healthy effective financial position is managing liquidity (IMF, 2005). Ethiopian insurance companies are expected to establish a liquidity risk management program that clearly specifies the assessment and planning of potential future liquidity risk that is prospectively supervised by the National Bank of Ethiopia.

In determining the soundness of liquidity management insurance companies, especially in the case of risk based supervision of insurance, planning for liquidity needs is a preferred current trend in identifying known, expected and potential cash outflows and in terms of quantity and timing of payment (Thompson, 2001).

Insurance companies should ensure the presence of adequate cash availability that meets the potential cash out flows so that short term liabilities such as outstanding claims do not have to be funded with long term assets. Even though the particular of liquidity management differ among companies the development and implementation of liquidity management program policies and procedure is mandatory step in ensuring the financial stability and health of insurance companies in Ethiopia.

2.5.4 Underwriting and Liability risk

An Underwriting and liability risk is risks that arise due to the exposure to financial loss resulting from the selection and approval of risks to be insured, the adjudication of claims and other related liabilities (Robert and Andre, 2011).

According to Birla et al (2008) it is the fundamental function of insurances companies to give coverage to risk holders (insurance client). In the process, it is obvious that if these risks materialize the burden is known to affect the financial position of insurance companies. Therefore insurance companies are expected to plan ahead and develop underwriting and liability management program by the National Bank of Ethiopia.

In managing the safety and soundness of an insurer managing underwriting and liability risk is a fundamental component. Underwriting risk management involves understanding the risk and prudently managing the company's risk/reward relationship (Acharyya, 2009). When insurers specialize in a line of business that are difficult to forecast and are volatile determining, the appropriate premium value required to offset the claim will be difficult, therefore leading to

greater underwriting result variability and underwriting risk. Consequently underwriting firm need to develop, implement and monitor their underwriting and liability risk management programs, procedures and policies in order to maintain less volatile underwriting returns (Acharyya, 2009).

2.5.5 Technical Provision Risk

Technical provision risk is a type of risk that arises from the exposure to financial loss due to inability to meet future claims and associated expenses. This happens when the claims provision held are insufficient overstating earnings and equity (IMF, 2005). Correspondingly, a company financial position may appear sound but in reality it may have a weak financial position or even be insolvent.

According to International Association of Insurance Supervision (IAIS), Insurance Core Principle (ICP), to challenge this risk insurers are expected to devise their own technical provision risk programs, procedures and policies in order to trace and measure the level of risk so as to develop a strong internal control over it.

In the European Union the regulation in the solvency II requirement for insurers, which is a multiyear project aiming at improving the regulatory capital requirement and solvency oversight of European insurers, focuses on a risk based approach to supervision, solvency and capital requirement. The detailed content of solvency II regimen covers the guidelines for the evaluation of technical provision reserving process. what the solvency II technical provision directive considers as the best estimate of technical provisions is an estimate that reflects the identification and valuation of all potential future cash flows that would be incurred in meeting liabilities to policy holders from existing insurance and reinsurance contract. This process of identification and evaluation of technical provision specifically relates to provisions for outstanding claims, incurred but not reported claim and premium provisions.

In Ethiopia the national standard for insurance companies operating in Ethiopia with respect to valuation and reporting of technical provisions is issued by the national bank of Ethiopia, directive No.SIB/38/2014. The regulation sets the standard of reporting of technical provision for all insurances giving due consideration to unearned premium provisions, outstanding claims, incurred but not reported claims and other technical provisions on premium and claims. The

unearned premium provision includes the unexpired portions of all premiums collected from policy contract holders. The regulation require the determination of net premium first by deducting reinsurance ceding from gross premium before calculating the unearned premium using the ‘1/24th’ method (NBE, 2014).

The directive further entails on the national standard of outstanding claims provisions for insurances by which insurance companies are obliged to assess and maintain all costs relating to an notified claim incidents(outstanding claims) and report to the national bank every quarter. If actual payment of outstanding claims exceeds the provisions set for it by more than 5% the regulation requires insurers to adjust the difference to outstanding claims or capital or retained earnings. Last but not least the directive further puts the standard of reporting on incurred but not reported claim. According to the directive a higher of 10% of net earned premium should be held as a provision for incurred but not reported claims (NBE, 2014).

2.5.6 Operational and Technological Risk

This category of risk arises from exposure to direct and indirect losses that arise from inadequate or failed internal processes, people and system or from external event (Culp, 2002). Financial Sector Assessment hand book published by The World Bank defines operational risk as the risk of expected or unexpected loss that arises from insufficiency and inadequacy of information system or internal control, human errors or management failure.

Even though a generally accepted definition of operational risk is not yet established it is generally related to failed internal processes, people, or systems or from external (Vaughan and Vaughan, 2007).

When company information technology infrastructure is poorly maintained, when companies lack clear policies upon which decision making authority are verified, when inadequate experience and knowledge prevails in a company’s human resource and poor documentation of files and poorly safe guarded assets and securities are present operational and technological risk is likely to appear on an increased level (IMF, 2005).

To reduce operational risk the establishment of appropriate system controls and procedures is necessary to identify and minimize the source of this risk. More over holding contingency plan

and back up facilities are essential for the timely recovery of operations and completion of operation risk assessment with high degree of integrity (IMF, 2005). For instance in Europe Solvency II General insurance requirements oblige European insurers to hold a maximum of 30% of their solvency capital requirement (a fund considered necessary for the combined charge of each separate risk) and a minimum of 3% of the gross earned premium and technical provision.

2.5.7 Legal and Regulatory Risk

Legal and regulatory risk is a risk that arises due to direct or indirect loss resulting from legal proceedings or actions against a company by regulatory authorities (Richard and Steven, 2015). This is one of the major risk types that affect insurance companies more often because of their operational function appears to be related to a legal nature due to the binding contractual agreement statement on each insurance policy sold.

In corporate management it is valuable to enlighten Boards and other stake holders to understand the most material legal risk faced by defining the risks and providing information on those risks. This creates an opportunity for commercial calculations to be made in balancing profit over cost (in this case legal risk cost) which will enable stake holders to make decision regarding the level of risk to take depending on the condition encountered on a strategic level (Richard and Steven, 2015).

In addition financial sector is a highly regulated sector in Ethiopia and non-compliance to regulation will give rise to regulatory fines. Insurance companies need to identify a department responsible for regulatory compliance and regulatory risk that reports on compliance to statutory limits and overall risk management effectiveness (NBE, 2010).

2.5.8 Contagion and Related Party Risk

Contagion and related party risk is a risk that arises due to exposure to direct and indirect loss from financial loss difficulties of other companies (third party) that adversely impact the financial position of insurance companies.

This type of risk is exclusively related to transactions of the major participants in the equity base of an insurance company which is likely to affect financial position when funds are mobilized out of the insurance company in a way that is disadvantageous to the insurer. During this kind of circumstances financial difficulties will weaken insurers due to influence of controlling shareholders or participants creating unfair balance of interest where controlling shareholders negotiate transaction where interests are subordinated to controlling or influential shareholder (NBE, 2010).

Such transactions adversely affect the financial health of insurers when unsupervised risks are transferred to insurance; this has negative impact on the economy because insurances collect funds for future delivery of insurance service (NBE, 2010).

2.5.9 Reinsurance risk

Reinsurance risk is a risk type that arises from bankruptcy or insolvency risk of reinsurers (Everis, 2009). It is known that most insurers in Ethiopia mostly rely on Reinsurance Company's support to increase their underwriting capacity. Thus the underwriting result of insurer is highly affected by the financial stability of reinsurers companies (Kokobe and Gemechu, 2016). In general insurers are recommended to prepare their own reinsurance management policy that clearly describes the objectives to adhere to.

On a national level insurers in Ethiopia should develop a reinsurance program that is approved by the NBE, ISD in order to meet the objectives set forth in their reinsurance management policies. It also help to identify the tolerance to risks in the insurers underwriting book so as to decide on the type of reinsurance arrangement to use (i.e. the quota share reinsurance, surplus treaties, the excess of loss coverage or stop loss policies).

In addition a reinsurance program is required to record and document the selection of appropriate reinsurance counterparties and intermediaries. This facilitates the management and review of careful selection of reinsurance counterparties with whom to do business with. With this regard, it is necessary to establish a separate reinsurance administrations in charge of developing and implementing reinsurance management procedures. This will also be necessary for monitoring, analyzing and controlling approval of reinsurance limits and exposure to concentration in excess of approved reinsurance coverage limits. The latter relates to the concentration of significant underwriting risk (also known as insurance risk) to a single reinsurer, or broker and their related parties (NBE, 2010).

2.6 Enterprise Risk Management Process

Enterprise risk management (ERM) process is described as the risk based approach to managing enterprises. ERM is evolving to address the need of various stakeholders and broad spectrum of risk complex organizations (Enterprise Risk Management Committee, 2003).

In 2003, the Causality Actuarial Society (CAS) defined ERM as the discipline by which an organization in any industry assessed, controls, exploits, finances and monitors risk from all sources for the main objective of maximizing organizational value.

ERM is now essential process for insurance for planning, organizing, leading and controlling the activities of an organization in order to minimize the effect of risk on an organization capital and earnings enterprise risk management extends to integrate financial, operational and other risks with a company functions. ERM provides a good frame work for risk management that involves identifying particular risks relevant to an organizations objective, determining a response strategy and monitoring process (Enterprise Risk Management Committee, 2003).

In a more comprehensive manner ERM aims to create value to an organization through the management of risks areas identified in relation to the organizations strategy and performance (COSO, 2016). Risk management on an enterprise level requires the recognition of the organizational culture, capabilities and practices as a fundamental step in order to fully integrate and implement a successful ERM framework that is well integrated with the strategic setting of an organization and able to create, preserve and realize value (COSO, 2016).

The ERM process effectiveness require full attention and participation of an organization's board of directors, management staffs and other personnel involved in setting and implementing the organization strategy. In addition the ERM process should stretch across an organization business unit in order to integrate and fit the risk management process with the business operation an organizational culture. This is important in identifying where and when potential events that may negatively affect the organization (Protiviti, 2006). Thus, in this manner an organization will be able to manage risks within its risk appetite with reasonable assurance regarding the achievement of entity objectives.

The establishment of a sound ERM frame work shall be established and based within the overall governance structure of an organization. This is essential for the effective implementation of ERM process. It is therefore recommended for insurers to integrate their ERM framework with the insurer business operation in order to reflect the desired business culture and behavioral expectation and address the potential risks faced by the insurer. Hence, the establishment and operation of the ERM framework should be led and controlled by the insurer's board of directors and senior management (IAA, 2009).

ERM framework differ form organization to organization depending on the nature of their business operation and culture of insurer. The ERM framework for a small motor insurer operating in one country will differ from the ERM framework established by a global insurer. Thus the major objectives when setting ERM framework is to proportionally integrate the ERM process with the nature, scale and complexity of the insurer (IAA, 2009).

In addition it is often essential to consider the combination of work behaviors of people in the organization when setting ERM strategy, function and framework. This directly refers to the risk culture of the insurer, which affects the effective implementation of ERM frame work. Employees of an insurer should be willing and able to use the appropriate behaviors to support risk related activities so that over time these behaviors will create the desired risk management culture (IAA, 2009).

In general, a comprehensive ERM framework should define the risk appetite which sets the level of risk acceptance of an insurer and reflect the insurers risk management philosophy. Risk appetite can be measured qualitatively or quantitatively according to the risk management culture

of an insurer. Either way, it is essential to establish a level of extent to which an organization exposes its capital and source of value for the use of strategic opportunities and retention of positive performance variability (Protiviti, 2006).

2.6.1 Establishing context

It is necessary to have a contextual reference to a firm status in order to understand the nature and character of the internal and external risk faced by an organization. Hence, it will be the first step to assess the internal and external environment. The internal environment is the context in which other components of ERM are applied because the internal environment of an insurer poses a significant impact over how ERM is implemented and executed. Particularly an entity is expected to develop a risk philosophy at this primary stage of the ERM process that expresses the sets of shared beliefs and attitudes characterizing how the entity considers risks in each business operation of an entity that is highly integrated with the entity risk culture (COSO, 2004).

In addition, establishing a context regarding integrity and ethical values of the people who create, administer and monitor entity functions essential for the development of a transparent ERM frame work that ensure the accountability on each risk management activity. Individual experiences such as value judgments, attitudes should be addressed in a code of conduct that expresses an entities statement of position on integrity and ethical value (COSO, 2004).

At this stage of the ERM process it is essential to set the risk appetite and tolerance limit that will be applicable to entities strategic objectives (COSO, 2004). Similarly insurers develop risk management policy that contains a well defined risk preference, risk appetite, risk tolerance limits along with the escalation procedures then the limits are approached or breached. Risk management policy should also include portfolio risk assessment of assets and liabilities, performance measurement based on risk adjusted returns and communication by management of the risk responses and metrics for the organizations (AAA, 2013).

2.6.2 Risk identification and assessment

According to Enterprise Risk Management Committee (2003) insurers may use different kind of mechanism, for documenting the material threats faced by an organization that pose risk on

organizations objectives, such as surveys, internal workshops, brainstorming sessions and internal auditing. Moreover it a mechanism by which in identifying the competitive advantages that can be exploited to achieve organizational value.. In order to ensure the effectiveness of the risk management process it is important to primarily define and understand the risk an insurer is exposed to. Particularly the range of risks faced by insurers that emanate from the assets of the organization; the liabilities generated underwriting the insurance risks and the strategies and operations of the organization itself (AAA, 2013)

Internationally many insurance organizations consider adopting and conducting periodic senior management workshops that serve as a qualitative assessment of risk, with the support from information on risk registers, surveys or interview and established common risk language (ERMC, 2003).

Similarly, as discussed in the previous section of the literature review the NBE, ISD has identified eight minimum standards for inherent and significant risks. Base on these minimum national standards insurers are expected to develop a comprehensive list of all the significant material risks that is unique to the insurer in terms of size, complexity of business operation and risk characteristics (COSO, 2016).

2.6.3 Risk analysis and quantification

Analysis and quantification of risk follows the risk identification phase of the ERM cycle and may involve wide range of methods and approaches. Analysis and quantification is measuring of risks, if possible using a probabilistic distribution outcome for each risk to materialize. Analysis may differ on the company's nature of operation, type of investment involved in and sophistication of operations. Usually analysis might be performed on qualitative and/or quantitative measures, with sensitivity analysis, scenario analysis, and/or simulation analysis applied. Insurers based on their claim data over a period of time and the cost exposure data they might be able to determine reasonable forecast of costs and variability in cost (ERMC, 2003).

Assessment of risk that compares the impact and likelihood of risk occurrences is valuable for management for decision making. In order to make a clear distinction on the level of impact of each risk it is necessary to primarily measure and quantify each type of risk an insurer is exposed to. Different types of risks may require different types of modeling techniques. For instance, the

range of techniques used or considered appropriate for most insurance business are listed below with a more general and broad standard categorization (IAIS, 2007).

Table 2: Risk modeling techniques

Risk Category	Modeling Technique(s)
Enterprise /all risk categories	Dynamic Financial Analysis
Underwriting (including reinsurance)	Financial Condition Report (FCR) and/or underwriting modeling or reviews
Market	- Value at risk (VAR) or Tail VAR - Interest rate models
Credit	Credit risk models
Liquidity	Asset/Liability modeling
Operational	- Internal loss data - External loss data - Scenario analysis, simulations

Source: IAIS (2007), Practice Note on Enterprise Risk Management for Capital and Solvency Purposes

Most measures used in ERM practice are either related to solvency measures or measurements of volatility of the organizations performance. Solvency related measures concentrate on the adverse “tail” of risk probability distribution relevant for economic capital requirement (ERMC, 2003).

2.6.4 Risk integration and prioritization

The Causality Actuarial Society (CAS) describe the process of integrating risk as the expression of aggregate risk distribution and portfolio effect in terms of impact on enterprise key

performance indicators which is called the aggregate risk profile (Enterprise Risk Management Committee, 2003).

Several risk exposure of an organization especially in the financial sector, are highly correlated. It is one of the major effects of ERM to capture these correlations. For instance interest rates and inflation rate often are said to generate a cause and effect relationship to a common higher level inputs (ERMC, 2003).

It is necessary to develop a separate impact and likelihood of occurrence of each risk exposure in order to form an aggregate risk profile that serve as a 'risk map' to give management the state of condition and future expectations for heir organization regarding wide range of risks across all functional units of an organization (ERMC, 2003).

Risk profiling is necessary to provide insurers a systematic way of recording to provide insurers a systematic way of recording and reporting that facilitates common understanding and articulation of risk (IAA, 2009). According to the International Association of Insurance Supervision (2007) Risk profiling is not a stale or one time activity but requires frequent maintenance to be mindful about the potential risks and their related impact and likelihood effect on the aggregate risk profile. Risk profile serves as a snap shot of management information about the top 10 risk exposures (IAIS, 2007).

Risk profiling also known as risk map is necessary for management at this stage of ERM process to make the decision of which risk to prioritize for treatment phase of ERM process because a risk map depicts each risk exposure in a way that highlights which risks are more significant (much higher likelihood and/or impact) and vice versa (COSO, 2004).

After the so called aggregate risk profile is determined prioritizing accordingly in order of the level of impact on performance and objective of an organization becomes the next step i.e. prioritization of risks. This is important for making the appropriate treatment for each risk. In prioritizing risk an organization might use different technique in order to develop a "risk map" of an organization that can be supportive for decision making (ERMC, 2003).

2.6.5 Risk treatment and response

At this level based the risk frequency and level of severity of a risk the best solution that fits the risk type is developed. There are different strategies that an organization can use to treat risks. This can be generally categorized in to the following groups

a. Risk Retention

Risk retention is keeping the risk as it is bearing the cash out flow it is going to cost without transferring it. Because the risk is not transferred and self-retained it is referred to as self-insurance. In insurance industry retention may be used through different techniques such as including deduction on policy insurances. Rejda (2003) asserts that all risks that are not avoided or transferred are retained.

Insurers based on their risk limit and risk appetite established they may chose to retain risks by identifying a strategic risk treatment such as improving its risk strategy risks treatment such as improving its risk reward position. Modifying exposures or coverage, changing price or expense structures, modifying claim practice, reconsidering reinsurance and other similar risk mitigation options can be used as a strategic risk treatment (ERMC, 2003).

b. Risk transfer

Insurance companies use this technique by passing the risk or part of the risk to another party usually a co-insurer or reinsurer (Alijoyo A, 2004). Alijoyo A (2004) agrees that risk transfer is involved after the retainable part of the risk is barred by the insurer. By transferring full or part of the risk insurers are able to increase their underwriting capacity. Insurers select their risk above the risk retention limits so if risk materializes the burden of risk exposure above the retention limit is absorbed through transferring.

c. Risk diversification

Diversification can be viewed as a mechanism by which an insurer is benefited from the normalization effect the aggregate risk exposure of various different risk drivers across different risk types. This approach is better preferred to combat exposure to risk that emanate from the same or related source of asset. Hence insurers are recommended to invest in feasibility study aimed at analyzing factors that influence diversification

strategy review. Meredith L (2004) indicated that this technique is useful for spreading the risk so the level of exposure is lowered because of the reduction on unsystematic risk.

d. Risk avoidance

Some loss exposures cannot be barred by an insurer and some loss exposures are not worth transferring but rather abandoned which diminishes the probability of loss to zero (Rejda, 2003).

2.6.6 Monitor and review

The final step in ERM process is an ongoing review that monitors the progress according to the goals established. A timely and consistent application monitoring activity is a key for effectiveness of ERM. In addition monitoring should be initially be aligned with the insurers organizational strategic goal and objectives and also consider the risk limits, risk tolerance, risk appetite and risk preferences defined in the risk management policy of the insurer (AAA, 2013). According to the American Academy of Actuaries (2013) measures of accumulated risk exposures are often required for risk monitoring phase of ERM. The development of measures such as Key Risk Indicators (KRI), which are given to each specific risk, are necessary for monitoring of potential losses or increase in risk exposure and facilitate appropriate risk mitigation decisions (AAA, 2013).

Effective risk management highly relies on the level of detail information available for decision making, particularly for management (IAIS, 2007). Based on the practice of IAIS at the highest level ERM reporting seeks to answer current and emerging key risk trends, changes in risk indicator and capability for indentifying and managing risk. The following table shows an indicative list of information essential for ERM monitoring and reporting by risk category.

An audit review is also a part of this process which review the implementation of risk management policies and procedure which should provide value towards taking correctional activities that improve the ERM process (ERMC, 2003).

Table 3: Reporting by risk category

Risk Category	Information
Enterprise /all risk categories	<ul style="list-style-type: none"> - Enterprise risk profile - Capital adequacy ratios - Significant regular engagement - Significant losses, incidents - ERM framework improvements - Changes in key risk indicators (KRIs)
Underwriting (including reinsurance)	<ul style="list-style-type: none"> - Risk aggregations (sum insured) by region, peril, distribution channel - Reserve strengthening/release
Market	Value at risk (VAR)
Credit	Counterparty credit quality for assets and liabilities – credit rating analysis
Liquidity	Proportion of liquid assets to total assets
Operational	<ul style="list-style-type: none"> - Analysis of key risks (operational risk profile) - Change in key risk indicators - Internal audit results

Source: IAIS (2007), Practice Note on Enterprise Risk Management for Capital and Solvency Purposes

Chapter 3- Research Methodology

3.1. Research Design and Method

The study has the purpose of assessing and identifying the major strengths and weakness of insurance companies' enterprise level risk management practices. Hence, In order to describe the current practice of insurance risk management and analyze and recommend on the level of implementation of ERM, the research adopts a descriptive method of research. Moreover, for the purpose of gathering information that is useful in obtaining a clear understanding of the practical application and process of ERM in Ethiopian insurances, it has been suitable to use survey method of descriptive research that involves the application of a structured questionnaire instrument.

3.2. Population and Sampling Techniques

Currently there are seventeen insurance firms operating in Ethiopia, out of which sixteen are from the private sector (Africa Insurance company sc, Awash Insurance company sc, National Insurance company of Ethiopia sc, Nyala Insurance company sc, Nib Insurance company sc , Nile Insurance company sc, The United Insurance company sc, Global Insurance company sc, Lion Insurance company sc, Oromia Insurance company sc, Abay Insurance company sc, Berhan Insurance company sc, Tsehay Insurance company sc, Ethio Life and General Insurance company sc, Lucy Insurance company sc and Bunna Insurance company sc) and one from the public sector (Ethiopian Insurance Corporation) (NBE, 2016).

Probabilistic sampling technique was used for this study because of its ability in giving equal chance for selecting respondents from the total population (Creswell, 2003). Thus, in order to collect the primary data that is necessary to analyze and generalize on the level of ERM practice in Ethiopian industry the study employed a probabilistic sampling technique known as stratified random sampling. Therefore first, based on their ownership, from Public institutions the study includes Ethiopian Insurance Corporation (EIC) which is the only public insurance in Ethiopia. Then Private insurance companies were grouped based on their age (i.e. from the year of

establishment of each insurance company), obtained from National Bank of Ethiopia website, with a 10 year range as shown on the table below.

Table 4: Sampling Technique

Ownership	Category by year	Insurance companies (Population)	Age	Randomly selected insurance companies for the study (Sample)
Public institutions	above 30	Ethiopian Insurance Corporation (EIC)	42	EIC
Private institutions	21-30 years	National Insurance Company of Ethiopia S.C.	23	Africa and Nile
		Awash Insurance Company S.C	23	
		Africa Insurance Company S.C	23	
		Nyala Insurance Company S.C	22	
		Nile Insurance Company S.C	22	
	11-20 years	Global Insurance Company S.C.	20	The United, NIB
		The United Insurance S.C	20	
		NIB Insurance Company	15	
	1-10 years	Lion Insurance Company S.C	10	Abay, Lucy and Berhan
		Ethio-Life and General Insurance S.C.	9	
		Oromia Insurance Company S.C.	8	
		Abay Insurance Company	7	
		Berhan Insurance S.C.	6	
		Tsehay Insurance S.C.	5	
Lucy Insurance S.C.		5		
Bunna Insurance S.C.	4			

Source: website of the National Bank of Ethiopia: (<http://www.nbe.gov.et/aboutus/faq.html>).

According to Gay & Diehl (1992) the sample for a descriptive research should be 10% of the population but if the population is small 20% may be required. Consequently, by applying simple random sampling technique Abay Insurance company sc, Lucy Insurance company sc and Ethio-Life and General Insurance S.C. were selected from 1 to 10 years category. But unfortunately due to numerous undertaking Ethio-Life and General insurance has declined the offer to participate in the study. Therefore, excluding Ethio-Life and General insurance a random sample selection was performed by which Berhan Insurance S.C was selected as the third participant

from 1-10 years of age group. Similarly from 11 to 20 years category The United Insurance S.C and Nib Insurance Company S.C are randomly selected for the study while from 21 to 30 years of age category Nile Insurance Company S.C was selected randomly and Africa insurance was selected due to accessibility. Thus a total of eight insurances selected which makes the sample more representative because it represents 47% of the total population of insurance companies in the country.

3.3. Sample size determination

The primary responsibility for risk oversight is the board of directors due to fiduciary responsibilities such as responsibility to stakeholders and conducting review of ERM practice. In addition the day to day management of each risk faced by insurers is the responsibility and result of active involvement of management overseen and monitored by board members (IAA, 2009). Thus, the actual sample unit or respondents constitute board members and management staff members i.e. top, middle and first level management staff members currently involved in each fundamental stage of the ERM process of the selected insurers.

Before including the board members & management staff members it is important to discuss the nature of management levels (hierarchy) in Ethiopian insurance sector in connection with related literature. Most of the time organizations have three management levels: first level, middle level and top level managers. First level or line managers are employees who directly manages other employees and operation while reporting to higher ranking (F.John, 2017). Middle level manager are an intermediate management level that subordinate to top management, implement company strategy and responsible for at least two junior staff (Peter Ancoin, 1989). While top management is individuals that are responsible for making organization wide decisions and establishes policies and objectives that affect the entire organization (Menz, M., 2012).

Thus, when discussing the level of management, based on the above classification top management classification is expected to include Chief Executive Officer's (CEO's) and Deputy Chief Executive Officer's (DCEO's) while middle level managers shall include all Division/Department managers and Service managers. First level management staff consist Branch managers who are the first line management in Ethiopian insurance and are at the forefront of offering the insurance services to potential customers. In addition they are also expected to report their daily operation to division/department manager.

Therefore, in order to select respondents from each insurance company the research first included one member of the board of directors and a board of directors secretary of the eight insurance companies selected as sample to gather information about the opinions and attitudes of the board regarding risk management practice. Consequently the research obtained number of total top and middle and first (line) level management members for each insurance company extracted from each insurance annual and quarterly report & annual report of the National Bank of Ethiopia as of June 30 2016. Accordingly, 27 top management members and 68 middle management members were identified which is a total of 95 top and middle management members that were found in the sample insurance companies selected for the study. Hence, the total number of top and middle level management members is few in number the research exhaustively included all of them under study. Regarding first level managers who are defined as branch managers the study selected a sample from a total number of 221 branches of the eight insurance companies selected as sample as of June 30, 2017. Thus from a total number of 221 branches a total of 140 were selected in the following manner.

Sample size determination for First level/Line managers

$$n = \frac{p(1-p)}{H^2/z^2 + p(1-p)/N} \quad \text{for finite population}$$

$$H^2/z^2 + p(1-p)/N$$

Where p= the population proportion, n= sample size N= population size z= is the confidence coefficient is to be 95.4% so that z= 2, h= the margin desired to estimate the population proportion within +_h with a given confidence coefficient suppose that we wish to estimate the proportion of parts within +_4 percent points in other words h= 0.04 so N=221

$$n = \frac{0.5(0.5)}{(0.05)^2/(1.96)^2 + 0.5(0.5)/221}$$

n = 140 is number of branch managers or first line managers selected for the study, which is proportionally allocated to each insurance based on their branch number. The detail allocation is presented in the following table.

Table 5: First level management selection

First level management members selection								
Selected insurance companies for the study	The							
	EIC	Africa	Nile	United	Nib	Abay	Berhan	Lucy
Total number of First level management members = (N_j)	70	22	36	30	28	19	8	8
Proportional allocation for First level management members sample selection = (N_j / N)*n	44	14	23	19	18	12	5	5

Source: NBE (2016), National Bank of Ethiopia Annual Report

Where, N_j = population size of first management for each stratum, n = total sample size for first level management members and N = total population size of first management members

Consequently, by selecting board chairperson and board secretary a total of 16 respondents were selected from the 8 sample insurance companies while a total of all 27 top and 68 middle level management members were selected so that the study exhaustively uses the response of all top and middle level management members in order to increase the quality and reliability of information to be obtained from top and middle level management respondents. Moreover a total of 140 line managers selected form a total of 221 first level management members. Thus, the total number of respondents selected for the study was 251 which were comprised of 16 participants from member of board of directors' and board secretary, a total of 27 top level, 68 middle level and 140 first level management members. Similarly, company wise the study included a total number of 66 respondents from EIC, 28 respondents selected from Africa insurance, 38 respondents selected from Nile insurance, 31 respondents selected from The United, 32 respondents selected from The Nib insurance, 25 respondents selected from Abay

insurance, 17 respondents selected from Berhan insurance and 14 respondents selected from Lucy insurance.

Table 6: Detail sample size determination

Selected insurance companies for the study	Board chairperson and secretary selected from board	Management members		
		Total No. of Top level management members	Total No. of middle level management members	Proportional allocation for First level management members sample
EIC	2	9	11	44
Africa	2	3	9	14
Nile	2	3	10	23
The United	2	4	6	19
Nib	2	3	9	18
Abay	2	2	9	12
Berhan	2	2	8	5
Lucy	2	1	6	5
Total	16	27	68	140

Source: NBE (2016), National Bank of Ethiopia Annual Report

3.4. Data sources

The research is relied on both primary and secondary data sources in order to obtain information that is difficult to obtain when using only one of the data types. The primary data was collected from insurance companies' members of board of directors who are ultimately responsible for the effectiveness of risk management and management staff members who are in the fore front of identifying and managing the risks facing the insurance industry. Individuals in management role have the authority to make decisions and oversee business practices to achieve business strategy objectives which also includes the established risk strategy and policies. Thus depending on how many layers of management there are entity, sub unit managers and supervisory personnel's are directly involved in executing the enterprise risk management process. Each manager is

accountable to the next higher level manager for his/her portion of enterprise risk management with the CEO being finally responsible and accountable to the board of directors (COSO, 2016).

The secondary data source for the research was obtained from financial statements of selected insurance companies operating in Ethiopia and by referring to related risk management publication of the NBE such as directives, policies, reports and other online references. Financial statement data is highly valuable in measuring credit risk, market risk and liquidity risk. Hence, the study constructed its secondary data analysis based on balance sheet and income statement of selected insurance companies for the year end 2012, 2013, 2014, 2015 and 2016.

3.5. Technique of Data Collection

In the data gathering process both primary and secondary data collection techniques were used for obtaining primary and secondary data. The primary data collection was conducted using an interview to gather the views and attitude of selected board management members about risk management practices while a structured closed ended questionnaire was developed based on Summated Scales (or Likert-type Scales) with 5 choices; “strongly agree”, “agree”, “neutral”, “disagree” and “strongly disagree”(see appendix) to gather the response of staff management members which helped to investigate the attitude toward the nature and types of risks and their related risk management practices including the benefits obtained so far and the challenges they are faced against.

The secondary data collection was primarily based on referring to financial statements of insurance companies which are valuable in constructing clear picture over the level of risk activity within the Ethiopian insurances sector.

3.6. Method of Data Analysis

The data gathered through questioner as described above is analyzed through statistical measures such as averages, percentages and trends. Data interpretation is supported by tables and the analyzed data is presented in descriptive statements (narrations), descriptive statistics, graphs and charts. The Data entry, analysis and presentation of data gathered through questionnaire was performed though SPSS software version 20.

The data gathered from financial statement was analyzed using a Standard Financial Soundness Indicator (FSI) measure known as CARMELS (Capital adequacy, Asset quality, Reinsurance, Adequacy of claims and actuarial, Management soundness, Earnings and profitability, Liquidity, and Sensitivity to market risk) framework which is developed by the International Monetary Fund for the assessment of financial soundness of insurance institutes. The CARAMELS model provides information on the financial strength and vulnerabilities of insurance companies based on the financial statement data (Das et al, 2003). A synopsis of CARAMELS model for insurance version can be summarized as follows.

Table 7: CARAMELS model

Category	Indicator	Non-Life	Life
Capital adequacy	Net premium/capital	X	
	Capital/total assets	X	X
	Capital/technical reserves		X
Asset quality	(Real estate + unquoted equities + debtors)/total assets	X	X
	Debtors/(Gross premium + reinsurance recoveries)	X	X
	Equities/total assets	X	X
	Nonperforming loans to total gross loans		X
Reinsurance and actuarial issues	Risk retention ratio (net premium/gross premium)	X	X
	Net technical reserves/average of net claims paid in last three years	X	
	Net technical reserves/average of net premium received in last three years		X
Management soundness	Gross premium/number of employees	X	X
	Assets per employee (total assets/number of employees)	X	X
Earnings and profitability	Loss ratio (net claims/net premium)	X	
	Expense ratio (expenses/net premium)	X	X
	Combined ratio = loss ratio + expense ratio	X	
	Revisions to technical reserves/technical reserves		X
	Investment income/net premium	X	
	Investment income/investment assets		X
	Return on equity (ROE)	X	X
Liquidity	Liquid assets/current liabilities	X	X
Sensitivity to market risk	Net open foreign exchange position/capital	X	X
	Duration of assets and liabilities		X

Source: Das et al (2003)

Chapter 4 - Results and Discussions

4.1 Introduction

In this chapter the result of the data collected is presented and used to provide information about the enterprise level of risk management activity in the Ethiopian insurance sectors. Thus the primary data was collected through an interview to gather the views and opinions of board members and a likert scale questionnaire to gather the views and opinions of each level of management members.

Hence, in the next two section the analysis of response rate and the overall background of respondents are presented based on the primary data collected from a sample of eight insurance companies, namely Ethiopian Insurance Corporations, Africa Insurance Company S.C, Nile Insurance Company S.C, The United Insurance Company S.C, Nib Insurance Company S.C, Abay Insurance Company S.C, Berhan Insurance Company S.C and Lucy Insurance Company S.C.

4.2 Analysis of response rate

A total of 251 likert scale questionnaires were distributed to eight different insurance companies to different levels of management members personally administered by the researcher. While 16 interview questionnaires were distributed to board members and board secretaries in the attempt to collect primary data.

Table 8: Response rate

	Board members and board secretaries	Top level management	Middle level management	Fist level management	Total
Distributed	16	27	68	140	251
Returned	12	20	52	106	190
Response rate	75%	74%	76%	76%	76%

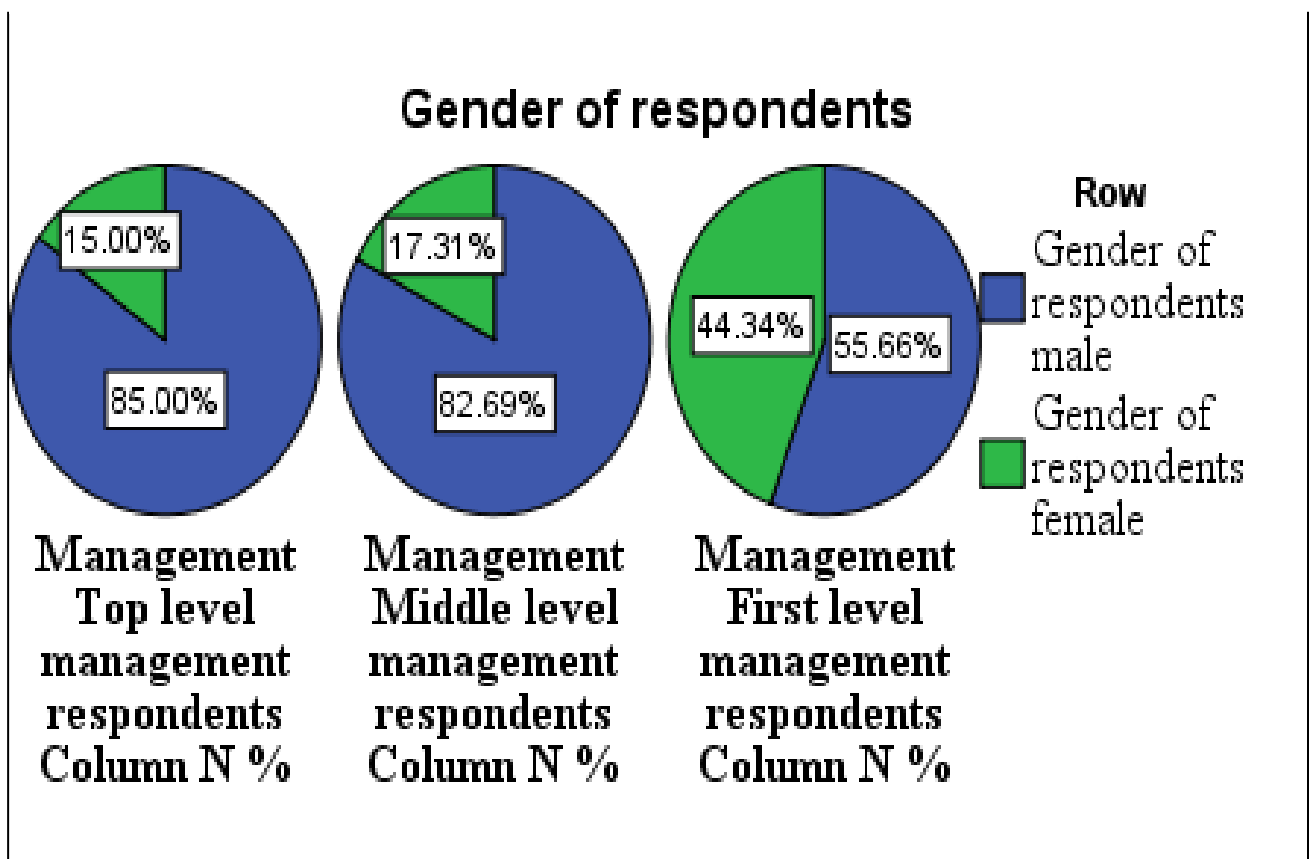
Source: own survey, 2018

A total of 178 questionnaires were returned with complete responses, of which 20 were from top level management. 52 were from middle level management and 106 were from first level management which results in a response rate of 74%, 76% and 76% for top, middle and first level management respectively. In addition a total of 12 survey interview were answered, of which 4 were from board members while 8 were from board secretaries of sampled insurers, which implies a response rate of 75%. In general, out of 16 survey interviews and 235 likert scale questionnaires 190 were returned which provides 76% response rate.

4.3 General background of respondents

Based on the structured questionnaire used to gather background information about the participant in the study it was found that the majority of the respondents were male with a total number 119 (66.8%) while 59 (33.1%) were female.

Figure 1: Gender of Respondents



Source: SPSS data analysis output, 2018

Similarly the figure above shows that male gender participants dominate the number of respondents in top, middle and first level management members with a 85% , 82.7% and 55.7% frequency percentage respectively. Similarly among the board secretary members who responded 1(13%) is a female while 7(87%) of the respondents were male. While all 4(100%) of the interviewed board members were male respondents.

When we come to the age of management members it is observed that 78(43.8%) of the participants were between the age group of 21 to 31 years, of which 24(46.2%) participants were from middle level management members and 54(50.9%) were from first level management members. In second place 75(42.13%) of the participants were found to be between the age group of 32 to 42 years of age. On third place the age group between 43 to 53 years follows with 18 (10.11%) participants. Finally 6(3.37%) participants were found between 54 to 64 years of age group and 1(0.56%) respondent was above 65 years of age.

Table 9: Educational level

		Management					
		Top level management respondents		Middle level management respondents		First level management respondents	
Age of respondents	21 to 31	0	0.0%	24	46.2%	54	50.9%
	32 to 42	8	40.0%	22	42.3%	45	42.5%
	43 to 53	8	40.0%	3	5.8%	7	6.6%
	54 to 64	4	20.0%	2	3.8%	0	0.0%
	above 65	0	0.0%	1	1.9%	0	0.0%

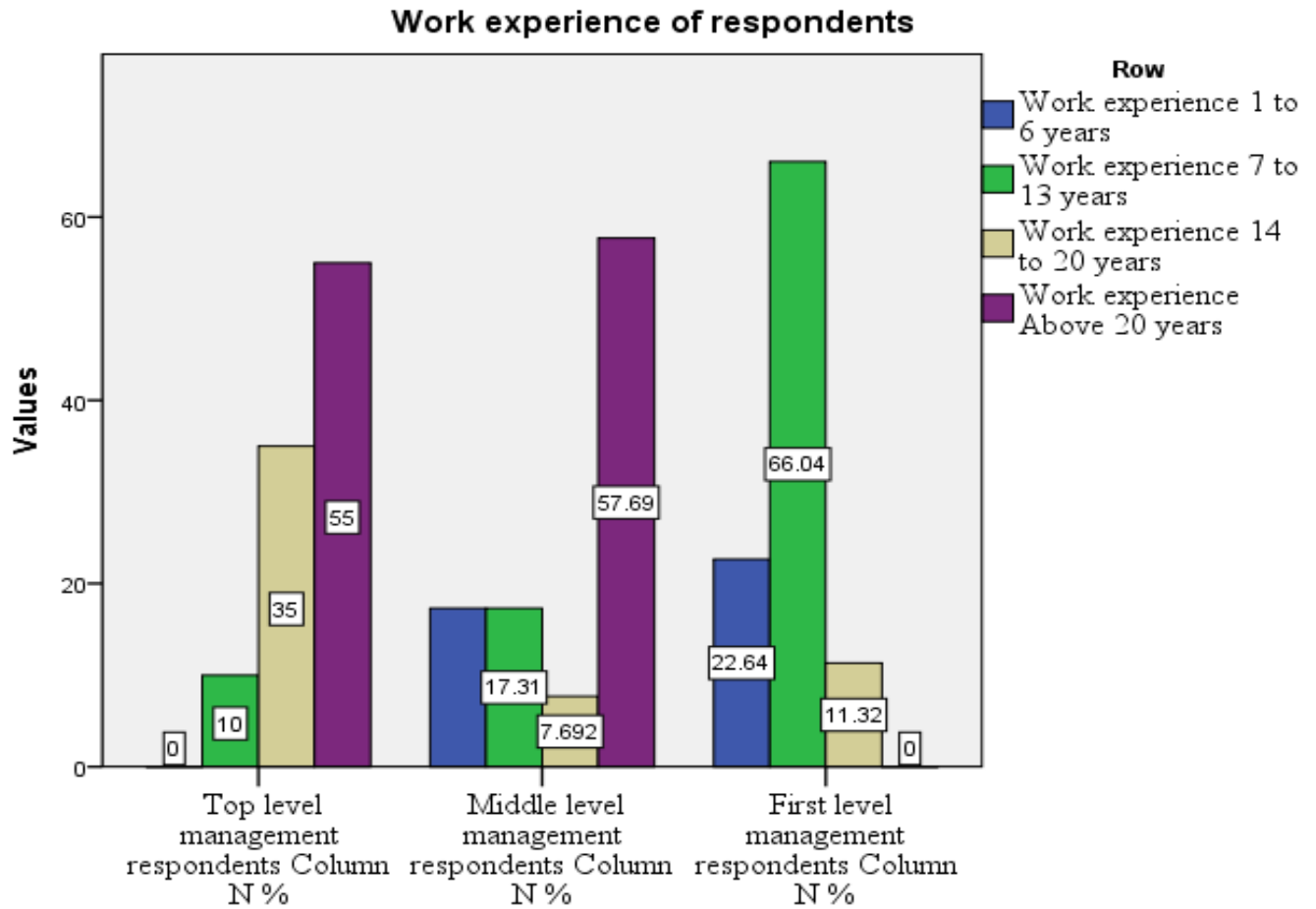
Source: SPSS data analysis output, 2018

With regard to educational level of the respondents, out of the total 178 respondents the majority 133(74.72%) were bachelor’s Degree holders while 31 (17.42%) were master’s degree holders. In addition 14(7.87%) participants hold collage diploma who were entirely first management members.

Furthermore, the work experience of the majority 11 (55. 0%) top management respondents above 20 years and similarly the work experience of majority 30 (57.7%) middle management

respondents were above 20 years. In addition 70 (66. 0%) majority first level management participants have worked for 7 to 13 years as presented in the next figure.

Figure 2: Work experience of respondents



Source: SPSS data analysis output, 2018

4.4 Results and Discussions

4.4.1 Results from Primary Data

In this section analysis of the data collected through questionnaires is presented along with the interview result. Thus, in the attempt to assess the level of enterprise wide risk management practice the study presents the data analysis results in accordance with the research objectives.

Subsequently, each section below deals with each specific objective in a specific manner ultimately answering the following five research question.

- What are the nature, structure and strategies of risk management practices of Ethiopian insurers?
- How is the risk management process of Ethiopian insurers carried out?
- What is the level of knowledge of management on the types, significance of impact and frequency of occurrence of each risk Ethiopian insurers are exposed to?
- What are the functions and benefits currently obtained from the risk management practice of Ethiopian insurers?
- What are the overall challenges faced by Ethiopian insurance companies in establishing and implementing the risk management practice?

4.4.1.1 Nature, Structure and Strategies of Risk management practice in the Ethiopian insurance sector

In this study one of the major aims was to identify the establishment of a contextual reference of each insurer status where the nature and character of the internal and external environment of each firm is assessed (COSO, 2004). Therefore, the participants were asked to give their attitude towards risk management strategies and policies as presented in the following tables.

When asked about the consideration of risk management controls as a strategic objective majority of the respondents strongly agreed which is 63.5% of the participants. In addition 56(31.5%) of the respondents agreed that risk management controls are part of the organization strategic objectives while 9(5.1%) remained neutral which resulted in a total mean value of 4.58. This is highly encouraged and reflective of the regulatory compliance of the surveyed insurers.

Similarly, when asked about the implementation of a risk management strategy, 161(90.4%) respondents reported that there is a clear risk management strategy in place which indicates a major agreement with the statement contrary to 14(7.9%) respondents who stayed neutral. This statement was similarly supported by first level, middle level and top level manager with a mean score of 3.90, 4.42 and 4.64 respectively which gave an overall mean score of 4.49.

Table 10: Nature, structure and strategies of the practice

		Management							
		Top level management members		Middle level management members		First level management members		Total	
		Column N %	Mean	Column N %	Mean	Column N %	Mean	Column N %	Mean
The insurance company considers risk management control among its strategic objectives.	Strongly Disagree	0.0%		0.0%		0.0%		0.0%	
	Disagree	0.0%		0.0%		0.0%		0.0%	
	Neutral	0.0%		9.6%		3.8%		5.1%	
	Agree	70.0%		32.7%		23.6%		31.5%	
	Strongly agree	30.0%		57.7%		72.6%		63.5%	
	Total		4.30		4.48		4.69		4.58
The organization has a clear risk management strategy in place.	Strongly Disagree	0.0%		0.0%		0.0%		0.0%	
	Disagree	10.0%		1.9%		0.0%		1.7%	
	Neutral	30.0%		7.7%		3.8%		7.9%	
	Agree	20.0%		36.5%		28.3%		29.8%	
	Strongly agree	40.0%		53.8%		67.9%		60.7%	
	Total		3.90		4.42		4.64		4.49
The Organization has established a Board Risk Management Committee.	Strongly Disagree	0.0%		0.0%		0.0%		0.0%	
	Disagree	10.0%		0.0%		0.0%		1.1%	
	Neutral	10.0%		17.3%		10.4%		12.4%	
	Agree	40.0%		19.2%		13.2%		18.0%	
	Strongly agree	40.0%		63.5%		76.4%		68.5%	
	Total		4.10		4.46		4.66		4.54

Source: SPSS data analysis output, 2018

In the course of the data collection the establishment of risk management committee at board level was supported by 154 (86.5%) respondents (with an overall mean score of 4.54) which imply a major agreement with the statement while 84 (47.2%) respondents did not support the

statement that there is an Enterprise risk management committee at management level with an overall mean score of 2.96 which is fall between “disagree” and “neutral” scale as per the Likert type scale measurement used under this study. This indicates that most of the insurers established and implemented a board level risk management committee but there exists a gap in implementing the progress on management level.

Table 11: Nature, structure and strategies of the practice

		Management							
		Top level management members		Middle level management members		First level management members		Total	
		Column N %	Mean	Column N %	Mean	Column N %	Mean	Column N %	Mean
There is an Enterprise Risk Management Committee at Management Level.	Strongly Disagree	10.0%		0.0%		0.0%		1.1%	
	Disagree	40.0%		48.1%		46.2%		46.1%	
	Neutral	40.0%		26.9%		23.6%		26.4%	
	Agree	0.0%		9.6%		10.4%		9.0%	
	Strongly agree	10.0%		15.4%		19.8%		17.4%	
	Total		2.60		2.92		3.04		2.96
The Organization has developed an Enterprise-wide Risk Management Framework.	Strongly Disagree	0.0%		25.0%		0.0%		7.3%	
	Disagree	10.0%		30.8%		0.0%		10.1%	
	Neutral	10.0%		7.7%		4.7%		6.2%	
	Agree	40.0%		23.1%		45.3%		38.2%	
	Strongly agree	40.0%		13.5%		50.0%		38.2%	
	Total		4.10		2.69		4.45		3.90

Source: SPSS data analysis output, 2018

As presented in the foregoing table 136 (76.4%) respondents reported that their organization has developed an Enterprise wide risk management framework contrary to 31(17.4%) respondents who disagreed and 11(6.2%) respondents who remained neutral. Thus, this indicates that the establishment of an enterprise wide risk management frame work is supported by the majority of

the respondents with an overall mean score of 3.90. Regarding assignment of an independent area or personnel (Risk manager) specifically for risk management function 175(98.9%) of the respondents accepted the establishment of a function for the practice with a mean score of 4.62, 4.50 and 4.20 for first level, middle level and top level management members respectively. Hence, the insurers' compliance with regulatory requirement to develop a risk management body is observed here with an overall mean score of 4.54 which indicates the positive effort towards implementing risk management frame work.

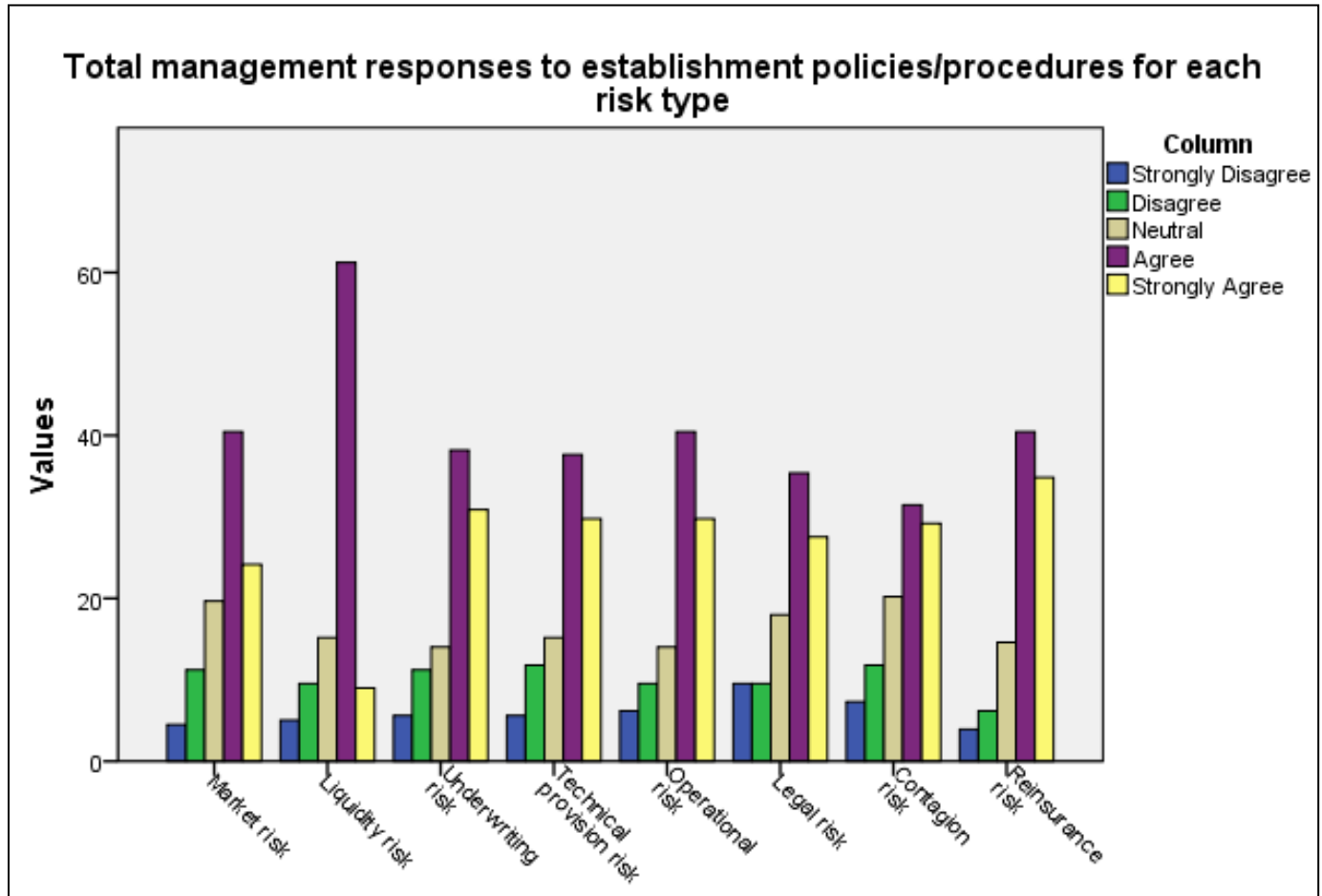
Table 12: Descriptive statistics of nature, structure and strategies of the practice

		Management							
		Top level management members		Middle level management members		First level management members		Total	
		Column N %	Mean	Column N %	Mean	Column N %	Mean	Column N %	Mean
The organization has assigned an independent area or personnel (Risk manager) specifically for Risk management function.	Strongly Disagree	0.0%		1.9%		0.0%		0.6%	
	Disagree	0.0%		0.0%		0.0%		0.0%	
	Neutral	10.0%		0.0%		0.0%		1.1%	
	Agree	60.0%		42.3%		37.7%		41.6%	
	Strongly agree	30.0%		55.8%		62.3%		56.7%	
	Total		4.20		4.50		4.62		4.54

Source: SPSS data analysis output, 2018

The establishment of policies and procedures for each class of risk type is another requirement that insurance organizations are expected to fulfill. (NBE, 2010) Thus, majority of the respondents accepted that all of the risk categories have a risk management policies or procedures in place except for contagion risk by which 8(40.0%) of the top management opposed to the statement that there is an established policy or procedure for contagion risk as presented in the following figures.

Figure 3: Policies and procedures across each risk category



Source: SPSS data analysis output, 2018

4.4.1.2 Risk management process in the sector

In order to establish a sound enterprise wide risk management practice a comprehensive systematic disciplined and proactive process should be in place where the identification, assessment, management and reporting on significant strategic, business and process level risks should in place (ERMC, 2003). Hence, this section deals with each step of the risk management process that makes up the ERM framework.

A. Risk identification and Assessment process

As presented in the following table 69(38.8%) of the respondents did not accept the statement that their insurance organization has identified loss events from each risk types using internal or external data with an overall mean score of 2.98. Similarly 6(30%) top management respondents

and 25(48%) middle management respondents reported that there is no performances of loss event identification form each risk type.

When we come to the development of a risk matrix a vast majority of the respondents indicated the establishment of risk profile in their respective insurance which was a total of 113 (63.5%) respondents and an overall mean score of 3.85. In addition, when the issue of difficulty in prioritizing main risks was raised a majority of 107(60.1%) of the respondents accepted the statement which implies that the process of assessing which risk to prioritize first has been complex for the sector. This result was similarly and conclusively shared among middle and first level managers by which 31(59.7%) middle managers and 68(64.1%) first level managers accepted the statement having a mean value of 3.60 and 3.82 respectively. But this result was inconclusive among top managers with a mean score of 2.80 where 8(40.0%) respondents were in favor of the statement while 8(40.0%) denied the difficulty to prioritize their main risks.

Through the interview with board members and board secretaries it was indicated that their insurance companies have developed and established a risk management framework, even new beginner insurances in the market indicated similar conditions.

Table 13: Descriptive statistics of risk identification and assessment of the practice

		Management							
		Top level management members		Middle level management members		First level management members		Total	
		Column N %	Mean	Column N %	Mean	Column N %	Mean	Column N %	Mean
The insurance organization has identified loss event from each risk types using internal or external data	Strongly Disagree	0.0%		25.0%		8.5%		12.4%	
	Disagree	30.0%		23.1%		27.4%		26.4%	
	Neutral	50.0%		9.6%		27.4%		24.7%	
	Agree	20.0%		28.8%		22.6%		24.2%	
	Strongly agree	0.0%		13.5%		14.2%		12.4%	
	Total		2.90		2.83		3.07		2.98

Source: SPSS data analysis output, 2018

Table 14: Descriptive statistics of risk identification and assessment of the practice

		Management							
		Top level management members		Middle level management members		First level management members		Total	
		Column N %	Mean	Column N %	Mean	Column N %	Mean	Column N %	Mean
The organization has developed a risk profile or risk matrix.	Strongly Disagree	0.0%		0.0%		0.0%		0.0%	
	Disagree	20.0%		11.5%		9.4%		11.2%	
	Neutral	20.0%		28.8%		24.5%		25.3%	
	Agree	50.0%		28.8%		28.3%		30.9%	
	Strongly agree	10.0%		30.8%		37.7%		32.6%	
	Total		3.50		3.79		3.94		3.85
The insurance company finds it difficult to prioritize its main risk.	Strongly Disagree	20.0%		3.8%		0.0%		3.4%	
	Disagree	20.0%		13.5%		10.4%		12.4%	
	Neutral	20.0%		23.1%		25.5%		24.2%	
	Agree	40.0%		38.5%		35.8%		37.1%	
	Strongly agree	0.0%		21.2%		28.3%		23.0%	
	Total		2.80		3.60		3.82		3.64

Source: SPSS data analysis output, 2018

The level of risk acceptance, which is risk appetite, should be defined by insurers ERM framework and reflect the insurer's risk management philosophy (Protiviti, 2006). Thus when discussing the establishment of a clearly defined risk appetite, the majority 71(39.9%) respondents denied the establishment of a clearly defined risk appetite, of which 40.4% of the middle managers and 45.3% of first level managers shared the same answer. But only 6(30%) of top management respondents believed that there is a clearly defined risk appetite in their organization. While the majority 12(60%) of top management respondents remained neutral which gives an overall mean score of 2.93 which fall quiet closer to "neutral" scale as per the Likert type scale measurement used under this study. This reveals the knowledge gap with regard to risk appetite and in particularly understanding, developing and implementing risk appetite.

Table 15: Descriptive statistics of risk identification and assessment of the practice

		Management							
		Top level management members		Middle level management members		First level management members		Total	
		Column N %	Mean	Column N %	Mean	Column N %	Mean	Column N %	Mean
The Organization has clearly defined its risk appetite (aggregate risk chosen).	Strongly Disagree	0.0%		15.4%		17.9%		15.2%	
	Disagree	10.0%		25.0%		27.4%		24.7%	
	Neutral	60.0%		21.2%		21.7%		25.8%	
	Agree	30.0%		25.0%		17.0%		20.8%	
	Strongly agree	0.0%		13.5%		16.0%		13.5%	
	Total		3.20		2.96		2.86		2.93
In establishing the Risk Appetite, the insurance company considered aligning it to the strategy of the organization.	Strongly Disagree	0.0%		3.8%		4.7%		3.9%	
	Disagree	20.0%		9.6%		9.4%		10.7%	
	Neutral	50.0%		15.4%		13.2%		18.0%	
	Agree	30.0%		44.2%		40.6%		40.4%	
	Strongly agree	0.0%		26.9%		32.1%		27.0%	
	Total		3.10		3.81		3.86		3.76

Source: SPSS data analysis output, 2018

Similarly in establishing and defining risk appetite in the risk management framework of every insurer it is necessary to align it to the strategies and objective of the insurer to make it more applicable. Hence, the majority 120(67.4%) of the respondents accepted the alignment of risk appetite with their organization's strategic objective with an overall mean score of 3.76. This result is similarly share among middle managers and first level managers by 37(71.2%) respondents and 77(72.6%) respondents respectively. While, the majority 10(50%) of the top management respondents remained neutral and 6(30%) of top management respondents were in favor of the statement. Based on the information gathered through interview board members and secretaries general view supported that on a portfolio level a classified risk class exists but lacks risk profiling. It was also indicated that policy and procedures are prepared for each business

risk area. In addition, it was also reported that business unit wise level of risk limit and tolerances are established.

Table 16: Descriptive statistics of risk identification and assessment of the practice

		Management							
		Top level management members		Middle level management members		First level management members		Total	
		Column N %	Mean	Column N %	Mean	Column N %	Mean	Column N %	Mean
The organization conducts workshops or panel discussions to identify enterprise level risks in each activity.	Strongly Disagree	25.0%		19.2%		23.6%		22.5%	
	Disagree	30.0%		34.6%		39.6%		37.1%	
	Neutral	40.0%		17.3%		14.2%		18.0%	
	Agree	0.0%		25.0%		17.0%		17.4%	
	Strongly agree	5.0%		3.8%		5.7%		5.1%	
	Total		2.30		2.60		2.42		2.46
The organization policy encourages training programs in the area of risk management	Strongly Disagree	10.0%		11.5%		12.3%		11.8%	
	Disagree	20.0%		5.8%		8.5%		9.0%	
	Neutral	10.0%		19.2%		19.8%		18.5%	
	Agree	30.0%		42.3%		32.1%		34.8%	
	Strongly agree	30.0%		21.2%		27.4%		25.8%	
	Total		3.50		3.56		3.54		3.54

Source: SPSS data analysis output, 2018

As presented in the table above the majority of 106 (58.6%) respondents opposed to the performance of workshops or panel discussion to identify enterprise level risk which is comprised of 67(63.2%) first, 28(53.8%) middle and 11(55.0%) top level management respondents which gave an overall mean score of 2.46 which is fall between “disagree” and “neutral” scale as per the Likert type scale measurement used under this study. In contrary a

majority of 108(60.7%) respondents conformed that their insurance organization encourages training programs on the area of risk management indicated by an overall mean score of 3.54.

B. Risk analysis and quantification

Quantifying and analyzing risks identified is a valuable step for decision making in every activity of management by comparing the risk measures of each exposure. Thus a majority of 105(59.0%) respondents supported (with an overall mean score of 3.67) that their organization developed a risk register document which consist of 30(57.7%) middle level managers and 73(68.9%) first level managers.

Table 17: Descriptive statistics of risk analysis and quantification of the practice

		Management							
		Top level management members		Middle level management members		First level management members		Total	
		Column N %	Mean	Column N %	Mean	Column N %	Mean	Column N %	Mean
The organization has created a risk register documents	Strongly Disagree	10.0%		1.9%		0.0%		1.7%	
	Disagree	0.0%		15.4%		17.0%		14.6%	
	Neutral	80.0%		25.0%		14.2%		24.7%	
	Agree	10.0%		32.7%		36.8%		32.6%	
	Strongly agree	0.0%		25.0%		32.1%		26.4%	
	Total		2.90		3.63		3.84		3.67

Source: SPSS data analysis output, 2018

But a majority of 16(80%) top management respondents remained neutral about creating a risk register document. The assessment and quantification of inherent and residual risk was also supported by a majority of 101(56.7%) respondents with a mean score of 3.53 and is comprised of 67(65.2%) respondents of first level and 29(55.8%) respondents of middle level managers. While a majority of 12(60%) of top management respondents remained neutral. Measuring the likelihood and impact of loss arising from each risk exposure was supported by 9(45%) top management respondents but 8(40.0%) of top management respondents remained impartial. In

spite of this a majority of 22(42.3%) middle level and 55(51.9%) first level management respondents opposed that their organization measures the likelihood and impact of loss arising from each risk exposure.

Based on the information gathered from the interview with board member and board secretaries the process of measuring each risk type is not yet complied through the risk management practice but it was disclosed that extensive effort is currently exerted in identifying and classifying risks pertinent to their organization’s objectives.

Table 18: Descriptive statistics of risk analysis and quantification of the practice

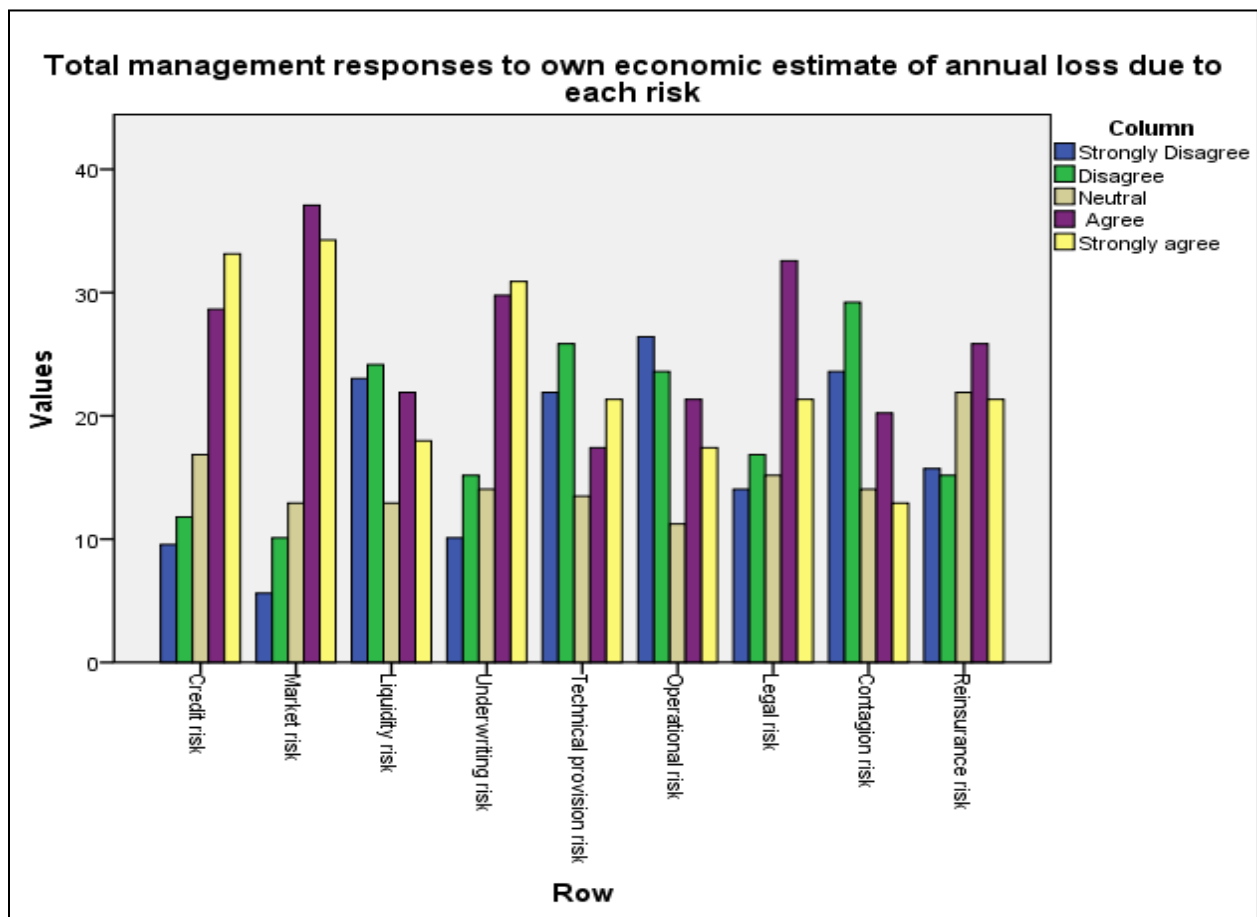
		Management							
		Top level management members		Middle level management members		First level management members		Total	
		Column N %	Mean	Column N %	Mean	Column N %	Mean	Column N %	Mean
The organization exercises the assessment and quantification of “Inherent” and “Residual” risk.	Strongly Disagree	0.0%		5.8%		6.6%		5.6%	
	Disagree	15.0%		17.3%		16.0%		16.3%	
	Neutral	60.0%		21.2%		14.2%		21.3%	
	Agree	25.0%		32.7%		34.0%		32.6%	
	Strongly agree	0.0%		23.1%		29.2%		24.2%	
	Total		3.10		3.50		3.63		3.53
The organization has measured the likelihood and impact of loss arising from each risk exposure	Strongly Disagree	0.0%		11.5%		13.2%		11.2%	
	Disagree	15.0%		30.8%		38.7%		33.7%	
	Neutral	40.0%		19.2%		14.2%		18.5%	
	Agree	45.0%		26.9%		19.8%		24.7%	
	Strongly agree	0.0%		11.5%		14.2%		11.8%	
	Total		3.30		2.96		2.83		2.92

Source: SPSS data analysis output, 2018

Across each risk type a majority of respondents supported that they have their own economic estimate of annual loss due to credit risk and 8(40.0%) of the top management, 23(44.2%) of the

middle management and 53(50.0%) of the first level management respondents supported that they have their own economic estimate of annual loss due to reinsurance risk. Even though, a majority of middle management respondents of 39(75%) for market risk, 33(63.5%) for underwriting risk, 27(51.9%) for legal risk and a majority first level management respondents of 81(76.4%) for market risk, 68(64.2%) for underwriting risk, 64(60.4%) for legal risk supported that they have economic estimate due to each of these risk but top management did not entirely support the establishment of economic estimate of annual loss due to market risk and even opposed by a majority of 8(40.0%) top level managers respondents in the case of both underwriting and legal risks respectively. In contrary, majority of top, middle, first level management respondents disproved that there is no economic estimate of annual loss due to liquidity, technical provision and operational risk. Similar idea was shared among middle and first level management respondents for contagion risk.

Figure 4: Economic estimate of annual loss due to each risk type



Source: SPSS data analysis output, 2018

C. Risk response and monitoring and control

Initially the strategic goal and objectives of insurers should incorporate the level of risk limit, risk tolerance, risk appetite and risk preference policy of insurer which serves as a guiding base in determining the monitoring phase of the ERM process (AAA, 2013). Thus a majority of 98(55.1%) respondents, of which a majority of 9(45.0%) top management respondents, a majority of 28(53.8%) middle management respondents and a majority of 61(57.5%) were first level management respondents, acknowledged that their organization has established a risk limit to monitor the actual level of identified risk remains within the risk tolerance with an overall mean score of 3.47.

A majority of 74(41.6%) respondents, of which a majority of 10(50.0%) top management respondents and a majority of 23(44.2%) were middle management respondents, supported that their organization response to risk included action plans in implementing decisions about identified risk. But a majority of 49(46.2%) first level management respondents denied the practice of such activities. In addition a majority of 108(60.7%) respondents, of which a majority of 8(40.0%) respondents were top managers, a majority of 33(63.5%) respondents were middle managers and 67(63.2%) respondents were majority first level management, confirmed that their insurance company's management regularly reviews the organizations performance measurement based on risk adjusted returns which provide an overall mean score of 3.47.

Similarly a majority of 130(73.0%) respondents which consists a majority of 16(80%) top management respondents, a majority of 36(69.2%) middle management respondents and a majority of 78(73.6%) first level management respondents, supported that monitoring the effectiveness of risk management is an integral part of the routine management reporting process with an overall mean score of 3.93. regarding periodic internal audit reports on risk management process a majority of 12(60%) top management respondents, a majority of 34(65.4%) middle management respondents and a majority of 76(71.7%) first level management respondents supported that their internal audit report periodically reports on the effectiveness of risk management which provide a mean score of 3.83.

Table 19: Descriptive statistics of risk analysis and quantification of the practice

		Management							
		Top level management members		Middle level management members		First level management members		Total	
		Column N %	Mean	Column N %	Mean	Column N %	Mean	Column N %	Mean
The organization has Risk limits to monitor the actual level of identified risks remains within the risk tolerance.	Strongly Disagree	0.0%		7.7%		9.4%		7.9%	
	Disagree	10.0%		13.5%		13.2%		12.9%	
	Neutral	45.0%		25.0%		19.8%		24.2%	
	Agree	30.0%		34.6%		34.9%		34.3%	
	Strongly agree	15.0%		19.2%		22.6%		20.8%	
	Total		3.50		3.44		3.48		3.47
The insurance organization's response to risk includes action plans in implementing decisions about identified risk.	Strongly Disagree	0.0%		15.4%		17.9%		15.2%	
	Disagree	20.0%		23.1%		28.3%		25.8%	
	Neutral	30.0%		17.3%		15.1%		17.4%	
	Agree	30.0%		30.8%		21.7%		25.3%	
	Strongly agree	20.0%		13.5%		17.0%		16.3%	
	Total		3.50		3.04		2.92		3.02
The insurance company's management regularly reviews the organization's performance measurement based on risk adjusted returns.	Strongly Disagree	10.0%		1.9%		2.8%		3.4%	
	Disagree	10.0%		15.4%		17.9%		16.3%	
	Neutral	40.0%		19.2%		16.0%		19.7%	
	Agree	40.0%		44.2%		56.6%		51.1%	
	Strongly agree	0.0%		19.2%		6.6%		9.6%	
	Total		3.10		3.63		3.46		3.47

Source: SPSS data analysis output, 2018

In contrary even though a majority of 23(44.2%) middle management respondents and a majority of 59(55.7%) first level management respondents supported that their organization risk

management controls are explicitly linked to each risk type, 8(40.0%) respondents denied such practices and the other 8(40.0%) of top management respondents remained neutral. In general a majority of 86(48.3%) of the respondents opposed that there is an explicit link between risk management controls and each risk types which put the overall mean score at 3.20.

Table 20: Descriptive statistics of risk analysis and quantification of the practice

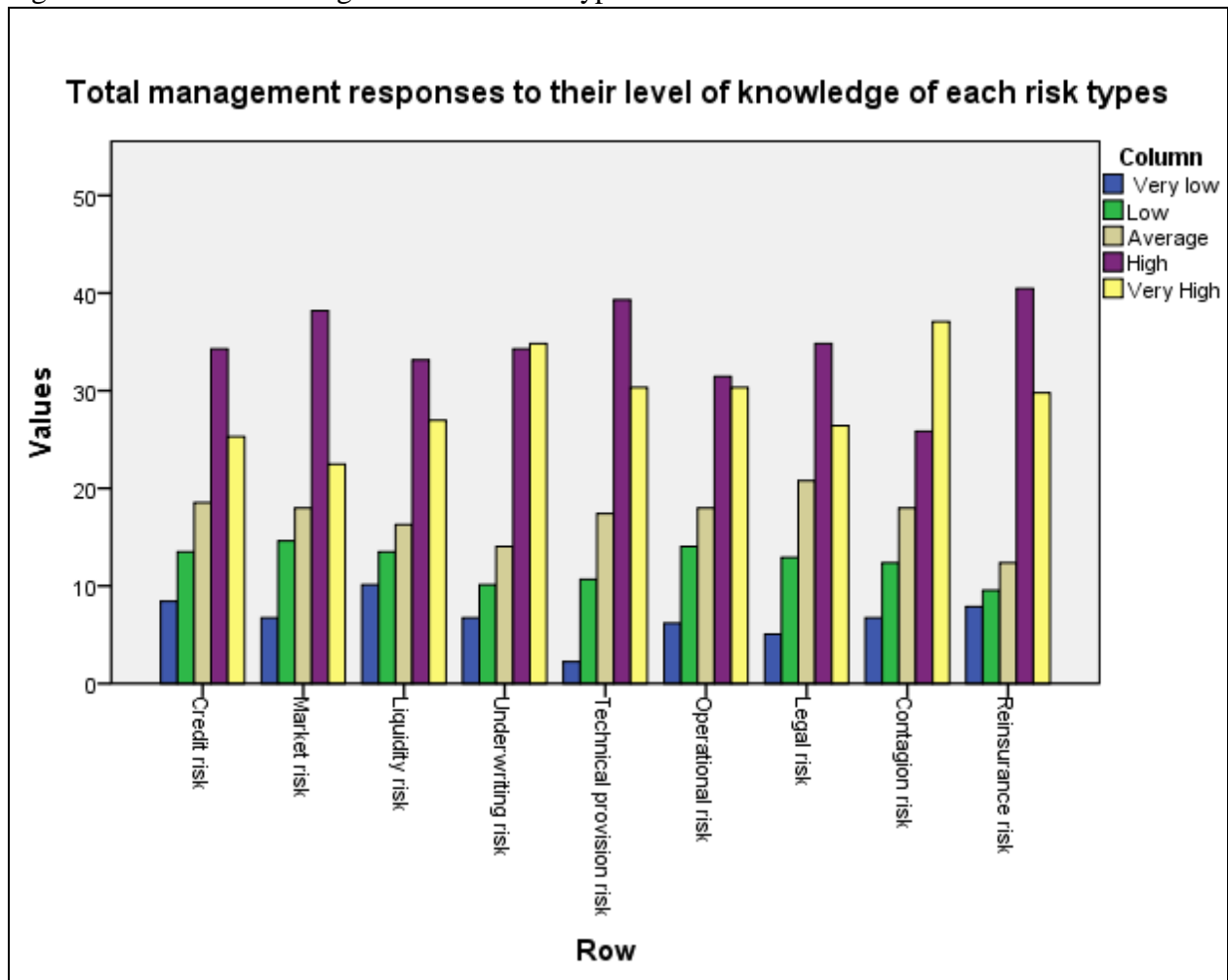
		Management							
		Top level management members		Middle level management members		First level management members		Total	
		Column N %	Mean	Column N %	Mean	Column N %	Mean	Column N %	Mean
Monitoring the effectiveness of Risk management is an integral part of routine management reporting.	Strongly Disagree	0.0%		1.9%		0.0%		0.6%	
	Disagree	20.0%		5.8%		2.8%		5.6%	
	Neutral	0.0%		23.1%		23.6%		20.8%	
	Agree	60.0%		46.2%		44.3%		46.6%	
	Strongly agree	20.0%		23.1%		29.2%		26.4%	
	Total		3.80		3.83		4.00		3.93
Internal auditors Report on the effectiveness of the risk management process periodically.	Strongly Disagree	20.0%		1.9%		0.0%		2.8%	
	Disagree	0.0%		5.8%		6.6%		5.6%	
	Neutral	20.0%		26.9%		21.7%		23.0%	
	Agree	50.0%		42.3%		41.5%		42.7%	
	Strongly agree	10.0%		23.1%		30.2%		25.8%	
	Total		3.30		3.79		3.95		3.83
The organization Risk management controls are not explicitly linked to each risk types.	Strongly Disagree	10.0%		11.5%		15.1%		13.5%	
	Disagree	30.0%		23.1%		17.9%		20.8%	
	Neutral	40.0%		21.2%		11.3%		17.4%	
	Agree	20.0%		26.9%		32.1%		29.2%	
	Strongly agree	0.0%		17.3%		23.6%		19.1%	
	Total		2.70		3.15		3.31		3.20

Source: SPSS data analysis output, 2018

4.4.1.3 The level of knowledge about each risk type and their likelihood, impact and effectiveness of risk management ability to mitigate each risk type

In order to understand the level of knowledge across each risk category respondents were asked to select their level of knowledge of each risk type from a five point scale of very high, high, average, low and very low. Thus, for all risk categories the reported level of knowledge was between the scale of high and very high for the majority of top, middle and lower level management respondents. The only exception to this was legal risk and contagion risk by which a majority of 11(55.0%) and 10(50.0%) top level management respondents rated the level of knowledge to an average for both legal and contagion risk respectively.

Figure 5: level of knowledge about each risk type

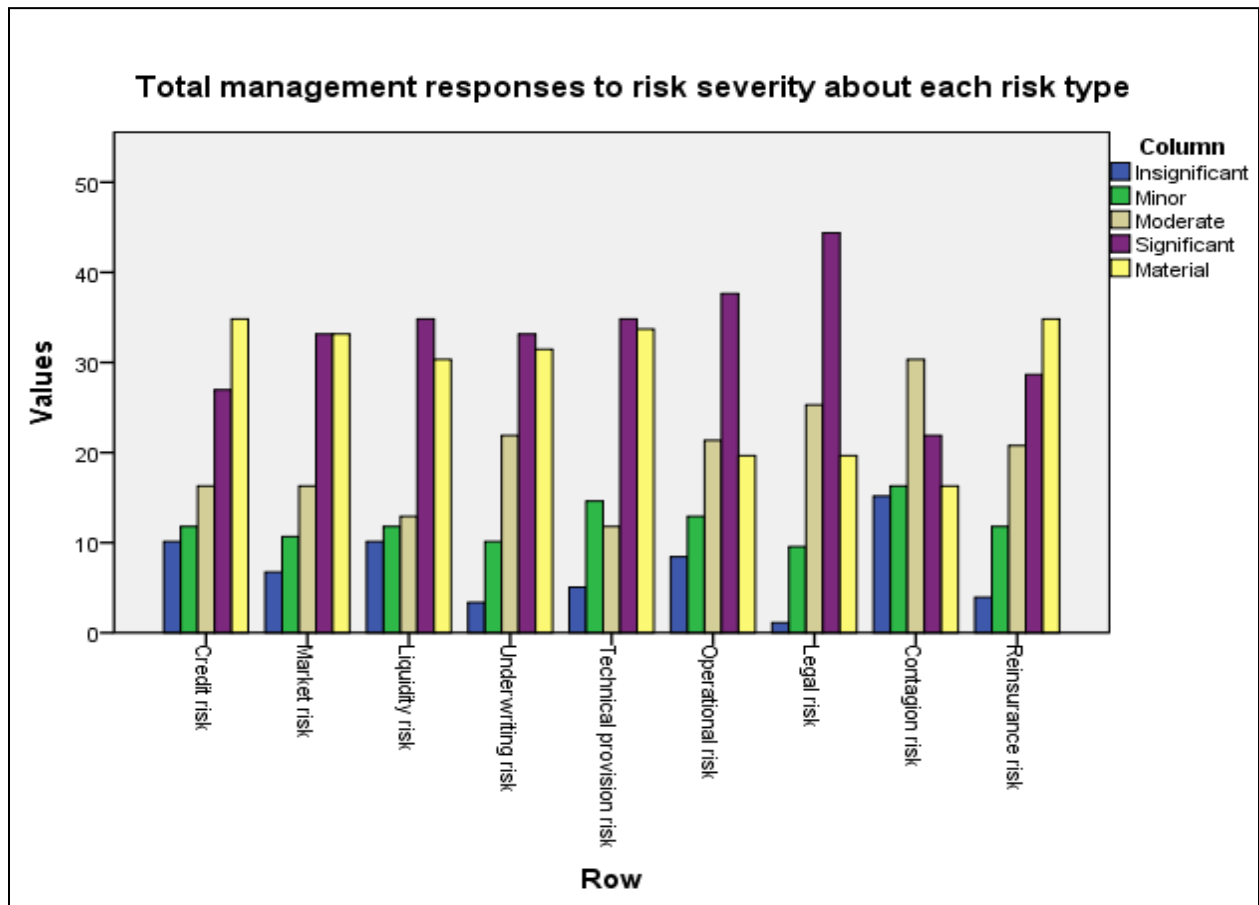


Source: SPSS data analysis output, 2018

For the purpose of assessing the view of the insurance sector over the level of severity and risk likelihood across each risk type respondents were asked to select their level of severity on five point scale among material, significant, moderate, minor and insignificant. Similarly for risk likelihood across each risk type respondents were asked to select their risk likelihood on a five point scale from almost certain, probable, possible, remote and rare.

As a result the level of risk severity for liquidity risk, underwriting risk, technical provision risk, operation risk and reinsurance risk was scaled between the scales of material and significant by the majority of top, middle and first level management respondents. While a majority of 8(40.0%), 10(50.0%), 14(70%) and 9(45%) Top management respondents rated the level of risk severity to a moderate for credit risk, market risk, legal risk and contagion risk respectively. Similarly for credit risk, market risk, legal risk and contagion risk a majority of middle and first level management reported their level of risk severity between material and significant.

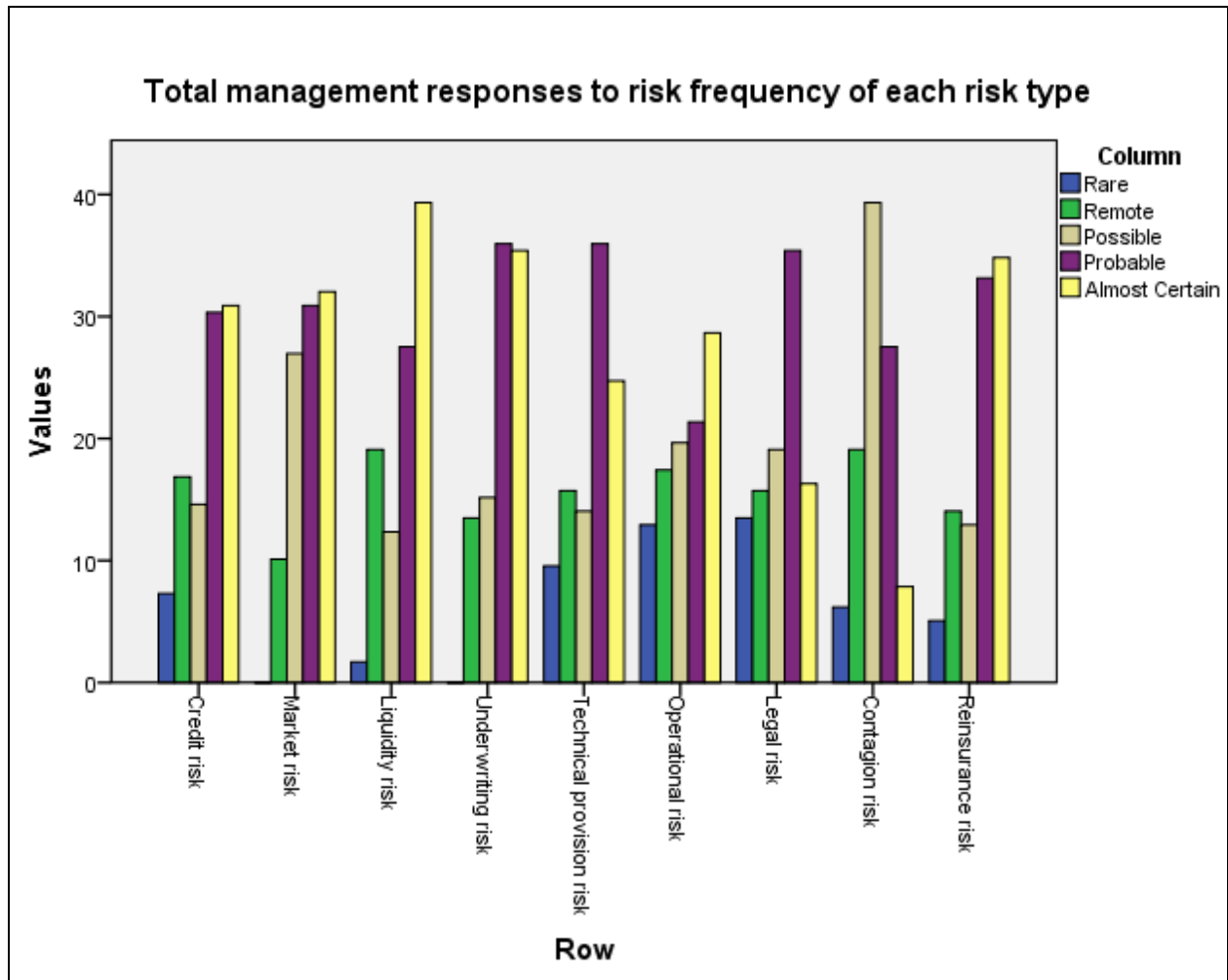
Figure 6: Risk severity perceived by management about each risk type



Source: SPSS data analysis output, 2018

Regarding risk frequency all risk categories were rated between the scales of probable and almost certain by the majority of top, middle and first level management respondents except for contagion risk which was rated as probable risk by majority of top, middle and first level management respondents.

Figure 7: Risk frequency perceived by management about each risk type

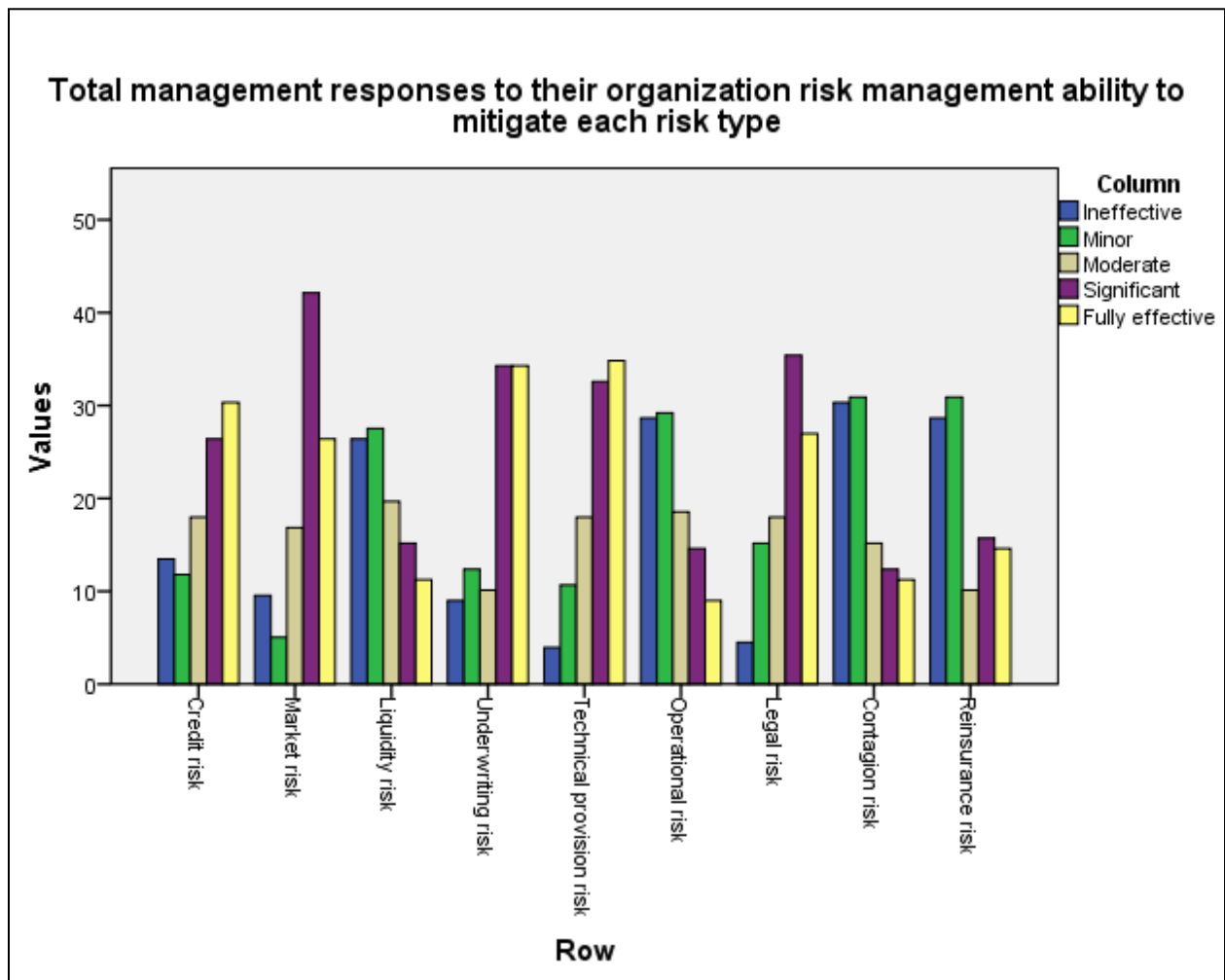


Source: SPSS data analysis output, 2018

And finally respondents were asked to measure their insurance risk management ability to mitigate each risk type on a five point scale by selecting among the scales of fully effective, significant, moderate, minor and ineffective across each risk category. Thus, a majority of top, middle and first level management respondents estimated their ability to mitigate credit risk and market risk between the scales of significant and fully effective while only majority top management respondents scaled their ability to mitigate liquidity risk and reinsurance risk

between the scale of significant and fully effective but a majority of middle and first level management respondents estimate minor and ineffective ability to mitigate liquidity and reinsurance risk. In addition, for underwriting risk and technical provision risk a majority of top management respondents estimated a moderate level of ability to mitigate these risks while a majority of middle and first level management respondents believe that their level of ability to mitigate underwriting risk and technical provision risk is at a significant and fully effective level.

Figure 8: Risk management ability perceived by management to mitigate each risk type



Source: SPSS data analysis output, 2018

But for operation risk and contagion risk a majority of middle and first level management respondents agreed that their level of ability to mitigate these risks was minor and ineffective where as majority of top management respondents believe that their ability to mitigate these risks was moderate.

Regarding legal risk a majority of middle and first level management respondent supported that their ability to mitigate legal risk was significant full effective but in the contrary 8(40.0%) of the top management respondents reported significant and fully effective ability to mitigate legal risk and 8(40.0%) of top management ability to mitigate legal risk which makes the result inconclusive for legal risk among top management respondent.

4.4.1.4 Risk management functions and benefits in the sector

Majority of 141(79.2%) of the respondents, of which a majority of 10(50.0%) top management respondents, a majority of 41(78.8%) of the middle level management respondents and a majority of 141(79.2%) first level management respondents, reported that the major function of the risk management practice is compliance with standards with an total mean score of 4.02.

Table 21: Descriptive statistics of risk management functions and benefits

		Management							
		Top level management members		Middle level management members		First level management members		Total	
		Column N %	Mean	Column N %	Mean	Column N %	Mean	Column N %	Mean
The main function of the risk management practice is compliance with standards.	Strongly Disagree	0.0%		0.0%		0.0%		0.0%	
	Disagree	20.0%		11.5%		4.7%		8.4%	
	Neutral	30.0%		9.6%		10.4%		12.4%	
	Agree	50.0%		48.1%		47.2%		47.8%	
	Strongly agree	0.0%		30.8%		37.7%		31.5%	
	Total		3.30		3.98		4.18		4.02

Source: SPSS data analysis output, 2018

Generally board members supported the challenge cost wise in meeting NBE risk management rigorous standards but nonetheless it was generally agreed that the standards developed has a positive impact in raising the awareness on the importance or necessity of risk management practice for the insurance sector in increasing productivity and financial performance.

Table 22: Descriptive statistics of risk management functions and benefits

		Management							
		Top level management members		Middle level management members		First level management members		Total	
		Column N %	Mean	Column N %	Mean	Column N %	Mean	Column N %	Mean
The current risk management practice has facilitated the identification of the risk management policies and procedures the insurer.	Strongly Disagree	10.0%		7.7%		11.3%		10.1%	
	Disagree	0.0%		15.4%		15.1%		13.5%	
	Neutral	50.0%		23.1%		18.9%		23.6%	
	Agree	40.0%		32.7%		27.4%		30.3%	
	Strongly agree	0.0%		21.2%		27.4%		22.5%	
	Total		3.20		3.44		3.44		3.42
The current risk management practice provides information about the different types of risk exposures of the insurance company.	Strongly Disagree	0.0%		3.8%		3.8%		3.4%	
	Disagree	10.0%		9.6%		11.3%		10.7%	
	Neutral	40.0%		26.9%		18.9%		23.6%	
	Agree	40.0%		30.8%		29.2%		30.9%	
	Strongly agree	10.0%		28.8%		36.8%		31.5%	
	Total		3.50		3.71		3.84		3.76

Source: SPSS data analysis output, 2018

In addition, a majority of 94(52.8%) respondents, of which a majority of 8(40.0%) top management respondents, a majority of 28(53.8%) are middle management respondents and 58(54.7%) are majority first level management respondents, were in favor of the statement that their current risk management practice has facilitated the identification of the risk management policies and procedures of the insurer with a total mean score of 3.42. Similarly, a majority of 114(64.0%) respondents, of which a majority of 10(50.0%) top management respondents, a majority of 31(59.6%) are middle management respondents and 70(66.0%) are majority first

level management respondents, supported that their current risk management practice provides information about the different types of risk exposures of their insurance company with an overall mean of 3.76.

Table 23: Descriptive statistics of risk management functions and benefits

		Management							
		Top level management members		Middle level management members		First level management members		Total	
		Column N %	Mean	Column N %	Mean	Column N %	Mean	Column N %	Mean
The risk management practice of the insurance company has extended the knowledge of employees about the different types of risk exposures.	Strongly Disagree	10.0%		5.8%		8.5%		7.9%	
	Disagree	20.0%		21.2%		0.0%		8.4%	
	Neutral	30.0%		21.2%		17.0%		19.7%	
	Agree	30.0%		25.0%		21.7%		23.6%	
	Strongly agree	10.0%		26.9%		52.8%		40.4%	
	Total		3.10		3.46		4.10		3.80
Enterprise risk management increases the business performance of the insurer.	Strongly Disagree	0.0%		0.0%		0.0%		0.0%	
	Disagree	0.0%		5.8%		2.8%		3.4%	
	Neutral	40.0%		15.4%		14.2%		17.4%	
	Agree	30.0%		44.2%		45.3%		43.3%	
	Strongly agree	30.0%		34.6%		37.7%		36.0%	
	Total		3.90		4.08		4.18		4.12

Source: SPSS data analysis output, 2018

More over a majority of 114(64%) respondents, of which a majority of 8(40.0%) top management respondents, a majority of 27(51.9%) are middle management respondents and 79(74.5%) are majority first level management respondents; believe that their risk management has extended the knowledge of employees about the different types of risk exposures of their insurance company which provide a total mean of 3.80. Regarding business performance a

majority of 141(79.2%) respondents, of which a majority of 12(60.0%) top management respondents, a majority of 41(78.8%) are middle management respondents and 88(83.0%) are majority first level management respondents, accepted that Enterprise level risk management increases business performance of their insurance organization with a total mean of 4.12.

4.4.1.5 Overall challenges of the practice in the sector

During the study it was observed that a majority of 32(61.5%) middle level and a majority of 78(73.6%) first level management respondents accepted that their current risk management practice is confronted with uncertainty of regulatory requirements with a total mean score of 3.79. While a majority of 10(50.0%) top management respondents remained neutral about the issue.

Table 24: Descriptive statistics of overall challenges of risk management practice

		Management							
		Top level management members		Middle level management members		First level management members		Total	
		Column N %	Mean	Column N %	Mean	Column N %	Mean	Column N %	Mean
The current risk management practice of the insurance company is confronted with uncertainty of regulatory requirements.	Strongly Disagree	0.0%		1.9%		0.0%		0.6%	
	Disagree	20.0%		15.4%		10.4%		12.9%	
	Neutral	50.0%		21.2%		16.0%		21.3%	
	Agree	20.0%		36.5%		41.5%		37.6%	
	Strongly agree	10.0%		25.0%		32.1%		27.5%	
	Total		3.20		3.67		3.95		3.79
Lack of commitment from board is a challenge in the risk management practice of the insurer.	Strongly Disagree	10.0%		30.8%		36.8%		32.0%	
	Disagree	50.0%		25.0%		20.8%		25.3%	
	Neutral	20.0%		17.3%		12.3%		14.6%	
	Agree	10.0%		17.3%		17.9%		16.9%	
	Strongly agree	10.0%		9.6%		12.3%		11.2%	
	Total		2.60		2.50		2.48		2.50

Source: SPSS data analysis output, 2018

More over a majority of 102(57.3%) respondents (of which a majority of 12(60.0%) top management respondents, a majority of 29(55.8%) are middle management respondents and 61(57.5%) respondents are majority first level management respondents) opposed that board members lack of commitment is a challenge in the risk management practice of insurers. But still a significant number of 50(28.1%) respondents accepted that lack of commitments of board members is a challenge (with a total mean score of 2.50) in the risk management practice of their insurance organization. Furthermore a majority of 116(65.2%) respondents, of which a majority of 10(50.0%) top management respondents, a majority of 30(57.7%) are middle management respondents and 76(71.7%) are majority first level management respondents, responded that there is difficulty in implementing risk management methodologies in their company.

Table 25: Descriptive statistics of overall challenges of risk management practice

		Management							
		Top level management members		Middle level management members		First level management members		Total	
		Column N	Mean %	Column N	Mean %	Column N	Mean %	Column N	Mean %
There is difficulty in implementing risk management methodologies in the company.	Strongly Disagree	10.0%		5.8%		2.8%		4.5%	
	Disagree	30.0%		21.2%		13.2%		17.4%	
	Neutral	10.0%		15.4%		12.3%		12.9%	
	Agree	40.0%		30.8%		36.8%		35.4%	
	Strongly agree	10.0%		26.9%		34.9%		29.8%	
	Total		3.10		3.52		3.88		3.69
Lack of specific knowledge for risk management practice is a challenge of the insurer.	Strongly Disagree	10.0%		5.8%		6.6%		6.7%	
	Disagree	10.0%		17.3%		12.3%		13.5%	
	Neutral	10.0%		13.5%		10.4%		11.2%	
	Agree	30.0%		38.5%		38.7%		37.6%	
	Strongly agree	40.0%		25.0%		32.1%		30.9%	
	Total		3.80		3.60		3.77		3.72

Source: SPSS data analysis output, 2018

Table 26: Descriptive statistics of overall challenges of risk management practice

		Management							
		Top level management members		Middle level management members		First level management members		Total	
		Column N %	Mean	Column N %	Mean	Column N %	Mean	Column N %	Mean
In the risk management practice of the insurer there exists lack of risk management software or information system	Strongly Disagree	10.0%		5.8%		8.5%		7.9%	
	Disagree	10.0%		11.5%		12.3%		11.8%	
	Neutral	0.0%		19.2%		14.2%		14.0%	
	Agree	60.0%		34.6%		31.1%		35.4%	
	Strongly agree	20.0%		28.8%		34.0%		30.9%	
	Total		3.70		3.69		3.70		3.70
Lack of enough allocated budget is challenge for risk management practice in the company.	Strongly Disagree	5.0%		5.8%		4.7%		5.1%	
	Disagree	35.0%		15.4%		11.3%		15.2%	
	Neutral	20.0%		15.4%		12.3%		14.0%	
	Agree	30.0%		38.5%		38.7%		37.6%	
	Strongly agree	10.0%		25.0%		33.0%		28.1%	
	Total		3.05		3.62		3.84		3.69

Source: SPSS data analysis output, 2018

In addition a majority of 122(68.5%) respondents, of which a majority of 14(70.0%) top management respondents, a majority of 33(63.5%) are middle management respondents and 75(70.8%) are majority first level management respondents, accepted that their s a lack of specific knowledge for risk management in their insurance company with an overall mean of 3.72. Similarly, majority of 118(66.3%) respondents, of which a majority of 16(80.0%) top management respondents, a majority of 33(63.5%) are middle management respondents and 69(65.1%) are majority first level management respondents, accepted that there is lack of risk management software or information system in the risk management practice of their insurance organization with a total mean score of 3.70. Regarding the allocated budget for risk

management a majority of 117(65.7%) respondents, of which a majority of 33(63.5%) are middle management respondents and 76(71.7%) are majority first level management respondents, indicated that there is lack of enough allocated budget as a challenge and 8(40%) top management respondents opposed it and 4(20.0%) remained indifferent about the statement. Thus, it indicates that result was inconclusive among top management respondents.

4.4.2 Results from Secondary Data

To help support the information obtained from the primary data and have an understanding about the financial health or vulnerability of the insurance sector secondary data from financial statement and national bank publications was collected and analyzed using CAMELS Model of Financial Stability Indicator (FSI) and have been calculated according to das, davies and podpiera's methodology taking into account the difference between life and non-life insurance and are presented in the following table. Some of the indicators (for example from category of sensitivity to market risk) could not be calculated due to absence of information.

Table 27: Life insurance business financial soundness indicators

Categories	Indicator	Life insurance				
		2012	2013	2014	2015	2016
Capital adequacy	Net Premium/Capital	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	Capital/Total asset	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Asset quality	Equity/Total asset	34.75%	89.47%	90.53%	87.64%	88.22%
Reinsurance and actuarial issues	Risk retention ratio (net premium/gross premium)	91.66%	90.82%	88.00%	90.00%	87.00%
Earnings and profitability	Loss ratio (net claims/net premium)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
	Return on equity (ROE=Net income/Total asset)	Not available	Not available	Not available	Not available	Not available
Liquidity	Liquid assets/current liabilities	134.29%	781.56%	937.24%	669.73%	688.58%

Source: NBE, ISD data resource

Capital is essential for financial stability and efficiency which indicates whether the insurance company has enough capital to absorb loss arising from claims. Higher capital ratio means enough capital to run a business (Das et al, 2003). The first indicator of Capital adequacy (Net Premium to Capital) ranges from a maximum of 0.06% for 2012 to a consistent 0.05% from 2013 to 2016. This shows underperformance of capital held by insurers is huge (in relation to net premium) and not yet used or utilized to collect the biggest amount of premium possible. The second indicator (Capital to Total asset) indicates similar result of 100% over the years which indicated a huge asset reserved in non life insurance business to finance the capital.

Table 28: Non life insurance business financial soundness indicators

Categories	Indicator	Non life/General insurance				
		2012	2013	2014	2015	2016
Capital adequacy	Net Premium/Capital	0.06%	0.05%	0.05%	0.05%	0.05%
	Capital/Total asset	100.00%	100.00%	100.00%	100.00%	100.00%
Asset quality	Equity/Total asset	23.54%	25.34%	27.76%	30.54%	32.96%
Reinsurance and actuarial issues	Risk retention ratio (net premium/gross premium)	73.31%	66.95%	73.00%	77.00%	76.00%
Earnings and profitability	Loss ratio (net claims/net premium)	67.29%	65.26%	65.00%	63.00%	69.00%
	Return on equity (ROE=Net income/Total asset)	8.29%	11.87%	11.04%	11.23%	8.24%
Liquidity	Liquid assets/current liabilities	96.42%	99.39%	100.53%	100.06%	99.30%

Source: NBE, ISD data resource

The first indicator for Asset quality (Equity to Total assets) ranges from 34.75% for 2012 to 90.53 % for 2014 for life insurance and ranging from a minimum of 23.54% for 2012 to a maximum of 32.96% for 2016. This shows that much of the assets in non life/general business insurance are still financed by debt or other external means which indicates that the least expensive form of long term financing decision in the non life insurance business. Relatively the life insurance business is mainly funded through equity over the year from 2013 to 2016 which shows a higher cost of capital.

An interesting indicator in the reinsurance and actuarial issues is the risk retention ratio (net premium to gross premium) which ranges from a maximum of 91.66% for 2012 and a minimum of 87.00% for 2016 for life insurance and a maximum of 77.00% for 2015 and a minimum of 66.95% for 2013 for non life/general business insurance. This shows that majority of the risk are retained by insurers and only a small portion of risk is passed to reinsurers.

Regarding earnings and profitability, income statement information of life insurance (this is calculated by actuaries abroad) was not available thus, unable to find this information for life business. In the category of earnings and profitability for non life or general insurance business a loss ratio of a maximum of 69.00% for 2016 and a minimum of 63.00% for 2015 was observed and a ROE of a maximum of 11.87% for 2013 and a minimum of 8.29% for 2012 was observed this implies a consistent positive earnings in the non life sector. With regards to liquidity ratio life business seem better off than non life insurance with a maximum of 937.24% for 2014 and a minimum of 134.29% for 2012 while the non life business exhibited a maximum of 100.06% for 2015 and a minimum of 96.42% for 2012. This result shows the level of liquidity problem in the non life/general insurance business in relation to the life insurance business.

4.5 Summary of Findings

In this study the findings that can be extracted from the analysis of the data gathered are presented in a summarized and informative manner to determine the current state of enterprise wide risk management practice by addressing the research objectives.

- ✓ Respondents confirmed that risk management control is one of their main strategic objectives of their organizations. They also added that their risk management strategies are clearly implemented and an already established risk management committee exists at board of director's level. But the establishment of a risk management committee at management level is not yet organized by insurers.
- ✓ The establishment of enterprise wide risk management framework was affirmed by respondents as well as the assignment of an independent area or personnel (risk manager specifically for risk management function).

- ✓ Regarding the development of policies and guidelines for risk management practice respondents reported affirmative trend. Similarly respondents expressed that each class of business have an established policy and procedure.
- ✓ Respondents confirmed that identification of loss events is not performed for each risk type but there is an established risk profile in their insurance organization. In addition respondents confirmed the difficulty in prioritizing their main risk.
- ✓ Respondents also confirmed that lack of a clearly defined risk appetite in the organization even though they accepted the alignment of their risk appetite with their organizations strategic objectives. In addition, even though respondents responded that training program on the area of risk management is encouraged they also confirmed the lack of workshop organization and panel discussions.
- ✓ Respondents acknowledged the development of risk register document as well as the assessment and quantification of inherent and residual risk. In contrary respondents reported a weakness in measuring the likelihood and impact of loss arising from each risk exposure
- ✓ Respondents confirmed the establishment of economic estimate of annual loss due to credit risk, market risk, underwriting risk, legal risk and reinsurance risk. Respondents also confirmed a lack of development of economic estimate of annual loss due to liquidity risk, technical provision risk, operation risk and contagion risk.
- ✓ Respondents also acknowledged the establishment of risk limits to monitor the actual level of identified risk. Similarly it was confirmed that insurance organization response to risk included action plans in implementing decisions about identified risks.
- ✓ According to respondents responses, monitoring the effectiveness of risk management is an integral part of the routine management reporting in the sector. Moreover, based on the data collected internal audit reports are periodically executed on the effectiveness of risk management. But respondents admitted the lack of explicit link between risk management controls an each risk types.
- ✓ Respondents perceive their level of knowledge regarding each risk category is above average. Furthermore, credit risk, market risk, liquidity risk, underwriting risk, technical risk, operation risk, legal risk and reinsurance risk are perceived to have a above moderate (which is material or significant level) level of risk severity while and

contagion risk is perceived to have a below moderate level of risk by significant number of respondents.

- ✓ In addition all risk types are perceived to have probable or almost certain likelihood of occurrence except for contagion risk, which is perceived to have a possible level of likelihood or risk frequency.
- ✓ Insurers risk management ability to mitigate credit risk, market risk, underwriting risk and technical provision risk were to be moderate and above moderate (which is significant or fully effective) by respondents. While respondents confirmed a moderate and below moderate (which is minor or ineffective) level of risk management ability to mitigate operation risk and contagion risk.
- ✓ The opinion of top management disagrees with middle and first level managers on the view of their risk management ability to mitigate liquidity risk and reinsurance risk, by which top management respondents stated a significant and fully effective ability to mitigate both risks and in contrary middle and first level management stated a minor and ineffective ability to mitigate both liquidity risk and reinsurance risk. In addition, middle and first level management respondents perceived above moderate (which is significant or fully effective) risk management ability to mitigate legal risk.
- ✓ Respondents confirmed that major function of the risk management practice is compliance with standards. Moreover, they indicated that their current risk management practice has facilitated the identification of the risk management policies and procedures of the insurer. Respondents also disclosed that their current risk management practice provides information about the different types of risk exposures of their insurance company.
- ✓ Respondents validated that risk management extends the knowledge of employees about the different types of risk exposures of their insurance organization. In addition, it was assured that enterprise level risk management increase business performance.
- ✓ Uncertainty of regulatory requirement, lack commitment form board, difficulty in implementing risk management methodologies, lack of specific knowledge, lack of risk management software or information system, lack of enough allocated budget were all perceived as challenge by most of the respondents.

Chapter 5-Conclusions and Recommendations

In this chapter efforts are made to highlight and summarize the significant contribution of this study. The next two sections dwell on the conclusion and recommendation of the study based on the actual findings of the research and ultimately provides answer on the research questions.

5.1 Conclusions

According to the risk management guideline of NBE for insurance business, the insurance sector is faced with several risk exposures. As a sector that provides insurance coverage for different risk areas the necessity of establishing an integrated enterprises wide risk management system should be among the main strategies of insurers (Acharyya and Mutenga, 2013). Thus, in the aim of understanding the state of risk management practice in the insurance sector in Ethiopia this research examined the nature and aspect of the practice, the process of the practice, the level of understanding perceived about the each risk and their respective level of risk impact and likelihood in the practice and ultimately the functions, benefits and challenges of the practice so far. Thus based on the findings of the research the conclusions are presented as follows.

The research depicted that insurance managers in the sector perceive risk management control as a main strategic objective. But the establishment of risk management committee is accomplished at board level only. This shows that management involvement in the practice is at an early stage.

Based on the findings of the research insurers have established enterprises wide risk management framework and the assigning an independent personnel or risk manager for risk management. Moreover management admitted the development policies and guidelines for risk management practice and each risk area as well as the establishment of a risk profile. This is highly reflective of the regulatory compliance of surveyed insurers. A lack of loss event identification for each risk type is observed in risk identification phase of the practice along with a lack of a clearly defined risk appetite. In addition there is a perceived difficulty among managers in prioritizing their main risk. The practice also demands a workshop organization and panel discussions which is necessary to diminish skill and knowledge deficit regarding risk management.

Insurers have developed a risk register document and efforts are exerted in assessing and quantifying inherent and residual risk. Insurers also have established estimate of annual loss due

to credit risk, market risk, underwriting risk, legal risk and reinsurance risk. But there is a perceived weakness in estimating and establishing annual loss due to liquidity risk, technical provision risk, operation risk and contagion risk.

In monitoring risk exposures of identified risks and their actual level insurers have established a risk limit. With regards to response about the identified risk above risk limits action plan development is part of management decision making. The performance of internal audit on risk management activity also aids the current practice of monitoring the risk management practice.

According to the responses of respondents, all of the risk categories identified by NBE, ISD are well understood by management and are perceived to have probable or almost certain likelihood of occurrence with the exception of contagion risk. Similarly, all risk were perceived to have a significant or material level of risk severity which confirmed the risk categories identified by NBE, ISD as a main risks in relation to the current insurance sector environment.

In addition insurance management perceive the risk management ability to mitigate credit risk, market risk, underwriting risk and technical provision risk moderate and above. But weakness is perceived in mitigating operation risk and contagion risk.

The research findings show that compliance with standard was the main activity of risk management practice. This implies that enterprise risk management is not yet fully understood by the sector because ERM should be seen as a strategic imperative to maximize return on a risk adjusted basis. Due to risk management insurers benefited in identifying their risk management policies and procedures, obtaining information about their risk exposures and extending the knowledge of employees about the different types of risk exposure. Moreover risk management is acknowledged by management to increase business performance.

The main challenges responsible for the weaknesses observed in the practice are mostly related to uncertainty of regulatory requirement, lack commitment from board, difficulty in implementing risk management methodologies, lack of specific knowledge, lack of risk management software or information system, lack of enough allocated budget.

5.2 Recommendations

The importance of risk management as a business driver is increasingly significant for insurers around the globe due to the fact that risk is a major driver of strategic decisions of insurers worldwide. Thus, stakeholders have become much more concerned about risk. Thus, on the basis of the findings and conclusion reached the following recommendations are forwarded to possibly support the improvement of risk management practice in the insurance sector.

- The main function of ERM in the current Ethiopian insurance sector is regulatory compliance. Hence, insurers are better benefited by seeking for strategic values in risk management instead of strategic compliance. Moreover, insurers shall emphasize managing risk instead of trying to avoid it or minimize it because risk management is a way to maximize the trade –off between risk and return. Hence by taking a strategic view of risk management, insurers can focus on the risks intentionally undertook as a consequence of doing business and avoid risks that are inconsistent with the insurers objectives.
- In defining risk appetite insurers should consider aligning it to strategic objectives of their organization to have an effective risk reward decision making process. In addition to risk appetite statement a continuous monitoring is necessary for any changes within the market dynamics.
- Risk management is the responsibility of all staff member at all levels. Thus, all staff member should have clear understanding of their company objectives and the risk/return balance needed to achieve this goals. In this regard insurers might consider organizing workshops and panel discussions that includes the participation and involvement of all management and staff members. Moreover insurers should understand their company culture and decide how their risk function will interact with the company management and business operation.
- Finally, the insurance sector is recommended to consider developing and establishing a capital model to support their risk management practice and avoid risk control weaknesses observed in quantifying loss event and economic estimates due to loss from each risk exposure. Capital models are useful to insurers in making good decisions about

allocation of capital, or risk and return in particular area of business class, or with respect to assets.

5.3 Suggestions for Further Studies

The study focused on the view & opinions of board level and management level members in order to understand the state of enterprise risk management practice in the Ethiopian insurance sector. Thus, further research is recommended on the views and perceptions of other stakeholders such as the Insurance Supervision Directorate, the Ethiopian Association of Insurers and insurance brokers & agents because of the significant role they undertake in the sector. More over the practice of risk management in the micro-insurance sector is another recommended focus area for future studies

A study should be conducted to analyzed risk management decisions of insurers and their effect on the financial performance of insurers. In addition future studies could be extended to develop a framework for analyzing the risk allocation, capital budgeting and capital structure decisions facing insurers.

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Annex I - Research Questionnaire-1: Prepared to Gather Management members' views

**Addis Ababa University
College of Business and Economics
Department of Management
MBA in Management Programme**

Dear Respondents,

My name is Bisrat Gugsu, I am conducting a research on the topic “Assessment of Enterprise Risk Management Practices in the Ethiopian Insurance Sector”. This questionnaire is designed to collect information about the risk management practice in Ethiopian insurance companies. The data or information collected in such a way shall be used as Primary data in my thesis, which I am conducting as a partial fulfillment of the requirement for the **Master of Business Administration (MBA) degree**.

The study is mainly concerned with assessing and identifying the views and opinions of insurance companies' enterprise level risk management practices. Your participation in this study is greatly appreciated and valuable to reach on concrete findings about the issue. The researcher would like to thank you in advance for your kind response in giving your precious time in filling the questionnaire. No need to mention your name and the information provided is to be used only for this study and any information given will be kept confidential.

Thank you for your valuable time and careful consideration!!

Bisrat Gugsu

Date: _____

Place: _____

Part I: Respondent profile

Direction: kindly place a mark “√” in the provided boxes and fill the blank spaces.

1. Name of Insurance Company _____

2. Type of Ownership

Public Insurance Company

Private Insurance Company

3. Insurance Company Year of Establishment _____

4. Gender

Male

Female

5. Age 21 to 31

32 to 42

43 to 53

54 to 64

65 or above

6. Level of Education

College Diploma

PhD

Bachelor's Degree

Others please specify _____

Master's Degree

7. Work Experience

1 – 6 Years

14 – 20 Years

7 – 13 Years

above 20 Years

Part II: Content Questionnaire

Please express your view by marking a tick (“√”) in relevant box

no.	Enterprise Risk Management practices	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
1	The insurance company considers risk management control among its strategic objectives.					
2	The organization has a clear risk management strategy in place.					
3	The Organization has established a Board Risk Management Committee.					
4	There is an Enterprise Risk Management Committee at Management Level.					
5	The Organization has developed an Enterprise-wide Risk Management Framework.					
6	The organization has assigned an independent area or personnel (Risk manager) specifically for Risk management function.					
7	The organization has internally developed risk Management procedures or guidelines.					
10	The insurance organization has identified loss event from each risk types using internal or external data					
11	The organization has developed a risk profile or risk matrix.					
12	The insurance company finds it difficult to prioritize its main risk.					
13	The Organization has clearly defined its risk appetite (aggregate risk chosen).					
14	In establishing the Risk Appetite, the insurance company considered aligning it to the strategy of the organization.					
15	The organization conducts workshops or panel discussions to identify enterprise level risks in each activity.					
16	The organization policy encourages training programs in the area of risk management					
17	The organization has created a risk register documents					
18	The organization exercises the assessment and quantification of “Inherent” and “Residual” risk.					
19	The organization has measured the likelihood and impact of loss arising from each risk exposure					

21	The organization has Risk limits to monitor the actual level of identified risks remains within the risk tolerance.					
22	The insurance organization's response to risk includes action plans in implementing decisions about identified risk.					
23	The insurance company's management regularly reviews the organization's performance measurement based on risk adjusted returns.					
24	Monitoring the effectiveness of Risk management is an integral part of routine management reporting.					
25	Internal auditors Report on the effectiveness of the risk management process periodically.					
26	The organization Risk management controls are not explicitly linked to each risk types.					
29	The main function of the risk management practice is compliance with standards.					
30	The current risk management practice has facilitated the identification of the risk management policies and procedures the insurer.					
31	The current risk management practice provides information about the different types of risk exposures of the insurance company.					
32	The risk management practice of the insurance company has extended the knowledge of employees about the different types of risk exposures.					
33	Enterprise risk management increases the business performance of the insurer.					
34	The current risk management practice of the insurance company is confronted with uncertainty of regulatory requirements.					
35	Lack of commitment from board is a challenge in the risk management practice of the insurer.					
36	There is difficulty in implementing risk management methodologies in the company.					
37	Lack of specific knowledge for risk management practice is a challenge of the insurer.					
38	In the risk management practice of the insurer there exists lack of risk management software or information system					
39	Lack of enough allocated budget is challenge for risk management practice in the company.					

40	The Organization has established policies/procedures for the following risk areas								
Please express your view by marking a tick in relevant box	Credit risk	Market risk	Liquidity risk	Underwriting risk	Technical provision risk	Operational risk	Legal risk	Contagion risk	Reinsurance risk
Strongly Disagree (1)									
Disagree (2)									
Neutral (3)									
Agree (4)									
Strongly Agree (5)									

41	The insurance company has assessed identification of the following risk types.								
Please express your view by marking a tick in relevant box	Credit risk	Market risk	Liquidity risk	Underwriting risk	Technical provision risk	Operational risk	Legal risk	Contagion risk	Reinsurance risk
Strongly Disagree (1)									
Disagree (2)									
Neutral (3)									
Agree (4)									
Strongly Agree (5)									

42	What is your level of knowledge regarding the following different type of risks								
Please express your view by marking a tick in relevant box	Credit risk	Market risk	Liquidity risk	Underwriting risk	Technical provision risk	Operational risk	Legal risk	Contagion risk	Reinsurance risk
Very high									
High									
Average									
Low									
Very low									

43	The insurance company has an economic estimate of annual loss due to each of the following type of risks									
Please express your view by marking a tick in relevant box	Credit risk	Market risk	Liquidity risk	Underwriting risk	Technical provision risk	Operational risk	Legal risk	Contagion risk	Reinsurance risk	
Strongly Disagree (1)										
Disagree (2)										
Neutral (3)										
Agree (4)										
Strongly Agree (5)										

44	What is your Risk Severity, Frequency and the Level of mitigation for the following different type of risks									
Please express your view by marking a tick in relevant box	Credit risk	Market risk	Liquidity risk	Underwriting risk	Technical provision risk	Operational risk	Legal risk	Contagion risk	Reinsurance risk	
Risk Severity										
Significance of impact (severity)	Material									
	Significant									
	Moderate									
	Minor									
	Insignificant									
Risk Frequency										
Likelihood of occurrence (frequency)	Almost certain									
	Probable									
	Possible									
	Remote									
	Rare									
Risk Mitigation										
Effectiveness of risk management ability to mitigate severity and frequency	Fully effective									
	Significant									
	Moderate									
	Minor									
	Ineffective									

Annex II - Research Questionnaire-1: Prepared to
Gather Board members' views

Addis Ababa University
College of Business and Economics
Department of Management
MBA in Management Programme

Dear Respondents,

My name is Bisrat Gugsu, I am conducting a research on the topic “Assessment of Enterprise Risk Management Practices in the Ethiopian Insurance Sector”. This questionnaire is designed to collect information about the risk management practice in Ethiopian insurance companies. The data or information collected in such a way shall be used as Primary data in my thesis, which I am conducting as a partial fulfillment of the requirement for the **Master of Business Administration (MBA) degree**.

The study is mainly concerned with assessing and identifying the views and opinions of insurance companies' enterprise level risk management practices. Your participation in this study is greatly appreciated and valuable to reach on concrete findings about the issue. The researcher would like to thank you in advance for your kind response in giving your precious time and answering interview. No need to mention your name and the information provided is to be used only for this study and any information given will be kept confidential.

Thank you for your valuable time and careful consideration!!

Bisrat Gugsu

Date: _____

Place: _____

Interview content on the views of Board Members

Direction: Please answer the following questions to the best of your knowledge.

1. List the strategies the insurance company uses to manage risk.
2. Which of the following factors are considered in the development of Risk Management strategies?
 - a) Risk Profile
 - b) Policy on risk
 - c) Level of management's risk tolerance
 - d) Mention any additional factors the company considers
3. What are the broad parameters that the company considered in executing its Risk Management strategies?
4. Are all managers regardless of their levels involved in the development of risk management strategies?
5. How do the National Bank policies influence the formulation of risk management strategies in your company?
6. Do organizational politics influence development of risk management strategies by the company?
7. Does the insurance company consider new entrants in the mobile industry when developing risk management strategies?
8. How do economic changes influence development of risk management strategies?
9. Is there a risk awareness culture at the insurance company? How often is awareness sessions conducted?
10. How are the insurance company's staffs involved in risk management?

11. Mention any benefits obtained and challenges encountered in establishing a sound risk management practice in the past.