

# The Nature of Capital Structure among Insurance Companies in Ghana

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## Abstract

The objective of the study was to ascertain the nature of the capital structure of insurance companies in Ghana. Panel data was derived from annual reports and financial statements of 15 insurance companies registered with the National Insurance Commission from 2002 to 2011 and the analysis of variance (ANOVA) was applied to identify the differences in the nature of the capital structure among insurance companies based on their age and size. The results suggest that there is debt in the capital structure in the insurance sector of Ghana and out of these debts component, short term debt takes a higher proportion. The study also found that the proportion of equity capital is lesser than debt capital and again it established a significant difference in the proportion of equity capital practice and no difference in the debt capital practice among the different categories of insurance companies. Finally, our study allowed for yet another important comparison of capital structure between firms which are aged more than two decades and those which are aged less than two decades.

**Keyword:** insurance companies, equity ratio, debt ratio, age, size

## 1. Introduction

Capital structure attempts to explain the mix of funds from various sources used to finance firms. The pivot of the subject matter is the strategic role it plays in sustaining the firm in the foreseeable future, therefore if capital structure decision are taken without due diligence, the consequences may be devastating. Such devastating outcomes are financial distress, bankruptcy and liquidation. Capital structure issues have been debated since the publications of Modigliani & Miller in 1958, The outcome of these debates are the revolution of theories which sought to explain how best a company can combine equity funds and debt capital in the utmost benefit of all stakeholders of the company as well as increasing the wealth of shareholders.

The current study used theories like the pecking order theory which does not postulate an optimal capital structure as a starting point, but instead asserts that firms prefer the use of internal finance over external finance; signalling theory which explains the way firms decisions send signals to investors to compensate for information asymmetry; Free cash flow hypothesis which states that if the firm has enough cash flow after the payment of all expenses it can expand by investing the free cash in net present value opportunities which can increase the value of the firm.

Finally, the agency theory which is build on the idea that management represent the interest of stockholders as their agents, and they are supposed to operate in their best interest but managers of large organizations are continuously facing conflicts between firm value, stockholder's wealth maximization as well as their own personal welfare (Ahmadinia Afrasiabishani, & Hesami, 2012). They would divide their efforts in making the firm work hard enough to generate reasonable stockholder returns, while devoting the remainder of their efforts to public and personal service activities, employee benefits, and to higher executive salaries (Najjar & Petrov, 2011).

The issue of capital structure is commonly neglected in developing countries, such as Ghana. Partly because, firms in developing countries face major financing constraints, such as undeveloped bond markets and ineffective bank lending. It is important for developing countries to enhance the understanding of their financial institutions and the nature of their funding sources. The importance of financial managers is steadily growing in financial institutions such as the insurance firms and to assist them in fulfilling their goals, it is vital to provide them with knowledge that relates to the nature of the financing pertaining in their organisations. This would help financial managers to improve their financing decisions regarding their financing mix. By taking into account the theoretical impact of the nature of their capital structure.

### 1.1 Objectives and Scope of the Study

This study attempts to determine the nature of capital structure of insurance companies, while considering some significant factors that might affect it in order to achieve their primary objective of maximizing value and shareholder wealth, while overcoming the conflicts of interest between shareholders and managers as well as the negative signals it might sent to prospective investors. Our particular objective is to investigate the nature of

capital structure for insurance companies who have their financial statements with the National Insurance Commission (NIC) from 2002 to 2011.

### **1.2 Significance of the Study**

The significance of this study stems from the fact that various studies in Ghana have investigated the determinants of capital structure only for banks and non financial firms in Ghana. Such studies include; Amidu (2007), who studied the determinates of capital structure of Ghanaian banks, Abor (2008), who researched into the determinants of capital structure among SMEs' in Ghanaian and Gatsi (2012) who studied capital structure and performance of Ghanaian banks. However, to the best of the authors' knowledge, no study has been focused on the nature of capital structure in insurance sector of Ghana.

As such, we believe that we fill an important gap in our understanding of the nature of the capital structure decisions for insurance companies in the Ghana. Such an understanding is important, because it equips financial managers of insurance companies with applied knowledge of the nature of their capital structure.

### **1.3 Outline of the Study**

The study proceeds with the literature review on capital structure theories; then an explanation is provided for the variables used in the study as well as the research methodology; after that the results and discussions are presented.

## **2. Review of Literature**

For the purpose of the current studies literature is reviewed on the capital structure theories like the pecking order theory, signalling theory and the agency cost in relation to the firm size and the age of the firm to facilitate the discussion of the findings.

### **2.1 Pecking order theory**

Within the framework of pecking order theory which explains that firms would prefer retain earnings to finance their operational activities and if not enough would prefer debt capital because it is cheaper than equity capital and does not also dilute control. Equity capital would be resorted to only as a last resort. Rajan & Zingales (1995) established that firms with large size, measured in terms of assets and tangible facilities, all other factors holding constant, would maintain relatively lower debt levels since they can realise such funds from internal sources.

Graham (2000) after considering the size of the firms argued in his work that large scale companies which persistently earn high profit mostly operate with low debt levels indicating that they would rather retain their profit for both expansion and operational activities. However, in the banking sector which belongs to the financial industry just as the insurance sector, Cassa & Holmes (2003) and Najjar et al. (2011) who all worked on the insurance industry established that a negative relationship between age of firms and both total-term debt and short-term debt ratios. Erol (2011) also confirm a significantly negative correlation between age and leverage in their work. This means that as firms make age, they would prefer to retain profits to finance operational activities

### **2.2 Signalling Theory**

Barclay & Clifford (2005) in a contrast view to the market timing theory mentioned that, securities often are seen as an attempt to raise capital with the minimum cost, the signalling model assumes that financing decisions are designed basically to convey future prospects to outside investors (Naveed, Ishfaq & Zulfqar, 2010). This is usually done to raise the value of shares when managers think they are undervalued. In relation to the economy of Ghana, Amidu (2007) devised a research to investigate the determinants of capital structure of banks in Ghana and found a significantly negative relation between firm size and capital structure.

The implication of the study by Amidu (2007) is that firms with large size send signals that they operate with low levels of debt. Gatsi (2012) argued that debt obligates firms to make a fixed cash payment to debt-holders over the term of the debt security. The researcher also mentioned that firms could be forced into bankruptcy and liquidity if they default in honouring their debt obligations, and would ultimately affect the managers as they could lose their jobs and therefore could send negative signals that the firm is not performing well.

### **2.3 Agency Theory**

Fama & French (2005) indicated that debt usage does not necessarily grant tax benefits; high leverage may rather lead to agency problems among shareholders and debt holders that predict negative relationships between leverage and profitability therefore concluding on the fact that, it is better to use internally generated fund before the use of other source of finance by the firm. Abor (2008) noted that to effectively reduce agency problems, there is a need to change the capital structure of the firm.

However, Murray & Vidhan (2009), in their study on profit and Capital structure found a rather opposing result to that of Abor (2008). The paper showed that previous literature has misinterpreted the evidence as a result of

the wide spread use of familiar but empirically misleading gearing ratios and that the agency problem can be reduced if the company seek to satisfy the interests of both the equity holders and debt holder without altering the capital structure of the companies.

### 3. Methodology

This section discusses the sample size; population and research design used for the study. The sources of data for this study are the data base of the National Insurance Commission, insurance company guides, and data on the insurance sector with extensive use of the annual reports and financial statements of the insurance companies. The data was grouped into a coherent dataset in order to perform statistical analysis with *Statistical Package for Social Sciences (SPSS) version 16*.

While the total population of insurance companies in Ghana is estimated around 43, most of them were not having their financial statements with the National Insurance Commission (NIC) up until 2002. Hence, their financial information was not in existence and could not be included in the study. This limited the scope of the study to all insurance companies which had complete financial statements from 2005 to 2011 with the National Insurance commission. The period of study was limited to the period of 2005-2011, because data was available for at least 18 companies for this period. While admittedly the sample size may be small, it is a good starting point and an important extension for future research.

The capital structure variables used in the study are short term debt ratio which was measured as Total short term debt/ Total capital; Long term debt ratio which was estimated as Total debt / Total capital ratio and the equity ratio which was estimated as the Total equity / total capital. With regards to the age of the firm, it was estimated as the date of incorporation minus the date of observation; where the date of incorporation is the date the insurance company was established while the date of observation is the date within the time frame of the study.

### 4. Results and Discussion

To have a well comprehended nature of the capital structure of insurance companies in Ghana, the descriptive average for all the capital structure variables are provided followed by the analysis of variance of the capital structure variables.

#### 4.1 Nature of Capital Structure of insurance companies over the ten year period

To be able describe the nature of the capital structure practices in insurance companies in Ghana, the researchers categorised the insurance companies into two. One of category represented, companies with age above twenty while the other group represented companies with age below twenty. The nature of capital structure is described for all the capital structure variables used for the study.

**Table 1: Short term debt ratio average of the studied entities form 2002 – 2011**

Years	Insurance Company Classification by Age		Total
	Below 20years	Above 20 years	
2002	56.50	60.56	68.90
2003	51.38	45.65	70.43
2004	62.25	45.23	69.70
2005	82.68	50.94	71.81
2006	60.47	55.25	57.86
2007	49.29	42.92	46.10
2008	48.90	33.38	41.14
2009	32.36	37.00	34.68
2010	31.78	45.17	38.47
2011	51.24	46.08	48.66

Source: Average short term debt, 2013

Table 1 shows that there is a high proportion of short term debt capital in the capital structure of insurance companies in Ghana and with respect to the companies classification, the table also shows that companies whose age are below twenty have the highest proportion of short term debt in their capital structure than those whose age are above twenty. The trend of the short term debt in the capital structure of the two classifications continue to increase from 2002 to 2011 but the insurance companies with age below twenty attained an all time high of

82.68% of short term debt in 2005 while insurance companies with age above twenty years had its peak 55.25% in 2006.

The situation improved after 2006 where both groups experienced a demur in the proportion of short term debt in their capital structure with companies whose age are below twenty having a higher proportion than the companies whose age are above twenty. But during 2009 and 2010 insurance companies whose age were above twenty, had their proportion of short term debt in their capital structure surging up than those whose age were below twenty. The reason for this can be attributed to the global crisis in 2008 where most insurance companies had to pay claims to their clients who have insured against any possible losses from international trade.

The total column in table 1 indicates the overall average for all the insurance companies and the resultant average proportion of short term debt in the capital structure had a peak of 71.81% in 2005. From its peak in 2005, the proportion of short term debt in the capital structure of the insurance companies begun to drop and reached its lowest of 34.68% in 2009, this situation change in 2011 where the average short term debt in the capital structure of the insurance companies was at 48.66% for the seven year period used for the study.

Table 2 indicates the overall nature of the capital structure of insurance companies in Ghana since 2002 to 2011. From the table, the proportion of debt in the capital structure of insurance companies was higher than equity capital for three consecutive years which are 2008, 2009 and 2010 with an average total debt ratio of 49.78%, 43.37% and 46.14% respectively. This implies that, the components of equity in the capital structure during those periods were more than that of debt capital. This is in consonance with the studies by Graham (2000); Cassa & Holmes (2003) and Erol (2011), that companies that identify substantial free cash flow will have a low debt capital because the free cash will be used to settle the debts.

**Table 2: Total term ratio average of the studied entities form 2002 – 2011**

Years	Insurance Company Classification by Age		
	Below 20years	Above 20 years	Total
2002	59.80	66.56	68.90
2003	61.89	68.60	75.90
2004	65.70	50.79	64.80
2005	82.97	61.54	82.25
2006	75.16	66.09	70.63
2007	62.93	56.60	59.76
2008	54.57	44.99	49.78
2009	41.96	44.77	43.37
2010	37.88	54.40	46.14
2011	58.48	59.20	58.84

Source: Average total debt, 2013

A vivid analysis of table 2 shows that the total debt ratio statistics of insurance companies whose age are below twenty are higher than those whose age are above twenty with a maximum of 82.9% in 2005 and a minimum of 37.88% in 2009.

The reason why insurance companies whose age are above twenty have less debt in their capital structure than those whose age are below twenty can be attributed to the practice of pecking order theory and considering the agency theory in choosing a mix of capital by the insurance companies in Ghana. This is because from table 2 as insurance companies grow in terms of age in Ghana, they retain some of their earnings and use them in financing their operations rather than preferring debt capital. This is in consonance with the studies by Barclay & Smith (2005), Amidu (2007) and Gatsi (2012) in relation to the signalling theory which concluded that large firms use less debt capital and more equity capital to signal to prospective investors that they are self sufficient and for that matter can rely on internally generated funds for their operational activities.

Table 3 describes the average proportion of equity ratio in the capital structure of insurance companies in Ghana. Unlike the nature of the total debt ratio, where insurance companies whose age are below twenty have the highest proportion of total debt in their capital structure than those whose age are above twenty, the nature of equity ratio in the capital structure of the insurance companies shows an inverse situation.

From table 3, none of the years recorded more than 50% proportion of equity capital in the capital structure of the insurance companies from 2002 to 2009. This implies that, during the three year period the practice of total debt in the insurance companies in Ghana was not common and that insurance companies in Ghana prefer that less than 50% of their capital should take the form of equity. Therefore, if the agency theory is anything to go by;

then insurance companies in Ghana must concentrate on the desire of debt holders since they hold majority of their capital.

**Table 3: Total equity ratio average of the studied entities form 2002 – 2011**

Years	Insurance Company Classification by Age		
	Below 20years	Above 20 years	Total
2002	40.20	33.44	31.11
2003	38.11	31.44	24.10
2004	34.30	49.21	35.20
2005	17.03	38.46	17.75
2006	24.84	33.91	29.37
2007	37.07	43.4	40.24
2008	45.43	55.01	50.22
2009	58.04	55.23	56.63
2010	62.12	45.6	53.86
2011	41.52	40.8	41.16

Source: Average Equity ratio, 2013

Again, from table 3, while the proportion of equity ratio continue to increase for the insurance companies whose age are below twenty thus from 17.03% in 2005 to 62.12% in 2010, that of insurance companies whose age are above twenty had their equity capital ratio fluctuating during the period understudy and because the proportion of equity capital of this group is larger than the insurance companies whose age are below twenty, it translated into the total average of the proportion of equity in the capital structure of the insurance companies with statistics 17.75% in 2005; 29.37% in 2006; 56.63 % in 2009 and 41.16% in 2011. This finding is not consistent with the findings of Murray & Vidhan (2009), Naveed, Ishfaq & Zulfqar (2010) and Dong (2011) who concluded that aged firms employ less equity capital than less aged firms;

#### **ANOVA between Insurance Companies Classified by Age**

Capital Structure Variables

		Sum of Squares	F	Sig.
Short term debt Ratio	Between Groups	3408.258	4.439	.032
Equity Ratio	Between Groups	148.039	1.021	.391
Total debt Ratio	Between Groups	2233.735	1.336	.088

Source: ANOVA, 2013

From table 4, the p-values of 0.391 and 0.088 of the equity ratio and total debt ratio respectively indicates that, there is no significant difference in the capital structure of the insurance companies with age below twenty and those with age above twenty affirming the group statistics as indicated in table 2 and 3 above. But statistics for short term debt ratio was statistically significant at 5% with a p-value of 0.032 thereby establishing a significant difference among the short term debt structure of the two groups of companies.

The import of the results in table 4 is that, insurance companies by the nature of their operations do not appreciate the use of equity capital. So if that is anything to go by, then whether the company is a newly established one or not, it may like to surrender to the industry practice implying that there would not be any difference in their preference for equity capital. That reason cannot be attributed to the use of total debt and short term debt practice among insurance companies in Ghana. The result is consistent with the findings of Erol (2011) and Najjar (2011) whose study established no significant difference between the leverage ratios with respect to age under the pecking order theory.

## 5. Conclusions

For some time now, the issue of capital structure has attracted deep debate in the insurance sector of Ghana. The basic question is whether there exists debt in the capital structure of insurance companies since they receive huge sums of premiums each year without refunding them to the policy holders. Extensive research has attempted to identify the determinates of capital structure; while there are similar studies for both developed and developing economies, we are not aware of a study on the nature of capital structure for insurance companies in Ghana.

Our objective, therefore, was to ascertain the nature of the capital structure of insurance companies in Ghana. We used panel data derived from annual reports and financial statements of 15 insurance companies registered with the National Insurance Commission and applied the Analysis of Variance to identify the nature of the capital practice between the insurance companies. Our results suggest that there is debt in the capital structure in the insurance sector of Ghana and in these debt structures short term debt take a higher proportion.

The study also found that the proportion of equity capital is lesser than debt capital and no difference in the debt capital practice among the insurance companies. Finally, from a theoretical point of view, our study allows for yet another important comparison of capital structure between firms which are aged more than two decades and those which are aged less than two decades.

Our primary limitation was the limited number of observations. With only 15 companies and a period of only ten years, our results are admittedly weak. The natural extension to our research is to add more companies, more years, and potentially more variables to establish relationships between the extended variables.

## 6. Recommendations

Insurance companies should pay special attention to the level of debt capital since it might pose financial distress problems to them. Also, they should maintain good business relationships with their creditors in order to gain access to funds to undertake their operations as and when needed at low rates in order to reduce their overall cost of debt financing.

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