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**DETERMINANTS OF CAPITAL STRUCTURE: A STUDY ON
ETHIOPIAN INSURANCE COMPANIES**

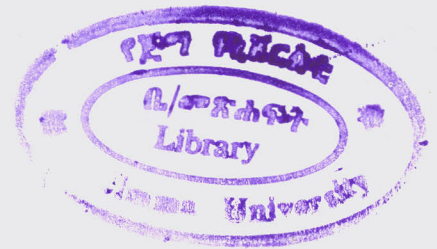
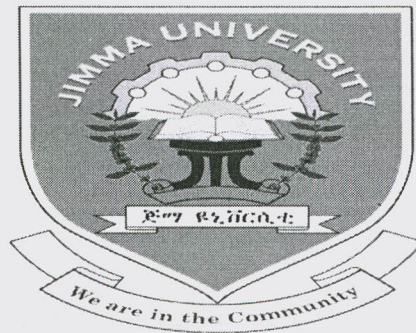
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DECLARATION

This Research is prepared by Esmael Beshir, entitled: “determinants of capital structure of Ethiopian insurance Companies” is my own original work, which has not been presented for degree in this University or any other universities and that all sources of materials used for the thesis have been properly acknowledged.

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ABSTRACT

This thesis is designed to investigate Capital structure determinants towards Ethiopian Insurance Industry. Thus, the major aim of this research was to investigate firm specific factors such as, Asset Tangibility, Liquidity, Risk, Growth Opportunity, Profitability and Age of the firm were impact on Ethiopian insurance companies. The panel data was used in this study to achieve the research objectives. In this study, the researcher used only secondary data. To accomplish this study, all insurance companies were included in the sample frame those had audited annual reports of seven years. In order to accomplish these issues a quantitative research approach is utilized by documentary analysis and the study uses seven (2008 up to 2014) years data for all Insurance Companies those have full audited financial statements for seven consecutive years This study applied panel or longitudinal data model with its fixed effect estimate regression to test a series of the hypotheses that organized through the review of existing literature. Then the data collected were analyzed by using: correlation and Ordinary least square model

After regression, the finding result shows that Asset Tangibility, Liquidity, Growth Opportunity and Business Risk were direct or Positive relation with Leverage level; while the remaining two variables (Profitability and Age of the firm) have negative relation with Leverage of Ethiopian Insurance Industry. Among of the six variables, only three variables (Asset tangibility has significant positive relation and both Profitability and Age of the firm were significant negative impact)on Ethiopian Insurance Companies and the remaining three variables (Liquidity, growth opportunity and business risk) found no significant effect on Capital structure determinants on Ethiopian Insurance Companies.

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LIST OF ACRONYMS

ACT.....	Agency Cost Theory
AFIC.....	African Insurance Corporation
AIC	Awash Insurance Corporation
EIC	Ethiopian Insurance Corporation
FEM.....	Fixed Effect Model
GIC	Global Insurance Corporation
IFC.....	International Finance Corporation
LEV.....	Leverage
LIC	Lion insurance Company
LTD.....	Long Term Debt
LTBDR.....	Long Term Book-Debt Ratio
LTMDR.....	Long Term Market Debt Ratio
MTBR.....	Market To Book Ratio
MMT.....	Modigliani and Millers Theory
NIC.....	National Insurance Corporation
NBIC.....	Nib insurance companies
NIC.....	Nile Insurance Corporation
NYIC	Nyala Insurance Corporation
POT.....	Pecking Order Theory
REM.....	Random Effect Model
ROA.....	Return On Asset
SMEs.....	Small and medium size enterprises
TOT.....	Trade-Off theory
TDR.....	Total Debt Ratio
UIC	United Insurance Company

CHAPTER ONE

INTRODUCTION

The main purpose of this study was to investigate the Capital structure determinants of Ethiopian Insurance Companies. Specifically to Investigates the relationship of firm's leverage with specific variable (Tangibility, Liquidity, Growth Opportunity, Profitability, Business risk and Ages of the firm), Understand the most significant impact on leverage and to examine the relevant theory that express the financial behavior of Ethiopian Insurance Companies.

Under this Introduction Chapter, the seven titles were discussed accordingly. Back ground of the study(1.1), Statement of the Problem(1.2), under 1.3 Objectives of the study by classifying General objective(1.3.1) and specific objectives (1.3.2), Research Hypotheses (1.4), Significance of the study(1.5), scope and limitation of the study(1.6) and Organizational structure of the study (1.7)

1.1 BACKGROUND OF THE STUDY

Capital structure is one of the finance topics among the studies of researchers and scholars. Its importance derives from the fact that capital structure is strongly related to the ability of the firms to fulfil the needs of various stakeholders. Capital structure refers to the way that a corporation finances its assets through the combination of equity and debt. That means firm's capital structure is then the composition or 'structure' of its liabilities. Equity arises when the organization sells some parts of ownership right to gain funds for Investement activities. On the other hand, Debt is a contractual agreement by companies to borrow from external parts of an organization an amount of money and repay it with interest within a determined time border.

For all, business activity must be financed; without finance to support their fixed assets and working capital requirements, business could not exist. For fulfill such requirement, an appropriate capital structure is a critical decision for any business organization. The essentiality of Capital structure decision is not only the need to Shareholders return maximization, but also essential for the impact of such decision on an organization's ability to deal with its competitive environment (Simerly and Li, 2002).

The major struggle of financing decision-making process was focused on both maximizing return with minimizing cost and decision on Variable that impact on such decision. So that most of the researchers were examined and investigates to move such maximum capital structure decision. But until now, there were no constant decision from one to other study and many sourced idea contradicted each other.

Since Modigliani and Miller, several theories have been developed to go to optimal decision and explain the capital structure determinants of the firms. With including MM, another theory including Trade off theory, Pecking order theory, and agency cost theory were the major theory that takes place in the field of Capital structure decision about its source of capital will affect its competitiveness among its peers. Therefore, the efforts of them were as of the firm use the appropriate mix of debt and equity that will maximize its values.

According to Trade off theory, a decision maker running a firm evaluates the various costs and benefits of alternative leverage plans. Often it is assumed that an interior solution is obtained so that marginal costs and marginal benefits are balanced.

Pecking order model is another important theory in the study of corporate capital structure that explains the relevance of the debt and optimum capital structure of the firms. This incorporates the assumption of information asymmetries and costs of transaction. Myers and Majluf, (1984) states that 'firms should follow a financing hierarchy in order to minimize information asymmetry between the parties' It states that companies prioritize their source of financing from internal financing to equity financing, according to this principle of the least resistance, preferring to raise equity as a financing means of last option. So, the pecking order theory claims that internal funds are used first and used debt from external parties only when all internal finances have been depleted. When it is not sensible to issue any more debt, they will eventually turn to equity as a last financing resource. To summarize this theory, it predicts that the more profitable firms that generate high cash flows are expected to use less debt capital than those who generate lower cash flows.

Thirdly, the Agency cost theory states that an 'optimal capital structure is attainable by reducing the costs resulting from the conflicting between the managers and the owners of the company.' This theories are developed by Jensen and Meckling in their 1976 publications. As consideration of them, this theory considered as the debt to be a necessary factor that creates conflict between

equity holders and managers. Both scholars used this theory to argue that the probability distribution of cash flows provided by the firm is not independent of its ownership structure and that this fact may be used to explain optimal capital structure. Jensen and Meckling recommended that, given increasing agency costs with both the equity-holders and debt-holders, there would be an optimum combination of outside debt and equity to reduce total agency costs. Research made by Fama, Miller, Jensen (1976) observed how agency cost were modeled. This is known as an agency cost model. This model states that capital structure is determined by its agency cost. They found two types of problems create agency theory those are conflict between firm managers and shareholders as well as conflict between debt holders and shareholders.

According to the many literatures, the empirical studies on the optimum and determinants of capitals structure are largely focused on developed countries and only few studies on the determinants of capital structure conducted in the developing countries. One of the recent empirical studies on determining the factors affecting capital structure in developing countries have been attempted by Booth et al. (2001)

However, there were very few studies in Ethiopian context, which relates to optimal capital structure as well as Capital structure determinants. Among of them: Ashenafi (2005) on the title of “Small and Medium enterprises: a case study in Addis Ababa” by Covering the Period between 1991 and 1996 E.C.; in the year of 2011, some researchers such as: Amanuel, kinde, Kebede, Bayeh studied on relative title. Additionally in the year of (2012, another studies in Commercial Bank of Ethiopia by Weldemikael and Netsanet in Construction Company.

1.2 STATEMENT OF THE PROBLEM

Modigliani and Miller, (1958) were the first authors who developed the theory of capital structure. Since Modigliani and Miller, the issue of capital structure has been a subject of major concerns for many researchers and scholars. So, many researchers followed them to develop other new theory regarding to capital structure and tries to depart from assumptions of Modigliani and Miller.

As of the studies made by Modigliani and Miller states “under the perfect market, the financial structure of the firms would not affect the value of the cost of capital” Modigliani and Miller also rise another argument’s that, in a reality, “a firm’s value could be increased by changing the

firm's capital structure, because of tax advantage of debts". After Modigliani and Miller, capital structure has become an issue that attracts a large number of researchers. Kester W. (1986) Capital and Ownership structure, Zeitun and Tian (2007), Onaolapo. A. and Kajola S.O in 2010, Saedi A. (2011)

Despite the theoretical appeal of capital structure, researchers in financial management have not found the optimal capital structure. For example, the lack of a consensus about what would qualify as optimal capital structure has necessitated the need for this research. A better understanding of the issues at hand requires a look at the concept of capital structure and its determinants.

Therefore, the knowledge of capital structure is one of the most important concepts made in financial management because it ultimately affects the wealth of the Institution. So, one of the main objectives of the financial manager is to ensure the lower cost of capital to maximize the value of the company, (Shah and Khan, 2007). Financial managers strive to find the optimal corporate capital structure where company could meet its financial requirements or current and expected future requirements (Tong & Green, 2005). Therefore, one of the tasks of maximizing the firm value can be achieved once financial managers identify the determinants of capital structure.

Most of the empirical research on corporate capital structure is conducted in developed world, (Mazur, 2007) and a relatively little research work has been done in developing countries on the firm's financing decision, (Graham & Harvey, 2001), (Tong & Green, 2005), (Shah and Khan, 2007).

There were a few researches directed towards to developing countries that applicability of the theories of capital structure derived from the developed nations. Mayer (1990), Singh (1995), Cherian (1996), Cobham and Subramanian (1998) were among the scholars who have studied the capital structure issue in the developing nations. One of the recent empirical studies on determining the factors affecting capital structure in developing countries have been attempted by Booth et al. (2001). In his study, a sample consisting of 10 developing countries were analyzed. And found that, the variables that explain the capital structures in developed nations are also relevant in the developing countries irrespective of differences in institutional factors across these developing nations.

However, the concepts of Optimal Capital structure and the determinants of capital structure studies were very little attention in Ethiopia. This implies that, there is lack of literature in Capital structure determinants as well as choice of Optimum capital structure in Ethiopian context. So the lack of such literature in Ethiopia motivates the researcher. The main purpose of this study was to investigate the determinants of capital structure in Ethiopian Insurance Companies. This study attempted to reduce the gap or fills the research gap by providing information about capital structure with its determinants by standing on the previous researchers' evidence.

Besides, the study attempts to determine how firms choose their capital structure, while Consider many significant factors that might affect it in order to achieve their primary objective like: maximizing value and shareholders wealth, Overcomes the conflict of interest between its shareholders and managers of the Company.

Research Questions (RQ)

✧ The main interest of this research was to examine the Capital Structure Determinants of Ethiopian Insurance Industry. To achieve this interest, the project would try to answer the following research questions:

- What are the most important determinants of Capital structure of Ethiopian Insurance Companies?
- What are the Relationship of Asset Tangibility, Liquidity, Risk, Growth Opportunity, Profitability and Age of the firm with capital structure of Ethiopian insurance Companies?
- Which theories of capital structure are successful to justifying the financial characteristics of Ethiopian insurance Companies?

1.3 OBJECTIVES OF THE STUDY

1.3.1 General Objective

This research comes in with the intention of investigating the determinants of capital structure of Ethiopian Insurance Companies.

1.3.2 Specific Objectives

In addition to the above general objectives, this study specifically:

- Examine the most important determinants of the capital structure for Ethiopian Insurance Companies.
- Justify the relationship of Asset tangibility, Liquidity, Risk, Growth opportunity, Profitability, and Age of the firm with Leverage of Ethiopian Insurance Companies.
- Identify the theory of capital structure which explains the financing decision of Ethiopian Insurance Companies.

1.4 RESEARCH HYPOTHESIS

In order to achieve the extracted objectives, in this study the researchers was used the following dependent and independent variables. So, classify firms leverage as dependent variable and the variables like: Asset tangibility, Liquidity, Risk, Growth opportunity, Profitability and Age of the firms as independent variable.

Leverage (Lev)

Leverage is defined as long term debt scaled by total debt plus the market value of equity (Doukes and Pantzalis, 2003), and (Mittoo and Zhan, 2005). Frank and Goyal (2009) used four definitions of Leverage which are 1) long term debt (LTD) over market value of assets, 2) long term debt (LTD) over book value of assets, 3) total debt (TD) over market value of assets and 4) total debt (TD) over book value of asset.

Tangibility of Assets

Tangibility is one of the specific independent factors that used for measure the level of collateral firms can offer to its debtor. Agency theory suggests that “collateralized assets can be used as a

monitoring instrument to control managers, and prevent threats of transferring wealth from debt holders to shareholders.”

In developed country, Most of the empirical finding resulted with positive relation of leverage level with tangible assets (Rejan and Zingales, 1995; Gerdesmeier, Kremp and Stoss, (1999).

Rajan and Zingales suggested that if balance sheet of the firm has larger proportion of tangible asset, the lenders are more willing to provide loan.

The studies conducted by Jong, et al (2008) and Huang & Song (2006) suggested the positive relation between fixed asset and firm’s leverage. Also the study by Frank and Goyal, (2009) found positive relationship between Asset Tangibility and Leverage level.

Therefore, by considering the previous study, in this study, the researchers expect the Positive relationship of asset tangibility with leverage level.

H1: Positive relationship between Asset tangibility and leverage level.

Liquidity

Liquidity is the firms’ specific independent variables that are used in the field of Capital structure determinants. Basically liquidity is the ability of any firm to meet its short term obligation when they become due. There are two perspectives Idea for relation of Leverage with firm’s liquidity. As of the view consistent with Trade-off theory, between liquidity and leverage the positive relation is assumed. In this theory the company with more liquidity (more current asset), will tend to use more external borrowing, because of their ability in paying off their liabilities.

Additionally, the Companies with higher liquidity level may support the higher leverage level because; the companies which have higher liquidity have ability to meet its short-term obligations. Thus, a high asset liquidity ratio could be a positive affect because it designates the firm as easily pay its obligations and also faces the lower risk of default.

Also the evidence of the direct relation between leverage level and liquidity is in line with empirical investigation by Basil and Peter (2008), and Faris (2010). By standing on previous study, researcher expects the Positive relationship of leverage with liquidity.

H2: There is Positive relationship between leverage and firm’s liquidity.

Growth opportunity

Growth opportunity is an asset which adds value to the firm, but it is an intangible asset which can't be collateralized and can't be charged under taxable income (Titmans and Wessals, 1988). Different theories suggest various predictions to show the relationship of Growth opportunity with leverage.

Some researchers like: Bevan & Danbolt, 2002; Chen, Cheng, He, & Kim, 1997; Rajan & Zingales, 1995; Titman & Wessals, 1988, predicted the negative relationship of growth opportunities with long-term debts and positive relationship with short term debts. On the other hand, other researchers like: Céspedes et al. (2010); Gill, Biger, Pai, and Bhutani (2009); Sharif, Naem, and Khan (2012), Tang and Jang (2007) and Yang, GU, and Lee (2010) found positive relationship of leverage with growth opportunities.

Additionally, the other study which studied by Chittenden and Michaela (1999) suggested that the Firms with rapid growth opportunities are looking for more debt due to the lack of their internal earnings. Therefore, the researcher expected that growth opportunities are positive relationship with leverage.

H3: There is Positive relation between growth opportunity and leverage.

Profitability

According to the pecking order theories that were suggested by Majluf and Myers (1984), firm has preferred retained earnings as their main source of funds for investment which is followed by debt. The last resort sought by a firm would be external equity financing. The reason for this ranking was that internal funds were not subject to any of the outside/free from external body and. External debt was ranked next equity. It has fewer restrictions than issuing equity and the issuance of external equity is seen as the most costly way of financing a firm. Therefore, when firm's which was profitable is seen to have more retained earnings and choose to have lower leverage. So the above justification shows the negative relationship between profitability and debt.

In addition to the above evidence, a number of empirical studies by many authors like: Kaster (1986), Lang, Titman and Wessals (1988), Harris and Rvis (1991), Rajan and Zingales (1995),

Booth et al (2001), Huang and Song (2002), found the negative relationship between leverage and profitability.

Besides the study by Abore (2005), there were also few studies indicated a positive relationship between profitability and leverage. Among others who found a positive association between profitability and leverage include Baker (1973), Peterson and Rajan (1994) and Roden and Lewellen (1995). In this study the researcher expect as no significant relation between leverage and profitability

H4: There is Negative relationship between leverage level and profitability.

Business risk

The level of the risk is said to be one of the primary determinants of the firm's capital structure (Castanias, 1983).). Despite the broad consensus that risk is an important determinant of corporate debt policy, empirical investigation has led to contradictory results. However, many of the study may suggest that the higher risk may leave the obligated firms to demand more debt; this assumption is consistent with the agency theory and also supported by empirical study of Naveed et al. (2010). This empirical study indicated that in order to accomplish the claim of the insurance policyholder, the company which have many risk or the risky companies obtain external funds

In addition to that, other studies such as: Jordan et al., 1998; Michaelas et al. (1999) and Esperanca et al., (2003) Found a positive relationship between firm risk and both of the long-term and short-term debts. In this study, by take in to consideration the previous empirical result, the researcher will expect positive relationship of leverage with business risk.

H5: There is positive relationship between leverage and business risk.

Age of the firm

Age of the firm was another important factor that affects the capital structure of the firms. Age of the firm was another important factor that affects the capital structure of the firms. The Pecking order theory argued that as the firm matures it builds reputation leading to better access to equity markets and it implies that age should be negatively related to the firms leverage.

In addition to the above evidence, other empirical results by Naveed et al, (2010) on Pakistan insurance companies specifies the negative relationship between age of the insurance companies and their leverage ratio. As of this negative relation predicts that, the older or matured Insurance Companies in Pakistan are preferred to utilize small portion of debt in formation of capital structure

According to the above evidence of Naveed et al. (2010) one key reason to employ less debt ratio is that when firm survives in business for a long time then it can accumulates more funds for running the operations of the business and subsequently keeps away the firm to go for debt. In this case the researchers expect negative relation of Ages with leverage firm.

H6: There is Negative relationship between leverage and age of the firms.

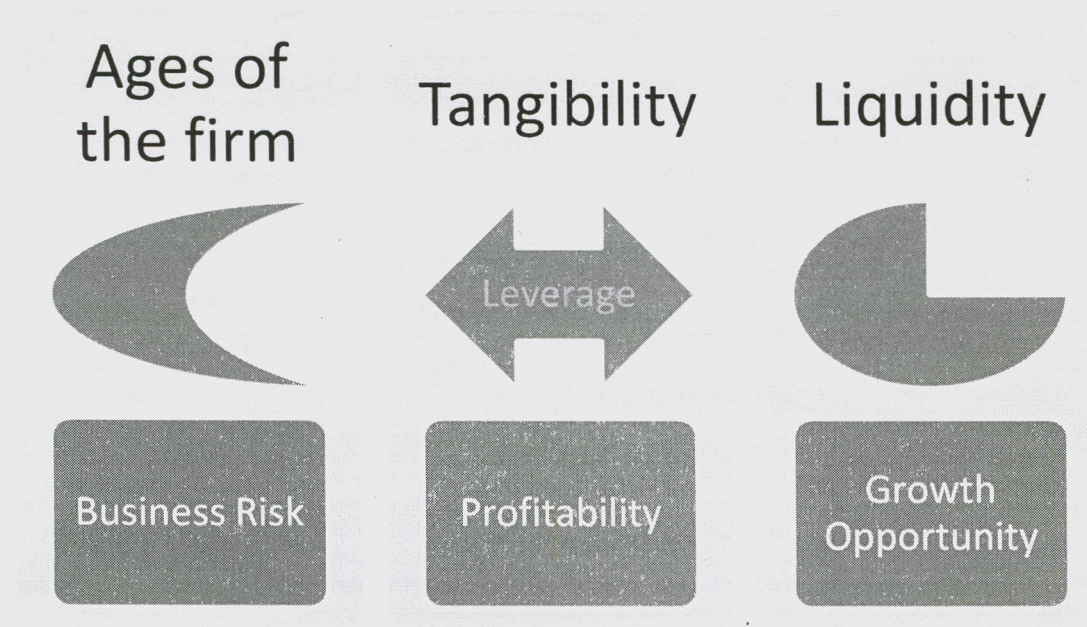


Figure 1.1 Organizational structure of Capital structure determinant of Ethiopian Insurance Companies

1.5 SIGNIFICANCE OF THE STUDY

This study examined the determinants of capital structure in Ethiopian Insurance Industry in general and cover many aspects of the topic, specifically it has been tried to determine the relationship between capital structure and variables that affect the capital Structure.

Capital Structure is a mix of debt and equity capital maintained by a firm. Since it related to ability of the firm to meet the needs of its stakeholder, the capital structure decision is very important. So this study will help the managers of Ethiopian Insurance Companies to take the financing decision for their firms. This study will be great contribution to Company's Management and investors in making clear decisions on capital structure determinants. In addition to the above, a lot of work is written because of the endless argument on capital structure theories. This study is another contribution to the existing work on the study of the impact of various variables on capital structure of Ethiopian Insurance Companies.

1.6 SCOPE AND LIMITATIONS OF THE STUDY

The Scope of these studies is limit to the Investigation of the Determinants of Capital Structure and the studies are restricted to Ethiopia insurance Company, Covering the period between 2008 and 2014. In this study, the researchers were used the data only from income statement and balance sheet during the period of 2008-2014. In this study, the researcher would select six variables that determine the capital structure of the Ethiopian Insurance Companies and also, this study will focuses only on the issues that extracted in the research objective and research question.

1.7 ORGANIZATION OF THE STUDY

This study mainly focused on justifies the determinants of capital structure of Ethiopian Insurance Companies, and Organized into five chapters. Chapter One introduces the research subject and briefly outlines the research background, Statements of the research problem, Research question, Research objectives, and also, Scope and Limitation have been clearly described. Apart from this, it also identifies the significance of the study. Chapter two consist the general review of the literature by including both theoretical and empirical literatures which related to capital Structure. Chapter three highlights the Research design and methodology.

Chapter four present the Study Result and discussion. The last Chapter or Chapter five discuss study Conclusion and Recommendation

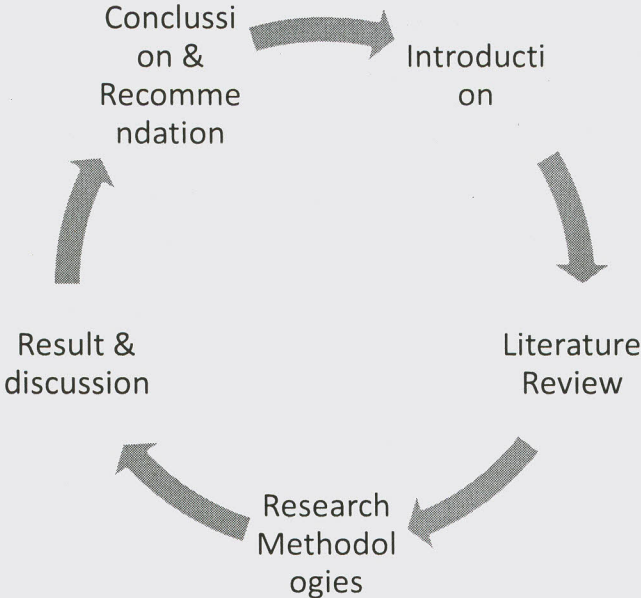


Figure 1.2: Organizational structure of this study

CHAPTER TWO

LITERATURE REVIEW

The literature review helps in generating a framework for the study by identifying the important issues in capital structure and theories that are relevant to the study. Therefore, an appropriate research methodology is easily developed for the purpose of this study. A review of the literature is a classification and evaluation of what accredited scholars and researchers have written on a topic, organized according to a guiding concept such as research objectives or the problem or issue you wish to address it. It involves a systematic search of published sources of information to identify items relevant to a particular requirement.

The primary purpose of this chapter is to discuss the theoretical understanding and Empirical investigation of Capital structure Determinants of Ethiopian Insurance Company. More specifically, it focuses on some major areas. First section Overview of Insurance Concepts. Second section Brief History of Insurance in Ethiopia. Thirdly, Optimum Capital structure Concepts based on scholar's theoretical lens. Fourthly, the theoretical review of capital structure by dividing into sub topic: 2.4.1 Modigliani and Miller theory, 2.4.2 trade-off theory, 2.4.3 pecking order theory, 2.4.4 agency cost theory. Fifth, the literature review examined studies which have explained the need and purpose of Capital Structure Determinants. In this sub title 2.5, the Empirical review of capital structure were presented by classifying into sub title: 2.5.1 empirical review in developed Countries, 2.5.2 empirical review in developing countries and 2.5.3 the empirical review of Ethiopian country.

2.1 OVERVIEW OF INSURANCE CONCEPTS

Insurance has several economic and social concepts. Primarily it covers the risk of financial loss of individuals by distributing fairly and equitably to the insured community. Insurance promotes investment by taking away the risk from the investor. Moreover, insurance is significant part of modern economy and it is huge source of employment .For example, in 1996 more than 2.4 million people were employed in the Insurance Industry in U.S.A. While the worldwide insurance market, especially the life insurance market, has grown rapidly and the

internationalization of the insurance business is becoming more widespread, these areas have not been greatly researched (Mark J. Browne and Kihong Kim., 1993)

2.2 BRIEF HISTORY OF INSURANCE IN ETHIOPIA

The history of insurance service in Ethiopia is as far back as modern form of banking service in Ethiopia which was introduced in 1905. At the time of an agreement between was reached between Menelik II and a representative of the British owned National Bank of Egypt to open a new bank in Ethiopia. Similarly, modern insurance service, which were introduced in Ethiopia by foreigners, mark out their origin as far back as 1905 when the bank of Abyssinia began to transact fire and marine insurance as an agent of a foreign insurance companies.

Continually, the modern insurance in Ethiopia was introduced at the beginning of the 20th century though the sector is one of the most underdeveloped (Hailu Zeleke, 2007, p: 41). According to the Indication of Hailu, (2007) the first significant event that the Ethiopian insurance market observation was the issuance of proclamation No. 281/1970 and this proclamation was issued to provide for the control & regulation of insurance business in Ethiopia.

Consequently, it created an insurance council and an insurance controller's office, its strange impact in the sector. The controller of insurance licensed 15 domestic insurance companies, 36 agents, 7 brokers, 3 actuaries & 11 assessors in accordance with the provisions of the proclamation immediately in the year after the issuance of the law.

Accordingly as stated by the office mentioned above, the law required an insurer to be a domestic company whose share capital (fully subscribed) not to be less than Ethiopian Birr 400,000 for a general insurance business, Birr 600,000 in the case of long-term insurance business and Birr 1,000,000 to do both long-term & general insurance business.

The proclamation defined 'domestic company' as a share company having its head office in Ethiopia and in the case of a company transacting a general insurance business at least 51% and in the case of a company transacting life insurance business, at least 30% of the paid-up capital must be held by Ethiopian nationals or national companies.

But, after four years that means after the enactment of the proclamation, the military government that came to power in 1974 put an end to all private enterprises. Then all insurance companies

operating were nationalized and from January 1, 1975 onwards the government took over the ownership and control of these companies & merged them into a single unit called Ethiopian Insurance Corporation.

Ethiopian Insurance Corporation (EIC) was established in 1975 by the proclamation number 68/1975 and became the sole operator (That means the corporation came into existences by taking all of the asset and liabilities of thirteen nationalized private insurance companies) with Birr 11 million paid up capital aiming the following objectives:

- ♣ Engage in all classes of insurance business in Ethiopia.
- ♣ Ensure the insurance services reach the broad mass of the people.

Subject to the provision of Article 18 of the Housing and Saving Bank establishment proclamation 60/1975, promote efficient utilization of both materials and financial resources.

Ethiopian Insurance Corporation was operating the business for about nineteen years under protected monopolistic system as state owned-sole insurer. After the demise of the Marxist regime in mid-1991 a fundamental change has taken place and there was a shift in political, economic and social orientation from totalitarianism to that of liberalism. Therefore, EIC was re-established as public enterprises under proclamation number 201/94 with Birr 61 million paid up capital.

Furthermore, after the change in the political environment in 1991, the proclamation for the licensing and supervision of insurance business heralded the beginning of a new era.

Immediately after the enactment of the proclamation in the 1994, private insurance companies began to increase. Upon re-establishment of the corporation in 1994 as state owned enterprise, the law covers the following new objectives to the Corporation:

- ♣ Engage in the business of rendering insurance service; and
- ♣ Engage in any other related activities conducive to the attainment of its purposes.

Therefore, the life insurance department and division, is one of the major sections dealing with the provision of different types of life insurance policy including endowment, term, and whole life and other types to the market.

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

new comers privately owned insurance companies have penetrated the financial market and reduced the market share of Ethiopian Insurance Corporation from 100 percent to 57 percent.

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

Currently, seventeen (17) insurance companies were established and functioned in Ethiopia with a number of branches across the countries. The following tables are the list of Insurance Companies now operating in Ethiopia

Table 2.1: List of Ethiopian Insurance Companies

S.No	Name of the Insurance
1	Ethiopian Insurance Corporation
2	African Insurance Company
3	Awash insurance Company
4	National insurance Company
5	Nyala insurance Company
6	Nile insurance Company
7	Global Insurance Company
8	United insurance Company
9	NIB Insurance Company
10	Lion insurance Company
11	Ethio-Life Insurance Company
13	Abay Insurance Company
14	Berhan Insurance share Company
15	Oromia Insurance share company
16	Tsehay Insurance Company
17	Lucy Insurance Company

Source: Annual reports of National Bank of Ethiopia

2.3 OPTIMUM CAPITAL STRUCTURE

Over the half of a century ago, the theory of capital structure has been dominated by the a lot of researcher for optimal capital structure. The firm's optimal capital structure involves trade-off between tax advantages of debt and various leverage related costs. When a firm is balanced between equity and its debt, it is known as optimum capital structure.

The firm's optimum capital structure has been studied by many research scholars like Miller in 1977 and Myers in 1984. In most studies of finding the optimal capital structure, macroeconomic data will be used. However, the study that using the firm specific factors on optimal capital structure was carried out by (Bradley et al. 1984). A model that captures the existence of tax advantage and bankruptcy cost trade-off was developed. To represent the optimal capital structure model, the assumptions are made

In most studies of finding the optimal capital structure, macroeconomic data will be used. However, study using the firm specific factors on optimal capital structure was carried out by Bradley et al. (1984). A model that captures the existence of tax advantage and bankruptcy cost trade-off was developed.

For the purpose of the study, a sample of 851 firms in the US covers 25 two digit SIC industries was selected. Three firm specific factors were examined to see the implication on the theory of optimal capital structure namely volatility (represents financial distress or risk), non-debt tax shield (represent tax advantage) and advertisement, and research and development expenses. Volatility was calculated as the standard deviation of the first difference in annual earnings before interest, depreciation and taxes over the period 1962 till 1982 divided by the average value of total assets. The non-debt tax shield was measured by the ratio of the 20 years (1962-1982) sum of annual depreciation plus investment tax credits divided by the sum of annual earnings before interest, depreciation and taxes over the period. Whereas, the level of advertisement, research and development was given by the 10 years (1973-1981) sum of annual advertisement plus research and development expenses divided by the sum of annual net sales over the same period

On the other hand, the study by Kraus and Litzenberger (1973) on optimal capital structure, attempted to introduce corporate taxes and bankruptcy penalties into a single period valuation

model in a complete capital market. From the firm's financing mix, the state where the firm was insolvent and incurred bankruptcy penalties and where the firm received tax savings attributable to debt financing are determined. By formulating the issues and problems with two propositions, this study concluded that there is a tax advantage or debt and bankruptcy penalty of debt when a firm chooses financing, optimal capital structure is reality.

2.4 THEORIES OF CAPITAL STRUCTURE

Capital structure is defined as the specific mix of debt and equity a firm uses to finance its operations. Capital structure theory is one of the most important issues in the corporate finance literature. In the literature of capital structure, there are four main important theories which include: Modigliani and Miller theory, Trade-off theory, Tacking-order theory & Agency cost theory have been discussed.

2.4.1 Modigliani and Miller Theory (MMT)

Before Modigliani and Miller (1953), there was no generally accepted theory of capital structure. Modigliani and Miller start by assuming that the firm has a particular set of expected cash flows. When the firm chooses a certain proportion of debt and equity to finance its assets, all that it does is to divide up the cash flows among investors. Investors and firms are assumed to have equal access to financial markets, which allows for homemade leverage. The investors can create any leverage that was wanted but not offered, or the investors can get rid of any leverage that the firm took on but was not wanted. As a result, the leverage of the firm has no effect on the market value of the firm. Their paper led subsequently to both clarity and controversy. As a matter of theory, capital structure irrelevance can be proved under a range of circumstances.

There are two fundamentally different types of capital structure irrelevance propositions. The first one is the classic arbitrage-based irrelevance propositions provide settings in which arbitrage by investors keeps the value of the firm independent of its leverage (Hirshleifer, 1966 and Stiglitz, 1969). The second irrelevance proposition concludes that "given a firm's investment policy, the dividend payout it chooses to follow will affect neither the current price of its shares nor the total return to its shareholders" (Miller and Modigliani, 1961). In other words, in perfect markets, neither capital structure choices nor dividend policy decisions matter.

The 1958 paper stimulated serious research devoted to disproving irrelevance as a matter of theory or as an empirical matter. This research has shown that the Modigliani-Miller theorem fails under a number of circumstances.

The most commonly used elements includes consideration of taxes, transaction costs, bankruptcy costs, agency conflicts, adverse selection, lack of Separability between operation and finance, time-varying financial market opportunities, and investors clientele effects. Alternative models use differing elements from this list. Given that so many different ingredients are available, it is not surprising that many different theories have been proposed.

Other study by Harris and Ravis, 1991) provided a survey of the development of this theory. As an empirical proposition, the Modigliani-Miller irrelevance proposition is not easy to test. With debt and firm value both plausibly endogenous and driven by other factors such as profits, collateral, and growth opportunities, we cannot establish a structural test of the theory by regressing value on debt. But the fact that fairly reliable empirical relations between a number of factors and corporate leverage exist, while not disproving the theory, does make it seem an unlikely characterization of how real businesses are financed. A popular defense has been to argue as follows: "While the Modigliani-Miller theorem does not provide a realistic description of how firms finance their operations, it provides a means of finding reasons why financing may matter." This description provides a reasonable interpretation of much of the theory of corporate finance.

2.4.2 Trade-off theory (TOT)

The term trade-off theory is used by different authors to describe a family of related theories. In all of these theories, a decision maker running a firm evaluates the various costs and benefits of alternative leverage plans. Often it is assumed that an interior solution is obtained so that marginal costs and marginal benefits are balanced.

The original version of the trade-off theory grew out of the debate over the Modigliani-Miller theorem. When corporate income tax was added to the original irrelevance, this created a benefit for debt in that it served to shield earnings from taxes. Since the firm's objective function is linear, and there is no offsetting cost of debt, this implied 100% debt financing. Several aspects of Myers' definition of the trade-off merit discussion. First, the target is not directly observable.

It may be imputed from evidence, but that depends on adding a structure. Different papers add that structure in different ways. Second, the tax code is much more complex than that assumed by the theory. Depending on which features of the tax code are included, different conclusions regarding the target can be reached. Graham, (2003) provides a useful review of the literature on the tax effects. Third, bankruptcy costs must be deadweight costs rather than transfers from one claimant to another. The nature of these costs is important too. Haugen and Senbet (1978) provide a useful discussion of bankruptcy costs.

2.4.3 Pecking Order Theory (POT)

Unlike the trade-off theory, the theory of pecking order does not assume an optimal level of capital structure. As previously indicated in the favor of the Pecking Order Theory which incorporates the assumption of information asymmetries and transaction costs, (Myers and Majluf 1984) suggests that 'firms should follow a financing hierarchy in order to minimize information asymmetry between the parties'. It states that companies prioritize their source of financing, from internal financing to equity financing, according to the principle of the least resistance, preferring to raise equity as a financing means of last resort. So, the pecking order theory claims that internal funds are used first and only when all internal finances have been depleted, firms will optimum for debt. When it is not sensible to issue any more debt, they will eventually turn to equity as a last financing resource. To summarize this theory, it predicts that more profitable firms that generate high cash flows are expected to use less debt capital than those who generate lower cash flows.

The pecking order theory argues that businesses adhere to a hierarchy of financing sources and prefer internal financing when available. However, when external financing is required, firms prefer debt over equity. Equity entails the issuance of additional shares of the company, which generally brings a higher level of external ownership into the company. Therefore; the form of debt that a firm chooses can act as a signal for its need of external finance. Thus firms that are profitable and therefore generate high cash flows are expected to use less debt compared to those who do not generate high cash flows. This theory therefore suggests that firms prefer debt to equity (Muritala, 2012). All of the mentioned mechanisms suggest that the pecking order theory entitlements a negative relationship between capital structure and firm performance, since more profitable firms optimum to use internal financing over debt.

2.4.4. Agency Cost Theory (ACT)

Jensen and Meckling developed this theory in their 1976 publications. This theory considered debt to be a necessary factor that creates conflict between equity holders and managers. Both scholars used this theory to argue that the probability distribution of cash flows provided by the firm is not independent of its ownership structure and that this fact may be used to explain optimal capital structure. Jensen and Meckling recommended that, given increasing agency costs with both the equity-holders and debt-holders, there would be an optimum combination of outside debt and equity to reduce total agency costs. Research made by Fama, Miller, Jensen (1976) observed how agency cost model. This is known as an agency cost model. It states that capital structure is determined by its agency cost. They found two types of problems create agency theory those are conflict between firm managers and shareholders as well as conflict between debt holders and shareholders.

2.5 EMPIRICAL LITERATURE REVIEW

In addition to the theory of capital structure, we need to see how research work has been done on capital structure with regard to justifying the predictions of these theories by collecting empirical evidence from many of the countries. With regarding to source of finance; the following question may be raised, ‘Is there any difference between developed and developing country?’ As mentioned below all of the empirical evidence in the literature of capital structure subject to specific condition in which prediction of some theories work while hypothesis of other theories do not. Likewise the behavior of firms to adjust the capital structure is changing when they are confronted certain internal and external situation.

Myers (2001) states all three theories of capital structure are conditional because they justify and work under their own set of hypothesis; (It means that none of three theories can give the rich picture for the capital structure. As argument of the (Eldomiaty and Ismail, 2009)‘ the business conditions are dynamic that cause firms changing their capital structure thus moving from one theory to another theory’. For example, According to Trade off theory ‘when the tax rate increases firms issuing debt for taking advantage of tax shield’; According to Pecking order theory, ‘When debt becomes less attractive to issue then firms may seek financing from retained

earnings'. Likewise if market offers some opportunities of low equity risk premium firms may finance their project with equity.

In addition to specific internal factors like tax, tangibility and etc., the factors such as growth domestic product (GDP), inflation, interest rate, capital market development and situational factors also the external factors that affect the capital structure of the firm.

2.5.1 Review in Developed Countries

After introduction by Modigliani and Miller on their seminal paper on capital structure, there are quite a number of researches directed towards determinants of capital structure. Initially the researches on the capital structure were started on the United States firms. One of the classical researches was carried out by Titman and Wessals (1988) and they studied the theoretical determinants of capital structure by examining them empirically. The theoretical attributes namely; asset structure, non-debt tax shields, growth, uniqueness, industry classification, firm size, earnings volatility and profitability were tested to see how they affect the firm's debt-equity choice. In their research, Titman and Wessals used six measures of financial leverage that includes long-term, short-term and convertible debt divided by market and by book values of equity.

Most of the empirical studies of the capital structure is conducted in developed countries (Mazur, 2007). Margaritis & Psillaki (2007) investigate capital structure of 12,240 firms in New Zealand and find evidence that consistent with theory of agency cost model. Frank & Goyal, (2009) examine capital structure of publically traded American companies from 1950 to 2003 and find the evidence supporting some versions of trade-off model. Beattie et al (2006) conducted survey research in which they examine the capital structure of listed UK firms and evidence support the predictions of Trade Off as well as pecking order theories. Huang & Ritter (2009) argued that US firms finance their operations more with external equity than debt if cost of equity capital is low. Lipson & Mortal (2009) investigate that the relationship between liquidity and capital structure of US firms and he found negative/inverse relationship between liquidity and debt.

Devic and Krstic (2001) conduct an empirical study on Poland and Hungarian countries. They identify four firms' specific factors namely: firm Size, Profitability, growth opportunities and tangibility were examined to see the effect on leverage level of the firms. Financial data were

gathered from twenty (20) listed firms from Hungary and eighteen (18) listed firms from Poland. The leverage in both countries was compared besides individually finding the choice of determinants of capital structure. With regression analysis, their results indicated that firm size was the most important determinants for Poland but profitability appeared to be the most significant factor in explaining the leverage for Hungary. When book value of leverage was used, another factor, profitability became significant for Poland and this suggested why book values were used by Polish enterprises for capital structure decision. Asset tangibility became significant only when the ratio of total debt to market value of capital used in Hungary. Generally, both countries have low debt and their gearing are even lower than of other G7 countries.

Recent evidence in finding the determinants of corporate capital structure of European countries was carried out by Antoniou et al. (2002). The firms from the UK, France and Germany for the period from 1969 till 2000 were analyzed. In their study, the independent variables were both firm specific variables and institutional and macroeconomic factors.

Among of the examined independent variables in the autoregressive model were profitability ratio, market to book ratio, effective tax rate, fixed assets ratio, firms size, earning volatility, term structure of interest rate, change in price, liquidity ratio, earnings volatility, market equity premium. All of the variables taken in their study were measured as: Profitability was measured by the ratio of operating income to total assets. Effective tax rate was measured as the ratio of total tax to total taxable income of the firm. Market to book ratio was measured by the ratio of book value of total assets less book value of equity plus market value of equity to book value of total assets. Tangibility or Fixed assets were defined as the ratio of net tangible assets to total assets. The measurement for firm size of the firm was the logarithm of total assets and logarithm of total sales. Liquidity was given by the ratio of current asset to current liabilities. Equity premium was measured by the cost of equity in relation to the return on risk free investment. Term structure of interest rates was measured by a six-month lag of interest rate. Annual stock price change was used to represent share market performance.

Firstly, the results showed that firms adjusted their leverage ratios to achieve their target capital structure and this complied with the static trade-off theory of capital structure. Leverage was positively affected by the size of the firm for all the three countries. Market to book ratio, term

structure of interest rate and share price performance as expected appeared negatively related to leverage. When the interest rate is high, the firms generally used less debt and when share price decline or when lower stock performance experienced by firms, they tend to use more debt until the stock price signal good rise. Inverse relations were noted between profitability and market to book ratio with leverage respectively in France and the UK. Tangibility of assets with leverage appeared positive in Germany, insignificant in France and negative in the UK. This suggested that asset tangibility was an important element for borrowing in Germany. Liquidity and volatility in earnings appeared insignificant in affecting leverage in Germany, France and the Hussain and UK.

Nivorozhkin (1997) studied the capital structure choice of listed firms in Poland using the firm level panel data. The firms in Poland generally had very low leverage levels due to reluctance of banks to grant loan to old and risky firms and the growing of equity market there. Therefore, Hussain and Nivorozhkin attempted to find out what five characteristic a firm has in order to get more leverage or higher leverage. To answer their question, eight firm specific factors were examined, namely ownership structure, dividend policy, asset characteristics, firm size, profitability, age, taxes and cash positions. The results indicated that large, new, foreign owned firms and firms with strong cash positions have higher levels of leverage. The age factor indicated that old firms enjoy smaller leverage and this could due to older firms having better reputation and can rely on stock market for financing. Except for age, other factors examined appeared as expected.

In another studies from the Spanish dataset, Pardon et al. (2005) in Spain. The study examined 65 non-financial listed corporations in the Spanish stock exchange from 1990 till 1999. The balance sheets and the companies share closing price at 31 December each year were extracted from the Commission Nacional del Mercado de Valoners and the Madrid Stock Exchange respectively. Six factors were examined empirically to see their influence on capital structure namely, firm size, generated resources, level of warrants, cost of debt, growth opportunities and firm reputation (number of years of age).

Generated resources were measured by the company's profit plus depreciation charges over its total liabilities. Level of warrants (also referred to as asset tangibility) was peroxide to the ratio of net tangible fixed assets over total assets. Capital structure was measured by short-term debt,

long-term debt and total debt each over total debt plus market value of equity. The results indicated that only the firm reputation (age of firm) seemed to be insignificant. As expected, size and the level of warrants showed a positive relation with leverage while generated resources cost of debt and growth opportunities indicated negative relationship with leverage. As a conclusion, the recent study of a developed nation still give similar results with the earlier study done on other developed nations.

Delcours (2006) made a recent attempt to find out the determinants of capital structure choice in the Central and Eastern Europe countries, namely Poland, Russian Federation, Czech Republic and Slovakia. The sample in this study covered a period from 1996 till 2002 and the independent variable measured by the book value of total debt to total assets, long-term debt to total assets and short-term debt to total assets. Three type of analysis is performed here namely, the fixed effects, random effects and the pooled effects. The results showed that the average debt ratio for Poland, Slovakia, Czech Republic and Russian are 0.56, 0.51, 0.43 and 0.34 respectively. The long-term debt to asset ratio were low for all the companies with 0.16 for Czech Republic, 0.81 for Slovakia, 0.21 for Poland and 0.25 for Russia that suggested that companies in these countries were mainly equity financed. The author felt that these could be due to the fact that bond markets in these countries are still developing.

2.5.2 Empirical study in Developing Countries

Relatively little research work on firms' financing decision has been done in developing countries (Shah and Khan, 2007). The main difference between developing and developed world is that in developed world firms finance their leverage with long term debt and short term debt is mainly contributing in leverage of firms in developing world (Booth et al 2001).

Tong and Green (2005) inspect capital structure of listed Chinese companies and find evidence in the support of POT (Cob-ham & Sub ramaniam, 1998). Huang and Song (2006) examine capital structure of 1200 Chinese firms and find the results consistent with TOT and POT of capital structure. El domiaty and Ismail (2009) examine the capital structure of Egyptian firms and find the evidence supporting TOT. 60 percent evidence of capital structure of Iranian firms support POT and rest 40% evidence support TOT of capital structure (Shahjahanpour. et al 2010). Taker et al (2009) investigates capital structure of Turkish firm and find evidence

supporting POT and TOT of capital structure. Qureshi (2009) investigates the capital structure of Pakistani firms and find the results consistent with POT. Gurcharan, (2010) examines the capital structure firms in selected four developing ASEAN countries and finds significant negative relationship between profitability and growth in all four countries but other determinants of capital structure are treating differently in each country. Booth et al (2001) investigate capital structure of 10 developing countries and argue that there is negative relationship between tangibility and leverage in Pakistan, Brazil, India and Turkey unlike the corresponding results in G7 by (Rajan & Zingales, 1995). While investigating capital structure of Pakistani companies (Shah and Hijazi 2004) also do not find significant relationship between tangibility and leverage. Chakraborty, 2010) argue the positive relationship between tangibility and leverage of Indian firms. Booth et al (2001) and (Shah and Hijazi, 2004) find evidence supporting POT. As mention above, evidences in developing world indicate the dominancy of pecking order theory as compared to trade-off theory.

As of the Conclusion of many researchers with except Myers, The factors affecting the developed countries also explain the capital structure decisions in the developing nations except for. Myers concluded that the decision of capital structure of the developing nations were different from the decision of capital structure in developed country. According to him, two major drawbacks found in most research which includes poor cross-sectional variation in samples and sample selection bias. In 1999, Liu 1999 conducted a study on determinants of corporate capital structure from companies listed in China between 1992 and 1997. Using the Ordinary least square (OLS) regression, the long term debt ratio was examined to see whether there were any relationship with industry classifications, Profitability, proportion of the tangible asset, firm size, growth rate of assets and ownership concentration. The results indicated that debt ratio are positively related to firm size, asset tangibility and growth rate and negatively related to ownership structure. Liu (2007) examined the determinants of capital structure of Chinese manufacturing companies to see which model of capital structure fits well with Chinese corporations.

In 2000, Chen in another studies, conducted an empirical investigation of the association between firm characteristic and the capital structure decision in high technology companies. For the purpose of the study, He examined 17 high technology industries in Taiwan. High technology companies were studied as they are in financial environment that cannot be reflected by its

characteristics such as rapid growth, competition, technological innovation and Research and & Development (R&D). Among of the Variable that examined by Him include managerial ownership, growth opportunities, R&D costs, firm size, earnings variability, profitability, cost variability, depreciation tax shield, cash flow variability, corporate tax shield and dividend payment; The results indicated that firm size, corporate tax, R &D costs, earnings variability and cost variability were positively related to leverage. The positive sign for corporate tax was a surprise result as it was predicted to be negative. The other factors appeared insignificant in the study.

Bahaduri (2002) has attempted to study the capital structure decision in developing countries by taking the Indian corporate sector as the main focus. The balance sheets from 1989 till 1995 from 363 manufacturing firms in India with nine types of industries were collected from the Centre for Monitoring Indian Economy (CMIE) database. Three measures of leverages that were calculated include total borrowing to asset ratio (TBTAR), long-term borrowing to asset ratio (LTBTAR) and short-term borrowing to asset ratio (STBTAR).

In his study, to measure all of the variables, he used only the book value due to limitation of data. The factors that determine the capital structure theories with the appropriate proxies were include asset structure, non-debt tax shield, firm size, financial distress, growth, profitability, age, signaling and uniqueness. Ratio of land and building to total assets, ratio of plant & equipment to total assets and ratio of inventories to total assets were used as proxies for asset structures. A ratio of a change in accumulated depreciation to net operating income was used as proxy for non-debt tax shield of a firm. To determine the firm size, logarithm of total assets was used as proxy. Since firms with volatile income likely to be less leveraged, two measurements were derived to measure volatility; probability of financial distress and standard deviation of a percentage change in operating income multiplied by probability of financial distress.

This study used the ratio of capital expenditure over total assets and growth of total assets as proxies to measure growth. Profitability was measured from the ratio of cash flow over total assets and the ratio of cash flow over sales. To measure age, value of one was taken for firms below the age of 20 and zero for otherwise. To capture signaling factors, the ratio of dividend payment to net operating income was calculated. Finally, product uniqueness can be measured using the ratio of R&D to sales and the ratio of selling expenses to sales.

From the analysis, it is interesting to note that firms with large size depend more on the long-term borrowing while the small firms depend more on short-term borrowings. Firms with high growth opportunities would like to increase their long-term debt taking capacity. It is also proven from the study that when the firms have more unique products it will be difficult for them to borrow. The measure of profitability or cash flow factor seemed to be significant for the short-term and total borrowings but not for long-term borrowing. The asset structure turn out to be surprising as it showed that there was no association between share of fixed assets and short-term borrowings as theory recommends that they do with collateral argument.

As a conclusion, this study was consistent with the recent study conducted by Booth et al. in 2001 on capital structure in developing countries. In this study, the researcher has managed to predict the capital structure choices of the firms in the developing country based on agency theory and asymmetric information-based models of capital structure. With the difference in institutional factors, the factors affecting the capital structure in developing countries found to be consistent with the theoretical framework of that of developed nations.

Bhole and Mahakud in 2004, also interesting to study of capital structure in India by using the panel data analysis. In this study, the changes in capital structure of both public limited companies and private limited companies were examined for a trend period, 1984-85 to 1999-2000, 1984-85 to 1991-92 and 1992-93 to 1999-2000. Four ratios were used to measure capital structure namely, long-term debt to equity(LTDTE), total borrowings to equity(TBTE), total borrowings to total liabilities (TBDTTL) and long-term borrowings to short-term borrowings (LTDSTB). The trend in corporate capital structure in India also had been examined by 13 different classes of industries. Apart from that, major determinants of capital structure had been examined to see the relationship between capital structures which includes: Cost of equity, cost of borrowing, collateral values of asset, liquidity, profitability, non-debt tax shields, size of the firm and growth rates. Several interesting results were noted. Generally, during 1966-2000, the leverage ratios for both public limited companies and private limited companies showed a significant increase.

From the leverage ratios trend of, Bhole and Mahakud found that public limited companies are more dependent on debt when compared with private limited companies. From the industry variations, they noted that among the industries having higher debt ratios include shipping,

electricity generation and supply, paper, cement, textiles and sugar while aluminum industry recorded a declining trend in debt usage.

The final part of the study showed that cost of borrowing, profitability, liquidity and non-debt tax shield were negatively related to leverage while cost of equity, firm size, growth and collateral value reveal a positive association with leverage. In terms of significance, only firm size and liquidity appeared significant determinants for all the three periods in the corporate capital structure of India. Other determinants appeared significant only in one or two periods from the three periods under study.

In the past time, many comparative studies had been conducted regarding on Capital Structure. For example, the capital structure of firms in some European, Central American, Latin American and Asian countries has been examined and even compared in various studies. Among of them: Aggarwal (1981), Errunza (1979) and Sekely and Collins (1988). To add value to the existing literature on comparative studies, Prasad et al. (1999) have conducted a comparative study of capital structure of Indian firms with the firms of developing Asian and European countries. The scholars have hypothesized that there would be no difference on the debt level of firms from either Asian country or Europe. For the purpose of their study, the capital structure of firms in India was compared with 5 other developing countries in Asia, namely Malaysia, Singapore, Thailand, Hong Kong and South Korea and with 3 other developing countries in Europe that includes Greece, Portugal and Spain. The data was collected from the 1992 Moody's Industrial Manual for firms from all those selected countries. The nonparametric test was conducted to analyze the data. Finally, the result suggested that the firms in developing countries tend to use similar levels of debt to the developed nations.

Recently, in 2004 other study on Asian countries was attempted by Desomsak et al. Firms operating in four countries in the Asian Pacific region, namely Malaysia, Thailand, Singapore and Australia were sampled in this study. All this selected four country were different in respect of the: legal traditions, financial markets, bankruptcy codes and corporate ownership structure. The objective of this study was to find out the determinants of capital structure choice of the selected countries and to investigate the potential influence of the 1997 financial crisis on capital structure decision. The financial information was gathered from the respective country's national stock analysis by covering a period between 1993 and 2001.

Accordingly, their study sample consists of 294 Thai, 669 Malaysian, 245 Singapore and 219 Australian firms. By using a cross-sectional framework, the leverage ratios of industrial firms were modeled as a fraction of the firm specific factors namely, tangibility, profitability, firm size, growth opportunities, non-debt tax shield, liquidity, earnings volatility and stock price performance. The effect of country specific variables was also tested here and they include the degree of stock market's activity, level of interest rates, legal protection of creditor's right and ownership concentration.

The results of their study shows that the country like Thai and Malaysian firms were highly leveraged, on the other hand the Australian firms were lowest leveraged. In Australia, the Tangibility of assets was positively related and appeared to be insignificant relation for other countries. This is explained by Australia being the country which has the lowest level of protection of creditors and it is rational for lenders of Australia to request for some extra security. Profitability showed a negative relationship with leverage only for Malaysia and remained insignificant for other three countries. Firm size showed a positive impact on leverage in all selected countries except Singapore while growth opportunity appeared to be negatively correlated with leverage for Thailand and Singapore and insignificant relation for Australia and Malaysian firms. The variables like" liquidity, share price performance and non-debt tax shields, showed inverse/ negative relationship with leverage for all of the four countries. Also, the Volatility of Earning appeared to be insignificant factor for all of the countries.

2.5.3 Empirical Literature Review in Ethiopia

Even though, many theory and empirical research are studied in a number of developed nations, there were a few researches directed towards to developing countries that applicability of the theories of capital structure derived from the developed nations. Mayer (1990), Singh (1995), Cheran (1996), Cobham and Subramanian (1998) were among the scholars who have studied the capital structure issue in developing countries. One of the recent empirical studies on determining the factors affecting capital structure in developing countries have been attempted by Booth et al. (2001). In his study, a sample consisting of 10 developing countries were analyzed and found that, the variables that explain the capital structures in developed nations are also relevant in the developing countries irrespective of differences in institutional factors across these developing nations.

However, there were very few studies in Ethiopia, which relates to Capital structure determinants. Ashenafi (2005) on the title of “Small and Medium enterprises: a case study in Addis Ababa” by Covering the Period between 1991 and 1996 E.C.; In his study he has tested seven firm-specific independent variables including: other fiscal benefits, economic risk, size of the firm, age of the firm, asset composition, profitability and growth opportunity of the firm.

Amanuel, (2011) , on the title “Determinants of Capital Structure: a case of Addis Ababa Manufacturing firms” and found that variables like assets tangibility, non-debt tax shield, earning volatility, profitability and size of the firms are the significant determinants of capital structure.

Kinde, (2011) on the title “Determinants of capital structure by taking Ethiopian Insurance Company” and result shows that firm specific variables including growth opportunity of the firm, profitability, business risk, liquidity and age of the firm have statistically significant influence on capital structure of Ethiopian Insurance Companies.

Kebede, (2011), on the title “Investigated the determinants of capital structure in Ethiopian small scale manufacturing co-operatives”.

Bayeh (2011), on the title “Investigate empirically the capital structure determinants : a case study of insurance industry in Ethiopia” and the results of his study shows that growth, profitability and age of the firm were found to have significant impact on capital structure of Ethiopian insurance companies proxies by long term debt and total debt ratios. Liquidity was significant for long term debt and debt to equity. Business risk was also significant for debt to equity and debt ratio whereas age had also significant influence for leverage. However, among the hypothesized capital structure determinants asset tangibility and size of the firm were found to have insignificant contribution on capital structure of Ethiopian insurance companies.

Weldemikael, (2012), on the title “Examined determinants of capital structure of Ethiopian banking Industries” and he found that the variable like profitability, size, tangibility and liquidity of the banks are important determinants of capital structure of banks in Ethiopia. However, growth and risk of banks are found to have no statistically significant impact on the capital structure of banks in Ethiopia.

Netsanet, (2012) on the title “Determinants of capital structure decisions of Construction companies in Addis Ababa, Ethiopia” and his results show that the variables including growth opportunity, tangibility, and non-debt tax shield are positively affect the capital structure of construction companies. On the other hand, Profitability, size, earning volatility, liquidity and age are inversely Affect their capital structure.

Generally, when compare our country (ETHIOPIA) with developed Countries as well as other developing countries; the researcher understands as the lack of such study or lack of the literature of capital structure in Ethiopia. So that, the lack of such studies in Ethiopia motivated the researcher to this study

The main purpose of this research is to investigate the determinants of capital structure of Ethiopian Insurance Companies. This study attempted to reduce the gap or fills the research gap by providing information about capital structure with its determinants by standing on the previous researchers' evidence.

Besides, the study attempts to determine how firms choose their capital structure, while Consider many significant factors that might affect it in order to achieve their primary objective like: maximizing value and shareholders wealth, Overcomes the conflict of interest between its shareholders and managers of the Company. The researcher's particular goal here is to investigate the capital structure determinants in the context of the Ethiopian Insurance companies.

Summary of the Chapter two

Under this chapter (Chapter two), the main objectives are to present literature review. To success such objectives, this study structured as follows:

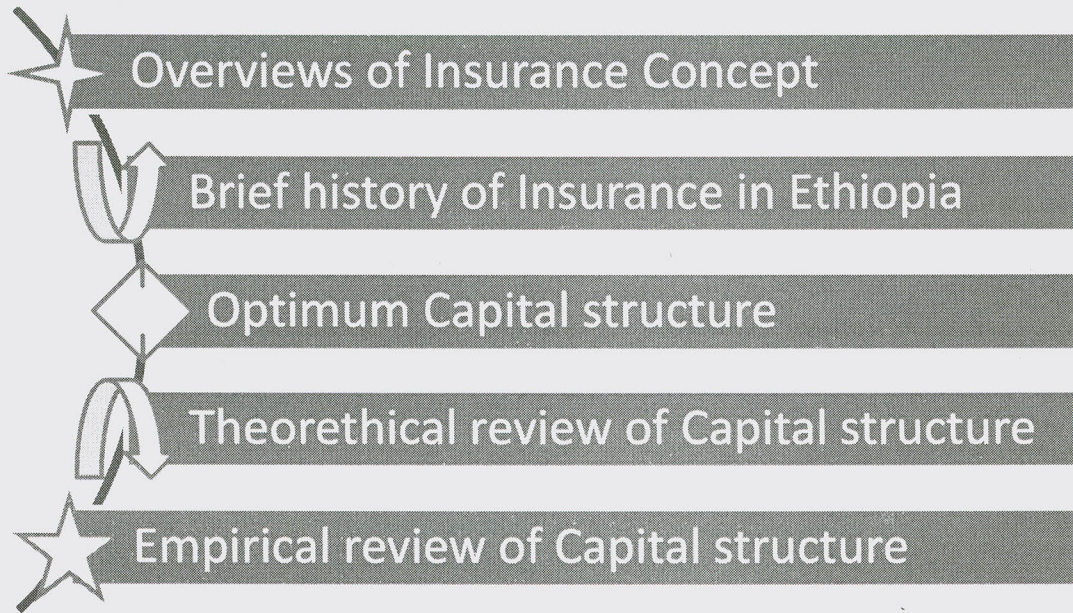
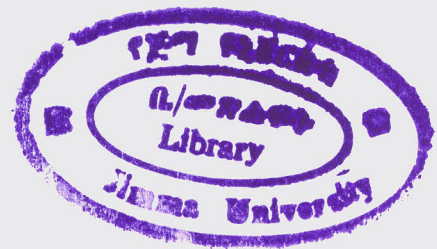


Figure 2.1: Organizational structure of Chapter Two



CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGIES

This chapter discuss about the methodologies of the study, under this topics; the research design, Research Approach, Source of data, Population and sampling techniques, methods of data collection and analysis, data specification and data measurements as well as measurement and definition of variables were discussed

3.1 RESEARCH DESIGN

Research design is defined as a framework for conducting research project. It deals with the necessary procedures for obtaining the needed information to solve research problems. According to (Malhotra, 2007), a good research design ensures that the research is conducted effectively and efficiently and the general planning about how the researcher will go about answering his or her research questions.

According to Kothari, (2004) research design is needed because it facilitate the smooth sailing of the various research operations, thereby making research as efficient as possible yielding maximum information with minimal expenditure of effort, time and money.

A choice of research design reflects the best way of a researcher about the dimensions of the research process and the research methods. The objectives of this research were to investigate the determinants of capital structure of Ethiopian Insurance Companies. In order to achieve the intended objectives of the study, descriptive research design used in this study.

3.2 RESERCH APPROACH

Depending on the nature of the research problem and the research perspectives, a research Approach could be classified as quantitative approach, qualitative approach and mixed approach (Creswell, 2003). As noted in Creswell (2003), quantitative research employs a review of the existing literature to deductively develop theories and hypotheses to be tested i.e., in this approach, the research problem is translated to specific variables and hypotheses. Quantitative research approach tends to assume that there is the cause and effect relationship between known variables. In line with this, quantitative research approach tests the theoretically established

relationship between variables by using sample data with the intention of statistically generalizing for the population under investigation and it uses statistical methods in describing patterns of behavior.

Similarly, Creswell (2003) describes the qualitative research approach as it uses to provides an understanding of social reality based on the subjective interpretation. The another types of the research was mixed research approach. This approach that seeks a practical knowledge claim philosophy that consists of both quantitative and qualitative approaches.

In general the choice among the three research approaches is guided by mainly the research problem apart from the underlying philosophy of each research method (Mc. Ker-char, 2008, cited in Yesgat (2009). That is, whether the research problem is based on the frameworks developed deductively through a review of the literature and prefigured information to be collected in advance of the study or to allow it to emerge from participants in the project or to both.

Thus, among of three listed research approach; the researcher employed quantitative research approach to investigate the capital structure determinants of Ethiopian Insurance Companies in order to achieve the stated objectives and the research perspectives.

The quantitative research approach is used to translate the research problem in to specific variables and hypothesis, (Yesgat, 2009, p.70).

3.3 SOURCES OF DATA

The data used for this study were purely secondary data. The documented data would be derived from audited financial statements each sampled Insurance Companies. Due to absence of complete data, the researcher wants to study on Insurance companies that established and service with in specific period time from (2008 to 2014) in order to assess the determinants of capital structure of the Ethiopian Insurance Companies.

Besides this, other sources like annual report, magazines, brochures, journals, newspapers, websites, etc. have also been chosen whenever found necessary.

3.4 POPULATION AND SAMPLING TECHNIQUES

This study is conducted on Ethiopian Insurance Companies. Currently, there are about seventeen Insurance Companies in Ethiopia and the researcher believe that, for meaningful analysis, there is no need to sample from the seventeen insurance companies as they are already few in number to collect information over the period of 2008-2014 of those seventeen. However, due to absence of completed and updated data, the researcher limited only on Insurance companies established and service before 2008 and. In this case, as the assumption of the researcher, the sample size of the study is only ten (10) and the remaining seven (7) companies have not gain the chance to include this sample size. In this research, the length of time is seven (7) years. As a result, the companies that have the service of less than seven years have no successful information. Therefore, the ten insurance companies used to examine the determinants of Capital structure of Ethiopian Insurance Industry are listed as follows:

Table 3.1: List of sampled Ethiopian Insurance Companies

	Name of the Insurance	Established years
1	Ethiopian Insurance Corporation	1975
2	African Insurance Company	1994
3	Awash insurance Company	1994
4	National insurance Company	1994
5	Nyala insurance Company	1995
6	Nile insurance Company	1995
7	Global Insurance Company	1997
8	United insurance Company	1997
9	NIB Insurance Company	2002
10	Lion insurance Company	2007

Source: National Bank of Ethiopia

3.5 METHODS OF DATA ANALYSIS

In this study, the researcher used the analytical techniques include the use of descriptive statistics and an econometric techniques of Panel data model. The regression model took the form of the Fixed Effects Models in order to establish the most appropriate regression with the highest explanatory power, which is better, suited to the data set employed in the study, which means a balanced panel (Greene, 2003; Chen, 2004; Sal-Wu. (2007).

Panel or longitudinal data is the combinations of cross-sectional and times series data. It is common in economics since it provides the massive source of information about an economy. Panel data is also called pooled data or micro panel data or longitudinal data or event history analysis or cohort analysis (Gujarati, 2003). Analysis of panel data is the subject of the one of most active bodies in econometrics. Besides, other benefits of panel data, researchers have been able to use time series and cross-sectional data to examine issues that could not be studied in either time series or cross-sectional settings alone (Greene, 2007). According to Baltagi, (2005), by combining time-series of cross section observations, panel data give more informative data, more variability, more efficiency and also less Collinearity.

3.6 MODEL SPECIFICATION

As of most literature, the leverage of the firm could be affected by the specific variables like asset tangibility, liquidity, risk, size, growth opportunity, profitability, and age of the firm. So Investigates the impact of such variables on firm's leverage will provide evidence of the effect of capital structure on leverage firms. By following the earlier formulated hypothesis, a regression model is formulated to capture the effect of such variables on firms leverage. This model will help in testing the stated hypothesis of the study and in achieving the earlier stated objectives.

Accordingly, in addition to achieving the stated objectives, and also to answer the questions that have been created in introduction part, a functional relationship between firm's leverage and the specific variables like asset tangibility, liquidity, risk, growth opportunity, profitability, and age of the firm.

Accordingly, the following researcher based model is organized as follows:

$$Y_{i,t} = \alpha + B \cdot X_{i,t} + \mu_{i,t}$$

Where:

$Y_{i,t}$ = represent as a vector of dependent variable

$X_{i,t}$ = represent as a vector of independent/ explanatory variable

α = represent as constant variable (Intercept)

B = represent as coefficients of variation

$\mu_{i,t}$ = represents as error terms

i = number of firms

t = number of time period

The vector of dependent variables ' $y_{i,t}$ ' are the firm's leverage indicators to be determined, while ' $x_{i,t}$ ' is vector of the explanatory or independent variables. (That means, factors that can influence firm's leverage. The constant term ' α ' represents the intercept of the equations while the ' $\mu_{i,t}$ ' are the error term that captures the variables that are not included and expected to be identically distributed with zero mean and constant variance. The subscript ' i ' denotes that the cross-sectional dimension and t , denotes the time series dimension.

✧ For the empirical investigation in this study, the following model forms were developed as follows:

$$LEV = \beta_0 + \beta_1 TANG_{it} + \beta_2 LQ_{it} + \beta_3 Br_{it} + \beta_4 GROWTH_{it} + \beta_5 PR_{it} + \beta_7 AG + \varepsilon_{it}$$

Where:

LEV = Firm's Leverage

β_0 = Constant coefficient

$\beta_1 - \beta_6$ = Regression coefficients for measuring independent variables

$TANG$ = tangibility of the Asset

LQ = liquidity of the firm

Br = business risk

GR = growth opportunities

PR = Profitability

AG = number of ages

ε = the error term

Basic Assumptions

The above panel data regression models were designed by considering the following basic assumptions.

- Zero mean value of disturbance, ε -I: $E(\varepsilon-I) = 0$. That means the mean or expected value of the disturbance term is zero. Technically, the conditional mean value of u -i is zero.
- Autocorrelation and Homoscedasticity or equal variance of ε i: $\text{var}(\varepsilon-i) = \sigma^2$. For all $i=1 \dots n$ (that means the variance of ε -i (error term) is the same (finite positive constant) for all observations.
- No autocorrelation between the disturbance terms. Each random error term (ε i) has zero covariance with, or is uncorrelated with each and every other random error term (ε i). example (for $s \neq I$), $\text{Cov}(\varepsilon I, \varepsilon s) = E\{[\varepsilon I - E(\varepsilon I)]X_i\} \{[\varepsilon I - E(\varepsilon s)]X_s\} = E(\varepsilon I | X_i)(\varepsilon s | X s) = 0$
- Normality: $u, I, t \sim N(0, \sigma^2)$: that is, u, i normally distributed for all i . this Assumptions implies that, u -i are independently and normally distributed with mean zero and a common variance σ^2 .
- Non-stochastic: X is assumed to be non-stochastic, and must take at least two different values.
- No specification bias: The regression model is correctly specified. Alternatively, there is no specification bias or error in the model used in the empirical analysis. That is, variables to be included in the model, the functional form, and statistical assumptions should be correct.

3.7 DEFINITION AND MEASUREMENT OF VARIABLES

As Harris and Raviv (1991, p. 334) state: "Several studies shed out building on the specific characteristics of firms and industries that determine leverage ratios. Their studies generally agree that leverage level increases with fixed assets, non-debt tax shields, growth opportunities, and firm size and decreases with volatility, advertising expenditures, research and development

expenditures, bankruptcy probability, profitability and uniqueness of the product.” However, the results of both theoretical and empirical studies are not always free from mistake.

Similarly, based on the data availability, the following Variables are studied in this research by classifying into Dependent variable and Independent variables. Thus the firms Leverage are used as dependent variables and Asset tangibility, Liquidity, Risk, Growth opportunity, Profitability, Age of the firm were used as independent variables.

3.7.1 Dependent Variable

Leverage (Lev)

According to the study by Hillier et.al, 2010, leverage was defined as long term-solvency ratio that address the firm’s long run ability to meet its obligation

The Concepts of Capital structure also suggested by pecking order theory, this theory shows that if a firm is profitable, then it is more likely that financing would be from internal sources rather than external sources. In other words, firms tend to use internally generated funds first and then resort to external financing. This implies that profitable firms will have less amount of leverage (Myers and Majluf, 1984). By this result, profitable firms that have access to retained profits can rely on them as opposed to depending on outside sources (debts).

Additionally, Titman (1988), Wessel’s (1988) and Barton et al. (1989) agreed up on that the firms with high profit rates would maintain relatively lower debt ratios since they can generate such funds from internal sources.

Generally, leverage are the variable that considers the main variable to express the capital structure and measured as total debt to total asset (king and santor, Ghosh, Weil (2008, 2007, 2007) respectively.

3.7.2 Independent Variable

Asset tangibility

Tangibility is one of the specific independent factors that used for measure the level of collateral firms can offer to its debtor. Agency theory suggests that “collateralized assets can be used as a

monitoring instrument to control managers, and prevent threats of transferring wealth from debt holders to shareholders.”

In developed country, Most of the empirical finding resulted with positive relation of leverage level with tangible assets (Rejan and Zingales, 1995; Gerdesmeier, Kremp and Stoss, (1999). Rajan and Zingales suggested that if balance sheet of the firm has larger proportion of tangible asset, the lenders are more willing to provide loan.

One recent study on larger sample was undertaken by Fanet al. (2003) to see the effect of asset tangibility on firm's leverage. They gathered a sample of 5,344 firms from 39 countries from time period between 1991 and 2000 and measured asset tangibility as the ratio of fixed assets to total assets. They found that asset tangibility also positively related to leverage.

Bhaduri (2002) used the following three alternatives for measuring asset tangibility namely, the ratio of land and building to total assets, ratio of plant and equipment to total assets and the ratio of inventory to total assets to really see the effect of asset class used on leverage. Bhaduri studied in India by taking sample data from 363 manufacturing firms for the period between 1989 and 1995 and found that all three proxies of asset tangibility did not appear to be a significant factor affecting the leverage. From the studies, Bhaduri concluded that term loans are not always used by the firms to finance longer assets.

Generally, most of the researcher concluded that, asset tangibility have positive relation with leverage and measured as the ratio of fixed assets to total assets

Liquidity

Liquidity is the firms' specific independent variables that used in the field of Capital structure determinants. Basically liquidity is the ability of any firms to meet its short term obligation when they become due. There are two perspectives Idea for relation of Leverage with firm's liquidity. As of the view consistent with Trade-off theory, there are positive relation between liquidity and leverage. In this theory the company with more liquidity (more current asset), will tend to use more external borrowing, because of their ability in paying off their liabilities.

Additionally, the Companies with higher liquidity level may support the higher leverage level because; the companies which have higher liquidity have ability to meet its short-term

obligations. Thus, a high asset liquidity ratio could be a positive impact on leverage because it designates the firm as easily pay its obligations and also faces the lower risk of default.

Also the evidence of the direct relation between leverage level and liquidity is in line with empirical investigation by Basil and Peter (2008), and Faris (2010)

As a whole, most of the study by many researchers agreed up on positive/direct relationship between leverage and firm's liquidity and liquidity measured as Current Asset/Current Liability

Growth opportunity

Growth opportunity is an asset which adds value to the firm, but it is an intangible asset which can't be collateralized and can't be charged under taxable income (Titmans and Wessals, 1988). Different theories suggest various predictions to show the relationship of Growth opportunity with leverage.

Some researchers like: Bevan & Danbolt, 2002; Chen, Cheng, He, & Kim, 1997; Rajan & Zingales, 1995; Titman & Wessals, 1988, predicted the negative relationship of growth opportunities with long-term debts and positive relationship with short term debts. On the other hand, other researchers like: Cespedes et al. (2010); Gill, Biger, Pai, and Bhutani (2009); Sharif, Naem, and Khan (2012), Tang and Jang (2007) and Yang, Gu, and Lee (2010) found positive relationship of leverage with growth opportunities.

Additionally, the other study which studied by Chittenden and Michaela (1999) suggested that the Firms with rapid growth opportunities are looking for more debt due to the lack of their internal earnings. Therefore, the researcher expected that growth opportunities are positive relationship with leverage and measured as Annual change in Total Asset

Profitability

According to the pecking order theories that suggested by Majluf and Myers (1984), firm has preferred retained earnings as their main source of funds for investment which is followed by debt. The last resort sought by a firm would be external equity financing. The reason for this ranking was that internal funds were not subject to any of the outside/free from external body and. External debt was ranked next equity. It has fewer restrictions than issuing equity and the issuance of external equity is seen as the most costly way of financing a firm. Therefore, when

the profitable firm is seen to have more retained earnings and chooses to have lower leverage. This behavior may be due to the costs of issuing of the new equity, as a result of asymmetric information or transaction costs.

However, there are conflicting theoretical predictions on the impact of profitability on firm's leverage (Rajan and Zingales, 1995); while Myers and Majluf (1984) predict a negative relationship and consistent to the pecking order theory; on the other hand, Jensen (1986) predicts a positive relationship if the market for corporate control is effective. However, if it is not effective, Jensen (1986) predicts a negative relationship between profitability and leverage. In this paper, the researcher expects that there is a negative correlation between profitability and leverage, i.e. the higher profit firms should follow lower leverage.

Here in this case, the ratios of profit after tax divided by total asset or Return on asset(ROA) were used as the measurement mechanisms for profitability.

Business risk

The level of the risk is said to be one of the primary determinants of the firm's capital structure (Castanias, 1983). Despite the broad consensus that risk is an important determinant of corporate debt policy, empirical investigation has led to contradictory results. However, many of the study may suggest that the higher risk may leave the obligated firms to demand more debt; this assumption is consistent with the agency theory and also supported by empirical study of Naveed et al. (2010). This empirical study indicated that in order to accomplish the claim of the insurance policyholder, the company which have many risk or the risky companies obtain external funds

In addition to that, other studies such as: Jordan et al., 1998; Michaelas et al. (1999) and Esperanca et al., (2003) Found a positive relationship between firm risk and both of the long-term and short-term debts

The empirical study in our country (ETHIOPIA) by Kinde (2011), also found positive relationship between risk of the firm and leverage ratio, which is consistent with the agency theory and supported by Naveed et al. (2010)

Therefore, many study concluded as of positive relation between leverage and business risk and measured as Standard deviation of the Operating Income

Age of the firm

Age of the firm was another important factor that affects the capital structure of the firms. The Pecking order theory argued that as the firm matures it builds reputation leading to better access to equity markets and it implies that age should be negatively related to the firms leverage.

In addition to the above evidence, other empirical results by Naveed et al, (2010) on Pakistan insurance companies specifies the negative relationship between age of the insurance companies and their leverage ratio. As of the negative relations predicts that, the older or matured Insurance Companies in Pakistan are preferred to utilize small portion of debt in formation of capital structure. According to the above evidence of Naveed et al. (2010) one key reason to employ less debt ratio is that when firm survives in business for a long time then it can accumulates more funds for running the operations of the business and subsequently keeps away the firm to go for debt

By following previous result, the other empirical study in our country (ETHIOPIA) by Ashenafi (2005), also found an inverse relationship between age and leverage ratio, which is consistent with pecking order theory.

Also another study by Hussain and Nivorozhkin (1997), suggested that, the age appeared negatively related to leverage level. As of their study, the new firms were seen in engaging in leverage than older firms. Regarding on this idea, there were two reasons pointed out by Hussain and Nivorozhkin. First, the bank has no willing to give loan to older firms that had bad earlier bank loans. Therefore, the banks were more willing to give the loans to new firms which had no such bad experience before. Secondly, the older firms may have reputation in the stock market and therefore willing to seek more equity finance.

Here, in this study, the researcher use Natural logarithm of ages as a measure of firm's age

✂ The following table shows the summary of the above empirical as well as theoretical study and measurement of determinant variables

Table 3.2: Summary of Definition & measurement, Expected sign, Empirical & Theoretical evidence

Independent Variables	Definition/measurement	Expected sign	Empirical Evidence	Theoretical evidence
Asset Tangibility	Fixed Asset/Total Asset	Positive relationship	-Kremp and Stoss, (1999) - Scott (1977), -Fan et al. (2003) -Booth et al. (2001)	-Pecking order theory -Static Trade of theory
Liquidity of the firm	Current Asset/Current Liability	Positive relationship	-Harris and Raviv, 1990 -Basil and Peter (2008), and Faris (2010) -Ronald, 2002 -Kinde (2011)	-Static Trade off theory
Growth Opportunity	Annual change in Total Asset	Positive relationship	Cespedes et al. (2010); Gill, Biger, Pai, and Bhutani (2009); Sharif, Naem, and Khan (2012), Tang and Jang (2007) and Yang, Gu, and Lee (2010)	-Pecking order theory
Profitability	Net income to Total Asset (ROA)	Negative relationship	Myers and Majluf (1984) -Harris and Ravis(1991), -Jensen (1986)	-Pecking order Theory
Business Risk	Standard deviation of the Operating Income	Positive relationship	Naveed et al. (2010) Jordan et al., 1998; Michaelas et al. (1999) and Esperanca et al.,	-Agency theory

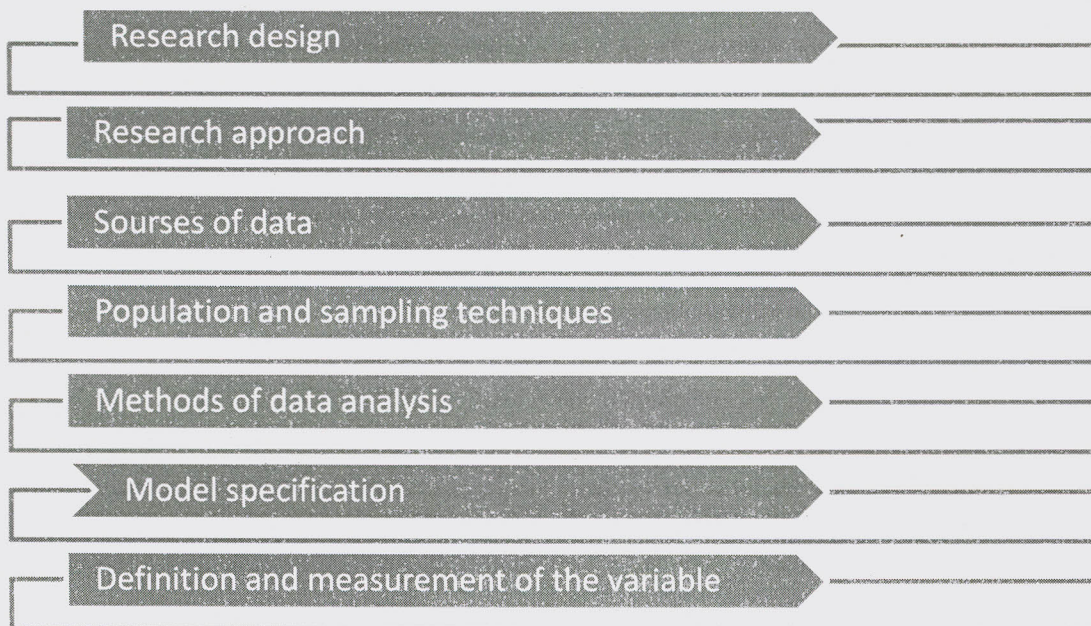
			(2003) Kinde, (2011)	
Age	Natural logarithm of ages	Negative relationship	Naveed et al, (2010) Hussain and Nivorozhkin (1997) Ashenafi (2005)	-Pecking order theory

Source: Theoretical and Empirical Literature review

Summary of the Chapter Three

This chapter presents the Research design and methodologies. Under this topic, the researcher try to discuss Research design, Research approach, sources of data, population and sample techniques, methods of data analysis, model specification, definition and measurement of the variables

Figure 3.3: Organizational structure of Chapter three



CHAPTER FOUR

RESULT AND DISCUSSION

As previously mentioned in first chapter, the main objective of this study is to justify the determinants of capital structure of Ethiopian Insurance companies. This chapter presents the main findings of the determinants of capital structure in the context of Ethiopian insurance companies as well as this chapter analysis and discussion of the results in comparison to the theories and earlier empirical results discussed and presented in previous sections by using specification, classical linear regression and model specifications. Additionally the stated hypotheses will be carefully discussed in this as to gain understanding into the different aspects of capital structure and its determinants. So, the researcher considering at the main firm specific factors (Asset Tangibility, Liquidity, Risk, Size, Growth Opportunity, Profitability and Age of the firms) as independent variables and firm's leverage as dependent variable. It also presents the results of panel data regression analysis results, financial (balance sheets and income statements) of Ethiopian Insurance Companies that taken from all sampled Insurance Companies and National bank of Ethiopia. This chapter Organized into five sections. Section one (4.1) discusses on specification and classical linear regression model. This Section also contains sub-sections 4.1.1 (Unit root test), 4.1.2 (Normality test), 4.1.3 (Multi-collinearity test), 4.1.4 (Heteroskedasticity test) and 4.1.5 (Random and Fixed effect model). The presentation of Correlation matrix analysis and Descriptive statistics analysis were presented in section 4.2 and 4.3 respectively. Finally, the regression result analysis were presented under section four (4.4) of this chapter.

4.1 SPECIFICATION AND CLASSICAL LINEAR REGRESSION

4.1.1 Unit root test

In order to determine the stationarity of the variables, the study employed Augmented Dickey-Fuller, 1979. The approach combines the attributes of time series and cross-sectional data. Therefore, the researcher firstly tested the data and variables to a unit root test in order to ascertain from the beginning, the researcher is dealing the nature of data; and secondly to know whether or not the result and findings can always hold in the long run.

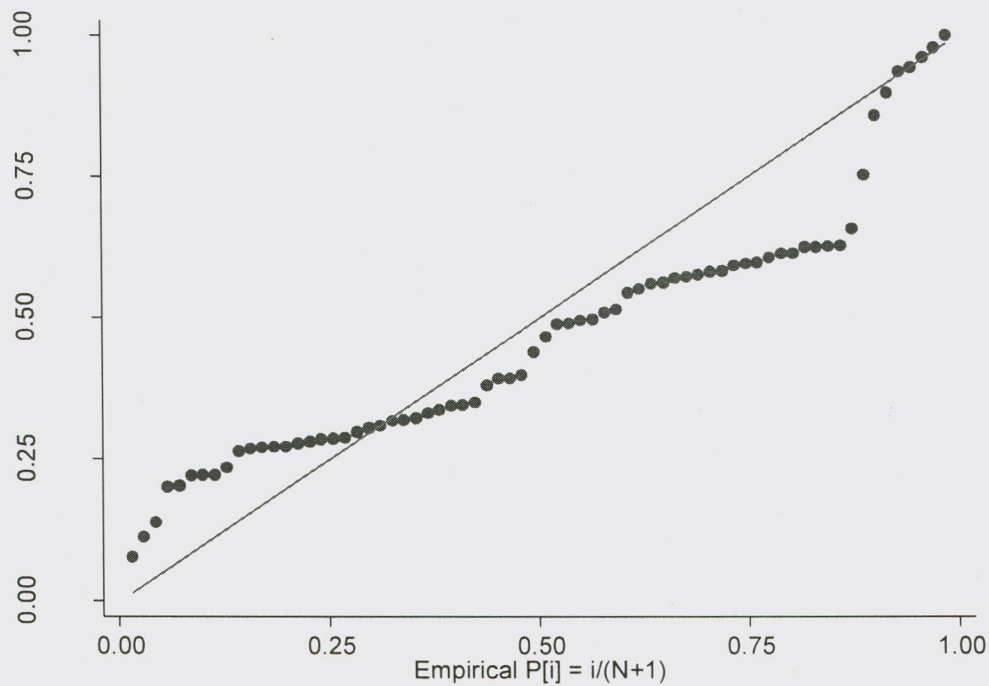
Therefore, Augmented Dickey Fuller (ADF) unit root testing was conducted for this purpose by using Stata software. As indication result from this Stata software, the researcher finds that all of the variables were static. For all, the table 4.1 shows the stationarity of this study

4.1.2 Normality test

As noted in Brook (2008) that in order to conduct single or joint hypothesis test about the model parameter, the normality assumption must be fulfilled. The simplest test for normality is a visual check of the histogram that compares the observed data values with distribution approximating the distribution. Therefore, the researcher used graphical methods for testing normality. The following graph shows as the study have no normality problem

Figure 4.1

Normal probability plot, standardized



Source: Financial statement of Ethiopian Insurance Companies by Stata software version 12.

The above P-P plot figure 4.1 showed the normality of the residual distribution around its mean of zero. Therefore, since the normality assumption is fulfilled based p-p plot, the researcher concludes that the data used in this study have no normality problem.

4.1.3 Test of multi-collinearity

Multi-collinearity is the statistical problem that is addressed among the independent variables. That means multi-collinearity exists when the independent variables are highly correlated. As recommended by Gujarati (2003), Variance inflation factor (VIF) methods are used to test for the existence of multi-collinearity among the determinants of capital structure choice. VIF measures how much the variances of the estimated regression coefficients are inflated as compared to when the determinants are non-linearly related.

If the variance Inflation Factor (VIF) value of any independent variable exceed ten (10), the variable is said to be highly collinear (Gujarati). On the other hand, multi-collinearity is exist if the correlation between two independent variables is more than 0.9 ($r=0.9$ or greater) (Pallant, 2005)

Variance inflation factor VIF is widely used method to test for multicollinearity; it measures the increasing in the variance of a coefficient as result of collinearity. Also tolerance (TOL) is a commonly used measure of collinearity and multicollinearity. It is represented by $1-R^*$, where R^* is the coefficient of the determination for the prediction of a variable by other independent variables. As a tolerance value smaller, the variable is more highly predicted by other independent variables. Variable inflation factor is directly related to the tolerance value ($VIF=1/TOL$). More than 10 for VIF values or TOL less than 10 indicates high degrees of collinearity or multicollinearity among the independent variables (Hair j. Babin B, Anderson and Talham 2006). Moreover, the following two table shown as the date haven't multi-collinearity problem

Table 4.1
Table test for multi-collinearity

Variable	VIF	1/VIF
roa	5.28	0.189336
gr	4.51	0.221972

tangibility	2.06	0.485929
logag	1.72	0.580850
liquidity	1.22	0.818957
risk	1.05	0.948865
Mean VIF	2.64	

Source: Financial statement of Ethiopian Insurance Companies

Having guidance from the correlation matrix, variables are tested for multicollinearity using Stata software for each relationship testing the values of variance inflation factor (VIF) and tolerance (TOL). As a result, VIF and tolerance results are acceptable and prove that the data is free from multicollinearity.

Table 4.2

Correlation matrix between Independent Variable

	Tang	Liquid	Gr	Roa	Risk	Logag
Tangibility	1.0000					
Liquidity	-0.3376	1.0000				
Gr	0.1666	0.0142	1.0000			
Roa	-0.4773	0.0385	-0.8288	1.0000		
Risk	-0.1187	0.0725	0.0571	0.0026	1.0000	
Logag	-0.4302	0.2726	-0.4985	0.5230	0.1559	1.0000

Source: Financial statement of Ethiopian Insurance Industries

As we see from the above correlation matrix table, there were no such high correlation between the explanatory variables. Therefore, we can say there is no multicollinearity problem in this study.

4.1.4 Test of Heteroskedasticity

In the Concepts of Heteroskedasticity test, the disturbance of the linear regression model that performing in the regressions are homoscedastic or Constant error term. If the errors have not a constant variance, they are said to be heteroscedastic (Brook (2008))

According to Gujarati, 2004: states that, Heteroskedasticity is to be present in a model if the variances of the error- term of the different observations are not same

To test whether there is a presence of Heteroskedasticity, the researcher used a Breusch-pagan test to identify any linear form of Heteroskedasticity and this test is organized into Stata.

According to Breusch-pagan tests of the null hypothesis that the error variances are all equal versus the alternative that the error variance are a multiplicative function of one or more variables.

The hypothesis that tested in Breusch-Pagan regression tests as follows:

Breusch-Pagan / Cook-Weisberg test for Heteroskedasticity

Ho: Constant variance

Variables: fitted values of leverage

chi2(1) = 0.23

Prob > chi2 = 0.6288

As a result the researcher does not accept Heteroskedasticity. Therefore, this model does not face any Heteroskedasticity problem

4.1.5 Fixed Effect versus Random Models

Fixed effects regression model is the model uses when we want to control for omitted variables that differ between a cases but are stationary over time. It lets us use the changes in the variables over time to estimate the effects of the independent variables on our dependent variable, and is the main technique used for analysis of longitudinal or panel data.

On the other hand, If we have reason to believe that some omitted variables may be constant over time but vary between the cases, and others may be fixed between cases but vary over time, then we can include both types by using random effects. Stata's random-effects estimator is a weighted average of fixed and between effects. The null hypothesis is that the residuals in the

random effects are uncorrelated with the regressions and that the model is correctly specified. Similarly, the estimated coefficients by the Random effect model or fixed effect model should be statically equal. Otherwise, the Random Effect Model estimator is inconsistent. If the null hypothesis is rejected, then the units specific effects are correlated with the Regressors or the models are not correctly specified (Baltagi 2005). In other words, the null hypothesis states that individual effects are not correlated with the other Regressors in the model. If correlated (Ho is rejected) a random effects model produces biased estimators, so the fixed effects model is preferred (Hun Myoung park)

The common accepted way of choosing between fixed and random effects regression model is Hausman test. The Hausman specification test checks a more efficient model against a less efficient but consistent model to make sure that the more efficient model also gives consistent results. However, fixed effect model (FEM) is more appropriate in the case of focusing on specific sets of the firms.

To run a Hausman test comparing fixed with random effects in Stata, we need first to estimate the fixed effects model, save the coefficients so that we can compare them with the results of the next model, estimate the random effects model, and then do the comparison.

To put it more simply, the idea behind this test is that if error is uncorrelated with x_{it} then there is no difference between estimates from both fixed effects (within the group's estimator) or random effects (GLS estimators) models.

Ho: u_i are not correlated with x_{it}

H1: u_i are correlated with x_{it}

Under the null hypothesis, random effects would be consistent and efficient (i.e. Ho is true), but under the alternative hypothesis, random effects would be inconsistent. The fixed effect model is consistent whether the null hypothesis is true or not, this means if the hausman specification test is significant then we accept the alternative hypothesis that there is a correlation between individual effects and x_{it} (Baltagi, 2005).

The Hausman test tests the null hypothesis that the coefficients which are estimated by the efficient random effects estimator are the same as the ones estimated by the consistent fixed effects estimator. Therefore, this includes insignificant P-value, Prob >chi2 greater than 0.05,

then it is more suitable to use random effects. However, in this study our p-value were less than 0.05 (significant P-value) then researcher should use fixed effects models.

Table 4.3
Houseman specification test

	Coefficients			
	(b) fixed	(B) random	(b-B) Difference	sqrt (diag(V_b-V_B)) S.E.
roa	-1.013817	1.380241	-.3664246	.1633467
size	-.4248336	-.3734072	-.0514264	.
tang	.5009388	.8115007	-.3105619	.3409485
liqu	.0147753	-.0150555	.0298307	.
logag	-.5177076	-.4790611	-.0386464	.
risk	.1028051	.0726229	.0301822	.0018317

Source: Financial statement of Ethiopian Insurance Companies

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2 (6) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 13.13

Prob>chi2 = 0.041 (V_b-V_B is not positive definite)

- In this study since null hypothesis is not accepted as well as p-values of less than 0.05, then the fixed effect model is more appropriate methods

4.2 PEARSON CORRELATION MATRIX ANALYSIS

The Pearson's Correlation matrix shows what type of relationship exists between the two variables. Correlation test is the common carrying out in research that relate with regression was determine whether collinearity exist among the dependent and independent variables as well as relationship between independent variables employed in the work or not, because it is capable of distorting the true picture of the relationship of dependent variable and independent variable, the

most widely-used type of correlation coefficient is Pearson, also Called linear or product moment correlation.

According to Brooks (2008), if it is stated that y and x are correlated, it means that y and x are being treated in completely symmetrical way. Thus, it is not implied that the changes in x cause changes in y or change in y cause change in x, rather it is simply stated that there is evidence for a linear relationship of the two variables, and that movements in the two are on average related to an extent given by the correlation coefficient. Correlation coefficient between the two variables ranges from positive 1 (+1) that means perfect correlation up to negative 1 (-1) which means perfect negative relationship. It also defined as dependence of one variable on another variable.

Based on the Pearson correlation relationship, the variables includes: Asset tangibility, Liquidity, Risk, Size, Growth opportunity, Profitability, and Age of the firm as independent variable on the other hand, firms leverage as dependent variable were present in the below table 4.4.

Table 4.4

Pearson Correlation Matrix

	Leverage	Tangibility	Liquidity	Gr	Roa	Risk	Logag
Leverage	1.0000						
Tangibility	0.6130	1.0000					
Liquidity	-0.1574	-0.3376	1.0000				
Gr	0.5727	0.1666	0.0142	1.0000			
Roa	-0.7377	-0.4773	0.0385	-0.8288	1.0000		
Risk	0.0278	-0.1187	0.0725	0.0571	0.0026	1.0000	
Logag	-0.5473	-0.4302	0.2726	-0.4985	0.5230	0.1559	1.0000

Source: From financial statement of Ethiopian Insurance Companies

Table 4.4 presents the analysis for simple regression between variables for the interval year of 2008-2014, and indicates that, there is a positive relationship of dependent variables (leverage) with independent variables such as: Tangibility, growth opportunity and business risk with Coefficients of 0.6130, 0.5727 and 0.0278 respectively. On the other hand, liquidity, Profitability, and age of the firm have negatively correlated with firms leverage with coefficient of -0.1574, -0.7377, and -0.5473 respectively, it means that if the firms increase in leverage by

one, the variables like liquidity, Profitability and age of the firm decreases with the coefficients - 0.1574, -0.7377, and -0.5473 respectively

4.3 DESCRIPTIVE STATISTICS ANALYSIS

This study sections summarized the descriptive statistics results of dependent variables (leverage) and independent variables (tangibility, liquidity, growth opportunity, profitability, business risk and ages of the firms) for sampled Ethiopian Insurance companies during the interval period between 2008 and 2014.

As shown in the below table (table 4.5), the descriptive statistics showing the mean, media, standard deviation, minimum and maximum values of both dependent and independent variable

Table 4.5

Descriptive statistics data

Variable	Obs	Mean	Std. Dev.	Min	Max
leverage	70	.6170665	.4184312	.02007	3.194154
tangibility	70	.2251537	.1941975	.041384	1
liquidity	70	1.999805	1.422656	.1037735	7.700222
gr	70	.1757527	.666933	-1	4.552314
Roa	70	.0555085	.2186852	-1.687968	.2650319
Risk	70	.3286846	1.663497	-.98007	13.64862
Logag	70	2.647205	.539632	.6931472	3.663562

Source: from financial statement of Ethiopian insurance Companies

As shown in the above table 4.5, presents the descriptive statistics for both dependent and independent variables of Ethiopian Insurance Companies as follows:

Dependent variable (leverage)

As previously planned in this study, the leverage/debt was measured by total debt or total liability over total asset. Accordingly, the mean values or average values of leverage is 0.617(61percent) with standard deviation of 0.4184312 or 41% (that means it deviate by 41 percent from the mean value of the sampled across Ethiopian insurance companies. In this case the 0.617 leverage values shows that 61% debt financing is done against total assets and only

39% of the total asset financed through equity capital in Ethiopian Insurance Companies over the period of 2008-2014.

Independent Variables (tangibility, Liquidity, growth, profitability, risk and ages)

Asset tangibility which measured as fixed asset divide to total asset and it shows that, the amount mean values of 0.2251537(22%) and standard deviation of 0.1941975(19%)of Ethiopian Insurance companies (which mean that 22 percent of Ethiopian insurance companies were fixed asset).

On the other hand, liquidity as it measured as Current asset to Current liabilities, it have the mean value of 1.999805 which indicate the amount of cash generated from current assets is 1.999805 or Current asset of the Ethiopian Insurance Companies were 1.999 time greater than Current or short term liability. The liquidity values of sampled Ethiopian Insurance companies were varied from as low as 0.1037735(10%) to high as 7.700222 (very great variation of liquidity) and the value of standard deviation is 1.422656 (that means, it deviates from the mean value of the sampled Ethiopian insurance companies by 1.422656).

The average values or the mean values of growth opportunities of the sampled Ethiopian Insurance companies were 0.1757527 as measured by annual change of total asset. The maximum value of annual change of total asset among the sampled Ethiopian insurance companies were 4.552314 and minimum change of total asset is -1 (great variation of growth asset among sampled Ethiopian Insurance Companies). The value of standard deviation of growth is 0.666933 (that means it deviated by 0.666933 among of the sampled Ethiopian Insurance Companies from the mean values).

The profit ratio of sampled Ethiopian Insurance Companies as measured as return on asset (ROA) was about 5.6 % of total asset. It varied from -1.687968 to 0.0555085 across the sampled Ethiopian Insurance Companies. The standard deviation is 22 percent (that means it deviates from average value by 22%).

The business risks of the sampled Ethiopian Insurance Companies were measured as the standard deviation of the operating Income (volatility of earning) and have the mean values of 0.3286846. The values of the business risk were varied from -0.98007 to 13.64862 with the standard deviation of

1.663497. This implies that the risk values of the Ethiopian insurance companies deviated by 1.663497 from the mean value.

On the other hand, the ages of the sampled Ethiopian Insurance Companies as measured as Natural logarithm of ages and shows the mean value as well as standard deviation of the sampled Ethiopian Insurance Companies were 2.65 and 0.54 respectively. The age values of the Ethiopian Insurance Companies were varied from 0.69 to 3.66.

4.4 REGRESSION RESULT ANALYSIS

This study examines the Capital structure determinant of Ethiopian Insurance Companies that established and functioned before 2008. The sample of this study contains 10 Insurance Companies, which have a minimum of seven consecutive year's audited financial statement data for the period interval between the years 2008 – 2014 were used.

In investigating the Capital structure of Ethiopian Insurance Industries, the researcher used a regression analysis to test the effect of six Independent (explanatory) variables (Asset Tangibility, Liquidity, Risk, Size, Growth Opportunity, Profitability and Age of the firm) on the dependent (explained) variable (that means leverage). Therefore, in this study the researcher used multiple regression analysis, in which tests have been made to examine whether one or more independent variables effect on the variation on the dependent variable. In relation to this, the researcher also examined whether the independent variables have a positive or negative effect on the dependent variable (that means leverage).

For all, this regression tests showed in the below (tables 4.6) to discusses the relationship between leverage and Independent Variables.

Table 4.6
Regression Result
Fixed effect regression model

Indep. variab	Coef.	Std. Err.	t-value	P> t	[95% Conf. Interval]	
Tangibility	.5596026	.2626814	2.13	0.037	.0335921	1.085613
Liquidity	.0213501	.0241486	0.88	0.380	-.0270066	.0697067
Gr	.0667453	.1247595	0.53	0.595	-.1830814	.316572

Roa	-.9158779	.3627943	-2.52	0.014	-1.642361	-.1893949
Risk	.0304269	.0194585	1.56	0.123	-.0085381	.0693919
Logag	-.1944698	.0784309	-2.48	0.016	-.351525	-.0374146
Cons	.9922829	.2409909	4.12	0.000	.5097069	1.474859

Source: financial statements of Ethiopian insurance industry

Based on the above regression results, the researchers develop the following estimated regression function:

$$LEV = \beta_0 + \beta_1 TANG + \beta_2 LIQ + \beta_3 GROWTH + \beta_4 PROFIT + \beta_5 RISK + \beta_6 AG + \varepsilon$$

$$LEV = \beta_0 + \beta_1 TANG + \beta_2 LIQ + \beta_3 GROWTH - \beta_4 PROFIT + \beta_5 RISK - \beta_6 AG + \varepsilon$$

$$LEV = 0.9922829 + 0.5596026 TANG + 0.0213501 LIQ + 0.0667453 GROWTH - 0.9158779 PROFIT + 0.0304269 RISK - 0.1944698 AG + \varepsilon$$

As the results from the above estimated regression; most of the dependent variables such as: Asset tangibility, liquidity, growth opportunity and business risk have direct relation with Leverage ratio. On the other hand, only two of independent variables such as: Profitability and Age of the firm have inverse relationship with leverage ratio.

Thus, the above regression equation can be used to predict the value of the dependent variable (leverage) based on the values of the independent variables (tangibility, liquidity, growth opportunity, profitability, business risk and ages of the firm). For example' when the variables like: Asset tangibility, liquidity, growth opportunity and business risk increased by 1% (one percent), the value of leverage level of Ethiopian Insurance Companies increased by mean values of 0.5596026, 0.0213501, 0.0667453, 0.0304269 respectively. Similarly, the remaining two independent variables such as Profitability and Age of the firm have negative impact on the leverage ratio (that means if the value of Profit and age of the firm increases by 1% (one percent), the value of our dependent or leverage level of Ethiopian Insurance Companies decreases by 0.9158779 and 0.1944698 respectively.

- ♣ In this case, the researcher discusses the effects of each and every independent variable on the dependent variable or leverage level of Ethiopian Insurance Companies.

Asset Tangibility

Tangibility is one of the specific independent factors that used for measure the level of collateral firms can offer to its debtor. Agency theory suggests that “collateralized assets can be used as a monitoring instrument to control managers, and prevent threats of transferring wealth from debt holders to shareholders.”

In developed country, Most of the empirical finding resulted with positive relation of leverage level with tangible assets (Rejan and Zingales, 1995; Gerdesmeier, Kremp and Stoss, (1999). Rajan and Zingales suggested that if balance sheet of the firm has larger proportion of tangible asset, the lenders are more willing to provide loan.

The studies conducted by Jong, et al (2008) and Huang & Song (2006) suggest the positive relation between fixed asset and leverage. Also the study by Frank and Goyal, (2009) found positive relationship between Asset Tangibility and Leverage level.

Generally, According to both theory of TOT and POT suggested, there is a positive relationship between Tangibility of the Asset and Leverage level. On the other hand, the finding of the empirical study by Murindet (2003) and Suto (2003) who found a positively and significant relationship of Leverage with Asset Tangibility for the Malaysian firms.

In Ethiopia the empirical study by Bayeh, (2011) who investigates capital structure determinants in case of Ethiopian Insurance Companies, also concludes the positive relationship between Asset tangibility and firms leverage.

Also the result in these study findings directs and significant relationship between Asset tangibility and leverage level of Ethiopian Insurance Companies and this result in line with POT and TOT and also consistence with the hypothesis that constructed initially in this study.

Liquidity

According to the prediction of the Tradeoff theory, there are positive relationship between liquidity and leverage ratio. This theory suggested that, the more liquid firms would use the external financing because of their ability to pay back their liability and also to get the tax benefit. Therefore, the expected liquidation values are higher for the firms with more liquid

assets, which mean that, the debt of the firm is directly related with asset liquidity (Harris and Raviv 1990).

Additionally, the Companies with higher liquidity level may support the higher leverage level because; the companies which have higher liquidity have ability to meet its short-term obligations. Thus, a high asset liquidity ratio could be a positive affect because it designates the firm as easily pay its obligations and also faces the lower risk of default.

Also the evidence of the direct relation between leverage level and liquidity is in line with empirical investigation by Basil and Peter (2008), and Faris (2010)

In Ethiopia the empirical study by Bayeh, (2011) who investigates the Capital Structure Determinants in case of Ethiopian Insurance Companies, also concludes the positive relationship between Liquidity and firms leverage.

As of the finding results by fixed effects models, the liquidity have direct related with leverage level but this variable was not significant effect on leverage level of Ethiopian Insurance Companies.

Therefore, the positive relationship of liquidity ratio and the leverage level of the Ethiopian Insurance Industry are in line with Trade off theory and this result also consistence with initial hypotheses organized in this study

Growth Opportunity

According to evidences from the theories of POT, the preference of the firms first from internal sources: So, the firms with relatively high growth will tend to issue securities less subject to the information asymmetries (that means that, short term debt). This concept may lead the firms with relatively higher growth having more leverage. Therefore, the assumption of growing firm requires huge capital and the internal funds may be insufficient to finance that huge capital requirement to meet requirements, so firms must use external borrowing or debt (packing order theory).

According to assumption of Ronny and Clairette (2003), Paulo and Zeila (2007) examine the positive relationship between growth opportunity and leverage level of the firms

Weldemikael, (2012) who investigates the relationship between leverage and firm specific (profitability, tangibility, growth, risk, size and liquidity) determinants of capital structure decisions and the theories of capital structure that can explain the capital structure of banks in

Ethiopia, also concludes the positive relationship between growth opportunity and firms leverage.

According to above finding result of the panel fixed effect estimation regression model shows that, the Growth Opportunity and the Leverage firms of the Ethiopian Insurance Company have direct relationship and this study was consistent with POT

Profitability

The panel fixed effect estimation regression result shows that, the Profitability and leverage ratio have Negative and significant relationship.

The impact of the profitability on leverage was well explained by the theory of “pecking order” theory that suggested by Majluf and Myers, (1984). As the assumption of this theory, the firm has an ordered of first prefer retained earnings as their main source of funds which is followed by debt. The last resort sought by a firm would be external equity fund or debts. Because: the internal funds are cheap and not subject to outside control. As a result when profitable firms are have more retained earnings and choose lower level of leverage. Therefore, from this assumption we understand the inverse relationship between Profitability and leverage level.

Weldemikael, (2012) who investigates the relationship between leverage and firm specific (profitability, tangibility, growth, risk, size and liquidity) determinants of capital structure decision and the theories of capital structure that can explain the capital structure of banks in Ethiopia, also concludes the negative relation between Profitability and leverage.

Similarly, in this study the researcher examine by fixed effective regression model and the last result states negative relationship between profitability and leverage firms of Ethiopian Insurance Companies. As of the researcher tried to show on the above table, the panel fixed effective regression model results shows the negative relationship between the profitability of sampled Ethiopian Insurance Industries and their leverage level with a regression coefficient of - 0.9158779 and p-value of 0.014.

Therefore, from the result of this study it concludes that, the profitability of Ethiopian Insurance Companies increases with decreases of Leverage level.

Generally, this study concluded as: The profitability and leverage level of Ethiopian Insurance Companies were negative and significant relationship and this result is consistent with the primary hypothesis of the study.

Business Risk

The level of the risk is said to be one of the primary determinants of the firm's capital structure (Castanias, 1983). Despite the broad consensus that risk is an important determinant of corporate debt policy, empirical investigation has led to contradictory results. However, many of the study may suggest that the higher risk may leave the obligated firms to demand more debt; this assumption is consistent with the agency theory and also supported by empirical study of Naveed et al. (2010). This empirical study indicated that in order to accomplish the claim of the insurance policyholder, the company which have many risk or the risky companies obtain external funds

In addition to that, other studies such as: Jordan et al., 1998; Michaelas et al. (1999) and Esperanca et al., (2003) found a positive relationship between risk of the firms and both of the long-term and short-term debts

The empirical study in our country (ETHIOPIA) by Kinde (2011), also found positive relationship between risk of the firm and leverage ratio, which is consistent with the agency theory and supported by Naveed et al. (2010)

Similarly, the regression result of this study shows that there is positive relationship between Business risk and firms leverage, but not significant relationship between Business risk and Leverage level of Ethiopian Insurance Companies.

Age of the firm

The result that gained from fixed effect estimated regression model shows the Negative relationship between Age of the firm and leverage level of Ethiopian Insurance Companies. This result is similar to the assumption of Pecking order theory.

The Pecking order theory argued that as the firm matures it builds reputation leading to better access to equity markets and it implies that age should be negatively related to the firms leverage. Similarly, as it is suggested by pecking order theory, the researcher result also concluded the Inverse relationship between ages of the Ethiopian Insurance Companies with

their leverage ratio under panel fixed effect estimation result of this study. The estimation result reveals negative and significant relationship between age and leverage level of the Ethiopian Insurance Companies with coefficient values of -0.1944698 and statistic p-values of 0.016.

In addition to the above evidence, other empirical results by Naveed et al, (2010) on Pakistan insurance companies states the negative relationship between age of the insurance companies and their leverage ratio. As of this negative relationships predict that, the older or matured Insurance Companies in Pakistan are preferred to utilize small portion of debt information of capital structure.

According to the above evidence of Naveed et al. (2010) one key reason to employ less debt ratio is that when the firms survives in a business for a long time, then it can accumulates more funds for running the operations of the business and subsequently keeps away the firms to go for debt

By following some developed countries, the empirical study in our country (ETHIOPIA) by Ashenafi (2005), also found an inverse relationship between age and leverage ratio, which is consistent with pecking order theory.

In this case, the finding results from fixed effect regression model the researcher conclude the negative and significant relationship between ages of the Ethiopian Insurance Companies with their leverage level.

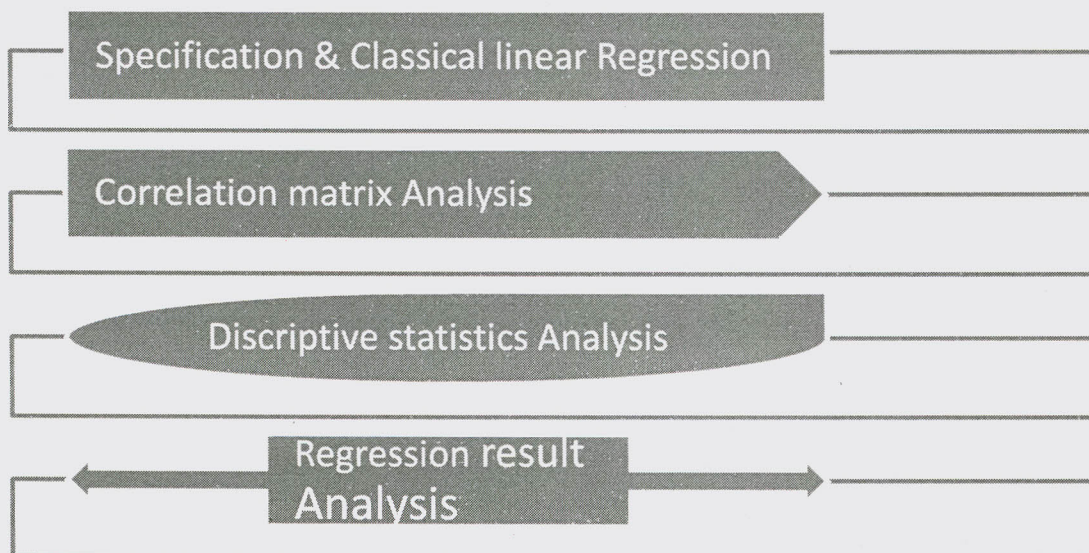


Figure 4.2: Organizational structure of Chapter four

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

The main objective of this paper is to investigate the determinants of the capital structure of Ethiopian Insurance Industry. This chapter concludes the research thesis by presenting the major findings results as well as providing a discussion and empirical conclusions drawn from the research study. Finally this section finishes by providing further recommendation for future research. Therefore, in this last Chapter the researcher discusses by dividing into two parts. In the first part 5.1, discussion of summary and conclusion all major important points and in section 5.2 discusses recommendation (for the Ethiopian Insurance Companies and also further Recommendation for the future researchers in sub-section 5.2.1 and 5.2.2 respectively).

5.1 CONCLUSION

Since Modigliani and Miller (1958), the Issue of capital structure has many number of debates among many researcher has been a confusing issue in corporate finance and accounting literature. Despite the MM theories, managers in the modern world are faced with a challenge of determining how to combine debt and equity in order to achieve the optimum capital structure that would minimize cost of capital and maximize return to shareholders. To investigate such complex issues, many of theories (like Trade off theory, Pecking order theory and Agency cost theory) have been developed and they generally focus upon what determinants variables effect on leverage level of the firms.

Similarly, the main objective of this research were to investigate Capital structure determinants of Ethiopian Insurance Companies and also specifically: determine the most determinant of Capital structure of Ethiopian Insurance, Identify the relationship of leverage level with listed independent variable (Asset tangibility, liquidity, Business risk, Profitability, Growth opportunity and Ages of the firm) and thirdly to understand the theories of capital structure that can explain the capital structure of Ethiopian Insurance Companies.

To success the listed above general and specific objectives, the researcher gather secondary data from Sampled Insurance and National bank of Ethiopia and used quantitative research method

and this study was applied the panel data regressions estimation for ten sampled Insurance Companies in Ethiopia by limiting time interval between 2008 and 2014.

All of the Company which has audited financial statement for five Consecutive years (2008-2014) was included in the study. In line with examined empirical and theoretical implication of the capital structure, this study analyses the determinants of capital structure decisions of Ethiopian insurance Companies by examining some recently developed theories.

The factors determine the capital structure and decision of Optimum Capital structure are choice based on previous empirical result and theories of Capital structure. Accordingly, among of the theories of Capital structure such as pecking order theory and Tradeoff theory and agency cost theory tried to find the theory which mostly explain the financial decision of sampled Ethiopian Insurance Companies.

As of the Pecking order theory states that, firms prefer internal financing to external financing and risky debt to equity due to information asymmetries between insiders and outsiders of firm. On the other hand, Static trade-off theory suggests that optimal capital structure is a tradeoff between net tax benefit of leverage/debt financing and bankruptcy costs.

For Accomplish this study, the researcher develops six variables to examine determinants of Capital structure determinants. The results of regression analysis disclose that firm leverage as dependent variable and variable like Asset tangibility, Liquidity, Growth Opportunity, Profitability, Business risk and ages of the firms as independent variable.

➤ **Asset Tangibility**

In this study, the relation between leverage and Asset tangibility of Ethiopian Insurance Companies is consistence with Pecking order theory and Tradeoff theory (that mean positive relationship of tangibility with Leverage). So the Tangibility was Positive and Significant variable. Therefore, asset tangibility was an important element for borrowing in in Ethiopian insurance companies.

➤ **Liquidity**

As of the finding results by fixed effects models, the liquidity have direct related with leverage level but this variable was not significant effect on leverage level of Ethiopian Insurance Companies. Therefore, the positive relationship of liquidity ratio and the leverage level of the

Ethiopian Insurance Industry are in line with Trade off theory and this result also consistency with initial hypotheses organized in this study

➤ **Growth Opportunity**

According to above finding result of the panel fixed effect estimation regression model shows that, the Growth Opportunity and the Leverage firms of the Ethiopian Insurance Company have direct relationship and this study was consistent with the assumption of Ronny and Clairette (2003), Paulo and Zeila (2007)

➤ **Profitability**

In this study the fixed effective regression result shows that, there is a negative relationship between profitability and leverage of the Ethiopian Insurance Companies. As of the researcher try to show by the panel fixed effective regression estimation results shows the negative relationship between the profitability of sampled Ethiopian Insurance Industries and their leverage level with a regression coefficient of -0.9158779 and p-value of 0.014. Therefore, from the result of this study it concludes that as the profitability of Ethiopian Insurance Companies increase, the Leverage level of these companies' decreases.

Generally, the result of this variable was summarized as: The profitability of Ethiopian Insurance Companies and its leverage were negative and significant relationship and also this result is consistent with the primary hypothesis of the study.

➤ **Business Risk**

The regression result in this study shows that there is positive and insignificant relationship between Business risk and leverage levels of Ethiopian Insurance Companies.

➤ **Age of the firm**

✂ The empirical result that gained from fixed effect estimated regression model shows the Negative and statistically significant relationship between ages of the firms and leverage level of Ethiopian Insurance Companies. This result was consistent Pecking Order Theory and result implies that the old established insurance companies getting difficulties in accessing the external source of finance (leverage/debt)

Finally, the study summarized as follows:

- ❖ From the selected variables, the variables like Asset tangibility, Profitability and Ages of the firm were the Very important variable in capital structure determinants of Ethiopian Insurance Companies.
- ❖ The finding result of the relationship between leverage level and Independent variables were summarized as follows: Asset tangibility, Liquidity, Growth Opportunity and Business Risk have direct or positive relation with Leverage ratio. On the other hand, two variables (Profitability and Age of the firm) have inverse relation with leverage ratio.
- ❖ Lastly, as of the finding result of this study, the Peking order theory of capital structure was the most appropriate to Ethiopian Insurance Companies; and the two remaining theory (Static theory and Trade of theory) were relatively less support the financial behavior of capital structure of Ethiopian Insurance Companies.

5.2 RECOMMENDATION

In this study, a number of theoretical and empirical studies have been conducted to examine the factors affecting Capital structure. Consistently, by depending on finding result from this study, the following stated suggestions are recommended by researcher to increase their attention on Capital structure decision.

5.2.1 Recommendations for policy direction and management of Ethiopian Insurance Companies

After finalizing this study, the researcher suggested the following recommendation for Ethiopian Insurance companies:

- ✂ The result finding from this study shows that the Ethiopian Insurance Companies highly used debt as the source of finance (which means about 61 %). While the finding result states that the leverage level negatively affects the profitability of Ethiopian Insurance companies. Thus as leverage increase, the performance decreases. Therefore Policy makers should place greater emphasis on the facilitation of equity venture capital and reduce the excessive amount of leverage in their capital structure in order to maximize their profit.

- ✧ From this study, the researcher's finding result shows positive relationship between business risk and Leverage level of Ethiopian Insurance Companies. This result shows that, the companies were reached by risk averse. So the managements of insurance companies should do more in eliminating the information asymmetries with investors and the companies must reduce their risk by diversifying its operation.
- ✧ Among of six independent variables, the three variables (tangibility, profitability and ages) are significant variable to determining optimum capital structure of Ethiopian Insurance Companies. So that the manager of Insurance company must highly use such variables effectively to maximize the values of the Organization with minimized Weighted average cost

5.2.2 Recommendations for future researchers

In Addition to the stated recommendation on the studied Problem, the following further research recommendation also stated for future researcher

- ☛ Most of the research has been conducted literature for capital structures in developed countries. In developing countries especially in Ethiopia has been very limited, therefore, to overcome such problem the study regarding capital structure are much needed.
- ☛ This study focused only on internal factors that affect capital structure of Ethiopian insurance Companies. So, the researcher recommended the next researcher as includes External factors that affect Capital structure of Ethiopian insurance Companies.
- ☛ Even though the selected specific internal specific variables in this study determine the capital structure of Ethiopian Insurance Companies but there is still need to consider as many variables as possible to get more determining the Capital structure of Ethiopian Insurance Companies

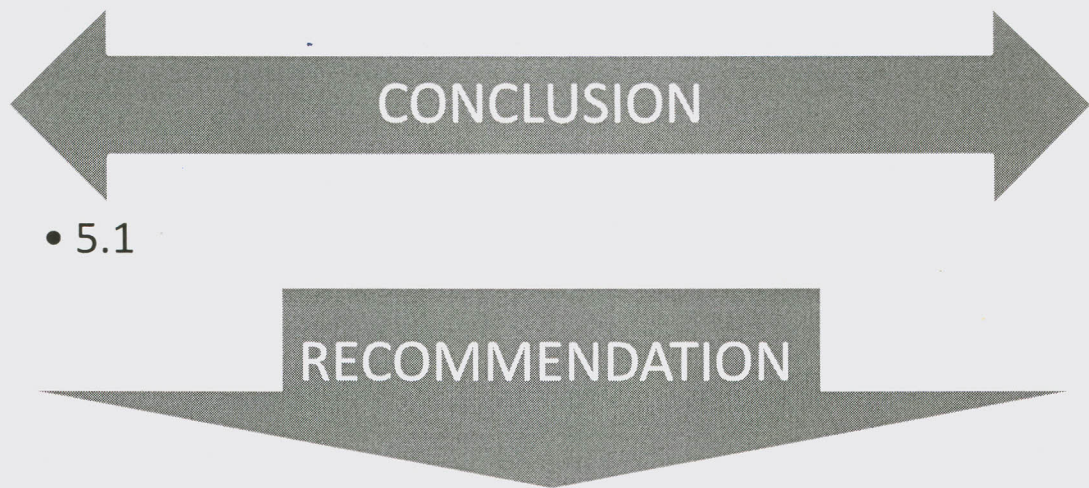


Figure 5.1 Organizational structure of Chapter five

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APPENDICE

APPENDIX 1: Summary of the raw data

Table 4.1 Raw data of Ethiopian Insurance Companies

Year	Company	leverage	tangibility	Liquidity	Gr	ROA	risk	logag
2008	EIC	0.295798	0.058636	2.797497	-0.00088	0.058505	0.130484	3.496508
2009	EIC	0.663019	0.062935	2.96597	0.295416	0.066084	13.64862	3.526361
2010	EIC	0.263755	0.055905	3.428795	0.181752	0.071875	0.295416	3.555348
2011	EIC	0.267258	0.068426	3.238553	-0.37557	0.068035	0.181752	3.583519
2012	EIC	0.716927	0.101416	1.872566	0.191439	0.162279	-0.37557	3.610918
2013	EIC	0.696444	0.116951	1.943235	0.160679	0.1937	0.191439	3.637586
2014	EIC	0.681633	0.492272	1.07684	-0.96918	0.224378	-0.98007	3.663562
2008	NIC	0.749252	0.182881	7.013198	0.165463	0.046234	0.04643	2.639057
2009	NIC	0.680229	0.158847	7.700223	0.232783	0.038296	0.150799	2.70805
2010	NIC	0.702859	0.126754	5.871897	0.372641	0.047476	0.200895	2.772589
2011	NIC	0.786909	0.089755	2.898327	0.670072	0.002835	0.202665	2.833213
2012	NIC	0.751103	0.064109	4.620953	0.359217	0.124385	0.5024	2.890372
2013	NIC	0.691901	0.049813	1.932329	0.015276	0.10723	0.419332	2.944439
2014	NIC	0.729175	0.197557	2.739731	-0.16266	0.121097	0.292437	2.995732
2008	AIC	0.352025	0.189967	1.998089	0.200895	0.073497	-0.79398	2.639057
2009	AIC	0.422953	0.222145	1.662069	0.202665	0.059878	0.174771	2.70805
2010	AIC	0.703885	0.228911	1.69691	0.5024	0.102999	0.178886	2.772589
2011	AIC	0.669591	0.312891	0.870318	0.419332	0.093101	0.069375	2.833213
2012	AIC	0.107892	0.2084	1.599226	0.292437	0.088749	-0.00765	2.890372
2013	AIC	0.379584	0.173538	1.742138	0.045698	0.172906	-0.02316	2.944439
2014	AIC	0.502262	0.077694	0.518362	-0.71045	0.265032	0.247879	2.995732
2008	NIC	0.16014	0.13119	5.138278	-0.02316	-0.01456	0.184728	2.564949
2009	NIC	0.508891	0.126823	1.314076	0.247879	0.021558	0.366926	2.639057
2010	NIC	0.312548	0.102828	2.191218	0.184728	0.126543	0.174359	2.70805

2011	NIC	0.293922	0.089571	2.321737	0.366926	0.079437	-0.77183	2.772589
2012	NIC	0.631551	0.118534	2.641728	0.174359	0.084127	0.042412	2.833213
2013	NIC	0.605425	0.137136	1.003925	0.228577	0.089445	0.497386	2.890372
2014	NIC	0.626469	0.509994	1.436324	-0.56785	0.115272	0.122271	2.944439
2008	AFIC	0.749578	0.044266	1.329629	0.059154	0.034645	0.328337	2.564949
2009	AFIC	0.719927	0.103542	1.497312	0.399195	0.043351	0.059154	2.639057
2010	AFIC	0.737528	0.161145	1.035686	0.295557	0.051711	0.399195	2.70805
2011	AFIC	0.752484	0.190278	1.858457	0.177894	0.040124	0.295557	2.772589
2012	AFIC	0.737379	0.273761	1.566367	0.013382	0.033622	0.177894	2.833213
2013	AFIC	0.689781	0.361457	1.202046	0.018676	0.03791	0.013382	2.890372
2014	AFIC	0.714288	0.365124	2.739682	-0.73916	0.04186	-0.79939	2.944439
2008	NYIC	0.381793	0.227776	1.663884	0.105996	0.055693	-0.04135	2.564949
2009	NYIC	0.02007	0.266672	1.469097	0.272878	0.107661	0.150539	2.639057
2010	NYIC	0.373486	0.212071	1.696439	0.168715	0.089434	0.058528	2.70805
2011	NYIC	0.501958	0.223914	5.303598	0.470557	0.112109	0.134511	2.772589
2012	NYIC	0.611525	0.160035	1	0.304583	0.118279	0.105996	2.833213
2013	NYIC	0.613605	0.157008	1	0.29805	0.120178	0.272878	2.890372
2014	NYIC	0.581013	0.210123	2.076583	-0.92836	0.106908	0.168715	2.944439
2008	GIC	0.407258	0.041384	1.234059	0.219762	0.006668	0.470557	2.397895
2009	GIC	0.902047	0.368079	1.249265	0.125505	0.036544	0.304583	2.484907
2010	GIC	0.449545	0.339998	1.149461	-0.27472	0.058372	-0.9748	2.564949
2011	GIC	0.553922	0.465749	1.485895	1.123465	0.043224	0.577519	2.639057
2012	GIC	0.417233	0.249916	1.542743	0.327044	0.014486	0.326478	2.70805
2013	GIC	0.455195	0.174445	1.662257	0.214241	0.112964	0.128337	2.772589
2014	GIC	0.489501	0.569674	0.983717	0.103811	0.093635	0.562827	2.833213
2008	UIC	0.36114	0.09321	1.868295	0.188358	0.124368	0.219762	2.397895
2009	UIC	0.420274	0.0907	1.677984	0.220155	0.041224	0.125505	2.484907
2010	UIC	0.360132	0.074658	2.040636	0.222349	0.107198	-0.27472	2.564949
2011	UIC	0.35751	0.063897	2.151099	0.377804	0.06977	1.123465	2.639057
2012	UIC	0.360994	0.052402	2.081432	0.20878	0.08022	0.327044	2.70805
2013	UIC	0.370187	0.076439	2.120729	0.192861	0.109657	-0.60982	2.772589
2014	UIN	0.605584	0.483388	1.613623	-0.76659	0.112701	-0.05621	2.833213

2008	NBIC	0.294553	0.144551	0.103773	0.511213	0.08785	0.48083	1.791759
2009	NBIC	0.378733	0.112116	1.861156	0.290925	0.083585	0.243265	1.94591
2010	NBIC	0.393868	0.110001	1.886523	0.218659	0.078998	0.976891	2.079442
2011	NBIC	0.403611	0.113784	1.852733	0.46088	0.072337	0.188358	2.197225
2012	NBIC	0.440742	0.083048	1.781246	0.149186	0.066458	0.220155	2.302585
2013	NBIC	0.433312	0.073251	1.828396	0.111507	0.088663	0.222349	2.397895
2014	NBIC	0.449955	0.817126	0.411724	-0.99366	0.107507	0.377804	2.484907
2008	LIC	3.194154	1	1.0394	4.552314	-1.68797	0.20878	0.693147
2009	LIC	1.14589	0.53229	0.862315	0.57774	-0.15434	-0.92323	1.098612
2010	LIC	1.25099	0.407114	0.969931	0.695092	0.062253	0.636466	1.386294
2011	LIC	1.06329	0.47535	0.843824	0.199732	0.038474	0.179479	1.609438
2012	LIC	1.279849	0.271157	0.97649	0.146172	0.106411	0.355721	1.791759
2013	LIC	1.356196	0.262364	0.796713	0.282097	0.118163	0.385962	1.94591
2014	LIC	1.461175	0.801609	0.237626	-1	0.122307	0.511213	2.079442

Bellows table shows the Acronyms represented the ten sampled Ethiopian

EIC	=	Ethiopian Insurance Corporation
NIC	=	National Insurance Corporation
AIC	=	Awash Insurance Corporation
NIC	=	Nile Insurance Corporation
AFIC	=	African Insurance Corporation
NYIC	=	Nyala Insurance Corporation
GIC	=	Global Insurance Corporation
UIC	=	United Insurance Corporation
NBIC	=	Nib insurance companies
LIC	=	Lion insurance Company

APPENDIX 2: Levin-Lin-Chu unit-root test

Table 4.2.1: Levin-Lin-Chu unit-root test for leverage

Ho: Panels contain unit roots Number of panels = 10
 Ha: Panels are stationary Number of periods = 7
 ADF regressions: 1 lag
 LR variance: Bartlett kernel, 6.00 lags average (chosen by LLC)

	Statistic	p-value
Unadjusted t	-9.1960	
Adjusted t*	-5.2241	0.0000

Table 4.2.2: Levin-Lin-Chu unit-root test for tangibility

	Statistic	p-value
Unadjusted t	-7.1803	
Adjusted t*	-2.9073	0.0018

Table 4.2.3: Levin-Lin-Chu unit-root test for liquidity

	Statistic	p-value
Unadjusted t	-16.1644	
Adjusted t*	-15.5062	0.0000

Table 4.2.4: Levin-Lin-Chu unit-root test for Growth

	Statistic	p-value
Unadjusted t	-12.6329	
Adjusted t*	-4.8243	0.0000

Table 4.2.5: Levin-Lin-Chu unit-root test for roa

	Statistic	p-value
Unadjusted t	-7.1286	
Adjusted t*	-2.6427	0.0041

Table 4.2.6: Levin-Lin-Chu unit-root test for risk

	Statistic	p-value
Unadjusted t	-13.4562	
Adjusted t*	-9.4075	0.0000

Table 4.2.7: Levin-Lin-Chu unit-root test for Ag

	Statistic	p-value
Unadjusted t	-30.2810	
Adjusted t*	-30.2455	0.0000

Source: Financial statement of Ethiopian Insurance Companies

APPENDIX 3: Normality test

Figure 4.1: Normal probability plot, standardized

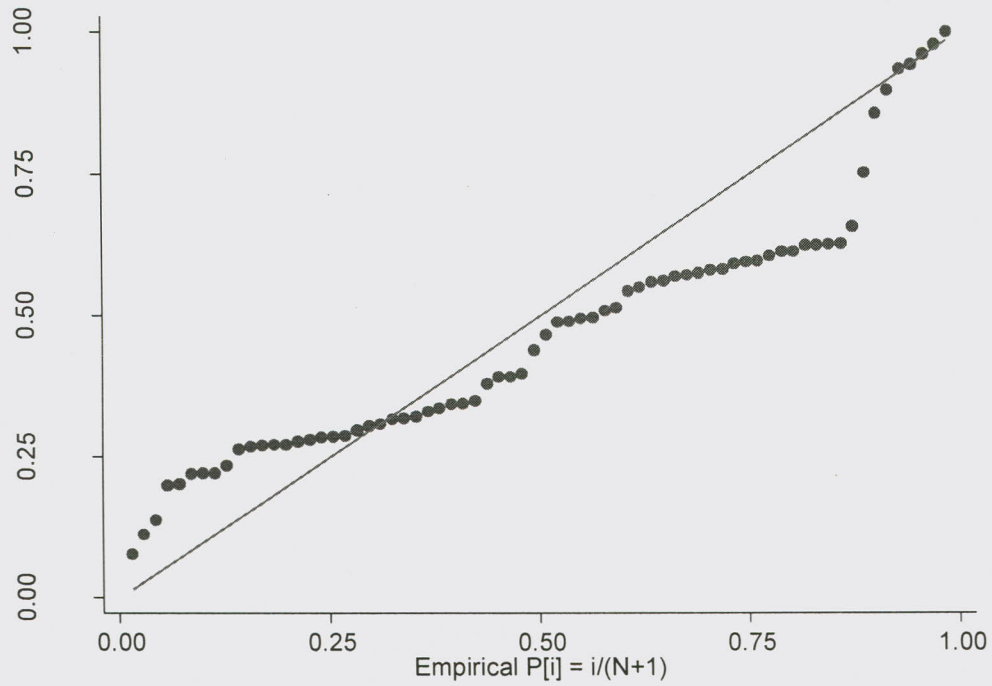


Table 4.3.1: Shapiro-Wilk W test for normal data

Variable	Obs	W	V	Z	Prob>z
leverage	70	0.68979	19.094	6.414	0.00000
tangibility	70	0.79174	12.819	5.547	0.00000
liquidity	70	0.76908	14.213	5.772	0.00000
gr	70	0.59956	24.648	6.969	0.00000
roa	70	0.28240	44.170	8.238	0.00000
risk	70	0.26438	45.279	8.291	0.00000
logag	70	0.89324	6.571	4.094	0.00002

Table 4.3.2: Skewness/Kurtosis tests for Normality

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	Prob>chi2
leverage	70	0.0000	0.0000	59.29	0.0000
tangiblity	70	0.0000	0.0005	27.82	0.0000
liquidity	70	0.0000	0.0001	32.84	0.0000
gr	70	0.0000	0.0000	63.31	0.0000
roa	70	0.0000	0.0000	.	0.0000
risk	70	0.0000	0.0000	.	0.0000
logag	70	0.0013	0.0042	14.69	0.0006

Table 4.3.3: Shapiro-Francia W' test for normal data

Variable	Obs	W'	V'	Z	Prob>z
leverage	70	0.67126	22.374	6.003	0.00001
tangiblity	70	0.78857	14.390	5.150	0.00001
liquidity	70	0.76268	16.152	5.373	0.00001
gr	70	0.57710	28.783	6.489	0.00001
roa	70	0.26113	50.289	7.567	0.00001
risk	70	0.24414	51.445	7.611	0.00001
logag	70	0.88775	7.640	3.927	0.00004

Source: Financial statement of Ethiopian Insurance Companies

APPENDIX 4: Multi-collinearity test

Table 4.4.1: Table test for multi-collinearity

Variable	VIF	1/VIF
roa	5.28	0.189336
gr	4.51	0.221972
tangiblity	2.06	0.485929
logag	1.72	0.580850
liquidity	1.22	0.818957
risk	1.05	0.948865
Mean VIF 	2.64	

Table 4.4.2

Correlation matrix between Independent Variable

	Tang	Liquid	Gr	Roa	risk	Logag
Tangiblity	1.0000					
Liquidity	-0.3376	1.0000				
Gr	0.1666	0.0142	1.0000			
Roa	-0.4773	0.0385	-0.8288	1.0000		
Risk	-0.1187	0.0725	0.0571	0.0026	1.0000	
Logag	-0.4302	0.2726	-0.4985	0.5230	0.1559	1.0000

Source: Financial statement of Ethiopian Insurance Companies

APPENDIX 5: Houseman specification test

Table 4.5
Houseman specification test

Coefficients				
	(b)	(B)	(b-B)	sqrt (diag(V_b-V_B))
	fixed	random	Difference	S.E.
roa	-1.013817	1.380241	-.3664246	.1633467
size	-.4248336	-.3734072	-.0514264	.
tang	.5009388	.8115007	-.3105619	.3409485
liqu	.0147753	-.0150555	.0298307	.
logag	-.5177076	-.4790611	-.0386464	.
risk	.1028051	.0726229	.0301822	.0018317

Source: Financial statement of Ethiopian Insurance Companies

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2 (6) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 13.13

Prob>chi2 = 0.041 (V_b-V_B is not positive definite)

APPENDIX 6: Pearson correlation table

Table 4.6
Pearson Correlation Matrix

	Leverage	Tangibility	Liquidity	Gr	Roa	Risk	Logag
Leverage	1.0000						
Tangibility	0.6130	1.0000					
Liquidity	-0.1574	-0.3376	1.0000				
Gr	0.5727	0.1666	0.0142	1.0000			

Roa	-0.7377	-0.4773	0.0385	-0.8288	1.0000		
Risk	0.0278	-0.1187	0.0725	0.0571	0.0026	1.0000	
Logag	-0.5473	-0.4302	0.2726	-0.4985	0.5230	0.1559	1.0000

Source: From financial statement of Ethiopian Insurance Companies

APPENDIX 7: Descriptive statistics data

Table 4.7
Descriptive statistics data

Variable	Obs	Mean	Std. Dev.	Min	Max
leverage	70	.6170665	.4184312	.02007	3.194154
tangibility	70	.2251537	.1941975	.041384	1
liquidity	70	1.999805	1.422656	.1037735	7.700222
gr	70	.1757527	.666933	-1	4.552314
Roa	70	.0555085	.2186852	-1.687968	.2650319
Risk	70	.3286846	1.663497	-.98007	13.64862
Logag	70	2.647205	.539632	.6931472	3.663562

Source: from financial statement of Ethiopian insurance Companies

APPENDIX 8: Fixed effect Regression model

Table 4.8
Fixed effect regression model

Indep. variab	Coef.	Std. Err.	t-value	P> t	[95% Conf. Interval]	
Tangibility	.5596026	.2626814	2.13	0.037	.0335921	1.085613
Liquidity	.0213501	.0241486	0.88	0.380	-.0270066	.0697067
Gr	.0667453	.1247595	0.53	0.595	-.1830814	.316572
Roa	-.9158779	.3627943	-2.52	0.014	-1.642361	-.1893949
Risk	.0304269	.0194585	1.56	0.123	-.0085381	.0693919

Logag	-0.1944698	0.0784309	-2.48	0.016	-0.351525	-0.0374146
Cons	0.9922829	0.2409909	4.12	0.000	0.5097069	1.474859

Source: financial statements of Ethiopian insurance industry

APPENDIX 9: Definition of the term

Business Risk: This is the variability in earnings before interest and tax (EBIT) associated with a company's normal operation.

Capital Structure: Capital structure represents the major claim to a corporation's assets. This includes that the different types of both equities and debt liabilities a firm employs in its business operations.

Corporate Income Tax: Corporate income tax is a tax based on the income made by a corporation. The corporation begins with Federal Taxable Income from the federal tax return. Corporate income tax is paid after the end of the taxable year based on the income made during the year. Company income subject to tax is often determined much like taxable income for individuals. Generally, the tax is imposed on taxable profits.

Equity: Ownership interest in a corporation in the form of common stocks or preferred stocks. It can also be referred to as shares.

Financial Risk: This is the increased risk of equity holders due to financial gearing. It is due solely to the capital structure of a firm or the level of gearing.

Leverage: This refers to the use of fixed charges source of funds such as debt, bond, and debenture capital along with the owners' equity in the capital structure. Leverage provides a good avenue of measuring risk. It could also be defined as a relative change in profit due to a change in sales. It can be further divided into operating leverage, financial leverage and combined leverage.

Long Term Debts: Long term debt is the type of debt or liabilities of the firm whose repayment period is more than one year

Optimal Capital Structure: This is the appropriate mix of equity and debt at which the value of a firm is maximized.

Risk: The possibility of suffering damage or loss in the face of uncertainty about the outcome of an action, future events or circumstances. It is the deviation of an actual outcome from the expected outcome in the presence of uncertainty.

Short Term Debts: Short term debt is other types of liabilities of the firms whose repayment is repaid within one year

Weighted Average Cost of Capital (WACC): This is the composite cost of capital representing the aggregate of the various sources of finance in use. It is used as the discount rate in the appraisal of new investment



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