

# Determinants of Capital Structure Decisions of Listed Insurance Companies in Kenya: A Survey of Insurance Companies in Nakuru Town

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**Abstract:** *Capital structure decisions are crucial for any business organization because such decisions impact on the firm's value and its ability to deal with its competitive environment. This study investigated the determinants of capital structure decisions of listed insurance company. The study adopted a descriptive survey design. The study population constituted six listed insurance companies with branches in Nakuru Town. The study targeted 50 branch managers and unit managers in 6 listed insurance companies in Nakuru Town. Purposive sampling was used to select 50 respondents among the branch and unit managers. Primary data was collected using questionnaires. Descriptive statistics and inferential statistics were used in data analysis. Based on the analysis of the results it is concluded that profitability was the main determinant of capital structure decisions in listed insurance companies. 8.1% of capital structure decision was explained by the size of the firm while 9.8% of the investment decisions were explained by profitability. The also concluded that there was a positive relationship between profitability ( $r = 0.691$ ,  $p < 0.05$ ) and the size of the firm ( $r = 0.494$ ,  $p < 0.05$ ) and capital structure decisions. It is recommended that listed insurance companies should expand their projects, new product lines and acquisitions of other firms. It is also recommended that quoted insurance companies should avail funds to implement their activities in order to meet their financial obligations.*

**Keywords:** Capital Structure, Firm Size, Profitability, Quoted Insurance Companies, Nakuru Town

## 1. Introduction

To understand how companies finance their operations, it is necessary to examine the determinants of their capital structure decisions. Company financing decisions involve a wide range of policy issues. At the private, they have implications for capital market development, interest rate and security price determination, and regulation. At the public, such decisions affect capital structure, corporate governance and company development (Green & Murinde, 2008).

Knowledge about capital structures can mostly be derived from data for developed economies that have many institutional similarities (Booth, 2001). It is important to note that different countries have different institutional arrangements, mainly with respect to their tax and bankruptcy codes, the existing market for corporate control, and the roles banks and securities markets play. The historical attempt to developing the theory of capital structure began with the presentation of a paper by Modigliani and Miller which revealed the situations under what conditions the CS is relevant or irrelevant to the financial performance of the listed companies. Most of the decision making process related to the CS are deciding factors when determining the CS, a number of issues e.g. cost, various taxes and rate, interest rate have been proposed to explain the variation in Financial Leverage across firms these issues suggested that the depending on attributes that caused the cost of various sources of capital the firm's select CS and benefits related to debt and equity financing.

### 1.1 Capital Structure

The term capital structure is used to represent the proportionate relationship between debt and equity. The various means of financing represent the financial structure

of a business. Traditionally, short term borrowings were excluded from the list of methods of financing the firm's capital expenditure. Capital structure decisions are one of the three financing decisions – investment, financing, and dividend decisions finance managers have to make. Financing is a major decision area of a firm. In the financing decision the manager is concerned with determining the best financing mix or capital structure of his firm. The capital structure decision is the mix of debt and equity that a company uses to finance its business (Booth, 2001).

Capital structure of a firm is the mix of debt, equity and other sources of finance that management of a firm uses to finance its activities. Different firms use different proportion or mix. According to Booth (2001) a firm may adopt to use all equity or all debt. All equity is preferred by investors as they are not given conditions on the type of investment and usage of funds from providers. All debt is preferred by investors in a country where debt interest is tax deductible. If a firm finances through debt which is considered to be a cheaper source of financing, it results in elevation of firm's riskiness attributing to reduced financial flexibility, increased likelihood of financial distress, possible downgrade in credit rating among others. There's the requirement of collateral, sustained coverage and liquidity ratios. The benefits of debt financing include tax shelter, improved earnings per share and return on equity. Firms use a mix of debt and equity in various proportions in order to maximize the overall market value of the firm (Abor, 2007). Capital structure of a firm determines the weighted average cost of capital (WACC). WACC is the minimum rate of return required on a firm's investments and used as the discount rate in determining the value of a firm. A firm can create value for its shareholders as long as earnings exceed the costs of investments. The capital structure decision has a significant role in insurance companies. This is because of the need to maximize returns to shareholders and other

stakeholders, and also it has an impact on the Organization's cost of capital and its ability to deal with its competitive environment. Keown (2005) pointed out that if the firm's cost of capital can be affected by its capital structure then capital structure management is clearly an important subset of business financial management. Organizations in the non-financial sector need capital mainly to acquire operational assets, securities or pursue new areas of business. While this is also true for insurance companies, their main focus is somewhat different.

The nature of insurance business is to provide protection to policy holders in times of accident through the minimization of loss. As a result of this function, insurance companies have always been concerned with both solvency and liquidity. In order to manage risks, insurance firms must have effective ways of determining the appropriate amount of capital that is necessary to absorb unexpected losses arising from insurance claims and other operational risk exposures.

### 1.1.1 Determinants of Capital Structure

A number of empirical studies have identified firm-level characteristics that affect the capital structure decisions of firms. Among these characteristics are the age of the firm, size of the firm, asset structure, profitability, growth, firm risk, tax and ownership structure. In the case of SMEs, other heterodox factors such as industry, location of the firm, entrepreneur's educational background and gender, form of business, and export status of the firm may explain their capital structure. This study attempted to analyze the capital structure decision of quoted insurance company in Kenya where the impact of firm size, profitability, liquidity and tangibility on capital structure were investigated.

### 1.1.2 Background of Kenya Insurance Company

The insurance companies in Kenya have for almost three decades seen a number of changes being introduced and adopted. It is however, worrying to note that eight insurance firms have either collapsed or have been placed under statutory management; representing an average of one insurance company after every four years. These include: - Kenya National Assurance Company, United Insurance Company, Lake Star Assurance Company, Standard Assurance, Access Insurance Company, Stallion Insurance, Invesco Assurance and Blue Shield Insurance Company. In response to this trend, the government of Kenya responded by establishing the Insurance Regulatory Authority (IRA) which is the prudential regulator of the insurance companies in Kenya, where it's expected to improve regulations and stability of the industry IRA became autonomous on 1st May, 2007 through an Act of Parliament. IRA is also responsible for supervising and developing the insurance companies in collaboration with other stakeholders such as agents and brokers.

Kenya's insurance sector leads within the East Africa Community and is a key player in the COMESA region. The industry has employed over 10,000 people. According to Ndung'u (2012), the Kenyan insurance market wrote Kenya Shillings 100 billion of Gross Direct Premiums in the year 2011. It has grown at an average rate of 16% p.a. over the last 5 years. Kenya currently has 44 licensed insurance companies. It is believed that the industry can grow

tremendously if the government brings in assets into the industry instead of only playing the role of regulation. AKI forecast further growth of the industry driven by the projected growth of the economy by 5.7 percent, 6.3 percent and 6.5 percent in the next three years respectively. The common market protocol of the East African Community (EAC) creates a big market full of opportunities. According to Ndung'u (2012) the future trend of the insurance and reinsurance market in Africa was to be spread across countries with free movement and with the opportunity to exploit full cross-border growth. The industry should therefore prepare for this eventuality in a timely manner.

## 1.2 Problem Statement

A firm's capital structure refers to the mix of its financial liabilities. It has long been an important issue from the strategic management standpoint since it is linked with a firm's ability to meet the demands of various stakeholders. Debt and equity are the two major classes of liabilities, with debt holders and equity holders representing the two types of investors in the firm. Each of these is associated with different levels of risk, benefits, and control. While debt holders exert lower control, they earn a fixed rate of return and are protected by contractual obligations with respect to their investment. Equity holders are the residual claimants, bearing most of the risk and have greater control over decisions. Therefore an appropriate capital structure is a critical decision for any business organization. The decision is important not only because of the need to maximize returns to various organizational constituencies, but also because of the impact such a decision has on an organization's ability to deal with its competitive environment. Following the work of Modigliani and Miller much research has been carried out in corporate finance to determine the influence of a firm's choice of capital structure on performance. The difficulty facing companies when structuring their finance is to determine its impact on performance, as the performance of the business is crucial to the value of the firm and consequently, its survival. The difficulty facing insurance firms in Kenya has to do more with the financing whether to raise debt or equity capital. The issue of finance is so important that it has been identified as an immediate reason for business failing to start in the first place or to progress. Thus it is necessary for firms in Kenya to be able to finance their activities and grow over time, if they are ever to play an increasing and predominant role in creating value added, as well as income in terms of profits. It is therefore important to understand what the key factors are and how they influence the insurance firms' financing choice. It is evidently clear that both internal factors and external factors could be very important in explaining the capital structure decisions of quoted insurance firms in Kenya. Thus, this study sought to measure the exact influence of the key factors on capital structure of quoted insurance companies in Kenya.

## 1.3 Objective of the Study

- i. To establish the influence of firm size on capital structure decisions of quoted insurance companies in Kenya.
- ii. To determine the effect of profitability on capital structure decisions of quoted insurance companies in Kenya.

## 2. Literature Review

### 2.1 Theoretical Review

There are various conditional theories that can explain the behavior of the capital structure of firms. According to Myers (2001) "there is no universal theory of the debt – equity choice, and no reason to expect one". Bauer (2004) states that there are several useful conditional theories, each of which will help one to understand the debt-to-equity ratio structure that firms choose. These theories can be divided into two groups, either they predict the existence of the optimal debt-equity ratio for each firm or they declare that there is no well defined target capital structure". The most pronounced theories of capital structure are the static trade-off theory (Ross, 1977), the pecking-order theory (Myers & Majluf, 2010; Myers, 1984), and the signaling theory (Ross, 1977).

#### 2.2.1 Trade off Theory

The original version of the trade-off theory grew out of the debate over the Modigliani-Miller theorem. When corporate income tax was added to the original irrelevance, this created a benefit for debt in that it served to shield earnings from taxes. Since the firm's objective function is linear, and there is no offsetting cost of debt, this implied 100% debt financing. The Trade-off theory of capital structure refers to the idea that a company chooses how much debt finance and how much equity finance to use by balancing the costs and benefits. Trade-off theory of capital structure basically entails offsetting the costs of debt against the benefits of debt. The theory describes that the companies or firms are generally financed by both equities and debts. Trade-off theory of capital structure primarily deals with the two concepts - cost of financial distress and agency costs. An important purpose of the trade-off theory of capital structure is to explain the fact that corporations usually are financed partly with debt and partly with equity (Myers & Majluf, 2010).

It states that there is an advantage to financing with debt, the tax benefits of debt and there is a cost of financing with debt, the costs of financial distress including bankruptcy costs of debt and non-bankruptcy costs (staff leaving, suppliers demanding disadvantageous payment terms, bondholder/stockholder infighting). The marginal benefit of further increases in debt declines as debt increases, while the marginal cost increases, so that a firm that is optimizing its overall value will focus on this trade-off when choosing how much debt and equity to use for financing. Modigliani and Miller in 1963 introduced the tax benefit of debt. Later work led to an optimal capital structure which is given by the trade off theory (Sunder & Myers, 1999). According to Modigliani and Miller, the attractiveness of debt decreases with the personal tax on the interest income. A firm experiences financial distress when the firm is unable to cope with the debt holders' obligations. If the firm continues to fail in making payments to the debt holders, the firm can even be insolvent. The first element of Trade-off theory of capital structure, considered as the cost of debt is usually the financial distress costs or bankruptcy costs of debt. It is important to note that this includes the direct and indirect bankruptcy costs.

Trade-off theory of capital structure can also include the agency costs from agency theory as a cost of debt to explain why companies don't have 100% debt as expected from Modigliani and Miller. 95% of empirical papers in this area of study look at the conflict between managers and shareholders. The others look at conflicts between debt holders and shareholders. Both are equally important to explain how the agency theory is related to the Trade-off theory of capital structure (Sunder & Myers, 1999).

The direct cost of financial distress refers to the cost of insolvency of a company. Once the proceedings of insolvency starts, the assets of the firm may be needed to be sold at distress price, which is generally much lower than the current values of the assets. A huge amount of administrative and legal costs are also associated with the insolvency. Even if the company is not insolvent, the financial distress of the company may include a number of indirect costs like - cost of employees, cost of customers, cost of suppliers, cost of investors, cost of managers and cost of shareholders (Sunder & Myers, 1999).

The firms may often experience a dispute of interests among the management of the firm, debt holders and shareholders. These disputes generally give birth to agency problems that in turn give rise to the agency costs. The agency costs may affect the capital structure of a firm. There may be two types of conflicts - shareholders-managers conflict and shareholders-debt-holders conflict. The introduction of a dynamic Trade-off theory of capital structure makes the predictions of this theory a lot more accurate and reflective of that in practice (Sunder & Myers, 1999).

The trade-off theory has contributed a lot in finance. It yields an intuitively pleasing interior optimum for firms and gives a rationale for cross-sectional variation in corporate debt ratios i.e. firms with different types of assets will have different bankruptcy and agency costs and different optimal debt ratios. However, the theory has limitations i.e. debt ratios as produced by this theory are significantly higher than observed. Secondly, in many industries, the most profitable firms often have the lowest debt ratios, which is the opposite of what the trade off theory predicts (Sunder & Myers, 1999). According to Myers (1984) the trade-off theory also fails to predict the wide degree of cross-sectional and time variation of observed debt ratios.

#### 2.2.2 Pecking Order Theory

Pecking order theory of capital structure states that firms have a preferred hierarchy for financing decisions. The highest preference is to use internal financing (retained earnings and the effects of depreciation) before resorting to any form of external funds. Internal funds incur no flotation costs and require no additional disclosure of proprietary financial information that could lead to more severe market discipline and a possible loss of competitive advantage. If a firm must use external funds, the preference is to use the following order of financing sources: debt, convertible securities, preferred stock, and common stock (Myers, 1984). This order reflects the motivations of the financial manager to retain control of the firm (since only common stock has a "voice" in management), reduce the agency costs of equity, and avoid the seemingly inevitable negative market reaction to an announcement of a new equity issue.

In pecking order theory there are two key assumptions about financial managers. The first of these is asymmetric information, or the likelihood that a firm's managers know more about the company's current earnings and future growth opportunities than do outside investors. There is a strong desire to keep such information proprietary. The use of internal funds precludes managers from having to make public disclosures about the company's investment opportunities and potential profits to be realized from investing in them. The second assumption is that managers will act in the best interests of the company's existing shareholders. The managers may even forgo a positive-NPV project if it would require the issue of new equity, since this would give much of the project's value to new shareholders at the expense of the old (Myers & Majluf, 1984).

The two assumptions noted above help to explain some of the observed behavior of financial managers. More insight is gained by looking at how the capital markets treat the announcement of new security issues. Announcements of new debt generally are treated as a positive signal that the issuing firm feels strongly about its ability to service the debt into the future. Announcements of new common stock are generally treated as a negative signal that the firm's managers feel the company's stock is overvalued (earnings are likely to decline in the future) and they wish to take advantage of a market opportunity. So it is easy to see why financial managers use new common stock as a last resort in capital structure decisions. Just the announcement of a new stock issue will cause the price of the firm's stock to fall as the market participants try to sort out the implications of the firm choosing to issue a new equity issue.

The pecking order explains why most high profit making firms go in for less external funds because they have large retained earnings compared to less profitable firms who depend more on external funds because they have less retained earnings. These firms however, prefer debt to equity because of lower flotation and information cost. Therefore, there is no well-defined optimal leverage, because there are two kinds of equity, internal and external, one at the top of the pecking order and one at the bottom (Bauer, 2004).

While the trade-off model implies a static approach to financing decisions based upon a target capital structure, pecking order theory allows for the dynamics of the firm to dictate an optimal capital structure for a given firm at any particular point in time. A firm's capital structure is a function of its internal cash flows and the amount of positive-NPV investment opportunities available. A firm that has been very profitable in an industry with relatively slow growth (i.e. few investment opportunities) will have no incentive to issue debt and will likely have a low debt-to-equity ratio. A less profitable firm in the same industry will likely have a high debt-to-equity ratio. The more profitable a firm, the more financial slack it can build up.

Financial slack is defined as a firm's highly liquid assets (cash and marketable securities) plus any unused debt capacity. Firms with sufficient financial slack will be able to fund most, if not all, of their investment opportunities internally and will not have to issue debt or equity securities. Not having to issue new securities allows the firm to avoid both the flotation costs associated with external funding and

the monitoring and market discipline that occurs when accessing capital markets.

Prudent financial managers attempt to maintain financial flexibility while ensuring the long-term survivability of their firms. When profitable firms retain their earnings as equity and build up cash reserves, they create the financial slack that allows financial flexibility and, ultimately long-term survival. Pecking order theory, however, does not explain the influence of taxes, financial distress, security issuance costs, agency costs, or the set of investment opportunities available to a firm upon that firm's actual capital structure. It also ignores the problems that can arise when a firm's managers accumulate so much financial slack that they become immune to market discipline. In such a case it would be possible for a firm's management to preclude ever being penalized via a low security price and, if augmented with non-financial takeover defenses, immune to being removed in a hostile acquisition. For these reasons pecking order theory is offered as a complement to, rather than a substitution for, the traditional trade-off model.

### 2.3 Conceptual Framework

The conceptual framework shows the relationship between the determinants of capital structure decisions.

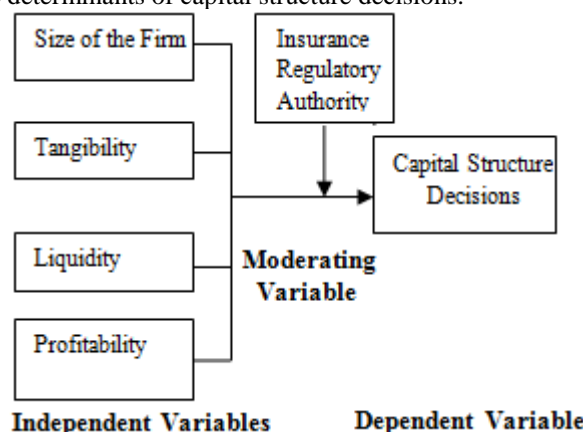


Figure 2.1: Conceptual Framework

As shown in Figure 2.1 the dependent variable of the study was capital structure decisions while the independent variables were the size of the firm, profitability, liquidity and tangibility. The insurance regulatory authority was the intervening variable.

### 2.4 Empirical Review

Many studies have been conducted to find out the determinants of capital structure, and the factors affecting capital structure of a firm. Gaud, et al. (2003) found the determinants of capital structure of Swiss companies using sample of 106 companies listed on Swiss stock exchange and data spanning over nine years (1991-2000). The research used variables including size, tangibility, growth, risk and profitability and the findings reported were that business risk, tangibility and size are positively related to leverage whereas growth and profitability are negatively related.

Shah and Khan (2007), Rafique (2011), Masnoon and Anwar (2012) carried out their respective research on

determinants of capital structure of KSE listed companies. The findings of these studies were quite similar. For all industries profitability was found to be negatively related to leverage. Eriotis, et al. (2007) did the similar work on Greek companies listed on Athens stock exchange for the time period of 1997-2001 and their findings reported debt ratio to be negatively related to growth, quick ratio and interest coverage ratio, whereas positively related to size.

Abor (2007) conducted a research on SMEs in Ghana and used 160 SMEs. the results were consist with pecking order hypothesis the coefficients for performance measured by profitability were negative and significant to this was in relation to capital structure proxies measured by long term debt and short term debt. This implied that internal financing increases profits hence SMEs tend to avoid using debt to finance their activities. Though profitable firms tend to have better access to debt finance the need for debt finance may be lower if retained earnings are sufficient to satisfy the need. Abor (2008) researched on determinants of the capital structure of Ghanaian firms listed on the Ghana Stock Exchange (GSE) during the six-year period, 1998–2003. The results also reveal that both long-term and short-term debt ratios were negatively correlated with profitability in all the sample groups. The results of this study clearly supported the pecking order hypothesis, in that profitable firms initially rely on less costly internally generated funds and subsequently look for external resources if additional funds are need.

Mohammad and Jaafer (2012) seek to extend Abor’s (2005). In their study with sample of 39 Jordan companies reveal significantly negative relation between debt and profitability. These show that an increase in debt position is associated with a decrease in profitability; thus, the higher the debt, the lower the profitability of the firm. The results also show that profitability increases with control variables; size and sales growth.

Muthama, et al. (2013) did analysis of macroeconomic influences on capital structure of listed companies in Kenya. The research concluded that macro-economic factors have strong influence on capital structure, GDP growth rate have positive influence on long term debt ratio and negative influence on total and short term debt ratio. Inflation have negative influence on short term debt ratio, interest have positive influence on long term and total debt ratio and negative influence on short term debt ratio.

Andzie and Amed (2012) researched on the determinants of capital structure of by doing a comparative study between firms listed at the Nairobi stock exchange and those listed at

the Ghana stock exchange. The study population constitutes ninety (90) listed firms. Thirty five (35) listed on the GSE and fifty five (55) on NSE. The Result of the study revealed that Growth opportunities, Firm size and Level of risk influence capital structure of listed firms positively but insignificant in both Ghana and Nairobi Stock market. Asset tangibility and Profitability were found to have significant negative effect on capital structure decision of listed firms in both markets; whiles tax was found to have a negative influence on capital structure, but insignificant the in the case of NSE listed firms.

### 3. Methodology

The study used a descriptive research design because such a design allowed simultaneous description of views, perceptions and beliefs of the respondents. The design was also appropriate for obtaining factual information for the study. The target population of the study was branch managers and unit managers in six listed insurance companies in Nakuru Town. Given that the number of respondents was small, purposive sampling technique was used to select 50 branch and unit managers as study respondents. Primary data was collected through questionnaires. The questionnaire was preferred because it was efficient and easy to administer. The questionnaires were administered through drop and pick method. Data analysis was done using descriptive statistics and inferential statistics with the aid of SPSS version 21. Descriptive analysis was used to determine the mean values of the variables and to also to show the trend analysis. Multiple regression analysis also was used to estimate the models in the study. Pearson correlation coefficients were interpreted for their effect and significance on the dependent variables using the ANOVA at 5% level of confidence. The strength of the relationships was tested using F-statistics. The results obtained were presented using tables.

### 4. Results

#### 4.1 Size of the Firm and Capital Structure Decisions in Insurance Companies

The study sought to ascertain the extent to which different indicators of the size of the firm determined the capital structure decisions in insurance companies in Nakuru Town. The respondents were asked to respond to selected indicators based on the extent to which they felt the indicators determined capital structure decisions. The findings obtained are presented in Table 1.

**Table 1:** Effects of Size of the Firm on Capital Structure Decisions

Statement	SD	D	N	A	SA	N	Mean	SD
Firm size influence capital structure of listed firms	5	3	10	9	18	45	3.77	0.73
Lower variance of earnings makes a firm able to tolerate high debt	3	6	5	10	21	45	3.89	0.83
Size of the firm determines its ability to resolve information asymmetries with lenders	5	2	10	9	19	45	3.97	0.77
Lenders to larger firms are more likely to get repaid than lenders to smaller firms	3	3	2	17	20	45	4.33	0.41
There is less susceptibility to bankruptcy in more diversified firms	8	4	23	1	13	45	3.21	0.23
Size of firm affects the capacity for expansion of projects, new product lines, acquisitions of other firms and maintenance, and replacement of existing assets	8	6	13	12	6	45	3.42	0.39

Results in Table 1 shows that size of the firm determines its ability to resolve information asymmetries with lenders, lower variance of earnings makes a firm able to tolerate high debt and There is less susceptibility to bankruptcy in more diversified firms were less determinants of capital structure decisions in insurance companies in Nakuru Town as indicated by a mean of 3.97, 3.89 and 3.77 with a standard deviation of 0.77, 0.83 and 0.73 respectively. The results also show that size of firm affects the capacity for expansion of projects, new product lines, acquisitions of other firms and maintenance, and replacement of existing assets, lenders to larger firms are more likely to get repaid than lenders to smaller firms and auditors identification of changes that may influence capital structure decisions in their company affected capital structure decisions in insurance companies in Nakuru Town to a great extent as indicted by a mean of 3.57, 3.43 and 3.21 with a standard deviation of 0.67, 0.41 and 0.23 respectively. This suggests that the size of the firm affected the capital structure decisions in insurance companies in Nakuru Town. However, these findings are not

in agreement with Berryman (1982) who found strong negative correlation between the firm size and the probability of insolvency. Hall (1995) also found out a negative relation between size of firm and its leverage pointing out that there was more transparency about large firms which reduced the undervaluation of new equity issue and encouraged the firms to finance through their equity. According to Andzie and Amed (2012) firm size influenced capital structure of listed firms positively.

**4.2 Profitability as a Determinant of Capital Structure Decisions in Insurance Companies**

The study examined the extent to which profitability determined the capital structure decisions in insurance companies in Nakuru Town. This was done by analyzing the responses from the respondents on the extent to which different indicators of profitability determined capital structure decisions in insurance companies in Nakuru Town as shown in Table 2.

**Table 2: Profitability and Capital Structure Decisions**

Statement	SD	D	N	A	SA	N	Mean	SDev
Amount of revenue gained from insurance companies exceeds the expenditure costs and taxes	4	4	7	6	24	45	3.93	0.69
The profit gained usually goes to the owners of the business	8	3	13	11	10	45	3.26	0.11
The firm maintains lower debt ratio as more funds are generated from internal sources	4	2	10	7	22	45	3.87	0.59
Both long-term and short-term debt ratios affect profitability in our firm	14	10	2	6	12	45	2.91	0.09
Profitability increases with control variables such as size and sales growth	2	9	11	20	13	45	3.91	0.78
Capital structure decisions and profitability are positively related to leverage	4	8	7	9	17	45	3.89	0.64

From the findings, high level of agreement were reported in respect to whether the amount of revenue gained from insurance companies exceeded the expenditure costs and taxes, profitability increased with control variables such as size and sales growth, capital structure decisions and profitability were positively related to leverage and the firm maintained lower debt ratio as more funds were generated from internal sources in insurance companies in Nakuru Town as indicated by a mean of 3.91, 3.93, 3.89, and 3.87 with standard deviation of 0.78, , 0.69, 0.64 and 0.59 respectively. Slightly lower response rates were reported in respect to whether the profit gained usually went to the owners of the business and whether both long-term and short-term debt ratios affected profitability in the firm as indicated by a mean of 3.26 and 2.91 with standard deviation of 0.11and 0.09 respectively. The findings of these studies are also quite similar to those of previous studies. However, in some studies profitability has been found to be negatively related to leverage (Eriotis, 2007). Abor (2007) also reported that profitability was significant in SMEs. Abor (2008) also found out that both long-term and short-term debt ratios were negatively correlated with profitability. Mohammad and Jafer (2012) reported that profitability increased with control variables such as size and sales growth.

**4.3 Regression Analysis for Size of the Firm (SF)**

Multiple regression analysis was done on the independent variable, size of the firm (SF), as a predictor on capital structure decisions. Results for the Analysis of Variance are presented in Table 3.

**Table 3: ANOVA for Size of the Firm**

ANOVA <sup>a</sup>					
Model1	Sum of Squares	df	Mean Square	F	Sig.
Regression	6.190	3	.884	1.686	.011 <sup>b</sup>
Residual	70.289	42	.505		
Total	76.479	45			

<sup>a</sup>. Dependent Variable: Capital Structure Decisions  
<sup>b</sup>. Predictors: (Constant), Size of the Firm (SF)

ANOVA results in Table 3 indicates that the regression model predicts the outcome variable with an F statistic of 1.686 supported by a probability value of 0.011. This is less than the conventional probability of 0.05, and indicates that, overall, the model applied statistically predicted the outcome variable. The model summary is presented in Table 4.

**Table 4: Model Summary for Size of the Firm (SF)**

Model Summary				
Model1	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.284	.081	.033	.0724

**a. Predictors: (Constant), Size of the Firm (SF)**  
**b. Dependent Variable: Capital Structure Decisions**

The model summary in Table 4 provides the R and R<sup>2</sup> values. The R<sup>2</sup> value of 0.081 supported by a probability value of 0.0724 indicates how much of the variations in dependent variable, "Capital Structure Decisions", was explained by the independent variable, "Size of the Firm (SF)". In this case, 8.1% was explained by size of the firm while the remaining 91.9% was explained by the other variables of the study. The R<sup>2</sup> in linear regression also tells how the regression line fits the data.

#### 4.4 Regression Analysis for Profitability

A multiple regression analysis was done to establish the extent to which profitability was a predictor of capital structure decisions of quoted insurance companies in Nakuru Town. Analysis of variance was done on profitability as predictor of capital structure decisions. The results are presented in Table 5.

**Table 5: ANOVA for Profitability**

ANOVA <sup>a</sup>					
Model 1	Sum of Squares	df	Mean Square	F	Sig.
Regression	7.506	3	1.075	2.089	.049 <sup>b</sup>
Residual	68.953	42	0.515		
Total	76.479	45			
<b>a. Dependent Variable: Capital Structure Decisions</b>					
<b>b. Predictors: (Constant), Profitability</b>					

ANOVA results in Table 5 indicate that the regression model predicts the outcome variable with an F statistic of 2.089 supported by a probability value of 0.049. This is less than the conventional probability of 0.05 and indicated that in overall the model applied statistically predicted the outcome variable. The model summary is presented in the Table 6.

**Table 6: The Model Summary of Profitability (P)**

Model Summary <sup>b</sup>				
Model 1	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.314 <sup>a</sup>	0.098	0.051	0.717
<b>a. Pr a. Predictor: (Constant), Profitability</b>				
<b>b. Dependent Variable: Capital Structure Decisions</b>				

The model summary in Table 6 above provides the R and R<sup>2</sup> values. The R<sup>2</sup> value of 0.098 indicated how much of the variations in capital structure decisions of quoted insurance companies could be explained by the independent variables, Profitability. In this case, 9.8% was explained by Profitability while the remaining 90.2% was explained by the other variables of the study. The R<sup>2</sup> in linear regression also tells how the regression line fits the data.

#### 4.5 Correlation Analysis

Pearson's correlation analysis was applied to test the strength of the relationship between the determinants of capital structure decisions in insurance companies in Nakuru Town. The dimensions of the determinants of capital Structure Decisions (CSD) were Size of the Firm (SF) and Profitability (P). The relationship was established through Pearson correlation analysis as presented in Table 7.

**Table 7: Pearson's Correlation Analysis Results**

		FS Total Score	P Total Score	CSD Total Score
<b>FS Total Score</b>	Pearson Correlation	1	0.491*	0.494*
	Sig. (2 tailed)		.000	.000
	N	45	45	45
<b>P Total Score</b>	Pearson Correlation	0.491*	1	0.591*
	Sig. (2 tailed)	.000		.000
	N	45	45	45
<b>CSD. Total Score</b>	Pearson Correlation	0.494*	0.591*	1
	Sig. (2 tailed)	.000	.000	
	N	45	45	45

\* σ = (Correlation is significant at 0.05 level (2-tailed))

The results show that there was a positive relationship between the size of the firm and capital structure decisions ( $r = 0.494$ ,  $p < 0.05$ ). This suggests that size of the firm relates positively with capital structure decisions in insurance companies in Nakuru town. The findings are similar to that of Maiteka (2010) who found that there existed a strong and positive relationship between size of the firm and capital structure decisions in financial institutions. The results also indicate that there was a positive relationship between profitability and capital structure decisions with,  $r = 0.591$  and  $p < 0.05$ . This implies that profitability determined capital structure decisions in insurance companies in Nakuru town.

## 5. Conclusions and Recommendations

### 5.1 Conclusions

The purpose of the study was to establish the determinants of capital structure decisions in quoted insurance companies in Nakuru Town. Based on the analysis of the results it is

concluded that profitability was the main determinant of capital structure decisions in insurance companies followed by size of the firm. The study also concludes that the size of the firm's ability to resolve information asymmetries with lenders and lower variance of earnings so as to make the firm able to tolerate high debt and that firms that diversified firms were the main attributes of the size of the firm that determined capital structure decisions in quoted insurance companies in Nakuru Town. It is also concluded that profitability determined the capital structure decisions of quoted insurance companies in Nakuru town as the amount of revenue gained from insurance companies exceeded the expenditure costs and taxes, profitability increased with control variables such as size and sales growth and capital structure decisions and profitability were positively related to leverage and the firm maintained lower debt ratio as more funds were generated from internal sources. It is also concluded that 8.1% of capital structure decision was explained by size of the firm and 9.8% by profitability. There was also moderate positive relationship between the

size of the firm ( $r = 0.494$ ,  $p < 0.05$ ) and profitability ( $r = 0.691$ ,  $p < 0.05$ ) and capital structure decisions.

## 5.2 Recommendations

Based on the conclusion, the study recommends that capital structure decisions should be considered with regard to the size of the firm and profitability. It is also recommended that quoted insurance companies should expand their projects, new product lines, and acquisitions of other firms and maintenance. It is also recommended that quoted insurance companies should avail funds to implement their activities in order to meet its financial obligations. It is also recommended that that more profit gained from the quoted insurance companies should go to the owners of the businesses.

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