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**IMPACT OF COMPETITION ON CAPITAL STRUCTURE DECISION IN
ETHIOPIAN INSURANCE COMPANIES**

BY

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**A THESIS SUBMITTED TO ST.MARY'S UNIVERSTIY COLLEGE SCHOOL OF
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IMPACT OF COMPETITION ON CAPITAL STRUCTURE DECISION

(ETHIOPIAN INSURANCE COMPANIES)

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DECLARATION

I, the undersigned declare that this thesis is my original work, prepared under the guidance of Zenegnaw Abiy (Dr). All source of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

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ENDORSEMENT

This thesis has been submitted to St. Mary's University College, School of Graduate studies for examination with my approval as a university advisor.

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List of Abbreviation

CLRM-----Classical linear regression model

CR-----Concentration ratio

EIC-----Ethiopian Insurance Corporation

ETB-----Ethiopian Birr

GDP-----Gross domestic product

GNP-----Gross national product

HHI-----Herfindhal-Hirschman Index

NBE-----National bank of Ethiopia

R & D-----Research and development

ROA-----Return on asset

VIF-----Variance inflation factor

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Abstract

Capital structure decision is one of the key decisions in strategic financial management. But it is important to be aware of what factor determines this decision and its extent. Industry specific characteristic, competition is one of the factor and the aim of this study is to empirically investigate the impact of this industry specific characteristic, competition on capital structure decision of Ethiopian insurance companies using ten years data (2007-2016) of nine insurance companies in Ethiopia which have started producing financial statements at year 2007. to identify the extent to which completion affects financing decision of Ethiopian insurance companies some significant firm specific and macroeconomic variables (profitability, tangibility, liquidity, firm size and inflation rate) were controlled. The study employed random effects model after Hausman and Breusch and Pagan Lagrangian multiplier test to regress explanatory variables on leverage ratio of Ethiopian insurance companies with the help of STATA software package. The result of this study suggests that competition were affecting financing decision of Ethiopian insurance firms positively with strong significance. In light of a negative relationship between competition and economic profit, the finding of this study which is a strong positive relationship between competition and leverage was in conformity with pecking order theory. Control variables, profitability and firm size were appeared to have a positive and significant relationship with leverage ratio of Ethiopian insurance firms whereas as tangibility, liquidity and inflation rate were appeared to have a negative and significant relationship with leverage ratio of Ethiopian insurance companies.

Key Words: Competition, market share, capital structure, leverage ratio

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CHAPTER ONE

INTRODUCTION

1.1 Background of the study

In one way or another, entities operations are to be financed. Without proper finance of fixed assets or working capital, business will not continue. According to Al-Shubri(2011) capital structure decisions are crucial for the financial wellbeing of the firm. Financial distress, liquidation and bankruptcy are the ultimate consequences lying ahead if any major misjudgment occurred following any financing decision of the firm's activity. One of the strategies a firm should look into is to lower the weighted cost of capital. This will increase net economic return, which eventually increases the firm's value. Hence, maximizing the firm's value is the focal point for every financing decision made by the management of the company. The management of the firm operating in the very uncertain world has a tough task ahead in achieving the best capital structure. According to Brigham and Houston (2009) Firm's optimal capital structure is structure that would maximize its stock price.

The modern theory of capital structure is believed to start with the Miller and Modigliani theorem. Modigliani and Miler (1958) introduced the controversial topic whether capital structure is determined by cost and profits of financial leverage or by market opportunities. In their assumed perfect capital structure, regardless of transaction cost, information asymmetry, distortionary taxation and bankruptcy costs, capital structure is irrelevant for firm's value. Due to unrealistic assumption, the debates about the effect of capital structure irrelevance propositions. Afterwards, Modigliani and Miller (1963) relieved the capital structure assumption and corrected their conclusion by introducing statement that capital structure impacts a firm's value.

Subsequently, theories emerged which support to explain firm's capital structure decisions which are tradeoff theory, pecking order theory and agency cost theory. Trade off theory emphasized balance between tax saving arising from debt and bankruptcy and financial distress cost (Modigliani and Miller, 1963). Pecking order theory favors internal financing to debt

financing (Myres and Majluf, 1984). In the Agency cost theory Jensen and Meckling (1976) argued that average level can be used to monitor the managers to pursue the overall firm's objectives. Besides the development of several theories and empirical works in relation with capital structure, what factors affect firms decision regarding their financing choice is still a debating issue in the area of finance. Many studies have revealed that capital structure is determined by firm specific characteristics such as tangibility of assets , non debt tax shields, profitability, growth opportunity, firm size, liquidity, etc(Basyith and Idris,2013; song ,2005; Duca,2012).the other determinant of capital structure is Macroeconomic variables such as GDP, inflation rate, GNP per capita, interest rate, etc(Magwai,2014; Khanna, srivastava and Medury,2015 ; Muthama, mbaluka and Kalunda,2013).

Those firm specific and macroeconomic determinants of Capital structure are also investigated in Ethiopia context. Amongst them, studies which examine firm specific factors which determine capital structure choice of firms are Daniel (2015) and Bayeh(2011) on Ethiopian insurance firms, Usman(2013) on Large tax payers share company, Amanuel (2011) on manufacturing share companies of Addis Ababa city, Shibru (2012) and Woldemichael(2012) on Ethiopian banking sector. Saddam (2014) also investigated macro economic factors which determine capital structure decision of firms on Ethiopian insurance sector.

Current capital structure theories have been criticized to lack consideration of the linkage between the output market (or input market) and firms financial policy (Lee, 2011). Some studies have found that level of competition in an industry is one of a determinant factor of capital structure decision of a firm (Altuntas, Berry-Stolze and Wende, 2014; Schargrotsky, 1998; Xiaomengxu, 2013). As per the researchers best knowledge there is no investigation which has been undertaken on the impact of degree of industry competition on capital structure decision of firms in Ethiopia, more specifically on Ethiopian insurance industry. So the aim of this study is to examine impact of degree of industry competition on capital structure decision of Ethiopian insurance firms.

1.2 Insurance in Ethiopia

According to various sources, the emergence of modern insurance in Ethiopia is traced back to 1905 with the establishment of the first Ethiopian bank called Bank of Abyssinia. The bank

which was established under a fifty years concession granted by Emperor Menilek II to the National Bank of Egypt in March 1905, and was inaugurated in February 1906(Zeleke, 2007). According to Tulu (2001) the bank had been acting as an agent for a foreign insurance company to underwrite fire and marine policies.

An Austrian called Weinsinger came to Ethiopia in 1923 to serve as an agent for a Swiss company called La Baloise Fire Insurance Company. Baloise paid the first fire loss on a warehouse and shop in 1929 (Zelege, 2007).

The first domestic insurance company called Imperial Insurance Company was established in 1951, and then until 1960 only one domestic and several foreign insurance companies represented by agents were undertaking insurance business mainly life, marine, fire and general accident insurances in Ethiopia (Zelege,2007).

Due to realization of the importance of regulation in insurance services, October 8, 1970, Ethiopian insurance market witnessed the promulgation of proclamation no 281/1970 under the immediate control and supervision of ministry of trade and industry. Until the proclamation no 281/1970 insurance businesses except marine insurance was administered by the provision of the commercial code of 1960. The minimum paid up capital required to establish an insurance company was as little as 12,500 Ethiopian dollars and subscribed capital was 50,000 as stipulated in the commercial code like any other commodity business. There was no restriction to transact insurance services in the country. Marine business and related marine insurance was administered by the maritime code of 1960 (Zelege, 2007).

The 1974 revolution overthrew the Imperial regime and first the provisional military administration council then followed by the path of command economy with a socialist ideology, took over power in Ethiopia. Consequently, the then government nationalized all banks and insurance companies and put restrictions on the involvement of private sector in the economy by Proclamation No. 26/1975 known as “Government Ownership and Control of the Means of Production”. In December 1975, the provisional government issued Proclamation No. 68/1975 to establish EIC, effective January 01, 1976 by nationalizing all the private insurance companies, so it monopolized the insurance industry (Zelege ,2007).

Following the collapse of the Derg regime, the transitional government of Ethiopia issued another insurance proclamation, Proclamation 86/1994, which permitted the establishment of private insurance companies in the country but restricted to domestic investors only. Following this EIC was re-established as public enterprise under the Council of Ministers Regulation No. 201/1994 with a paid-up capital of Birr 61,007,038 (Zeleke, 2007).

Subsequent to the 1994 insurance proclamation, the private sector once again has gotten the chance to participate in the insurance business. The first private insurance company to be established in August 1994 was Universal Insurance, which was later closed as a result of some supervisory actions. Lion Insurance Company, which was established in October 1998, was merged with United Insurance Company in October 2000. This merger constituted as the first voluntary merger of insurance companies in the history of the Ethiopian insurance industry (Zeleke, 2007).

As of June 2016, In Ethiopia there are 17 insurance companies, 9 of them are composite insurance means (transacting both general insurance and long term insurance). Out of the 17 insurance companies one is state owned and 16 are private owned insurance companies. While 8 of them are transacting general insurance business. The total assets reached 11.3 billion, total capital reached 2.97 billion and Gross premium 6.99 billion. The number of branch offices has reached 424 showing a 13% growth over last year same period. Moreover, over 1,950 insurance sales agents, 53 insurance brokers, 97 loss assessors and two surveyors are operating in the market. There are two reinsurance companies in Ethiopia these are Africa-Re and Ethio-Re. Moreover, there are also micro insurance companies established to provide to the low level income societies. Micro insurance service is entitled to provide by insurance companies and by micro finance banks (NBE Annual report 2015/16).

According to Zeleke (2007) Ethiopian Insurance market started to witness competition after 1994, a time when private insurance companies started to emerge. Both the public and private companies compete to keep a larger share of the market. This study made by Zeleke in 2007 found out that degree of competition differs from product to product. Motor and pecuniary insurance policies exhibit moderate concentration (moderate competition) whereas other

insurance policies exhibit higher concentration (low competition). This study also investigated degree of competition in insurance industry through qualitative survey and according to the result 83% of the respondents stated the degree of competition as very strong while 17% described it as strong. The study also revealed that entry and exit barrier to the industry is easy which implies inherence of competition in an industry since as entry and exit barrier becomes easy in an industry; the industry will tend to perfectly competitive market structure where competition is high (William and Stephen, 2012).

Belayneh (2012) analyzed market power and competitiveness of Ethiopian insurance industry. The study revealed that competition in Ethiopian financial sector in general and insurance industry in particular should be strong enough for enhancement of efficiency, provision of better service to customers, greater innovation and lower prices thus resulting in improvement of consumer's welfare and overall economic growth. This study found out that Ethiopian insurance industry is characterized by oligopolistic competition.

As discussed above competition is inherent in Ethiopian insurance sector and it more probably affects strategic financial management decision of Ethiopian insurance companies. Since According to porter (2008) competition is one of the determinant factor for strategic decision of firms.

1.3 Statement of the problem

Determinants of choosing an optimal capital structure are still under research. Level of competition is found to be one of the determinants of capital structure. However the majority of researches on the determinants of capital structure study consider firm specific factors and Macro economic factors. There are limited numbers of researches which have been made on the effect of the level of competition on the capital structure decision of firms.

According to Lee (2011) a firm's market position and industry structure provide a new rationale for limits on the firms borrowing. It shows that long term outstanding debt introduces a competitive disadvantage in the product market. This happens because of the difficulty in raising outside funds when competition is intense. Thus, firms subject to rival firm's competitive pressure would limit borrowing. Xiaomengxu (2011) investigated how product market competition influences capital structure of listed firms in the Netherland using market

concentration and Research and Development as a proxy for competition and concluded that higher degree of product market competition leads to lower long term debt ratio. Schargrotsky (2002) studied two groups of firms which are oligopolies and monopolies. It is concluded that the debt ratio of oligopolies is less than that of monopolies by regressing debt ratios on product market competition controlling for size, profitability, non-debt tax shields and growth opportunities. If a firm faces a high degree of competition, it will use capital from deeper pockets to capture more market share. Another literature on this area is conducted by Altunas, Berry-Stolze and Wende(2014) which examined insurance companies capital structure across broad range of countries including those in developing markets using market concentration and market penetration as a proxy for competition. In this study property liability insurance and life insurance sections were examined separately due to life insurance policy heterogeneity across countries unlike property liability insurance. The conclusion drawn from this study was that, in the property liability insurance, insurance companies operating in countries with strong competition have relatively high leverage or hold relatively low levels of costly capital and the reverse holds for life insurance companies.

Evidence from Developing Countries also shows the significant interaction between product market competition and capital structure choice of a firm. Naha and Roy (2011) examined impact of product market behavior which was captured from three angles which are structure (concentration)-conduct (advertisement)-performance on capital structure choice of firms taking evidence from Indian firms. The study found out that structure and conduct significantly influences short term loan.

The other literature evidenced from Developing Countries on the impact of degree of industry competition on capital structure choice of a firm taking evidence from South Africa Firms (Fosu, 2013). The study found out that product market competition enhances the performance effect of leverage.

Ethiopian insurance industry is characterized by oligopolistic market structure. This was found out by the study of Belayneh(2012). According to a qualitative survey by zeleke (2007), 83% of the response reflects the existence of strong competition in the industry. According to NBE's report, 2015/2016 seventeen insurance companies operate in Ethiopian insurance industry. Ethiopian Insurance Corporation which is public owned insurance company in the industry

possesses the largest market share, 35.67% according to the Annual report of NBE, 2015/2016 and followed by Awash with a market share of 8.13%, Nile with market share of 6.72 and Nyala with market share of 6.20% with relatively better market possession in the industry. The rest insurance companies operate in the industry with little market share. This indicates the inherence of strong competition in the industry. Even if previous literatures evidenced that market structure affects capital structure decision of firms, no emphasis has been given to the impact of degree of competition on the capital structure decision of insurance sector in Ethiopia.

As per the researcher's best knowledge there is no a single study undertaken in Ethiopia investigating the impact of Degree of industry competition on the capital structure decision of a firm, More specifically on capital structure Decision of Ethiopian Insurance Companies. So the aim of this study was intended to investigate the impact of degree of industry competition on the capital structure decision of firms in case of Ethiopian insurance Companies.

1.4 Objective of the Study

1.4.1 General Objective

The general objective of this study was to examine the impact of the degree of industry competition on capital structure decision of insurance companies in Ethiopia.

1.4.2 Specific objective of the study

In line with the above general objective this study intended to achieve the following specific objectives.

- To identify the extent to which market share exerts impact on leverage of Ethiopian insurance companies.
- To discover which capital structure theory is influential in Ethiopian insurance industry in relation with the market structure prevailed in the industry.

1.5 Literature Driven Hypothesis

In order to achieve the purpose of this study the following hypothesis were tested.

There are also literatures which have been made on the relationship between competition and leverage. According to Lee (2011), Schargrodsky (2002), Xiaomeg xu (2013) and Naha and Roy (2011) competition and leverage founds to be related negatively. So in this study it is expected that competition and leverage to have a negative relation.

H₁: There is significant negative relationship between competition and leverage.

In this study market share were used to measure the degree of competition in Ethiopian insurance industry.

Many literature such as Nickell(1996) and Griff(2001) proposes market share as an inverse measure of competition. According to Murat et al (2002) Herfindhal-Hirschman Index (HHI) is one of the measures of competition, the higher the value of HHI the higher the concentration will be which tends to a monopoly market structure. The lower (tending to zero) the value of HHI the lower the concentration ratio will be which implies a presence of very large number of Tiny firms and higher competition and the reverse holds true. Since HHI measures competition using market share a higher HHI implies few firms possessing the highest market share and the lower HHI implies larger tiny firms with smaller market share. This implies the presence of an inverse relation between Market share and competition. Therefore based on this negative relationship between Market share and competition, those majorities of previous empirical works on competition and capital structure can be interpreted as implying a negative relation between Market share and leverage.

H_{1A}: There is significant positive relation between market share and leverage

1.6 Scope of the study

Capital structure decision have been described in the literature to be determined by firm specific characteristics (firms size, profitability, tangible asset, etc), industry specific characteristics (competition and country/Macroeconomic factors (GDP, Inflation rate, ease of Access to financial market, cost of financial distress, etc). This study was limited to the impact of industry factor, competition on capital structure decision of insurance firms in Ethiopia. This study was conducted for the period from 2007 to 2016.

1.7 Limitation of the Study

The study used secondary data which is financial statement of insurance firms in Ethiopia for the period 2007 to 2016. Amongst the seventeen insurance companies currently operating in the Ethiopian insurance industry, the sample population of the study was limited only to those insurance companies which have started producing financial statement in 2007 and continued to operate till 2016.

1.8 Significance of the study

The study will have significance for various parties. More importantly it will be significant for managers and shareholders of insurance companies, potential investors and researchers.

- The study will be important for practitioners, management bodies, shareholders and potential investors of Ethiopian insurance companies by creating an understanding on how Degree of Industry competition affect their financing decision and how to alter (comply) their financing strategy with the prevailing market power of their company and with the market structure of the industry.
- It also adds knowledge on the interaction of Degree of Industry competition and financing decision of a company. This study will also be used as a good reference for other researchers in the future those which conduct their research in relation with interaction of Degree of Industry competition and capital structure in general and in case of Ethiopian insurance industry in particular.

CHAPTER TWO

RELATED LITERATURE REVIEW

2.1 Theoretical literature review

The study of capital structure attempts to explain the mix of securities and financing sources used by corporations to finance real investment. There is no universal theory of the debt-equity choice, and no reason to expect one. There are several useful conditional theories, however. For example, the tradeoff theory says that firms seek debt levels that balance the tax advantages of additional debt against the costs of possible financial distress. The tradeoff theory predicts moderate borrowing by tax-paying firms. The pecking order theory says that the firm will borrow, rather than issuing equity, when internal cash flow is not sufficient to fund capital expenditures. Thus the amount of debt will reflect the firm's cumulative need for external funds (Myres, 2001). Agency cost theory predicts the capital structure choice is based on the existence of agency cost. This theory investigates the relationship between the managers of the firm and the outside Equity and debt holders (Jensen and Meckling, 1976).

There is another possibility perhaps financing doesn't matter. Modigliani and Miller (1958) proved that the choice between debt and equity financing has no material effects on the value of the firm or on the cost or availability of capital. They assumed perfect and frictionless capital markets, in which financial innovation would quickly extinguish any deviation from their predicted equilibrium.

The logic of the Modigliani and Miller (1958) results is now widely accepted. Nevertheless, financing clearly can matter. The chief reasons why it matters include taxes, differences in information and agency costs. Theories of optimal capital structure differ in their relative emphases on, or interpretations of, these factors. The tradeoff theory emphasizes taxes, the pecking order theory emphasizes differences in information (Myres, 2001), and Agency cost theory emphasizes agency cost (Jensen and Meckling, 1976)

2.1.1 Theories of Capital structure

The question “How do firms choose their capital structure?” is one of most controversial issues in modern corporate finance (Antoniou, et. al., 2002). Firms tend to finance new investment by raising debt capital only if the retained earnings are insufficient. The irrelevance theory of capital structure, which has been introduced by Miller and Modigliani (1958) denoted by M&M throughout the researcher paper was the first break through in relation to the subject of capital structure and its effects on financial performance. They first hypothesized that if markets are perfectly competitive, firm performance will not be related to capital structure, thereby suggesting no significant relationship between a firm’s capital structure and its performance. The value of the firm is similarly unaffected by its financial structure. Their assumptions of a perfectly competitive market exclude the impacts of tax, inflation and transaction costs associated with raising money or going bankrupt. In addition they also assume that disclosure of all information is credible, thus there is no information asymmetry. Even though M&M theory was heavily criticized of some weaknesses and its irrelevant assumptions of the real world, this theory still provides the foundation for many other theories suggested by other researchers.

Modigliani and Miller (1963) in their second version of capital structure have altered the underlying argument of their classical proposition of capital structure. They incorporate the income tax and contend that the value of the firm, if unlevered equals the value of the firm if unlevered plus the generated tax bolding the benefit of tax shield on interest.

According to trade-off theory, a firm chooses the proportion of debt and equity by balancing the costs and benefits of tax shield and bankruptcy to have an optimum capital structure in a long term (Fama & French, 2002). Similarly argument is explained by tax shields theory which favors debt to a larger extent than equity. Interest is paid before tax payment so that firms benefit from a tax liability. Tax saving is one of the advantages as a result of using debt, while the disadvantage is the cost of potential financial distress (Ahmadinia et. al., 2012).

Pecking order theory argues that the asymmetric information increases the cost of financing. The three sources for the financing are internal funds, debt and equity. Firm prefers internal financing to external financing, and prefer to debt over equity when other elements are under control (Frank & Goyal, 2008). When firms focus on equity financing, the problem is that firms may

issue too much equity at the wrong time resulted from asymmetric information problem. What's more, investors may overvalue or undervalue the share price due to asymmetric information problem. Similar situation is explained in the article of Halov & Heider (2011) who suggest internal financing could avoid asymmetric information problem. Shareholders have information disadvantage compared to managers of the firm. Shareholders care more about cash flow, because with sustainable cash flow, they will be get paid with the retain earnings. External financing costs future cash flow so that managers prefer internal financing at the first place.

The next important theory mentioned in the literature is the agency cost theory. Jensen and Meckling(1976) 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 Jensen (1976) observed 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. Empirical studies indicate some important paths that reduce agency problems. These areas as follow: Shareholders can monitor manager activity that may reduce the problem. It can reduce agency cost (Brealey and Myers, 2003). Monitor is done by the board of the firm, auditors and the lender (Bank) and Shareholder concern about firm managers benefits not think about their own interest.

Signaling theory by Ross (1977) is developed based on the view that capital structure of the firm may signal information of the firm to outside investors. The theory assumes that, unlike outsiders, insiders such as the owner-managers know the exact state of the firm. The owner-managers would prefer equity over debt since an excessive usage of debt may cause managers to lose their job if the firm goes into liquidation or becomes insolvent. In contrast, outsiders view outstanding debt levels in firms favorably since high debt levels signal to outsiders that firms

are of high quality.

Ross (1977) asserts that when there are information asymmetries between the firm's management and outside investors, debt will be represented as a signaling means. Asymmetric information between owner-managers and investors is a driver to signaling games where the amount of debt and the timing of new issues are viewed as a sign of the performance of the firm.

2.1.2 Determinants of capital structure

A number of Empirical studies have identified firm level and macro level characteristics which determine capital structure decision of a firm based on the above theoretical stand points. Here are listed the most significant determinant factors as evidenced in many literatures.

Table 2.1 some empirical literatures made in Ethiopia used to select most significant determinant factors of capital structure.

Name of the Author	Significant factors	Insignificant factors
Amanuel(2011)	Profitability, risk, size, tangibility and Non-debt tax shield	Age and Growth
Usman(2013)	Size, age, tangibility, liquidity and non-debt tax shield	Risk, Dividend payout and growth
Woldemichael(2012)	Profitability, liquidity, tangibility and size	Risk and growth
Solomon(2012)	Size, growth, non-debt tax shield and risk	profitability, liquidity, dividened payout, age and tangibility
Daniel(2015)	Profitability, tangibility, growth and liquidity	Risk and age
Saddam(2014)	Size, risk, age and inflation rate	Profitability, liquidity, growth opportunity, GDP growth rate and interest rate

Source: Compiled by the researcher

2.1.2.1 Profitability

According to pecking order theory all things being equal, the more profitable the firms are, the more internal financing they will have, and therefore we should expect a negative relationship between leverage and profitability. This relationship is one of the most systematic findings in the empirical literature (Harris and Raviv, 1991; Rajan and Zingales, 1995). There are conflicting theoretical predictions on the effects of profitability on leverage (Rajan and Zingales, 1995); while Myers and Majluf (1984) predicted a negative relationship according to the pecking order theory, Jensen (1986) in the agency cost theory predicted a positive relationship. Following the pecking order theory, profitable firms, which have access to retained profits, can use these for firm financing rather than accessing outside sources. Accordingly, the pecking order model predicts a negative relationship between book leverage and profitability. The pecking order theory predicts that firms with a lot of profits and few investments have little debt. Since the market value increases with profitability, the negative relationship between book leverage and profitability also holds for market leverage.

However, in a trade-off theory framework, an opposite conclusion is expected. When firms are profitable, they should prefer debt to benefit from the tax shield. In addition, if past profitability is a good proxy for future profitability, profitable firms can borrow more as the likelihood of paying back the loans is greater. From the trade-off theory point of view more profitable firms are exposed to lower risks of bankruptcy and have greater incentive to employ debt to exploit interest tax shields.

According to the trade-off theory, agency costs, taxes, and bankruptcy costs push more profitable firms toward higher book leverage. First, expected bankruptcy costs decline when profitability increases. Second, the deductibility of corporate interest payments induces more profitable firms to finance with debt. Finally, in the agency models of Jensen and Meckling (1976) and Jensen (1986), higher leverage helps to control agency problems by forcing managers to pay out more of the firm's excess cash.

2.1.2.2 Size

According to tradeoff theory, first, large firms don't consider the direct bankruptcy costs as an active variable in deciding the level of leverage as these costs are fixed by constitution and constitute a smaller proportion of the total firm's value. And also, larger firms being more diversified have lesser chances of bankruptcy (Titman and Wessels 1988). Following this, one may expect a positive relationship between size and leverage of a firm. The trade-off theory predicts an inverse relationship between size and the probability of bankruptcy. Hence, there is a positive relationship between size and leverage. Second, contrary to first view, Rajan and Zingales (1995) argued that there was less asymmetrical information about the larger firms. This reduced the chances of undervaluation of the new equity issue and thus encouraged the large firms to use equity financing. This means that there is negative relationship between size and leverage of a firm. Following Rajan and Zingales (1995), we expect a negative relationship between size and leverage of the firm. Therefore, the pecking order theory of the capital structure predicts a negative relationship between leverage and size, as larger firms exhibiting increasing preference for equity relative to debt.

2.1.2.3 Tangibility

From a pecking order theory perspective, firms with few tangible assets are more sensitive to informational asymmetries. These firms will thus issue debt rather than equity when they need external financing (Harris and Raviv, 1990), leading to an expected negative relation between the importance of intangible assets and leverage.

According to trade-off hypothesis, tangible assets act as collateral and provide security to lenders in the event of financial distress. Hence, the tradeoff theory predicts a positive relationship between measures of leverage and the proportion of tangible assets. On the relationship between tangibility and capital structure, theories generally state that tangibility is positively related to leverage.

Tangibility is almost always positively correlated with leverage. This supports the prediction of the trade-off theory that the debt-capacity increases with the proportion of tangible assets on the balance sheet.

Based on the agency problems between managers and shareholders, Harris and Raviv (1990) suggested that firms with more tangible assets should take more debt. This is due to the behaviour of managers who refuse to liquidate the firm even when the liquidation value is higher than the value of the firm as a going concern.

Harris and Raviv (1990) predicted that firm with higher liquidation value would have more debt. Firms with more tangible assets usually have a higher liquidation value although we are aware that assets specificity may play a role and result in some distortion. In general, firms with a higher proportion of tangible assets are more likely to be in a mature industry thus less risky, which affords higher financial leverage.

2.1.2.4 Liquidity

Trade off theory of capital structure argues that firms with more liquidity (more current ratio) tend to use more external borrowing, because of their ability in paying off their liabilities. The higher liquidity ratio would relatively have higher debt ratio due to greater ability of a firm to satisfy short term contractual obligations on time.

On the other hand, the pecking order theory believes firms with financial slack (i.e liquid assets such as cash and marketable securities) will prefer internal source than debt or equity to finance future investments (Myres, 1984). Hence they argued negative significant relation between liquidity and capital structure.

2.1.2.5 Inflation rate

Trade off theory postulates a positive relationship between leverage and expected inflation. According to Tagrat (1985) cited in Frank and Goyal (2008) there is a positive relationship between inflation and leverage due to features of the tax code, implying that the real value of tax deductions on debt is higher when inflation is anticipated to be high. On the other hand According to market timing theory, the firm issue debt when the interest on the debt is low as compared to past and future expected interest rate. In general prediction about the future interest rate depends upon the inflationary trends in economy. So when firms expect that in the future the inflation rate will be higher or they realize that the current rate of inflation is low the firms issue debt securities.

2.1.3 Competition

According to Vickers (1995) competition can be defined as a process of rivalry between suppliers that takes place either in the market or for the market. Firms compete to attract customer by offering lower prices, higher quality of products or services, or more innovative products and services. When competition is working effectively the market will send clear message to firms about which goods and services consumers want to buy. Efficient firms offering the products consumers want at low prices will prosper and inefficient ones will not.

Competition is often thought to be able to improve corporate performance and behavior. It is generally believed that competition pressurizes firms to lower costs, reduces managerial and operational slack, provides incentives to optimize efficiency, and drives innovation. This belief has been influencing policy making across the global, such as the deregulation towards free market, trade liberalization and, even more broadly, globalization. However, economist's dispute about this hypothesis since the theoretical foundation for it is not solid and empirical evidences are vague. Nevertheless, market competition remains an interesting topic to academia and an important issue for policy makers. Though economists disagree on the mechanism and channels that competition may affect market participants, it is less doubtful that competition has effects on corporate behavior at micro level and on a country's economic health at macro level (Jun Du and Minjia Chen,2010).

Further, competition in a particular market forms an important element of industrial as well as firm characteristics, which have been commonly recognized and critical to be taken into account by economists in empirical studies. The competition characteristics in the industry are associated with firms' sunk cost, resource dependence, managerial practices, entry barriers, technology applications, and so forth (Jun Du and Minjia Chen, 2010).

2.1.3.1 The Effects of Competition on Firms performance

Vickers (1995) argues that the concept of competition should encompass all forms of rivalry (including market trading, auctions etc.), instruments of rivalry (including price, advertising, research and development, merger and acquisition, and efforts), and objects of rivalry (such as profits, market share, corporate control, promotions, and survival). Competition is perceived to have positive effects on the efforts to improve economic efficiency through its ability to encourage firms and individuals to improve productivity and work efforts. Vickers (1995) and Disney, Haskel, and Heden (2003) shows that competition shifts resources and output from inefficient firms towards efficient ones and forces the former to exit, and therefore increase overall efficiency. However, Green and Mayes (1991), Caves *et al.* (1992) and Schmidt (1997) document inverted U-shaped relationship between competition and efficiency, which shows that increases in competition are most beneficial to efficiency in markets where competition is low to start with.

2.1.3.2 Competition and capital structure theories

According to William and Stephen (2012) at the perfectly competitive market structure firms earn zero economic profit in the long run. In an oligopoly and monopoly market structure firms earn a positive economic profit. This implies an increase in market share or concentration ratio will lead to an increase in an economic profit and vice versa. From this we can extract a negative relationship between competition and economic profit.

According to trade off theory as profit of a firm increase leverage ratio also increase since there is less risk of financial distress. In an oligopoly and monopoly market structure economic profit is high since competition is low so according to trade off theory in these oligopoly and monopoly market structure leverage ratio will be high and in a perfectly market structure since economic profit is low due to higher competition leverage ratio will decrease. This suggests that tradeoff theory supports negative relationship between competition and leverage ratio. On the other hand according to pecking order theory leverage ratio will be low in oligopoly and monopoly market structure since economic profit increase due to a lower competition and firms tend to use internal source of fund than debt whereas in a perfectly competitive market structure economic profit will

decrease due to tough competition so firms tends to use external source of fund. This suggests that pecking order theory supports a positive relation between completion and leverage ratio.

Competition is one of the determinants of corporate strategy (porter, 2008). According to yuvarajsambasivam and Abate (2013) and Fosu (2013) leverage ratio determines performance of the company. As financing decision is one of the key decision in strategic financial management that a firm undertakes to obtain a better performance, besides to firm level and macro level factors financing dicosion should also be determined based on the competition prevailed in an industry which is an industry specific factors which determine capital structure choice of a firm in Addition to firm specific and macroeconomic factors. as evidenced below studies also have been made on the impact of competition in the determination of capital structure of a firm.

2.2 Empirical literature review

2.2.1 Capital structure and competition

According to Lee (2011) one of the difficulties with current capital structure theories is that they do not consider the linkage between the output market or input market and a firm's financial policy. This study investigated the interaction of capital structure and product market competition with a Theoretical Approach. This study conceived the fact that firm's financial policy interacts with the product market and argued that firm's ultimate survival depends on how well it competes in the product market. Important determinant of a firm's debt policy is its relative market position in the industry.

“ the study of corporate practice with respect to debt revealed considerable evidence of conformity in industry thinking and practice and a sensitivity to the reactions of those competitors who were considered to be near rivals”(Donaldson,1961 cited in Lee,2011)

Furthermore According to Scott and Jhonson (1982) cited in Lee (2011), industry wide leverage ratios were important influences on a firm's leverage Decisions.

So this study introduces product market competition as a determinant of a firm's capital structure Decision and shows long-term outstanding Debt introduces a competitive disadvantage in the product market.

When firm's engage in competition other than price cutting, such as advertisement and R&D competition, they are sacrificing the short run stockholders cash flow (profit) for long run benefits through an increase in market share.

The competitive disadvantage in the product market due to long term outstanding debt happens because of the difficulty in raising outside funds when competition intensifies. This is a real cost firms have to consider when deciding upon their capital structure policies. Thus, firms subject to rival firm's competitive pressure would limit borrowing. This cost is referred to as "the market power cost of debt".

The study of Istitieh and Rodriguez (2003) empirically examined interaction terms between theoretical capital structure determinants and input/output market variables using panel data on 1,502 Spanish manufacturing firms in the 1993-1999 periods. Istitieh and Rodriguez used a system of simultaneous equations to solve the inherent endogeneity problem when foresighted firms anticipate the output market consequences of their financing decisions.

The system contains two equations: a financial leverage equation and a product market concentration equation. Their main empirical findings regarding product market determinants of capital structure were that employee bargaining power (measured by labor expenses minus dismissal and early retirement indemnities over value added) and customer bargaining power (measured by customer concentration) were negatively related to leverage. Also industry concentration and vertical integration were positively related to leverage, whereas reputation (measured by the firm's age) and economic growth were negatively related to debt ratios.

Schargrotsky (2002) argued that while a lot of empirical studies have examined the relation between leverage and competition, there is still no strong evidence on how market structure affects debt ratios. He studied the relation between competition and structure on a sample of 22 newspaper companies between 1957 and 1995 as this industry has a wide variability in market structure across local markets and across time (i.e. both monopoly and oligopoly structures are present). The study used OLS method to regress the dependent variables on the independent

variables. After controlling for a wide range of capital structure determinants, Schargrotsky found that oligopolies have higher debt ratios than monopolies. This finding was consistent with the existence of strategic debt as monopolists and firms operating under perfect competition have no incentive to raise their debt for strategic reasons.

Xiaomeng Xu, 2013 examined the impact of product market competition on capital structure of listed firms in the Netherlands during the period 2003-2011. Ordinary Least Squares (OLS) regression analysis was used to investigate this impact. The dependent variables used in the regressions were book leverage ratio and market leverage ratio whereas the independent variables include concentration ratio and R&D. the study also control for firm size, growth opportunity, non-tax debt shield and tangibility. Industry types and years were two dummy variables.

Statistically significant positive relationships between concentration ratio and both book value of long term debt ratio and market value of long term debt ratio were observed respectively. The finding indicated that the product market competition negatively influences capital structure. The study also found no evidence of a relationship between R&D and capital structure. In terms of R&D, the study can't found the relationship between product market competition and capital structure.

2.2.1.1 Evidence from Financial Institutions

Al-shubri(2011),investigated capital structure and market power evidence from Jordanian Banks. The study used Tobin's Q as a measure of market power. A sample data of fourteen banks listed on Amann stock exchange for the period from 2005 to 2008. The dependent variable used was Total debt deflated by total Asset. The study used OLS estimation method to regress the impact of market power on capital structure. The arguments of the results were, a bank in oligopoly condition sustains its aggressive production and high-income strategy by employing a higher level of debt. Shareholders of the bank gain in terms of increased wealth. In adverse market conditions, the limited liability provides protection to shareholders against the risky production decision by which lenders would suffer. Thus, the bank's debt level will increase as it gains market power reflected in Q. On the other hand, as debt increases, there are significant costs in

terms of increased probability of bankruptcy and financial distress. This cost would be accentuated by the behavior of no or low-debt banks with 'deep purses.' They would resort to predatory price behavior and lead their rivals to bankruptcy. This argument suggests a negative relationship between capital structure and Q.

According to Al-Shubri(2011) These two opposing effects point to the possibility of a non-linear relationship between capital structure and market power. As a bank starts gaining market dominance, it will increase debt to increase its production and income. That is, as bank's market power increases, they employ more debt to pursue their output maximization strategy. This attracts rival banks to intensify competition by cutting price and/or output. At the intermediate level of market dominance when competition intensifies through price cut, higher costs of debt squeeze out the profitability of highly levered firms, and their chances of financial distress and bankruptcy increase. Levered banks react by reducing debt or increasing production through improved assets utilization. However, after consolidating their position, banks at a higher level of market dominance leverage make use of debt in expanding their production. Firms with strong profitability and reserve funds and high market dominance adopt a high-risk production strategy and use more debt. Thus, we can predict a cubic relationship between capital structure and market power. In other words, firms at relatively lower and higher levels of market power employ more debt, while firms at the intermediate level of market dominance are vulnerable to rivals' competitive threat and reduce their debt.

Altunas et al (2014) examined insurance companies' capital structure across a broad range of countries including those in developing markets. Also examined specific country characteristics and to what extent these country-level factors moderate the relationship between a firm's characteristics and the firm's capital structure decisions. One of the country level characteristics identified in this study was level of competition. To examine the relative importance of firm-level and country-level determinants of insurer capital structure, the study performs a variance decomposition analysis. Since property-liability insurance companies and life insurance companies differ substantially with respect to their business model and, hence, their capital structure, the study perform the analysis separately for these two sectors of the industry. Using data on 6,545 firm-year observations from property-liability insurers across 28 different

countries and 2,001 firm-year observations from life insurers across 14 countries over the period 2001 to 2008. The study used two measures for the level of competition in a country which were market concentration, as an inverse measure of competition and insurance penetration which is a direct measure of competition and found out that the change in the predictive margins of the market concentration variable was negative, and the change in the predictive margins of the insurance penetration variable was positive. Since market concentration is an inverse measure and insurance penetration a direct measure of competition, the results indicate that insurance companies operating in countries with strong competition have relatively high leverage or hold relatively low levels of costly capital the study reveals the reverse result for life insurance sectors. As hypothesized in the study this is because holding capital is costly and since insurance firms operate in a competitive environment so as to ensure efficiency they have to hold less capital.

2.2.1.2 Evidences from Developing countries

Naha and Roy (2011) analyzed empirically to what extent product market competition that a firm faces in a developing country like India, affects its capital structure decisions. The product market behavior was captured from three different angles viz. structure (concentration ratio), conduct (Advertisement), performance (Return on Asset). The study examined the impact of market structure, conduct and performance on both the short-term and long-term debt ratios separately, after controlling for the other determinants of capital structure. The method used was panel regression analysis. It was observed that the structure and conduct were significant in influencing only the short-term debt ratio whereas performance was consistently having a negative impact on both short-term and long-term debt ratios. Market structure affects short term debt-ratio positively which suggests that more concentrated a firm is, it includes more short term debt in the capital structure. Thus, monopolies are expected to have higher short-term debt-ratios than oligopolies. As concentration increases, a firm becomes more powerful player in the market with better access to the capital market. The result slightly alters when long-term debt is considered, where only the conduct of firms turns out to be statistically significant.

According to Naha and Roy (2011) The impact of conduct variable was different for short term

debt as compared to long term debt. The direction of influence of conduct was positive in case of long-term and negative in case of short-term debt. A firm with the objective of promoting sales in the near future incurs advertising expenditure, which requires more capital for creating unique capabilities, maintaining more inventory and specific human skills that will differentiate its product from that of others. Thus, to sustain itself in terms of sales, the requirement of long-term debt increases with increase in the expenditure to maintain its conduct. Such a behavior on the part of a firm reflects the positive association of the conduct variable with long-term debt ratio. The significant negative relation between short term debt and conduct variable becomes a puzzle to the Authors. However they draw the following argument as a tentative explanation. If the conduct variable has its desired impact it would improve the competitive position of the company which may reduce the working capital requirements leading to a reduction in short term loan requirement. That is the relation is capturing a trade-off between improved selling activities and short term capital requirement.

Fosu (2013) investigated the relationship between capital structure and firm performance, paying particular attention to the degree of industry competition. The paper applied a novel measure of competition, the Boone indicator, to the leverage- performance relationship. Using panel data consisting of 257 South African firms over the period 1998 to 2009, this paper examined the effect of capital structure on firm performance and investigated the extent to which the relationship depends on the level of product market competition. The study used GMM (Generalized Method of Moments). The results suggest that financial leverage has a positive and significant effect on firm performance. It was also found that product market competition enhances the performance effect of leverage. The results were robust to alternative measures of competition and leverage.

2.2.1.3 Evidence from Ethiopia

Amanuel (2011) investigated firm specific determinants of capital structure In case of manufacturing companies in Ethiopian for the period 2004 – 2010. The study used total debt, long term and short term debt ratios as dependent variable and profitability, earning volatility, size, age, tangibility, Non-debt tax shield and growth as an independent variables. the study finds out that profitability , earning volatility, size, tangibility and non-debt tax shields to be

a significant determinants of capital structure. Usman(2013) studied firm specific determinants of capital structure in case of large tax payers share company for the period 2006 – 2011. Long term debt ratio was regressed by profitability, size, age, tangibility, liquidity, non-debt-tax shield, growth, dividend payout ratio and earning volatility and the result revealed a significant relationship between size, age, tangibility, liquidity, non-debt tax shield and long term debt ratio. Woldemichael (2012) investigated the impact of firm specific determinant factors, i.e profitability, liquidity, growth, tangibility, risk and size on total debt ratio of banking sector in Ethiopia for the period 2000-2011. The study finds out profitability, liquidity, tangibility and size as significant determinants of total debt ratio of banking sector in Ethiopia. Shibru (2012) have investigated firm specific determinants of capital structure in case of banking industry banking industry in Ethiopia for the period 2000-2011. Profitability, tangibility, growth, risk, size and liquidity were the independent variables whereas leverage ratio was the dependent variable. Profitability, tangibility, size and liquidity have found to be significant determinants of capital structure of banking industry in Ethiopia. amongst the studies which have been undertaken on the investigation of firm specific determinants of capital structure of insurance companies in Ethiopia Solomon (2012) investigated firm specific determinants of capital structure decision of insurance companies in Ethiopia for the period 2003-2010. Total debt ratio was the dependent variable and profitability, size, liquidity, growth, non-debt tax shield, dividend payout, age, tangibility and risk were the independent variables. Size, growth, non-debt tax shield and risk were found to be the significant determinant factors of Total debt Ratio. Daniel (2015) was another study undertaken on the firm specific determinants of capital structure decision of insurance companies in Ethiopia. Leverage ratio was regressed by profitability, tangibility, growth, liquidity, risk and size. Profitability, tangibility, growth and liquidity were found to be significant determinants of capital structure of insurance companies in Ethiopia.

There are few studies on the impact of Macroeconomic variables on capital structure decision of firms. Saddam (2014) investigated impact of firm specific and macro economic variables on capital structure choice of insurance companies in Ethiopia for the period 2007 – 2013. GDP growth rate, Inflation rate and interest rate were macro economic variables were tested against leverage ratio. The result of this study concluded inflation rate as a significant

macroeconomic determinant variable of capital structure in Ethiopian insurance industry.

So many studies in Ethiopia have focused on firm specific and macroeconomic variables which determine capital structure of firms. But as per the best of the researchers knowledge there is no any single study undertaken on the Impact of Industry specific variables on capital structure decision of firms, more specifically on Ethiopian insurance companies. So this study will investigate the impact of degree of competition in Ethiopian insurance industry which is one of industry variable which is assumed to have an impact on capital structure decision of insurance companies in Ethiopia.

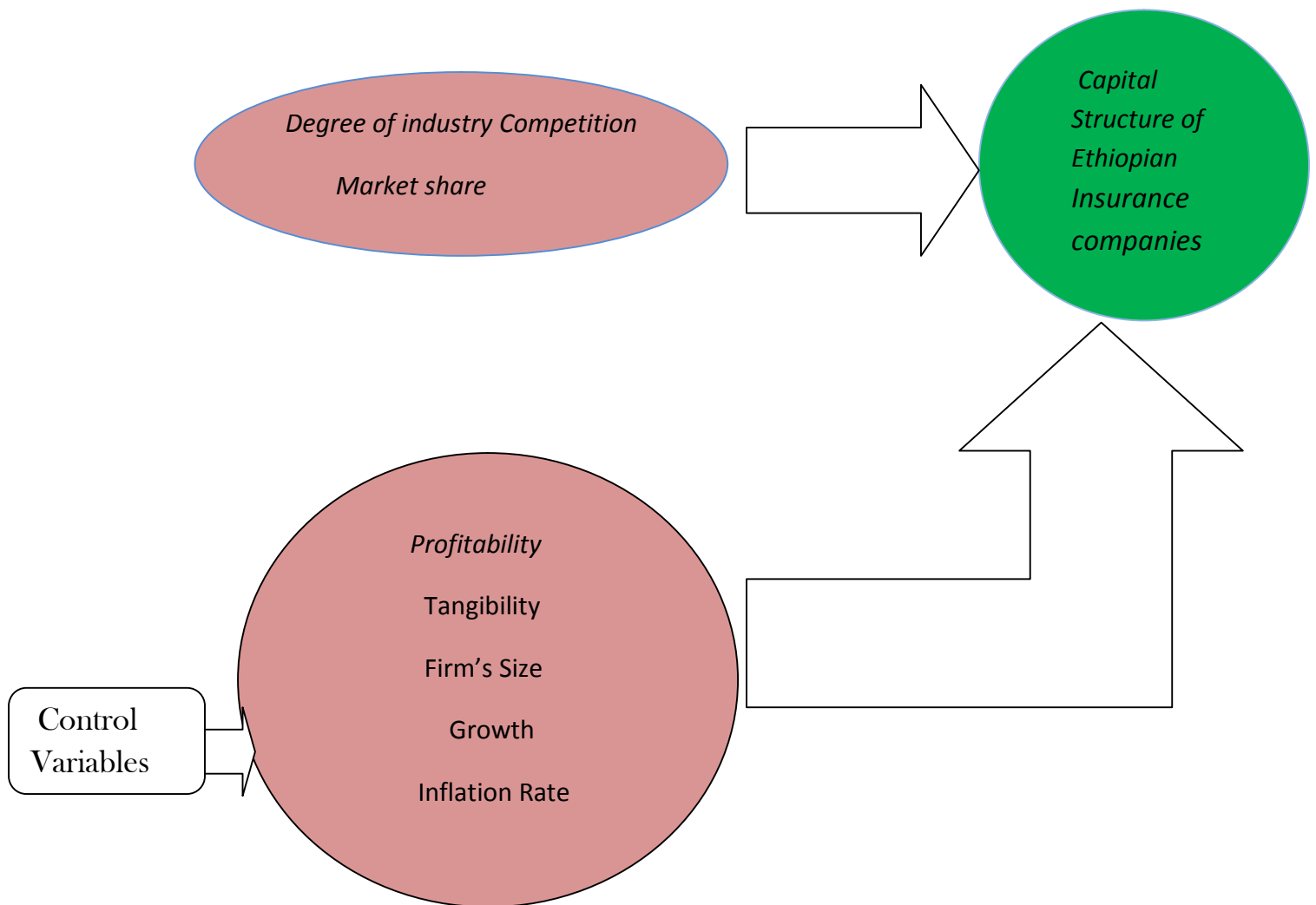
2.3 Conclusion and Knowledge gap

As discussed above in the literature review there are numerous theories including MM propositions, trade off , pecking order ,and agency cost theories those express what determine capital structure Decision and the issue of optimal capital structure differently. Various empirical studies also conducted regarding determinants of capital structure. Most of those studies were also limited to investigating internal and external determinants of capital structure. In Ethiopia context also various empirical studies on internal (firm specific) and external (Macroeconomic) determinants of firms more specifically, on Ethiopian insurance Companies were conducted. But limited studies were conducted on the impact of industry specific factor, competition on capital structure decision of firms. In Ethiopia context also as per the researchers bet knowledge there is no a single study undertaken on this industry specific factor, competition on financing decision of firms more specifically on Ethiopian insurance companies. Therefore this study will be a good opener for future study in this area of Ethiopian context by filling the above knowledge gap through the examination of competition's impact on financing decision of Ethiopian insurance companies.

2.4 Conceptual framework

Conceptual framework as depicted in the below figure it demonstrate a potential link between independent variables with dependent variable. In other words, it indicates the cause and effect relationship between Degree of industry competition and capital structure of insurance companies in Ethiopia.

Figure 1-compiled by the researcher



CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Research Design

According to Saunders et al(2009) the way researcher choose to answer research question will be influenced by research philosophy and approach adopted. A research question will subsequently inform a researcher's choice of research strategy, choice of collection technique, analysis procedures and the time horizon over which research project is undertaken. A research design is the general plan of how a research will go about answering a research question.

According to Saunders et al (2009) Based on purpose, research could be broadly divided in to Exploratory, Descriptive and Explanatory research design. Exploratory study is a valuable means of finding out what is happening; to seek new insights; to ask questions. On the other hand, the object of Descriptive study is to portray accurate profile of persons, events or situations. This may be an extension of, or a forerunner to a piece of exploratory research or, more often a piece of explanatory research. Finally Explanatory study establishes casual relationships between variables. This emphasized on studying a situation on a problem in order to explain the relationship between variables.

Since the purpose of this study is to identify the impact of competition (industry specific characteristics) on financing decision of Ethiopian insurance companies, the study employed an explanatory research design .Quantitative data was collected and statistical test were employed to obtain a clearer view of relationship.

As far as time horizon was concerned, this study employed panel data in that ten years, 2007 to 2016, data of each insurance companies in Ethiopian insurance sector was collected.

3.2 Research Approach

According to Creswell (2009), there are three common approaches to conduct a research project in the area of business and social sciences research namely; quantitative, qualitative, and mixed research approaches.

With quantitative approach, the researcher primarily used postpositive claims for developing knowledge, employed inquiry strategies such as experiments and surveys, and also collected data on pre specified instruments that yield statistical data. The purpose of this paper was to determine the relationship between degree of industry competition as independent variables using measuring proxy of competition which is Market share and Leverage ratio as dependent variable. Therefore, the quantitative research method was the well suited method for this study. This study was intended to develop hypothesis and theoretical framework, which can only be examined by quantitative measures. The other reason for selecting this method was the support of numerous literatures on the relevant studies, where they employ quantitative methods to investigate their research problems and verify their hypothesis.

3.3 Sources data

In order to achieve objectives of this study, the researcher relied on secondary sources of data such as financial reports of insurance companies and annual and quarterly reports of National Bank of Ethiopia (NBE). Specifically, panel raw data for empirical analysis in relation with Degree of competition proxy and control variables were obtained from audited financial statements of sample insurance companies for the period of ten years (2007 to 2016). The sources of data for this study were Balance sheets and Income Statements of sample insurance companies over 10 years period from 2007 to 2016, which were mainly extracted from National Bank of Ethiopia, which can provide comprehensive database for all insurance companies. In addition to the above core data sources, previous related empirical studies, books, and other important documents were referred by the researcher to make the study robust.

3.4 Study population and sampling technique

According to Annual report of NBE 2015/2016 as at June 2016 , seventeen insurance companies are working in Ethiopia and the researcher believed 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 2007- 2016. 10 years data from 2007-2016 have been collected due to the researcher intention to provide the reliable and most up-to-date result. The year service below 10 years was not included in sample frame to make panel data model structured.

Therefore, those insurance companies, which were established after 2007 and started to provide financial statement in the succeeding fiscal year were not included in this study because this study incorporated only insurance companies that have started to produce financial statements for the year 2007 and continue to operate till 2016.

9 insurance companies which started to produce financial statement on 2007 and continued to operate till 2016 were selected from the sample population these are: Ethiopian Insurance Corporation, Awash insurance company, Global Insurance Company, Nile insurance company, Nice insurance company, Africa insurance company, Nib insurance company, Nyala insurance company, United insurance company. This accounts for 58.8 percent of the total population (insurance companies) in Ethiopian insurance industry.

3.5 Method of data analysis and Presentation

The study used panel data which is the combinations of cross-sectional and times series data. It is common in economics since it provides massive source of information about economy. Panel data is also called pooled data, micro panel data, longitudinal data (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). By combining time series of cross section observations, panel data give more informative data, more variability; less co linearity

among the variables and more efficiency.

The panel data that was collected for the purpose of this study analyzed using descriptive statistics, correlations, and multiple regression analysis through statistical software package of STATA. First, based on the collected and processed industry specific (competition) as well as control variables (firm specific and macroeconomic) data, several descriptive measures were analyzed. These descriptive measures include mean, minimum, standard deviation and maximum values of each explanatory variables as well as the dependent variable of total leverage. Following the descriptive analysis, correlations between all variables including the dependent variable were calculated and analyzed. By using such correlation statistics, the degree of association between explanatory variables themselves as well as with the dependent variable was analyzed.

Thirdly, before running a multiple regression analysis, model specification test namely hausman test and Breusch and Pagan Lagrangian multiplier test were carried out to choose an appropriate estimation technique among fixed or random effects models. Fourth, based on the regression result, diagnostic tests were made by the researcher in order to assure CLRM assumptions were not violated. Among others, autocorrelation and multicollinearity tests were employed by the researcher. Finally, the researcher run regression thereby analyze the impact of industry specific factor, competition on the dependent variable by controlling selected most significant firm specific and macroeconomic variables and discuss results accordingly based on the selected panel estimation model.

3.6 Definition of variables

Dependent Variable

Total debt ratio

It is debt or liability to assets ratio. These measures a company's use of leverage i.e percentage of debt used to finance assets (Asa, 2010). Amongst the many measures of leverage on Rajan and Zingales (1995), total liability to total asset ratio were used in this paper as a proxy measure of leverage. Total debt is the sum of short term and long term liabilities.

$$\text{Total debt ratio} = \text{Total Liability} / \text{Total Asset}$$

Independent variables

Competition

Vickers (1995) defined competition as a rivalry between suppliers. According to Caessens (2009) there are three approaches that have been proposed for measuring competition. The first empirical approach considers factors such as financial system concentration or Herfindhal indices. The second considers regulatory indicators to gauge the degree of contestability. It takes in to account entry requirement, formal and informal barriers to entry, activity restrictions etc. it also considers changes overtime in financial instruments such as innovation, Advertisement, etc. the third set uses formal competition measures such as the so called H-statistics (proxy of reaction of output to input prices).

This study used market share as a proxy for competition.

Market share

Jun du and Min Jia (2010) defined market share as the share of firm's sale in the total sale of an industry.

$$\text{Market share} = \text{Firms sale at time } t / \text{Industry sale at time } t$$

Control variables

Profitability

Profitability plays an important role in leverage Decisions. Profitability was measured by return on Assets. ROA represents the contribution of Firms Assets on profitability creation. Profitability is a measure of earning power of a firm. The earning power of a firm is generally the basic concern of its shareholders. Following Titman and Wessels (1988) and Rajan and Zingales (1995) the ratio of operating income (net profit before tax and interest) over Total Assets (ROA) were used to measure profitability.

Tangibility

Tangibility of Assets represents the effect of the collateral values of Assets on the firms leverage level. The underlying argument behind the use of tangible assets as collateral for debt is the higher liquidation value of these assets in the event of financial distress or bankruptcy (Rajan and Zingales,1995).following Rajan and Zingales(1995) the ratio of fixed Assets to Total Assets were used as a measure of Tangibility.

Size

size can be regarded as proxy for information asymmetry between managers and outside investors. Large firms are subject to more news than small firms because the investment community would be more concerned with gathering and providing information about large firms (Kadapakkal et al,(1988) cited in Zurgat (2009).

Following Titman and Wessel (1988) and Rajan and Zingales (1995) ,natural logarithm of Total Assets as proxy for the size of the firms were used.

Liquidity

liquidity is an ability of a firm to pay off its liability. Firms with more liquidity ratio will have a greater ability to satisfy their short ter m contractual obligation.in line with Naveed et al (2010)

and Dawood et al (2011) ,Liquidity was measured as a ratio of current asset to current liability which were current ratio.

Inflation

It is a persistent increase in general price levels in an economy over the time (Muthama et al,2013).it were measured by general Inflation rate(Saddam,2014).

3.7 Model Specification

Leverage level i.e Total debt ratio was used to represent the dependent variable. Level of competition was used as a dependent variable with its proxy, Market share. The most significant firm specific and macroeconomic variables were controlled in this study these are profitability, Tangibility, liquidity, firm Size and Inflation Rate. Multiple regression Model was Employed to investigate Impact of Degree of Competition on capital structure decision of Ethiopian Insurance Companies. The General Model for this study was

$$Y_{i,t} = \alpha + \beta X_{i,t} + \epsilon_{i,t}$$

The subscript i represents the cross sectional dimension and t denote the time series dimension. In the left side, $Y_{i,t}$ represents the dependent variable in the model, which is the firms leverage expressed as total debt ratio. In the right side, $X_{i,t}$ represents the set of independent variables in the estimated Model. α represent the intercept (constant variable) where as $\epsilon_{i,t}$ the error terms.

The General Model employed for the study was:

$$TDR_{it} = \alpha + \beta_1 MS_{it} + \beta_2 PRF_{it} + \beta_3 TNG_{it} + \beta_4 LQ_{it} + \beta_5 SZ_{it} + \beta_6 IR_{it} + \epsilon_{it}$$

Where:

α - Constant coefficient

$1 - \beta$ = Regression coefficients for measuring independent variables

TDR_{it} = Total debt ratio of insurance i at year t

MS_{it} = market share of insurance i at year t

PRF_{it} = Profitability of insurance i at year t

LQ_{it} = Liquidity of insurance i at year t

TNG_{it} = Tangibility of insurance i at year t

SZ_{it} = Firm Size of insurance i at year t

IR_t = Inflation rate at year t

= Error term

CHAPTER FOUR
EMPIRICAL ANALYSIS AND DISCUSSION OF RESULTS

4.1 Descriptive Analysis

In this section, results pertain to various descriptive measures of total debt or total leverage ratio as well as explanatory variable, competition measured by market share and profitability of insurance companies and control variables i.e most significant firm specific and macroeconomic explanatory variables which are profitability, tangibility, liquidity, firm size and inflation rate. Table 4.1 below depicts mean, minimum, maximum and standard deviation values of dependent and explanatory variables. The total observation for dependent variable of leverage as well as full independent variables was 90, composed of nine cross sections multiplied by ten years data for each cross section.

Variable	Mean	Std. Dev.	Min	Max	Observations
totald~i overall	.6364778	.0756866	.45	.86	N = 90
between	.0581582		.554	.706	n = 9
within	.051847		.5244778	.8384778	T = 10
market~e overall	.1081818	.130943	0	.53	N = 88
between	.1341215		.017	.457	n = 9
within	.0270073		.0511818	.1811818	T = 9.77778
tangib~y overall	.178	.1281519	.04	.81	N = 90
between	.0876755		.06	.352	n = 9
within	.0975359		.001	.721	T = 10
profit~y overall	.0981111	.1035319	-.02	.76	N = 90
between	.0424159		.045	.177	n = 9
within	.0954028		-.0568889	.6811111	T = 10
firm_s~e overall	8.435667	.4654466	7.48	9.5	N = 90
between	.3936979		7.854	9.225	n = 9
within	.2780585		7.752667	9.032667	T = 10
liquid~y overall	1.111222	.2364571	.4	2.31	N = 90
between	.1228666		.915	1.271	n = 9
within	.2057726		.5962222	2.176222	T = 10
inflat~n overall	17.14	10.89984	2.8	36.4	N = 90
between	0		17.14	17.14	n = 9
within	10.89984		2.8	36.4	T = 10

Table 4.1 Descriptive statics results table

As can be seen above, the average leverage (total debt) ratio of sample insurance firms was 63.6% implying those sample insurance firms generate over two third of their financing need for operation from debt sources of finance.

The overall maximum and minimum leverage ratio, as measured by total debt ratio was 86% and 45% respectively. The dispersion of debt ratios between insurance firms was 75%.

The main explanatory variable market share, used as a proxy for competition happened to have an overall mean value of 10.8% which was because the highest market share is possessed by one public insurance firm, Ethiopian Insurance Company and the majority of insurance firms possess little share. The minimum and maximum value of market share was 0 and 53% respectively. Dispersion of market share was 13% between sample insurance companies and 2.7% within sample insurance companies implying majority of sample insurance firms market share is near to the mean value and market share of sample insurance firm is more stable.

Descriptive analysis for control variables which are the most significant firm specific and macroeconomic explanatory variables of leverage ratio is presented as follows.

Profitability exhibited an average value of 9.8% as measured by return on assets (ROA) this indicates that those insurance firms under study earned 9.8 cents of before tax profit on every single ETB of the asset investment besides, the sample's maximum profitability record was 76% while the minimum appeared with the loss of 2%. The dispersion of ROA for a sample measured by standard deviation was 10.3% this is because there is no a significant difference in the profitability of Ethiopian insurance companies as it is also evidenced above in their average market share which is low.

The overall average value of tangibility of assets as measured by ratio of fixed assets to total asset was 17.8% which implies tangible asset of those sample insurance companies is low or around 75% of their asset is current asset. The maximum and minimum value of tangibility of assets was 81% and 4% respectively. The variation of tangible asset of sample insurance firms was found to be 12.8% which is low that is fixed asset to total asset ratio of sample Ethiopian insurance companies is almost near to each other.

The mean liquidity ratio which was measured by a ratio of current asset to current liability of sample Ethiopian insurance firms under study period was 1.11: 1; this implies that those sample insurance firms had 1 ETB and 11 cents to pay for every ETB of their short term obligations throughout the study period. The maximum and minimum liquidity ratios for the sample Ethiopian insurance firms throughout the study period were 2.31 and 0.4 respectively per single ETB of current liabilities.

The size of sample Insurance firm in ten years of study ranged from minimum of 7.48% to maximum of 9.5%. The dispersion of size of sample Insurance firms was appeared to be 46.5%. Government owned Insurance Company EIC was happened to be the largest of all sample Insurance firms over the period.

Another controlled variable was inflation which is a macroeconomic variable and was appeared to have a significant effect on leverage ratio of Ethiopian insurance companies in previous studies. In this study the mean value of inflation over study period is 17.14%. The maximum and minimum value of inflation is 2.8 and 36.4%.

4.2 Correlation Analysis

Here in this section the association of independent variables with dependent variable of leverage as well as the independent variables themselves were analyzed and discussed by using a correlation matrix. The correlation analysis was made aiming to see the extent of strength or weakness of relationship among variables. Correlation analysis could have three important advantages. First, it tells whether the relationship between the dependent variable is positive or negative. Second, it tells whether the relationship is strong or not. Third, it tells about whether there is multicollinearity problem or not.

According to Brooks (2008), the correlation between two variables implies that they are being treated in completely systematical way (Similar manner). This implies an existence of evidence for linear relationship between the two variables which does not mean a change in one variable causes in a change in another. A correlation coefficient of two variables ranges between -1 and +1. A correlation coefficient of negative one implies that a perfect negative linear relationship between the two variables while positive one indicates a perfect positive linear association. A

correlation coefficient of zero indicates the absence of any linear relationship between two variables. The table below presents the correlation among the variables.

	totald~i	market~e	tangib~y	profit~y	firm_s~e	liquid~y	inflat~n
totaldebtr~i	1.0000						
marketshare	-0.0006	1.0000					
tangibility	-0.3127	-0.3521	1.0000				
profitabil~y	0.1837	-0.0619	0.2250	1.0000			
firm_size	0.4463	0.5692	-0.4252	0.0327	1.0000		
liquidity	-0.2380	0.2160	-0.2846	0.1868	0.1051	1.0000	
inflation	-0.2647	0.0518	0.0152	-0.2471	-0.1873	-0.1223	1.0000

Table 4.2 Correlation Analysis results table

Total debt ratio was negatively correlated with market share, tangibility, Liquidity and inflation for the coefficient estimates of correlation – 0.0006, – 0.3127,-0.2380 and -0.2647 respectively while profitability and firm size was positively correlated with total debt ratio of sample insurance firms for the coefficient estimates of correlation 0.1837 and 0.4463 respectively. This implies when market share, tangibility, Liquidity and inflation increase leverage (total debt ratio) will decrease and as profitability and firm size increase leverage ratio also increase.

4.3 Model specification test

The first step before running a regression analysis and thus to investigate significant factors that can affect financing decision of Ethiopian insurance firms is to specify an estimation model.

According to Brooks (2008), the two most widely used panel estimation approaches that can be appropriate for a research in the area of finance are fixed effects model and random effects model. Fixed effects model allow the intercept in the regression model to differ throughout cross-sections, but not over time, whereas all of the slope estimates are fixed both for individuals cross sections as well as over time. Random effects model also known as the error components

model, as of fixed propose that different intercept for each cross sections that do not vary over time, with the relationships between independent and dependent variables assumed to be the same both for each cross-section and over time. However, the difference between the two is that under a random effects model, the intercepts for each cross-sections unit are assumed to arise from a common intercept (which is the same for all cross-sections and over time) plus random variables i.e that varies cross-sectionally but not over time.

In order to choose appropriate model for the study, Hausman test was carried out by the researcher. The Hausman test as presented below tests the null hypothesis of random effects model is appropriate against the alternative that moves fixed effects model appropriate if the probability of Hausman chi-square is less than 0.05, the researcher could use fixed effects model otherwise random effects could be used.

This study used Hausman test and Breusch and Pagan lagragian multiplier test to estimate the appropriate model for the study.

	— Coefficients —			
	(b) fe	(B) re	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
marketshare	-.162052	-.1615918	-.0004602	.0111567
tangibility	-.0105654	-.0108283	.0002629	.0008939
profitabil~y	.1954493	.1979529	-.0025036	.0133112
firm_size	.0750189	.0751392	-.0001203	.0004144
liquidity	-.2763163	-.2818334	.005517	.0163115
inflation	-.0001037	-.0001026	-1.10e-06	9.56e-06

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

$$\begin{aligned}
 \text{chi2}(6) &= (b-B)'[(V_b-V_B)^{-1}](b-B) \\
 &= 0.18 \\
 \text{Prob}>\text{chi2} &= 0.9999
 \end{aligned}$$

Table 4.3a Hausman test for fixed effects and random effects

The Housman test with a P-Value of 0.99, we fail to reject the null hypothesis which says fixed effect is not the appropriate model or in another word there is no correlation between the exogenous variable and unobserved heterogeneity variable. Hence, random effect model is the chosen model. However still, before concluding that random effect is the correct model we need to check whether there is significant company difference or not using Breusch and Pagan Lagrangian multiplier test.

Breusch and Pagan Lagrangian multiplier test for random effects

$$\text{totaldebrati}[\text{company},t] = Xb + u[\text{company}] + e[\text{company},t]$$

Estimated results:

	Var	sd = sqrt(Var)
totalde~i	5.318761	2.306244
e	.0810237	.2846466
u	.0803419	.2834465

Test: Var(u) = 0

$$\begin{aligned} \underline{\text{chibar2}(01)} &= 75.39 \\ \text{Prob} > \text{chibar2} &= 0.0000 \end{aligned}$$

Table 4.3b Breusch and Pagan Lagrangian multiplier test for random effects model result

The test result shows the appropriateness of Random effect against fixed effect model since probability of Breusch and Pagan Lagrangian multiplier chi square is less than 0.05. It shows whether there is significance companies difference or not, hence random effect model is the appropriate model.

4.4 CLRM assumptions and diagnostic test

The diagnostic test were undertaken to ensure that the data fits the basic assumptions of the classical linear regression model. Before discussing regression Analysis result, post estimation tests are presented to be sure that the selected model is consistent and efficient. The study

undertakes post estimation tests: multicollinearity test and serial correlation tests (Autocorrelation).

4.4.1 Multicollinearity test

This test is conducted to check whether there is serial correlation among independent variables or not using Variance inflation factor (VIF). The result of VIF is 5.40 is lower than the critical value of 10. Hence, there is no problem of Multicollinearity problem.

Variable	VIF	1/VIF
firm_size	14.15	0.070677
liquidity	7.39	0.135408
inflation	3.35	0.298922
tangibility	3.27	0.305789
profitability	2.26	0.443145
marketshare	1.97	0.507634
Mean VIF	5.40	

Table 4.4 VIF test of Multicollinearity test results table

4.4.2 Autocorrelation

Autocorrelation test is a test that can be used to check whether the errors are uncorrelated each other thereby to assure whether the model was in line with the fourth assumption that required not serially correlated error terms. Wooldridge test for autocorrelation is applied to test for serial correlation between error terms.

Wooldridge test for autocorrelation in panel data

H0: no first-order autocorrelation

$$F(1, 8) = 3.441$$

$$\text{Prob} > F = 0.1007$$

With a p value of 10% we fail to reject the null hypothesis of no autocorrelation. Hence, our post estimation tests show that our model is correct and hence, we can proceed to discussion and presentation of results.

4.5 Regression analysis and Discussion of results

Here in this section of the study, the regression analysis presented which is followed by discussion of results obtained from the analysis based on random effects model of panel estimation. Thus, the next two sub-sections i.e 4.5.1 and 4.5.2 represent regression analysis and Discussion of results from which conclusion to be made about factors affecting capital structure Decision as represented by leverage of Ethiopian Insurance firms.

4.5.1 Regression Analysis

The previous section of the paper revealed that the correlation result and various techniques approved the non existence of multicollinearity. This helped the researcher to employ multiple regression to predict magnitude of each explanatory variables impact on the dependent variable, Total debt ratio.

As shown in the previous section of the paper , the model used to find out and explain the association between the dependent and independent variables was:

$$TDR_{it} = \theta + \beta_1 MS_{it} + \beta_2 PRF_{it} + \beta_3 TNG_{it} + \beta_4 LQ_{it} + \beta_5 SZ_{it} + \beta_6 IR_t +$$

Where:

θ - Constant coefficient

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

TDR_{it} = Total debt ratio of insurance i at year t

MS_{it} = market share of insurance i at year t

PRF_{it} = Profitability of insurance i at year t

LQ_{it} = Liquidity of insurance i at year t

TNG_{it} = Tangibility of insurance i at year t

SZ_{it} = Firm Size of insurance i at year t

IR_t = Inflation rate at year t

= Error term

In order to choose from the most widely used panel estimation models of random effects and fixed effects models, the researcher employed a Hausman and Breusch and Pagan Lagrangian multiplier test. The results as it is shown in table 4.3a and 4.3b, suggested that random effects model was appropriate and preferable than the fixed effects one. So, the regression analysis as well as discussion of results regarding Impact of competition in capital structure decision of insurance firms in Ethiopia was made based on the random effects estimation results which is presented in table 4.5 below.

```

Random-effects GLS regression                Number of obs      =      88
Group variable: company                     Number of groups   =      9

R-sq:  within = 0.6251                      Obs per group:  min =      8
        between = 0.3466                      avg =      9.8
        overall = 0.4743                      max =     10

Wald chi2(6)                               =     97.52
corr(u_i, X) = 0 (assumed)                  Prob > chi2        =     0.0000

```

totaldebrati	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
marketshare	-.2146295	.0613297	-3.50	0.000	-.3348335	-.0944256
tangibility	-.1318594	.0540384	-2.44	0.015	-.2377728	-.0259461
profitability	.1581782	.0534289	2.96	0.003	.0534595	.2628969
firm_size	.0946961	.014991	6.32	0.000	.0653142	.124078
liquidity	-.0831962	.0261616	-3.18	0.001	-.1344719	-.0319204
inflation	-.0007538	.0004494	-1.68	0.093	-.0016347	.0001271
_cons	-.0265161	.1383283	-0.19	0.848	-.2976346	.2446024
sigma_u	.01371521					
sigma_e	.03177264					
rho	.15706906	(fraction of variance due to u_i)				

Table 4.5 Random effects model results table

As depicted in random effects results Table 4.5 above, market share with p value of 0.000, profitability at p value of 0.003, firm size at p-value of 0.000 and liquidity at p value of 0.001 were strongly significant at 1% level besides, Tangibility with p-value of 0.015% and inflation with p-value of 0.093% were significant at 5% and 10% level respectively to affect total debt ratio of sample Insurance firms. Market share, tangibility, liquidity and inflation were appeared to have a negative relationship with the dependent variable whereas profitability and firm size were appeared to have a positive relationship with the dependent variable, total debt ratio. The result also shows 47% of the variation in total debt ratio was explained by the independent variables, market share, Profitability, tangibility, liquidity, firm size and inflation and 62% of the variation in total debt ratio within each sample Insurance firm was explained by the independent variables. This also indicates that there are also other variables that influence the variation in the level of leverage. The probability of Wald chi2 with a value of 0.000 revealed the appropriateness of the Model or all variables used in the model jointly affects Total debt ratio significantly.

$$\text{TDR} = -0.0265 - 0.214 \text{MS}_{it} + 0.158 \text{PRF}_{it} - 0.131 \text{TNG}_{it} - 0.0831 \text{LQ}_{it} + 0.0946 \text{SZ}_{it} - 0.0007 \text{IR}_t +$$

The model can be explained as a 1% increase in market share will reduce total debt ratio by 21.5%, Total debt ratio will decrease by 13.2% as tangibility of assets of Ethiopian Insurance companies increase by 1%. Similarly a 1% increase in liquidity and inflation rate reduce total debt ratio by 8.3% and 0.07% respectively. On the other hand a 1% increase in profitability and firm size will increase total debt ration of Ethiopian Insurance companies by 15.8% and 9.5%.

4.5.2 Discussion of results

The previous sub section highlighted the regression results based on random effects estimation here in this sub section, detailed discussion of findings pertaining to an explanatory variable , degree of competition and control variables, most significant firm specific and macro economic variables for capital structure of Ethiopian insurance companies in Ethiopia Presented.

4.5.2.1 Degree of Competition

Market share

As market share is an inverse measure of competition and as revealed by many previous literatures; market share was hypothesized to be one of the most significant factors and to have a positive effect on capital structure of Ethiopian Insurance firm implying significant and negative relationship between competition and capital structure decision of Ethiopian insurance companies. The result of Random effects model as presented in Table 4.5 Indicated that the coefficient of market share was negative and statistically significant at 1 % level with p-value of 0.000 to explain capital structure of Ethiopian insurance companies' that is a significant negative relationship between market share and leverage. Therefore hypothesis 1A, there is significant positive relation between market shares and leverage was to be rejected in terms of sign and was to be accepted in terms of significance. According to the result of the study Ethiopian insurance firms utilized less debt during the time when their market share increase and utilized more debt when their market share decrease during the study period .

The finding is in line with the results of Altunas et al (2014), Istaitieh and Rodriguez (2003) and Fosu (2013) who have found a negative relationship between concentration ratio and leverage. According to Nickel (1996) and Griff(2001) concentration ratio or market share and competition are inversely related. This implies an increase in the market share of firms in an industry leads the market structure of that industry to a more concentration so the most efficient ones will stay in the industry and possess the largest market share whereas those inefficient tiny firms will be ruled out from the industry. So the market structure of that industry will tend to an oligopolistic and monopoly market structure from a perfectly competitive market structure. This directs the finding of this paper to an interpretation of a direct or positive relationship between competition and leverage ratio. According to the above finding the Higher the concentration ratio prevailed in the industry implying the highest market share possessed by few firms leads to a higher market concentration ratio and lower competition. At this market structure leverage ratio will be low.

So the finding of this thesis work, a positive relationship between competition and leverage implies a negative relation between Economic profit and leverage. This finding is in line with

pecking order theory. Which argues as profit increase a firm tends to use internal source and leverage ratio will decrease.

Competition

As can be derived from the above Discussions, the effect of competition on leverage has found to be statistically significant and have a positive sign. This implies Ethiopian insurance firms increased their leverage ratio at times of intense competition and reduce their leverage ratio at times of less competition during the study period. This result is contrary to Lee (2011), Xiaomeng xu(2013) and Nha and Roy(2011) but it is in line with Altunas et al(2014), Istaitieh and Rodriguez(2003) and Fosu(2013) who has found a positive relation between competition and leverage ratio. Therefore hypothesis 1, there is a significant negative relationship between competition and leverage was to be rejected.

This finding is also in line with pecking order theory which argues a negative relationship between profitability and leverage in light of an inverse relationship between competition and Economic profit (William and Stephen, 2012).

4.5.2.2 Control variables

Profitability

The result of the random effects model as presented in Table 4.5 The coefficient of profitability was statistically significant with p-value of 0.003 at 1 % significance level but has a positive sign. The result is in line with Trade off Theory which argues Profitability and leverage are directly related. That is as profitability increase a risk of financial distress reduces so the firm will tend to use more leverage so as to increase its benefit from interest tax shield. In terms of sign the finding was in contrary to many previous studies (Titman and Wessels,1988; Rajan and Zingales ,1995) but in terms of significance it is consistent with those studies.

Firm size

A significant and positive relation between firm size and leverage has been found from random effects estimation result as presented in table 4.5. With p-value of 0.000 firm sizes has found to

be a strong determinant factor of leverage. A 1 % increase in firm size increase leverage ratio of Ethiopian insurance firms by 9.4%.

According to Trade off theory larger firms uses more debt than smaller firms due to lower bankruptcy risk as the size of the firm increases. Contrary to this pecking order theory predicts negative relationship between size and leverage due to lower information asymmetry as the size of a firm increase a firm prefers to issue equity than debt. So the finding of the study is in line with tradeoff theory and it is similar with the results of Solomon (2012) and Rajan and Zingales(1995).

Tangibility

As indicated in table 4.5 there is a negative and significant relationship between tangibility and leverage ratio. At p-value of 0.015 tangibility was found to affect leverage at 5% significance level. An Ethiopian insurance firm with higher tangible asset uses less debt for financing and vice versa. This finding is in support of agency cost theory. Agency cost of debt increases when firms cannot collateralize their debt or when they are with less tangible asset. So the result implies Ethiopian insurance firms with high tangible assets can increase their debt since agency cost of debt decrease as tangibility increase. The result was similar with Daniel(2014).

Liquidity

The result of random effects estimation showed a negative and significant relation between liquidity and capital structure decision of Ethiopian insurance firms. With the coefficient of -0.83 and 1% significance level at p-value of 0.001. Trade off theory argues that firms with more liquidity (more current asset) tend to use more external borrowing, because of their ability in paying of their liabilities. On the other hand pecking order theory believes firms with more liquidity will prefer internal sources than debt or equity to finance future investment. The finding of this study was in line with the pecking order theory. The more liquid assets a firm has the more they use these assets instead of external financing. The result is also in line with findings of Woldemichael (2012) and Harris and Raviv(1991).

This strong negative relation implied that Ethiopian insurance firms with more liquid assets such as cash and marketable securities will prefer to use internal sources than external funds to finance their investment.

Inflation rate

Random effects estimation result of this study indicated a negative coefficient for inflation rate 0.07% and it was also significant at 10% level with a p-value of 0.09. This implies there is a significant negative relationship between annual inflation rate and debt level of insurance firms in Ethiopia. According to this finding, the higher the inflation rate in Ethiopia becomes the less likely insurance firms of the country tend to issue more debt than equity in order to finance their operation. This finding is in support of market timing theory which suggests a negative impact of inflation rate on firms leverage, due to an increase in the cost of obtaining debt when inflation is expected to be high. In Empirical perspective, this finding is consistent with previous research by Booth and Aivazian(2001).

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

Capital structure decision is one of key decisions in strategic financial management which attempts to explain the mix of securities and financing sources used by corporations to finance real investment. Capital structure is a composition of debt and equity that a firm uses to make up its asset. One of the strategies a firm should look in to is to lower weighted cost of capital so as to increase a firm's value. This is a focal point of financing decision. Following works of Modigliani and Miller (1958) many theoretical and empirical works were conducted on capital structure in general and its determinants in particular.

Regarding the determinants of capital structure decision of firm specific factors such as profitability, asset tangibility, growth opportunity, firm size, business risk, liquidity and age; macro economic factors such as GDP growth rate, interest rate and inflation rate are widely studied. On the other hand, even if it is few, empirical works on industry specific determinants of capital structure such as competition were conducted.

The general objective of this study was to examine the impact of industry specific determinant of capital structure specifically, competition, on capital structure decision of Ethiopian insurance companies by controlling selected firm specific and macroeconomic determinant factors of capital structure which are profitability, tangibility, liquidity, firm size and inflation rate which were selected from previous literatures and to identify a prominent theory of capital structure for insurance sector of the country in relation with the market share prevailed in the industry . In order to achieve such objective the researcher used quantitative research approach. Nine insurance companies were selected purposively and financial statement of these insurance companies and necessary data such as Annual reports, brochures and publications were used to draw a panel data over the period of 2007-2016 with the help of STATA software package.

The regression result of random effects model verified 47% of the change in the dependent variable (capital structure as expressed as total debt ratio) was explained by an industry specific variable competition and firm specific and macro economic variables, profitability, tangibility,

liquidity, Firms size and inflation rate were used as a control variables. The result shows a significant relation between competition (as measured by market share) and leverage ratio. All the firm specific and macro economic variables used to control the impact of competition on leverage ratio were found to be significant determinants of capital structure decision of Ethiopian insurance firms.

The study also attempts to identify the most prominent theory of capital structure which better explains the financial decision behavior of the sample insurance companies in Ethiopia. Amongst the major theories of capital structure which are trade off theory, pecking order theory and agency cost theory, pecking order theory were found to be an important capital structure theory in explaining financing decisions of insurance companies in Ethiopia in relation with the market structure of Ethiopian insurance industry.

The empirical findings of this study indicate that:

- Industry specific variable competition

Competition as measured by market share of Ethiopian insurance firms were found to be a significant determinant of leverage ratio of Ethiopian insurance firms with a 1 % significance level and had a negative sign. This implies if Ethiopian insurance industry becomes typically competitive their leverage ratio will also increase since economic profit decrease in a perfectly competitive industry firms in that industry will use external funds. if Ethiopian insurance sector becomes concentrated companies in this industry will use their internal funds since economic profit increase in a concentrated industry. This finding is in support of Pecking order theory.

- Firm specific and macroeconomic control variables

- Contrary to majority of previous studies profitability was found to have positive and significant impact on leverage ratio of Ethiopian insurance companies. This implies Ethiopian insurance companies will increase their leverage ratio as profitability increase. This finding is in line with trade off theory.
- A negative relationship between asset tangibility and leverage was found and it is an indication that companies with smaller share of tangible asset tend to be more subject to the cost of debt increases. This is in line with agency cost theory.

- Liquidity was found to be negatively associated with leverage and indicated that Ethiopian insurance firms with liquid asset will prefer internal sources than debt to finance future investment. This holds pecking order theory.
- Firm's size variable displayed a positive relation with financial leverage and was found to be most significant determinant of Ethiopian insurance firms financing pattern. Larger firms in Ethiopia insurance industry tends to use more debt. This supports trade off theory.
- Significant relationship between inflation rate and leverage ratio of Ethiopian insurance companies implies at times of high inflation prevailed in the country insurance companies in the industry will reduce their debt level. This result is in line with market timing theory.

To conclude the findings of the study implies Market structure prevailed in Ethiopian insurance industry significantly determines financing Decision of Ethiopian insurance firms. even if there are significant firm specific and macro economic variables which determine financing decision of insurance firms in Ethiopia, Competition were also found to be significant determinant factor whose effect on capital structure decision of Ethiopian insurance firms cannot be undermined. During the study period, when competition becomes intense in Ethiopian insurance industry, insurance companies in the industry preferred to use external source of fund since an intense competition leads to a zero economic profit insurance firms seek to external funds. Contrary to this when competition falls in Ethiopian insurance industry, insurance companies in the industry preferred to use internal source of fund since as competition falls insurance firms earn a positive economic profit insurance firms use their internal pocket as a source of fund.

5.2 Recommendations

As per the study results and conclusions presented in the preceding sections, the researcher made the following recommendations.

- Since an industry specific variable competition was found to be a significant determinant factor of capital structure decision Ethiopian insurance firms managers and shareholders of Ethiopian insurance companies shall give due attention to the prevailed market structure in the industry in deciding their leverage ratio in order to gather fruits of optimal capital structure.

- Amongst the major capital structure theories, pecking order theory appeared to be a prominent theory for Ethiopia insurance sector in relation to market structure of insurance industry. So managers of Ethiopian insurance companies are advised to act accordingly by giving due attention for this theory while making their financing decision.
- With the current situation of Ethiopian insurance sector it is characterized by oligopolistic market structure. So Ethiopia insurance companies are expected to have a positive economic profit. It is better that they limit their leverage ratio and finance their investment from internal fund.

Directions for further research

- Based on random effects regression result r-squared was 0.4743. This implies 47% of variation in leverage was explained by explanatory variable and control variables (competition, profitability, tangibility, liquidity, firm size and inflation rate). This indicates the model used in this study has a moderate power in explaining financing decision of Ethiopian insurance companies. This might be because the control variables used are small or there are other control variables that are more significant than those which were incorporated in this study. Based on this , as a further research direction it is recommended for future researchers to incorporate more significant control variables to examine the real impact of competition on financing decision of Ethiopian insurance companies.
- In this study market share was a proxy used to measure competition in Ethiopian insurance sector. But there are also other strong proxies used to measure competition in an industry such as concentration ratio, HHI index, barriers to entry, R& D expense). So for future researchers it is recommended that they use those proxies to measure, the degree of competition in examining its impact on financing decision of firms.

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