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**An Examination of the Capital Structure Decisions by Companies Quoted on the Dar
es Salaam Stock Exchange.**

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An examination of the
capital structure

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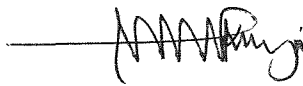
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Abstract

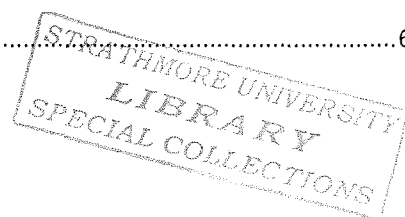
This study was carried out in Tanzania. The study was intended to examine the levels of debt and equity employed by companies quoted on the Dar es Salaam Stock Exchange (DSE) in financing their businesses. The study also aimed at identifying the significant factors that influence the capital structure and further to examine the financial managers' opinions on the factors they perceive important in influencing the capital structure. The study focused on 9 selected non-financial companies quoted on the (DSE). The data was collected for 10 years beginning 2000 to 2009 and was obtained from the companies' financial reports and from questionnaires that were mailed to the (CFOs) of all the 9 companies. The most important theories that have guided this study are pecking order theory, agency cost theory and trade-off theory. By using descriptive analysis, it has been found that companies quoted on the (DSE) are on average moderately levered as they prefer relatively more equity to debt. By using regression analysis, the empirical results show that the significant factors influencing the capital structure of companies quoted on the (DSE) are; industry class, company profitability, company size, non-debt tax shields and growth opportunities. Contrary to the outcome of prior studies in developing countries, this study finds that asset tangibility, earnings volatility and effective tax rate are positively related with capital structure. The results of regression are consistent with the opinions of the CFOs except for assets tangibility, earnings volatility and effective tax rate which are perceived by (CFOs) as important factors while the regression analysis shows them as not influential factors on capital structure by companies quoted on the (DSE). The possible explanation for these differences may be that company officials perceive some of the factors as important while in reality they are not. This study makes several contributions to the body of knowledge as well as providing insights to academicians. The study further reveals that there is no single theory that simultaneously predicts the full set of the reliable factors; this warrants further development of the capital structure theories. Finally, the researcher concludes that capital structure decisions varies from country to country and even from industry to industry and should be dealt as such.

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Acronyms

AT	-	Assets Tangibility.
C	-	Capital Structure.
CFOs	-	Chief Financial Officers.
CMSA	-	Capital Markets and Security Authority.
CZ	-	Company Size.
D/E	-	Debt equity ratio
DSE	-	Dar es Salaam Stock Exchange.
EABL	-	East African Breweries Limited.
EBT	-	Earnings Before Tax.
ET	-	Effective Tax Rate.
GO	-	Growth Opportunity.
IC	-	Industry Class.
KQ	-	Kenya Airways.
Ln	-	Natural Logarithm.
MM	-	Modigliani and Miller.
NT	-	Non-Debt Tax Shields.
PR	-	Profitability.
ROA	-	Return on Assets.
SMB	-	Tanga Cement Company Limited (SIMBA).
SWS	-	Swissport Company
TAT	-	Tanzania Tea Packers Limited.
TBL	-	Tanzania Breweries Limited.
TCC	-	Tanzania Cigarette Company.
TOL	-	Tol Gas Limited.
WACC	-	Weighted Average Cost of Capital.

CHAPTER ONE: INTRODUCTION

1.0. Background to the study

In corporate finance, the capital structure refers to how a company finances its overall operations by using different sources of funds (Ross, Stephen and Jeffrey, 2007). These sources of funds for the company may be broadly categorized into debt and equity financing. While debt comes in the form of bond issues; long term notes payable and short notes payable, equity may be identified as common stock, preferred stock and retained earnings (Mahmud, Muhammad, Herani, Gobind M., A.W. and Farooqi, Wahid, 2009).

Capital structure decisions involve a choice of proper mix of financing sources which is also influenced by various factors. The decision is crucial for any company, since an appropriate capital structure helps not only to maximize returns to various company shareholders, but also the decision has an influence on the company's ability to deal with its competitive environment (Simerly and Li, 2002).

The capital structure decision is not a recent phenomenon. Many theories such as The Naive Theory, Modigliani and Miller Theory, the Static Trade- Off Theory, the Information Asymmetry Theory, and the Agency Cost Theory have evolved to explain the same issue.

In the early days, however, the research on how capital structure of a company could be decided was mainly based on the companies operating in developed countries especially in the United States (U.S). Experience has shown that studies on capital structure cannot be generalized in absolute terms. That is, such studies based on the experience of a single country do not represent the effect of diversity of economic and financial environment on capital structures of companies in other countries (Antoniou, Guney and Paudya, 2002). Along this line of argument, there has been an increases need to understand the capital structure of other countries as well.

With the motivation to understand the capital structure decisions of other countries and broadening the understanding (Rajan and Zingales, 1995) attempted to study the factors influencing capital structure decisions in the G-7 countries, and tried to assess whether these factors were the same as those influencing capital structures of U.S companies. What they found out was that, the factors influencing capital structure that have been reported for U.S (size, growth, profitability and tangibility) are important in other countries as well.

However, Rajan and Zingales (1995 p.1421) stated that “Theories have made some progress on the subject of capital structure decisions. We now understand the most important departures from the Modigliani and Miller assumptions that make capital structure relevant to a company’s value, however, very little is known about the empirical relevance of the different theories”.

Similarly, Harris and Raviv (1991, p.299) in their survey of capital structure theories, claimed: “The models surveyed have identified a larger number of potential determinants of capital structure. The empirical work so far has not, however sorted out which of these are important in various contexts”.

Despite of these attempts, findings based on data from developing countries did not appear until later, for example Booth L, Aivazian V, Demircuc-Kunt and Maksimovic V. (2001) or Huang and Song (2004). Booth et al., (2001) extended the work of Rajan and Zingales (1995) by including some data from emerging markets. Ten countries that were studied included Brazil, Mexico, Malaysia, Zimbabwe, South Korea, India, Pakistan, Jordan, Turkey and Thailand.

The conclusion from these studies were that, there were some common features in the capital structures of the companies in different countries but that further research was necessary to identify the determinants of capital structure in particular institutional settings or countries. Specifically they noted that, the influence of the independent variables on capital structure were not completely uniform across countries.

It may be argued that, this lack of uniformity, is attributed by the fact that, the different capital structure theories do not have the same influence in every country and that, in addition to the suggestions made by Booth et al., that is, capital structure decisions should be studied in particular settings, it is also important to look at various theories when studying capital structure decisions and not to rely on a single theory. According to Myers (2001, p.81), there is no universal theory of capital structure to any given country or setting.

The interpretation of this argument may be that, a certain theory may be dominant in one context and weak in another context and this provides a need to study various theories to identify which theories are relevant in what context.

The famous researchers, Prasad, Green and Murinde (2001) also pointed out that, a very little is known about company financing decision in developing countries. There has been limited work done in developing countries mainly because of the constraints on corporate financial data (Fan and Wong, 2002); Deesomsak, Paudya and Pescetto, 2004).

In Tanzania, the study on capital structure decision has also received scant attention. So far there is no any published study based on data from Tanzania at least to the extent of the researcher's understanding. This motivates to carry out a study on capital structure in Tanzanian context. The motivation is also strengthen by the fact that there have been no universal findings as explained above due to variations in economic and market development among others.

It should also be noted that, Tanzania has many special features as an emerging market. The economic growth strategy of Tanzania has undergone a great transformation since early 1990s. Before this period, Tanzania was a socialist state with its economy purely centralized (Tanzania Ministry of Finance and Economics, 2010). Beginning the period of 1990s, many radical changes and structural reforms were put in place to increase economic efficiency and competitiveness.

Tanzanian capital market, the Dar es Salaam Stock Exchange (DSE) was introduced to boost economic efficiency but it is relatively at its infant stage, underdeveloped and inefficient relatively to other countries since its inception in 1996 (DSE Handbook, 2009). Only 15 companies have been listed on the (DSE) up to late 2010 (DSE Handbook, 2010). Inflation and interest rates are high in the country and its economic growth rate is relatively low (Tanzania Ministry of Finance and Economics, 2010).

The study on capital structure in Tanzania with particular focus to (DSE) will help corporate managers to make informed decisions when deciding on the capital structure, that is, proper use of debt and equity in financing business operations since such a decision has the overall implication on the value of the company.

Therefore, this study sought to examine the capital structure decisions in Tanzania context for companies quoted on the Dar es Salaam Stock Exchange based on the data set from 2000 to 2009.

1.1. Problem Statement

Despite extensive research on capital structure, there is still no general answer to the question “How do companies decide on their capital structure”. The empirical results on capital structure carried out by different researchers arrive at differing results.

To understand the capital structure of companies, researchers, for example, Booth et al., (2001), Harris and Raviv (1991) and Rajan and Zingales (1995), have suggested that the study on capital structure should be conducted in a particular context since there exists differences in the business environment, economic growth and capital market advancement among countries.

The capital structure decision remains one of the important strategies to corporate managers because it affects performance and company’s efficiency (Ghosh A. 2008; Margaritas and Psillaki, 2007).

The Dar es Salaam Stock exchange in Tanzania was introduced in 1996 with the aim of increasing economic efficiency in the country. It is imperative for companies quoted on the (DSE) to be able to finance their activities and grow over time if they are ever to play an increasing role in creating value –added, providing employment as well as income in terms of profits and dividends to shareholders, expanding their size of the directly productive sector in the economy, generating tax revenues for the government and facilitating poverty reduction through employment and company ownership.

In this regard, it is necessary to understand how companies quoted on the (DSE) finance their operations by examining their capital structure decisions.

1.2. Research Objectives

1.2.1. The main objective

The major objective of this study was to empirically examine the capital structure decisions by companies quoted on Dar es Salaam Stock Exchange.

1.2.2. Specific objectives

- (i) To examine the levels of debt and equity employed by companies quoted on the (DSE) and assess whether there are variations in the levels across companies.
- (ii) To identify the significant factors that influence the choice between debt and equity by companies listed on the (DSE) and measure the direction of the relationship.

(iii) To examine the management's opinions on the factors they perceive to have an influence on the choice between debt and equity by companies listed on the (DSE).

1.3. Significance of the study

The study results were deemed to be significant to the following primary users.

(i) External investors and shareholders who will be able to know how their companies are financed and understand the main factors that drive the financing decisions. Also the results were aimed at helping them to observe company's performance before making the decision of whether or not to buy or sell the stock and understand whether their companies are highly risk or not.

(ii) Professional managers who will understand how companies quoted on the (DSE) are financed and know the factors that influence the capital structure decisions. In that way they can consider these factors of capital structure to establish the optimal financing vehicle that helps achieve the company's objectives.

(iii) Lenders who may find the results useful in evaluating the company's performance in the light of these factors before giving loans, with particular emphasis on the level of risk involved.

(iv) Academicians who may have an insight into the management thinking and their perception of the capital structure and its major influencing factors.

1.4. Scope of the study

The current study was carried out in Tanzania for companies quoted on the Dar es Salaam Stock Exchange (DSE) for a period of 10 years from 2000 to 2009. This period was believed by the researcher in this study as long enough to achieve the intended objectives.

CHAPTER TWO: LITERATURE REVIEW

2.0. Introduction

In this chapter, a review of related literature is presented. It is divided into several sections; first, an understanding of capital structure decision is provided, different theories in relation to the topic are discussed; various factors also in relation to capital structure are explained. Furthermore, the research gap, conceptual framework, the research model and variable measurements and have been presented in this chapter.

2.1. The Capital Structure Decision

In a broader perspective, the sources of the company's capital can be classified into basic categories that are equity and debt, Ross et al. (2007). Both of these capitals hold inherent properties. In one hand, the equity capital provides investors to control over the firm as owners. However, the firm may not be able to use only equity financing because the rational objective is to maximize the value of the firm. Also the risk pattern of equity is higher and in some cases the expected rate may drive to sell equity at lower prices in the market, hence lowering the value of the company.

On the other hand, according to Dinesh Prasad Gajurel (2005) raising debt capital is also advantageous to the firm in numerous ways. Firstly, interest is tax deductible, which lowers the effective cost of debt, secondly, debt holders are limited to a fixed return, and stockholders do not have to share profits if the business does not have excess profits. Thirdly, debt holders do not have voting rights, so the stockholders can control a business even though they may be investing less than would otherwise be required.

However, although raising more debt brings better results to some existing shareholders, its risk also increases as it may cause financial distress for example, bankruptcy in the extreme case when a company defaults.

Therefore the crux of the capital structure theories lies between and among these two basic sources of capital, equity and debt and the interests of three major stakeholders of the firm, stockholders, managers and the debt holders respectively.

2.2. Theories on capital structure

2.2.1. The Naïve Theory

The Naïve theory of capital structure (the traditional theory) lays on the assumption that the value of the company is maximized when the company is entirely financed by debt.



According to this theory, the cost of debt and the cost of equity remains stable irrespective of the amount of debt or equity issued (Baver, 2004). The value of the company is said to be increased when more debt is issued as the cost of debt is lower than the cost of equity. As more debt is issued, the company is able to reduce the weighted average cost of capital (WACC).

According to Prace (2004), one of the major weaknesses of this point is that the assumption of cost of debt to remain the same for all levels of capital structure is only applicable when changes in capital structure are small. As debt increases the risk increases and the investors will demand higher returns for their debt financing, therefore the cost of debt at certain point in time will increase and not remain the same.

2.2.2. Modigliani and Miller Theory

Modigliani and Miller (1958) rejected the traditional view and came up with the new propositions to explain the capital structure theory and this marked the birth of modern capital structure theories. MM introduced the capital structure irrelevancy proposition in their famous work on the “Cost of Capital, Corporation Finance and the Theory of Investment”.

Modigliani and Miller (1958) used cross-sectional equations on data taken from 43 electric utility companies between 1945 and 1948 and 42 oil companies during 1953 to find out whether the choice of capital structure affects the cost of capital.

Modigliani and Miller (1958) made certain assumptions on their study which are also known as assumptions of perfect competitive capital market and they include the following; there are no taxes, there are no transaction costs, all market participants have equal information and equal opportunities, there is no information asymmetry, lending and borrowing at risk free interests, companies issue only two types of claims, risk free debt and (risk) equity, cash flow streams are perpetuities and lastly operating cash flow streams are independent of debt or equity considerations.

Modigliani and Miller (1958) found that the cost of capital and the value of the firm are independent of the capital structure. The cost of capital and the value of the firm are constant for all degrees of leverage. The overall cost of capital increases in a manner to offset exactly the use of lower expensive debt financing, and therefore, average cost of capital remains constant irrespective of the capital structure used by a company.

Five years later Modigliani and Miller (1963) introduced corporate taxes into their earlier model by setting free the assumption of no taxes. They argued that optimal capital structure can be obtained for companies with 100 percent debt financing by having the tax shield benefits of using debt. With tax introduction, the value of levered company becomes higher. This was their correction model.

Thereafter, several empirical researches were conducted on the concept developed by Modigliani and Miller. Later, Miller (1977) examined the tax model and introduced personal taxes into the model and argued that optimal capital structure exist when both corporate taxes and progressive personal taxes exist.

2.3. Modern Capital Structure Theories

In the development of literature on capital structure, three main important theories have been developed, which include the Trade-Off Theory, the Agency Cost Theory and the Asymmetric Information Theory. These theories are explained below.

2.3.1. The Static Trade-off Theory

The Static Trade-Off Theory originated from the debate of the Modigliani and Miller (MM) theorem (1963). According to the Static Trade-Off theory, an optimal capital structure does exist. A company is regarded as setting a target debt level and gradually moves towards this target. It is built on the concept of target capital structure that balances various costs and benefits of debt and equity. It postulates that companies increase their debt level such that marginal tax advantage of additional borrowing is offset by the increase in the cost of financial bankruptcy. In other words, since interest payments are tax deductible, raising more debt increases tax benefits. However, an increase in debt also increases the possibility of default and hence the expected cost of bankruptcy. The theory suggests that companies should maintain a balance between equity and debt financing.

2.3.2. Asymmetric Information Theory

This theory was started by Myers and Majiluf (1984). The theory suggests that managers or insiders are assumed to possess private information about the characteristics of the company's return streams or investment opportunities. Capital structure is designed to mitigate inefficiencies in the company's investment decisions that are caused by the information asymmetry. Various approaches to the asymmetric information are discussed in the following sub-sections.

2.3.2.1. Pecking Order Theory

Myers and Majiluf (1984) showed that, if investors were less well-informed than current firm insiders about the value of the firm's assets, then equity would be mispriced by the market. This underinvestment could be avoided if the firm could finance the new project using a security that was not so severely undervalued by the market. Debt involves no undervaluation and therefore would be preferred to equity by companies in this situation. This pecking order hypothesis maintains that businesses adhere to a hierarchy of financing sources and prefer internal financing when available, and debt was preferred over equity if external financing was required (Myers and Majiluf, 1984).

2.3.2.2. Signalling Theory

This suggests that, the firm's debt can be used to signal the value of the company. The underlying condition is information asymmetries between the firm and the market. By issuing debt, the management demonstrates that the firm has strength to make interest payments by committing to creditors which signals confidence in the companies' ability to generate future cash flows, Ogden et al. (2003).

2.3.3. The Agency Cost Theory

The Agency Cost Theory plays an important role in the financing decision due to the conflict of interest that may exist between shareholders and managers. The conflict of interest involves the divergent from the shareholders of the company's value maximization (Jensen and Meckling, 1976). One of the ways to reduce this conflict is increasing managers equity holding (agency cost) to align their interests with those of the shareholders.

Another agency cost identified by the theory is debt agency cost which arises due to a conflict of interest between debt providers on one side and shareholders and managers on the other side Jensen and Meckling, (1976). The theory suggests that when the costs associated with agency relationship between shareholders and managers on one side and debt holders on the other side are high, companies choose to use more equity financing and less debt financing.

2.4.0. Potential Factors Influencing Corporate Capital Structure

2.4.1. Selection of the Variables

Independent and dependent variables of the current study have been determined according to the results by previous studies and how far data have been available for measurement purposes. The studies from which the variables were obtained include; Myers (1984),

Titman and Wessels (1988), Harris and Raviv (2001), Huang and Song (2002), Antoniou et al.(2002), Caesar and Holmes (2003), Buferna et al. (2005), Rajan and Zingales (1995), Booth et al. (2001), Prasad et al. (2001), Huang and Song (2004), Narayanan and Lukose (2004), Sorgorb and Mira (2005).The variable in these studies have been thought to be useful in the study of capital structure in both developed and developing countries.

2.4.2. Asset Tangibility and Company Capital Structure

The theoretical literature has evidenced the importance of the type of assets owned by a company as it affects the company capital structure. According to the Trade-Off Theory, if a company has more tangible assets in their composition of total assets, it has higher capacity to raise debt on the collateral argument. The theory of information asymmetry also suggests that the use of debt for companies with more tangible assets is relatively greater (Frank and Goyal, 2002; Rajan and Zingales, 1995).

In the same line of argument, the trade of theory as it is for Pecking Order Theory predicts a positive influence of assets tangibility on capital structure. This means that, as the value of intangible assets disappears (almost entirely) in the case of bankruptcies, the presence of tangible assets is expected to be important in external borrowing as it is easy to collateralize them.

Tangible assets often reduce the costs of financial distress because they tend to have higher liquidation value (Titman and Wessels, 1988; Harris and Raviv, 1991).This will reduce the magnitude of financial loss incurred by financiers should the company default. Hence by pledging the firm's tangible assets as collateral or arranging so that a fixed charge is directly placed to particular tangible assets of the firm, implies that, these tangible assets can support more debt than intangible assets.

This will therefore result in companies with assets that have greater liquidation value having relatively easier access to finance and lower costs of financing, leading to these firms having higher level of debt than equity in their capital structure (Cassar and Holmes, 2003). Consistently, the agency theory suggests that companies with tangible assets will support more debt as tangible assets reduce agency costs since debt can be secured with known tangible assets that have alternative redeployable uses in case of default. Scott (1977) argues that, on the same grounds, a company will issue as much debt as possible as the agency costs of secured debts are lower than that of unsecured debt.

Moreover, Stulz and Johnson (1995) argue that, a company's opportunity to engage in asset substitution is reduced by secured debt. In firms with more intangible assets, the cost of controlling capital outlays are higher as monitoring is more difficult for firms holding secured debt to shift to riskier projects if they have more tangible assets. Thus the creditors might impose restrictions to the firms with relatively less tangible assets. This therefore implies the positive association between assets tangibility and capital structure.

Surprisingly, empirical studies do not provide us with consistent results. Some researchers for example, Rajan and Zingales (1995), Friend and Lang (1988) and Titman and Wessels (1988) find a positive influence of assets tangibility on capital structure. Studies which also support the positive influence of assets tangibility on capital structure, is the study by Drobetz and Fix (2003). In their study, they used the ratio of fixed assets as a proxy to measure asset tangibility. They gathered evidence from 124 large companies listed on the Swiss Stock Exchange and concluded that, a positive correlation between asset tangibility and capital structure was observed.

Furthermore, Parsley (2002), examined the capital structure issue for companies operating in Malaysia. In this study, besides market power and other variables, asset tangibility was one of the variables examined by Parsley. A sample size of 208 companies listed on the Malaysian Stock Exchange was taken for analysis to see the influence on capital structure.

In his study, Parsley measured tangibility of assets as the ratio of fixed assets over total assets. The results indicated a positive relationship between assets tangibility and the capital structure in Malaysia.

One study on a larger sample was undertaken by Fan, Titman and Twite (2003) to see the influence of assets tangibility on company's capital structure. They gathered a sample of 5,344 companies from 39 countries, for the period beginning 1991 to 2000 and measured asset tangibility as a ratio of fixed assets to total assets. They found that asset tangibility also positively influenced capital structure.

On the other hand, there are empirical studies that have found a negative influence of assets tangibility on capital structure, for example the study carried by Bhaduri (2002). Bhaduri used three proxies for asset tangibility namely, the ratio of land and building to total assets,

ratio of plant and equipment to total assets and the ratio of inventory to total assets to really see the effect on capital structure choice.

To carry out his study, Bhaduri studied 363 manufacturing companies in India for the period 1989 through 1995 and found that all three measurements of asset tangibility did not appear to be a significant factor influencing the capital structure. From the studies, Bhaduri concluded that term loans are not always used by the companies to finance long term assets.

Also, Daskalakis and Psilaki (2006) studied the capital structure decisions of companies in France and Greece. Among the variables that were examined in their study was asset tangibility which appeared to have a negative influence on capital structure in both countries. According to them this result was in compliance with the pecking order model as they argued that companies with more tangible assets had already found the stable income and there were fewer tendencies for them to seek external financing.

In support of the negative influence of assets tangibility on capital structure, Nivorozhkin (2005) used dynamic unrestricted capital structure model to examine the determinants of firms target financial leverage in Czech Republic and Bulgaria between 1993 and 1997. His study supported the study of Ferri and Jones (1979) who too found a negative influence of assets tangibility on capital structure. Nevertheless, Booth et al. (2001) and Huang and Song (2002) who carried their studies in developing countries, found a negative influence of assets tangibility on capital structure. For this study, most of the companies included in the sample are manufacturing companies and may have a considerable amount of fixed assets and their ability to obtain debt is greater through collateralizing of their fixed assets. This then leads to the following hypothesis which will be tested in Tanzania for companies listed on the (DSE).

***H_i:** Assets tangibility has a positive and significant influence on the capital structure by companies quoted on the (DSE).*

2.4.3. Profitability and Company Capital Structure

According to the pecking order theory, profitable firms have financial surplus. Profitable firms are likely to have sufficient internal finance that ensures they do not need to rely on external sources as they can supply their fund needs from internal finance when necessary, Lu, (2007). Since firms with financial surplus will not need to use external resources, their use of debt also remains in low level.

Moreover due to information asymmetries between the firm and outsiders, firms will prefer internal financing over external financing as the cost of external capital will be greater for the firm. That is, although more profitable firms would be more likely to get access to external sources of capital, they will prefer inside funds to finance their operations and investments. Thus accordingly as pecking order theory suggests, there is a negative of profitability on capital structure (Vasiliou, Eriotis and Daskalakis, 2003; Saeed, 2007).

A different view which does not support the pecking order theory is put forward by Jensen (1986). According to him, since profitable companies are considered as more trustable by debt providers, they can more easily obtain loans which indicate that a positive influence of profitability on capital structure is expected.

Empirical findings also have arrived at different conclusions. There are studies which support the negative influence of profitability on capital structure on one hand, and yet on the other hand some studies support the positive influence of profitability on capital structure.

Remmers, Stoneville, Wright and Beckhuiser (1974) conducted a study for the period beginning 1969 through 1972 on large companies of selected industries in US, Japan, France and the Netherlands. They concluded that apart from growth, profitability was one of the factors that negatively and significantly influenced capital structure. Studies done by Hurdle (1994), Chiarella, Pham, Sim and Tan, (1992), and also Muhammad (1999) confirmed the same results.

Also, Thies, Clifford, Klock and Mark (1992) studied a sample of large United States (U.S) manufacturing companies from 1935 till 1983. Profitability was measured by the earnings before interest and tax over net total assets. Altogether, 5 measurements were used for capital structure, namely the ratio of short term debt to total capital, long term debt to total capital, convertible debt to total capital, preferred stock to total capital and common stock to total capital. The study indicated that profitability was significant in explaining company's capital structure and it was inversely related to it.

In developing countries, Booth et al. (2001) conducted a study on finding the determinants of corporate capital structure on 10 developing countries. They used return on assets as a

measure for profitability. The results indicated that the more profitable the company was, the lesser it was expected to use the debt.

Other studies that evidenced the negative influence were Titman and Wessels (1988) and Thies et al. (1992), which used earnings before interest and tax over assets as a measure for profitability. In a different study, Al-Sakran (2001) used return on assets and earnings before interest over sales as measures for profitability and yielded similar results.

Moreover, Munyo (2004) performed a study in finding the factors that influence capital structure using data from an economy without stock market that is the Uruguayan companies. In this study only profitability was seen to be significantly influencing the capital structure. The negative coefficient obtained, confirms the increased relationship between profitability and capital structure.

On the other hand, Abor (2005) studied the effect of profitability on capital structure in Ghana. All the listed companies on Ghana Stock Exchange over a period (1998-2002) were sampled in that study. Three measurements were applied to represent capital structure namely, short-term debt to total capital, long-term debt to total capital and total debt to total capital. The profitability was measured by the ratio of earnings before interest and taxes (EBIT) to equity.

Mixed results were seen in the study of Abor (2005). A negative influence was noted between long-term debts to total assets with profitability. He concluded that profitable companies use more short-term debt to finance operation in Ghana. However, surprisingly, a significant positive relationship was noted between the ratio of short-term debt to total assets and total debt to total assets with profitability respectively.

Besides the study by Abor (2005), there were also few studies that indicated a positive influence of profitability on capital structure. Jensen (1986) who found positive relationship argues that the effectiveness of the market control plays an important role in determining the coefficient for profitability, if the market for corporate control is effective, managers of profitable companies are “forced” to pay out cash by leveraging up and the lenders too are willing to lend to the profitable companies.

Apart from that, Taub (1975) found a significant positive relationship between profitability and capital structure of (US) corporations. Among others who found a positive association

between profitability and capital structure include Baker (1973), Peterson and Rajan, (1974) and Roden and Lewellen (1995). In line with the pecking order theory, the existence of information asymmetry between insiders (managers) and outsiders is expected to be higher for companies quoted on the (DSE) because of inefficiency of the capital market. This leads to the following hypothesis.

***Hi:** Profitability has a negative and significant influence on the capital structure by companies quoted on the (DSE)*

2.4.4. Company Size and Corporate Capital Structure

The theory of pecking order predicts a negative relationship between size and capital structure with larger firms exhibiting increasing preference for equity relative to debt (Jensen, 1986). The argument is that, large companies are more closely observed by analysts and should therefore be more capable of issuing more informational sensitive equity, and have lower debt. In the same direction, the Agency Cost Theory, pioneered by Jensen and Meckling in 1976, suggests that, management of large, and more established firms may have an incentive for overinvestment, which is accomplished by using free cash flows of the company in inefficient projects instead of distributing it to shareholders through dividends or stock repurchase. Hence according to agency cost theory, profitable companies should be less levered.

In a different direction, Static Trade-Off Theory predicts a positive relationship between company size and capital structure. Also empirical studies have indicated differing findings. Although most of the empirical studies have shown a positive influence of company size on capital structure, there are some studies which provide evidence for negative influence.

The reasons for positive influence of company size on capital structure as argued by Nagano (2003) in his study was that, large companies, generally seen as diversified, the diversification actually can protect them overtime from demand down turns in business or product class, thus lowering the probability of income loss or in the extreme case insolvency.

Krishnan and Moyer (1996) studied 81 large corporations from Hong Kong, Malaysia, Singapore and Korea to determine the factors influencing capital structure. One of the variables tested was firm size. The proxies used to measure company size was the logarithm of total assets and to measure leverage, ratio of total debt to market value of

equity and the ratio of long-term debt to market value of equity were used. Using linear regression model, they found that company size was positively related to capital structure.

The company size coefficient appeared to be more significant in the long term debt to equity than in the total debt to equity model. The results were in line with the studies done by Marsh (1982) that company size was more important in determining the capital structure as larger companies have access to the long term debt market.

In a study done by Ferri and Jones (1979), two additional interesting proxies, namely the average level of total assets of current and preceding four years and the average level of sales of the current and preceding four years were examined in addition to the common proxies for firm size which are total assets and total sales. It was felt that the average measures might give a clear picture of the indication of the company size than a single period. They used data gathered from the compustat data set of 233 companies from 1969 till 1976. As expected, the results indicated a positive relationship between firm size and leverage with average measures to have better coefficient.

Another study was undertaken in a non-corporate tax regime by Al-Sakran (2001) who examined the capital structure of Saudi-Arabian companies. A sample of 35 firms had been identified in this study and the sources of data were Bakheet Financial Advisors and annual reports of companies between 1993 and 1997. He used multi-linear regression model to investigate the relationship between capital structure and firm size besides other 4 variables. The measure for company size was the logarithm of total assets. Capital structure was measured by the ratio of total debt to capital. Al-Sakran concluded that company size was positively related to capital structure.

Furthermore, the study on the influence of firm company size on capital structure by Boateng (2004) tried to find out the practice by the financial managers in Sub-Saharan African Nation, Ghana. In this study, a cross-sectional survey using questionnaires was taken on a sample of equity joint ventures in Ghana with partners from Western Europe, America and Asia.

About 90 questionnaires from the joint venture companies were taken as a sample with a total of 41 questionnaires successfully collected. The size of JVS was categorized according

to the total capitalizations (less than \$ 5 million (small), between \$ 5- \$ 10 million (medium) and greater than \$ 10 million (large)).

The influence of company size was analysed by considering the differences in means of relative effect of firm size on capital structure. Capital structure was calculated by the ratio of total debt to total assets at book value. After surveying the impact of size on the joint venture companies in Ghana, Boateng concluded that large companies tend to have more gearing. It was proven that large companies have huge assets, well diversified and are less prone to bankruptcy.

On the other hand, some studies reported a negative influence of company size on capital structure for example, Kester (1986); Kim and Sorenson (1986) and Titman and Wessels (1988). However, the results were often weak as far as the level of statistical significance is concerned. This study in line with the static trade-off theory, predicts a positive influence of company size on capital structure choice. Hence the following hypothesis is formulated.

***Hi:** Company size has a positive and significant influence on the capital structure of companies quoted on the (DSE).*

2.4.5. Growth Opportunity and Capital Structure

The pecking order theory suggests that companies play a greater demand on the internally generated funds of the company. Consequently, companies with relatively high growth will tend to look outside the firm to finance the growth and new investments.

Therefore, these companies will look to short-term less secured debt than to longer-term more secured debt for their financing needs. In other words, growing firms that need funds prefer debt to external equity. Thus based on the pecking order theory, the relationship between expected growth and capital structure is predicted to be positive.

In contrast, the theory of agency cost suggests that growing companies use less debt and more equity in financing business operations. In support of this theory, Titman and Wessels (1988) point out that the costs associated with the agency relationship between shareholders and debt holders are likely to be higher for companies in growing industries.

In support of this argument, Myers (1977) argues that, due to information asymmetries, companies with high debt levels might have the tendency to undertake activities contrary to the interests of the debt-holders. To compensate for this risk, debt holders would charge a

higher risk premium and also impose debt covenants which would restrict the freedom of directors and managers and result in a debt agency cost. Therefore to avoid such debt agency costs, growing companies are expected to be less reliant upon debt finance.

So far, empirical studies have evidenced the mixed results in respect of the relationship between expected growth and capital structure. Baskin (1989) studied 378 fortune 500 companies through 1960 till 1972 and concluded a positive influence of growth on capital structure.

However, Pao, Pikas and Lee, (2003) studied ten variables to see their influence on capital structure of listed companies in Taiwan from 1996 to 1999. They used average sales for growth rate over the previous two years to represent the growth variable and concluded that growth was negatively related to capital structure.

In another study, Dittmar (2002) measured growth as the ratio of research and development (R & D) over sales with an argument that growing companies should have high expenditure to grow, namely the R & D costs. This was conducted from the data collected from Security Data Company Worldwide Acquisition Data Base from 1983 till 1995. The results indicated a negative relation between growth and capital structure.

Likewise, Rajan and Zingales (1995) also found a negative influence of growth opportunity and capital structure. The reasons for the negative influence of growth opportunity on capital structure were offered by them. Firstly, it is expected that as growth opportunities increase, the cost of financial distress also increases. Secondly, firms prefer to issue equity when the stocks are overvalued. Another explanation is that, although growth opportunities add value, the firm cannot use growth opportunity as a security to lenders, Titman and Wessels (1988) and Chung, (1993). This study in support of the agency cost theory, predicts a negative influence of growth opportunity on capital structure choice. This leads to the following hypothesis.

***Hi:** Growth opportunity has a negative and significant influence on the capital structure of companies quoted on the (DSE).*

2.4.6. Non-Debt Tax Shields and Capital Structure

The tax deduction for depreciation is called a non-debt tax shield. Non-debt tax shield is one of the variables commonly examined by research scholars in an effort to find its effect on

the capital structure. The literature caters conflicting results for the effect of non-debt tax shields on capital structure. De Angelo and Masulis (1980) argued that companies with large non-debt tax shields relative to their expected cash flows include less debt in their capital structure.

According to the MM (1963) theory, the main incentive to borrow is to take advantage of interest shields or tax deductible of interest. The presence of other non-debt tax shields like depreciation and amortization reduces this incentive. A company with larger non-debt tax shields was expected to use less debt. Therefore the existence of non-debt tax shields should discourage debt financing and a negative relationship between non-debt tax shields and capital structure is expected.

Buferna, Banyassa and Hodgkinson (2005) conducted a study from the Libya data set. The results indicated a strong negative influence of non-debt tax shields on capital structure. Another study was carried by Chaplinsky and Niehaus (1993). They used the ratio of depreciation expense plus investment tax credits to total assets to represent non-debt tax shields. This result too showed a negative influence of non-debt tax shields on capital structure.

As for the developing countries, Prasad et al., (2001) found that in Thailand the non-debt tax shields had no significant influence on the capital structure but surprisingly in Malaysia the non-debt tax shields resulted in positive relationship with capital structure. The argument for positive relationship was that when the company has more non-debt tax shields, depreciation was higher and the company employed more debt.

In another study on an ASIAN country, Huang and Song (2004) examined more than 1,000 large Chinese listed companies up to the year 2000 and concluded that non-debt tax shields appeared positively related to capital structure. In this study, it is also argued that when companies have more fixed assets, depreciation will be higher and this will encourage more borrowing since depreciation is tax allowable expense. This leads to the following hypothesis;

Hi: Non- debt tax shields has a positive and significant influence on the capital structure by the companies quoted on the (DSE).

2.4.7. Earnings Volatility and Capital Structure

The trade-off theory by Modigliani and Miller (1963) suggests a negative association between earnings volatility and capital structure choice as the probability of being unable to meet financial obligations increases within the volatility of earnings.

This may result in arranging funds at higher cost to service the debt or face the risk of bankruptcy; hence as the present value of the costs of financial distress increases within the probability of being financially distressed, risky firms prefer less debt (Myers and Majluf, 1984). Rather if a firm is financed by equity, it may choose not to pay dividends during periods of financial difficulty (Myers and Majluf, 1984).

Thus firms within highly volatile earnings borrow the least and prefer equity to debt. Baxter (1967) and Warner (1976) support the theory that the risk of bankruptcy affects capital structure of firms.

Empirical study however has evidenced mixed results on the relationship between earnings volatility and capital structure. Studies that have evidenced negative relationship between earnings volatility and capital structure include (Bradley et al. 1984; Noe and Ramirez, 1991). Similarly, other studies which confirmed the significant negative relationship between earnings volatility and capital structure include (Scott, 1976; Marsh, 1982; John, T. 1993; Brigham and Gapenski, 1994; Bathal et al., 1994; and Bhaduri, 2002).

Also, Narayanan and Lukose (2004) performed linear regression on the data collected from listed Indian firms for a period of 1990 till 1999. Earnings volatility was one of the variables examined to see the effect on capital structure choice.

From the results, they concluded that financial earnings volatility is negatively related to capital structure choice. Prasad et al., (2001) provided evidence on the determinants of capital structure from the Malaysian and Thailand corporations.

They found that earnings volatility in Malaysia was negatively related to capital structure and for Thailand it appeared insignificant. Another study that was conducted by Antoniou et al., (2000) concluded that earnings volatility was not a significant factor influencing capital structure. This study expects a negative relationship and the following hypothesis is formulated.

Hi: Earnings volatility has a negative and significant influence on the capital structure by companies quoted on the (DSE).

2.4.8. Effective Tax Rate and Capital Structure

According to the trade-off theory by MM (1963), companies prefer debt to equity for financing to get advantage of tax deductibility of interest payment. The theory suggests that a company with a higher tax rate should have higher debt level because it has more income to shield from taxes. According to this theory, a positive relationship is expected between effective tax rate and capital structure.

Empirical results on the influence of effective tax rate on capital structure recorded mixed results. There are those which show positive relationship and others which provide evidence for negative relationship between effective tax rate and capital structure. For example, Jahera and Lyold (1996), found a positive relationship between effective tax rate and capital structure choice. A positive relationship between earnings volatility and capital structure choice was also confirmed by Kim and Sorensen, (1986) and Huang and Song, (2000).

On the other hand, Sogorb and Mira (2005) attempted to examine effective tax rate among the firm specific variables to see the influence on Spanish Capital Structure Decision. The results indicated a negative relationship between effective tax rate and capital structure.

In addition, Negash (2002) studied the effect of corporate tax on 64 firms that were listed in the Johannesburg Stock Exchange (JSE)'s industrial sector for the year 1991-1998 periods. Using the statutory tax, income tax expense, actual tax paid and marginal tax as proxies for tax, the study reported a negative association between the tax rate variables and capital structure. This study in support of the trade-off theory, expects a positive relationship; hence the following hypothesis is formulated.

Hi: Effective tax rate has a positive and significant influence on the capital structure by companies quoted on the (DSE).

2.4.9. Industry Class and Capital Structure

Industry class is also said to influence the choice between debt and equity. Empirical studies that identify a statistically significant relationship between industry classification and capital structure include the study by (Bradley M., Gregg, A., Jarrel and Han Kim., 1984; Long and Malitz, 1985; and Kester, 1986). Harris and Raviv. (1991.p.333) based on a

survey of empirical studies claim that “Drugs, Instruments, Electronics and Food have consistently low leverage while Paper, Textile Mill Products, Steel, Airline and Cement” have consistently large leverage. Also Kim (1978) argues that, the degree of influence on capital structure was expected to differ between two industries because the optimal debt-equity mixes may vary in different industries.

In developed countries, it has been found that certain industries, such as utilities, transportation companies and capital intensive manufacturing firms are characterised by high debt while other industries such as service firms, mining companies and rapid growing or technology based manufacturing companies, employed little or no debt financing. Some studies like Sheel (1994), Lööf (2003) used an industry dummy variable to examine the influence of industry class on capital structure choice. To estimate the influence of industry classification on capital structure, this study, similarly uses dichotomous values. A value equal to 1 is used for a set of manufacturing firms and zero otherwise. In this study with regard to industry classification, the following hypothesis is stated.

***Hi:** There is a significant relationship between industry class and the capital structure of companies quoted on the (DSE).*

Table1: Expected relationships between independent and dependent variable

Independent variable	Relationship with dependent variable
Asset tangibility	+ve
Company profitability	-ve
Company size	+ve
Growth opportunities	-ve
Non-debt tax shields	+ve
Earnings volatility	-ve
Effective tax rate	+ve
Industry class	-/+ve

2.5. The Research Gap

One of the many objectives of financial managers is to maximize the wealth of shareholders, Damodaram, (2001). Shareholders wealth maximization is linked to capital

structure decision because capital structure is one of the drivers of company's value, Damodaram, (2001). It is important for managers to understand various aspects about capital structure decision. While this is true, academic theories and literature have not been very useful to provide general understanding on the issue of capital structure decision.

Empirical results so far show no strong consensus on how companies decide on their capital structures despite decade of intensive research. The very fact that related explanatory variables have different regression signs-some positive and others negative-prove that the findings cannot be generalized.

For instance while Titman and Wessels (1988) in their study conducted in the United States revealed that asset tangibility, non-debt tax shields, earnings volatility and growth do not affect capital structure decision (Harris and Raviv, 1991) using data from developing countries showed that, capital structure was positively influenced by asset tangibility, non-debt tax shields, firm size and growth opportunity and negatively influenced by financial distress and profitability.

Another study done by Booth et al. (2001) using data from 10 developing countries revealed the positive relationship between assets tangibility and capital structure for the 4 countries of their study and the negative influence of assets tangibility for the other 6 countries. In their study, contrary to the findings by Harris and Raviv they found that financial distress had a positive influence on capital structure.

Unlike other developing economies, the area of research for capital structure is still unexplored in Tanzania. Research made on the ground of capital structure in the context of Tanzania are unknown and limited since there is hardly any published work up to late 2010.

The results of other countries may not be applicable in the Tanzanian environment and in particular to the companies listed on the (DSE) due to the following obstacles;



2.6. Theoretical conceptual frame work

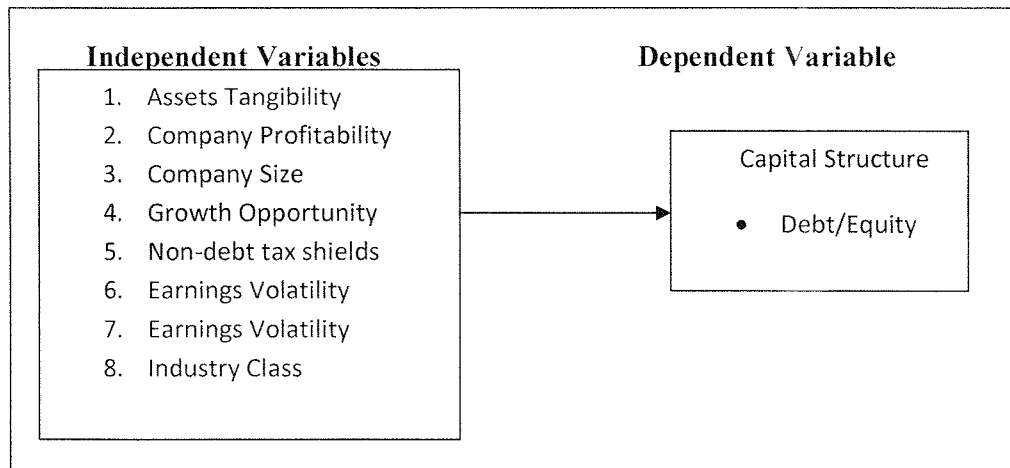


FIGURE 1: A schematic diagram showing the relationship between assets tangibility, company profitability, company size, growth opportunity, non-debt tax shields, earnings volatility, effective tax rate, industry class and capital structure

2.7. The Research Model

The research model for this study is as follows.

$$C=f(AT, PR, CZ, GO, NT, EV, ET, IC.).$$

Whereby; C=Capital structure, AT=Asset tangibility, PR=Profitability, CZ=Company size, GO=Growth opportunity, NT=Non-debt tax shield, EV=Earnings volatility, IC=Industry class.

2.8. Variable Measurement

The measurement of both the independent and dependent variables have been obtained from the literature considering the availability of data.

2.8.1. Dependent variable

The dependent variable for the current study is capital structure and it is measured by the ratio of total debt over equity, Mahmud, Muhammad, Herani, Gobind M., Rajar, A.W and Farooqi, Wahi, (2009). A high ratio indicates that the company uses more debt than equity in financing its business while the lower ratio indicates the vice versa.

2.8.2. Independent Variables

Independent variables on which data was collected include the following.

2.8.2.1. Assets tangibility

In this study, asset tangibility is measured by fixed assets divided by total assets. It has been used by Harris and Raviv (1991), Rajan and Zingales (1995), Bevan and Danbolt (2000), Omet and Nobanee. (2002) and Buferna et al., (2005). They argue that this is an appropriate measure for asset tangibility.

2.8.2.2. Profitability

In this study, profitability is measured by earnings before tax divided by total assets. This measure is supported by Rajan and Zingales (1995), Bevan and Danbolt (2000), Huang and Song (2002), Antoniou, et al. (2002) and Buferna et al., (2005).

2.8.2.3. Company Size

In this study, company size is measured by the natural logarithm of total assets. This measure is supported by Titman and Wessels (1998), Huang and Song (2000) and Antoniou, et al. (2002) to be an appropriate measure for company size.

2.8.2.4. Company Growth Opportunities

Many researchers have used the ratio of book-to –market value of equity as a proxy for the growth for example, Ozkan, 2001, and Gaud, P., Jane E., Hoesli M., and Bender A. (2005). But in this study due to the fact that market value may not be available for most companies listed on (DSE), therefore as suggested by Titman and Wessels (1998), the growth rate of sales is considered as the proxy for company growth and it was used in the current study.

2.8.2.5. Non-debt Tax Shields

In this study non-debt tax shields is measured by the annual depreciation expense over total assets. This measure is supported by, Deesomsak et al., 2004, Song and Philippatos (2004).

2.8.2.6. Earnings Volatility

In this study, earnings volatility is measured by absolute value of variation in earnings after tax divided by total assets. This measure is supported by Jong, Kim and Stultz (1996), Booth et al., (2001), Cassar and Holmes (2003), Wald (1999), and Chen (2004).

2.8.2.7. Effective Tax Rate

In this study effective tax rate is measured by the ratio between tax paid and earnings before tax. This measure is supported by other researchers such as Sorgob and Mira (2005)

2.8.2.8. Industry Class.

In this study industry class is measured by dichotomous values, whereby 1 is for manufacturing industries and 0 otherwise.

Table 2: Summary of the measurements for the variables

Variables	Measurements
Capital structure	Total debt/ Equity
Assets tangibility	Total fixed assets over total assets
Profitability	EBT/Total assets
Company size	Ln (assets)
Growth opportunities	Percentage change in sales
Non-debt tax shields	Annual depreciation over total assets
Earnings volatility	Absolute value of the variations in ROA
Effective tax rate	Tax expense over EBT
Industry class	1 for manufacturing, 0 otherwise



2.9. Summary of the Literature Review

This chapter focused on reviewing related research studies. From the literature of capital structure, it is seen that there have been developments of various theories of capital structure. The theories themselves have been tested by scholars mostly for companies in the developed nations.

However, there were not many studies carried out to prove these theories in developing countries and non-in Tanzania as per the researcher's knowledge. From the literature the researcher has learnt that, it is important for managers to pay attention on appropriate features of capital structure, for example, the heavy reliance on debt may not be the positive signal for the company performance as may result into bankruptcy because of default.

Rajan and Zingales (1995) suggestions remain important, that is, the influence of various factors on the choice of capital structure may vary from one period to another, from one company to another, from one industry to another and from one country to another. Hence a study of capital structure should be carried out in a particular context. This study was carried out in Tanzania for the companies listed on Dar es Salaam Stock Exchange

CHAPTER THREE: RESEARCH METHODOLOGY

3.1. Introduction

The purpose of this chapter was to present and explain the research methodology that was used in the study. The chapter is divided into the following sections; section 3.2 explains the research design, 3.3 explains population framework, 3.4 explains selection of the sample, 3.5 explains data collection methods, 3.6 explains the research model specification, 3.7 explains data analysis method and 3.8 explains limitations of the study.

3.2. The Research Design

This empirical study was designed to examine the capital structure decision of companies listed on the (DSE).The study is both quantitative and qualitative in nature. It is quantitative because it sought to prove existing theories as opposed to developing new theories. It utilized experimental method and quantitative measures to test hypotheses. It also emphasizes the measurement and analysis of causal relationship between variables, Creswell, 2003, McMillan and Schumacher, (2006).The study is partly qualitative as it sought to examine opinions.

3.3. Population Frame

A population or universe is any complete group of entities sharing some common set of characteristics, William G.Zikmund, (1994, p.356).The population under this study is defined as all companies listed on Dar es Salaam Stock of Exchange (DSE).There are a total of 15 companies listed on Dar es Salam Stock Exchange up to late 2010.

3.4. Selection of the Sample

Fifteen (15) companies to late 2010 were listed on (DSE).To achieve the objectives of this study, the researcher selected purposively 9 non-financial companies which were studied for a period of 10 years beginning 2000 up to 2009. Financial companies such as insurance companies, investment companies, and banks were excluded from this study because they do not provide a good platform for the study of capital structure and also they have to comply with very stringent legal requirements pertaining to their financing arrangements (Ozkan, 2001; Gaud, et al, 2005).

3.5. Data Collection Methods

The data was collected from websites of companies listed on Dar es Salaam Stock Exchange (DSE). Where information was not complete data was obtained from, Capital Markets and Securities Authority (CMSA). Data was extracted from consolidated accounts

of the year 2000-2009. In order to calculate values of variables to test the hypotheses, the profit and loss accounts (The Income Statements), the balance sheet (The Statement for Financial Position) and notes to the accounts were used. In addition to this, a questionnaire was mailed to Chief Financial Officers (CFOs) of every company to obtain supplementary information to get to know their opinions on various factors influencing capital structure decision.

3.6. Specification of the Model

The method similar to that of Dodd (1986) and Chowdhury (2004) was applied to test the factors that influence the capital structure by multiple regression analysis using Least Square Estimation Method. The assumptions on which Least Square Estimation Method is based include a) Relationship between dependent and independent variable is linear, b) Residual term to be normally distributed with zero expectations, not correlated with independent variables, and hence constant variance. The current study predicts that capital structure is influenced by the variables shown in equation below.

$$C=a +b_1X_1+ b_2X_2+b_3X_3+b_4X_4+b_5X_5+b_6X_6+b_7X_7 +e$$

Whereby; C=Capital structure, X1=Asset Tangibility, X2=Profitability, X3=Company size, X4=Growth opportunity, X5=Non-debt tax shields, X6=Earnings Volatility, X7=Industry class and e is the error term.

3.7. Data Analysis Techniques

The methods of data analysis that were employed in this study are Regression Analysis and Descriptive Statistics. The Regression Analysis measures the functional relationship of dependent and independent variables at the same time and is a very commonly used technique to study the factors influencing capital structure (Taub, 1995; Taggart, 1977; Ferri and Jones, 1979; Rajan and Zingales, 1995; Booth et al. 2001; Ozkan, 2001; and Gaud et al., 2005). It was used to identify the significant factors influencing capital structure of companies quoted on the (DSE). Descriptive statistics was used to analyse the data obtained from the questionnaire and to examine the levels of debt and equity whereby percentages were used. To carry out the Regression Analysis, computer software (the MINITAB) was used and the output was produced and interpretation. Significance of the model was determined by use of the P-value, R^2 and F-score while T-values for each independent variable were used to determine their significance. The Correlation Matrix for independent

variables was used to test the extent of relationships among independent variables. This helped to measure variability among variables to avoid measuring the same or close related variables as if are different.

3.8. Limitation of the Study

The following were the limitations of this study;

1. From an accounting point of view, all the variables used in this study to measure capital structure and independent factors are basically based on the year end balances. This study could not obtain the monthly end figures in order to provide better evidence in studying the influence of the independent variables on capital structure.
2. This study only included non-financial companies quoted on the (DSE). Hence these findings may not be applicable for financial companies and non-listed companies.

Despite these limitations, the researcher ensured that the results and evidences attained the objectives of the study.

CHAPTER FOUR: PRESENTATION OF THE FINDINGS

4.1. Introduction

This chapter is devoted for presenting and analysing the findings relating to the capital structure decision in the context of Tanzania for companies listed on the (DSE). One of the issues presented and analysed in this chapter relates to the examination of the levels of debt and equity employed by companies listed on the (DSE). Another issue dealt with in this chapter relates to the factors influencing capital structure of companies listed on the (DSE). Lastly an examination of management opinions on the factors influencing the capital structure by companies listed on the (DSE) is also analyzed.

4.2. An examination of the Levels of Debt and Equity employed by Companies listed on the (DSE)

In this section, the levels of debt and equity for companies listed on the (DSE) have been analysed by using descriptive statistics. The data was obtained from the financial statements of selected companies listed on the (DSE) for 10 years beginning 2000 to 2009. The results are as shown in the table below.

Table 3: The Debt Levels of Selected Companies listed on the (DSE) in %

CO/YR	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
TCC	28	29	21	25	28	28	36	29	38	41	30.3
SWS	28	26	31	33	31	25	30	23	38	26	29.1
TOL	34	39	37	34	33	35	42	31	36	34	35.8
TAT	59	59	47	59	54	62	59	54	50	51	53.8
TBL	33	21	22	26	26	29	35	54	53	55	34.4
SMB	32	27	29	26	24	36	28	27	31	21	28.1
TWG	31	26	23	31	32	29	22	23	37	26	28
KQ	68	70	66	70	71	68	75	72	66	77	70.3
EABL	20	13	26	13	14	27	57	35	36	35	27.6

Mean debt levels for the period of 10 years	37
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The table 4.1 above shows the descriptive statistics of debt levels of each year for each company and the mean equity level for 10 years for selected companies listed on the Dar es Salaam Stock Exchange. **TCC** is Tanzania Cigarette Company Limited, **SWS** is Swiss port

Company Limited, **TOL** is TOL Gases Limited, **TAT** is Tanzania Tea Packers Limited, **TBL** is Tanzania Breweries Limited, **SMB** Tanga Cement Company Limited(SIMBA), **TWG** is Tanzania Portland Cement Company Limited(TWIGA), **KQ** is Kenya Airways and **EABL** is East African Breweries Limited.

Referring to table 4.1, KA shows the highest mean debt level of 70.3% followed by tat which shows a moderate mean debt level of 53.8%. Other companies show low levels of mean debt, for example TOL shows a mean debt level of 35.5, TBL shows a mean debt level of 34.4%, TCC shows a mean debt of 30.3, SWS shows a mean debt level of 29.1, SMB shows the mean debt level of 28.1, TWG shows the mean debt level of 28% and EABL shows the lowest mean debt level of 27.6%.

Table 4: The Equity Levels of Selected Companies Listed on the (DSE) in %											
CO/YR	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Mean
TCC	72	71	79	75	72	72	64	71	62	59	69.7
SWS	72	74	69	67	69	75	70	77	62	74	70.9
TOL	66	61	63	66	67	65	58	69	64	66	64.5
TAT	41	44	53	41	46	38	44	56	50	49	46.2
TBL	67	79	78	74	74	71	65	56	47	45	65.6
SMB	68	73	71	74	76	64	72	73	69	79	71.9
TWG	69	74	77	69	68	71	78	77	63	74	72
KQ	32	30	34	30	29	32	25	28	34	23	29.7
EABL	80	87	74	87	86	73	43	65	64	65	72.4
Mean equity levels for the period of 10 years											63

The table 4.1 above shows the descriptive statistics of equity levels of each year for each company and the mean equity level for 10 years for selected companies listed on the Dar es Salaam Stock Exchange. **TCC** is Tanzania Cigarette Company Limited, **SWS** is Swiss port Company Limited, **TOL** is TOL Gases Limited, **TAT** is Tanzania Tea Packers Limited, **TBL** is Tanzania Breweries Limited, **SMB** Tanga Cement Company Limited(SIMBA), **TWG** is Tanzania Portland Cement Company Limited(TWIGA), **KQ** is Kenya Airways and **EABL** is East African Breweries Limited.

Referring to Table 4.2, EABL shows the highest mean equity level of 72.4% for a period of ten years beginning from 2000 to 2009. For the same period, TWG shows the mean equity level of 72% which ranks the second to EABL. Other companies which show high levels of mean equity are SMB with the mean equity level of 71.9%, SWS with the mean equity level of 70.9% and TCC with the mean equity level of 69.7. Other companies show moderate mean equity levels for example, TBL shows mean equity level of 65.6% and TOL shows mean equity level of 64.5%. On the other hand TAT shows low level of mean equity of 46.2% while KA shows the lowest mean equity level of only 29.7%.

4.3. Examination of Factors Influencing the Choice of Capital Structure of Companies Listed on the (DSE)

The factors influencing capital structure of companies listed on the (DSE) have been analyzed by using multiple regression analysis.

4.3.1. Correlation Matrix Analysis

Below are the results of correlation matrix analysis.

Table 5: Pearson's correlation coefficients

	ET	EV	NT	GO	SZ	PR	AT
IC	-0.386	0.092	-0.240	0.028	0.252	-0.009	0.097
ET		-0.532	-0.313	0.118	0.343	0.431	-0.138
EV			0.054	0.100	-0.427	-0.589	0.410
NT				-0.190	-0.371	0.091	0.126
GO					0.132	0.180	0.182
SZ						0.252	0.024
PR							0.515

The table 4.3 above shows the Pearson Correlation Coefficient Matrix .It shows how the correlation among variables. **AT** is the asset tangibility measured by fixed assets over total assets, **PR** is the company profitability measured by earnings before tax over total assets, **SZ** is the company size measured by natural logarithm of total assets, **GO** is the growth opportunity measured by growth rate of sales, **NT** is the non-debt tax shields measured by annual depreciation over total assets, **EV** is the earnings volatility measured by absolute value of the variations in earnings before tax, **ET** is the effective tax rate measured by tax expense over earnings before tax and **IC** is industry class measured by 1 for manufacturing industries and 0 otherwise.

A correlation analysis was performed to test for multicollinearity among variables. Multicollinearity means that there is a linear relationship among the explanatory variables which may cause the regression model to be biased (Gujarati, 2003, page 345). In general, independent variables having collinearity at 0.70 in absolute value or greater should not be included in the regression analysis, Tibachnich and Fidell (1996). The table 4.4 below shows the results of correlation among variables. The highest correlation value among the variables is -0.586. Hence multicollinearity does not appear as a problem in the regression analysis for this study.

The results show that most of the variables are lowly correlated with one another. This allows the researcher in this study to include all the independent variables in the analysis

4.3.2. Regression Analysis

The following model was used to determine the significant and insignificant factors influencing capital structure of companies listed on the (DSE)

$C = f(AT, PR, SZ, GO, NT, EV, ET, IC)$ which yielded the following multiple regression equation

$$C = \beta_0 + \beta_1(AT) + \beta_2(PR) + \beta_3(SZ) + \beta_4(GO) + \beta_5(NT) + \beta_6(EV) + \beta_7(ET) + \beta_8(IC) + e.$$

The results are presented in the table 4.4 below

Table 6: OLS Regression for Significant Factors

Predictor	Coef	T-Value	P-Values	VIF
Constant	-2.723	-2.63	0.010	
AT	0.3669	1.16	0.249	1.7
PR	-1.6776***	-5.84	0.000	2.4
SZ	0.20676 ***	4.89	0.000	1.7
GO	0.5568*	1.88	0.064	1.3
NT	-7.951***	-2.98	0.004	1.6
EV	0.07403	1.65	0.103	2.3
ET	-0.4820	-1.05	0.297	2.6
IC	-1.1710***	-9.89	0.000	1.8

R-Square is 76.0%, P-value of the model is 0.000

* means the variable is significant at 10% level, ** means the variable is significant at 5% level, *** means the variable is significant at 1% level.

In the table 4.4 above, estimates from Ordinary Least Square (OLS) are presented. The data were obtained from the financial statements of 9 companies listed on the (DSE) for the period 2000-2009. **AT** is the asset tangibility measured by fixed assets over total assets, **PR** is the company profitability measured by earnings before tax over total assets, **SZ** is the company size measured by natural logarithm of total assets, **GO** is the growth opportunity measured by growth rate of sales, **NT** is the non-debt tax shields measured by annual depreciation over total assets, **EV** is the earnings volatility measured by absolute value of the variations in earnings before tax, **ET** is the effective tax rate measured by tax expense over earnings before tax and **IC** is industry class measured by 1 for manufacturing industries and 0 otherwise.

The R-square for this study is 76.0 % while the R-square adjusted is 73.6%. It means that, 76.0% of the variations in the regression equation are explained by the independent variables. The p-value of 0.000 for the regression model indicates that the model used is valid.

The regression analysis helped the researcher to achieve the objective two by testing the hypothesis set earlier in this study.

4.4. Testing for Hypotheses

Under this section, hypotheses formulated earlier are being tested. The p-values from the regression analysis are compared to the level of significance.

4.4.1. Hypothesis 1

Hi: There is a positive relationship between asset tangibility and the choice of capital structure by companies listed on the (DSE).

Ho: There is no significant relationship between asset tangibility and the choice of capital structure by companies listed on the (DSE).

Ho: $\beta_1 = 0$

Hi: $\beta_1 \neq 0$

From the regression analysis in table 4.4 above, the p-value for asset tangibility is 0.249. Since $0.249 > 0.10$, it means that the null hypothesis would not be rejected at the 10% level of significance. This means that, asset tangibility is statistically insignificant in influencing the capital structure choice by companies listed on the (DSE). According to the results, the alternative hypothesis is rejected and the null hypothesis is accepted.

4.4.2. Hypothesis 2

Hi: There is a negative relationship between profitability and capital structure choice by companies listed on the (DSE).

Ho: There is no significant relationship between profitability and capital structure choice by companies listed on the (DSE).

Ho: $\beta_2 = 0$.

Ho: $\beta_2 \neq 0$.

The p-value for profitability from the regression analysis in table 4.4 above is 0.000. At 1% level of significance, the null hypothesis would be rejected and the alternative hypothesis accepted. Since $0.000 < 0.001$, means that, the researcher is 99% confident that, company profitability is statistically significant in influencing the capital structure of companies listed on the (DSE). As predicted in this study, alternative hypothesis was accepted.

4.4.3. Hypothesis 3

Hi: There is a positive relationship between company size and capital structure choice by companies listed on the (DSE).

Ho: There is no significant relationship between company size and capital structure choice by companies listed on the (DSE).

Ho: $\beta_3 = 0$.

Hi: $\beta_3 \neq 0$.

The p-value for company size from the regression analysis in table 4.4 above is 0.000. This p-value is less than 0.01. That means there is strong evidence to reject the null hypothesis at 1% level of confidence as the researcher in this study is 99% confident that, company size is

statistically significant in influencing the choice of capital structure by companies listed on the (DSE). The conclusion that, as predicted, alternative hypothesis is accepted.

4.4.4. Hypothesis 4

Hi: There is a negative relationship between expected growth and capital structure choice by companies listed on the (DSE).

Ho: There is no significant relationship between expected growth and capital structure choice by companies listed on the (DSE).

Ho: $\beta_4=0$.

Hi: $\beta_4\neq 0$.

The p-value for expected growth from the regression analysis in table 4.4 above is 0.064 which is less than 0.1. That means there is evidence not to reject the null hypothesis at 10% level of significant. The evidence indicates that, expected growth has significance influence on the capital structure by companies listed on the (DSE). Since the alternative hypothesis is supported by the regression results; it is then not rejected in this study.

4.4.5. Hypothesis 5

Hi: There is a positive relationship between non-debt tax shields and the choice between debt and equity by companies listed on the (DSE).

Ho: There is no significant relationship between non-debt tax shields and the choice between debt and equity by companies listed on the (DSE).

Ho: $\beta_5=0$.

Hi: $\beta_5\neq 0$.

The p-value for non-debt tax shields from the regression analysis in table 4.4 above is 0.004. Since this p-value is less than 0.01, it means that the null hypothesis is rejected at 1% level of significance. By these results, it is evident that non-debt tax shields have significant influence on the capital structure by companies listed on the (DSE).

4.4.6. Hypothesis 6

Hi: There is a negative relationship between earnings volatility and the choice between debt and equity by companies listed on the (DSE).

Ho: There is no significant relationship between earnings volatility and the choice between debt and equity by companies listed on the (DSE).

Ho: $\beta_6=0$.

Hi: $\beta_6\neq 0$.

The p-value for earnings volatility from the regression analysis in table 4.4 above is 0.103 which is greater than 0.10. This result means that the evidence does not allow the researcher to reject the null hypothesis at 10% level of significance. The results indicate that, earnings volatility is not statistically significant in influencing the choice of capital structure by companies listed on the (DSE).

4.4.7. Hypothesis 7

Hi: There is a positive relationship between effective tax rate and the choice between debt and equity by companies listed on the (DSE).

Ho: There is no significant relationship between effective tax rate and the choice between debt and equity for companies listed on the (DSE).

Ho: $\beta_7=0$.

H1: $\beta_7\neq 0$

The p-value for effective tax rate from table 4.4 is 0.297 which is greater than 0.10. The results indicate that, there is not enough evidence to reject the null hypothesis at 10% level of significance. The conclusion drawn is that, effective tax rate has no significant influence on the choice between debt and equity by companies quoted on the (DSE) and therefore the alternative hypothesis is rejected.

4.4.8. Hypothesis 8

Hi: There is a significant relationship between industry class and the choice between debt and equity by companies quoted on the (DSE).

Ho: There is no significant relationship between industry class and the choice between debt and equity by companies quoted on the (DSE).

$H_0: \beta_9=0$.

$H_1: \beta_9 \neq 0$.

The p-value for industry class is 0.000 which is less than 0.01. This means that the null hypothesis would be rejected at 1% level of significance and the alternative hypothesis accepted. The result shows that, the nature of the industry has an influence on the capital structure of companies listed on the (DSE). Industry class shows a negative influence on the capital structure of companies listed on the (DSE).

Table 7: Summary results for significant and Non-Significant Factors

Variables	Is the variable Significant?
Asset tangibility	NO
Profitability	YES
Company size	YES
Growth opportunity	YES
Non-debt tax shields	YES
Earnings volatility	NO
Effective tax rate	NO
Industry class	YES

The table 4.5 above is the summary for significant and non-significant factors influencing the capital structure of companies listed on the (DSE). It is shown in the table that, company profitability, company size, growth opportunity, non-debt tax shields and industry class are significant factors while asset tangibility, earnings volatility and effective tax rate are not significant factors.

4.5. An examination of the Management's Opinions on the factors Influencing Capital Structure of Companies Listed on the (DSE)

The purpose of conducting a field research was to shed some light on how financial managers perceive about the factors that influence capital structure. A questionnaire was sent to the 9 selected companies which are listed on the (DSE) requiring them to identify the factors that influence the capital structure. The questionnaire consisted of two questions, one question contained a list of factors drawn from the literature and each CFO was asked

to tick the important factor. Another question required the CFOs to identify other factors not mentioned in the list. The results are as shown in the tables 4.4 and 4.5 below.

Table 8: Opinions of the CFOs on the factors that influence the capital structure

Factors	Important factors		Not important factors	
	Number	%	Number	%
AT	8	89	1	11
PR	9	100	0	0
SZ	7	78	2	22
GO	5	56	4	44
NT	6	67	3	33
EV	8	89	1	11
ET	7	78	2	22

The table 4.5 above shows the opinions of the financial managers on the factors that influence the capital structure of companies listed on the (DSE). **AT** is the asset tangibility, **PR** is the company profitability, **SZ** is the company size, **GO** is the growth opportunity, **NT** is the non-debt tax shields, **EV** are the earnings volatility in, **ET** is the effective tax rate.

Table 9: Opinions of the CFOs on other factors that influence the capital structure.

Factors	Important factors		Did not respond	
	Number	%	Number	%
IC	8	89	1	11

The table 4.6 above shows the opinions of the financial managers regarding other factors that influence the capital structure of companies listed on the (DSE). **IC** is industry class.

CHAPTER FIVE: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.0. Introduction

Chapter five presents the discussion of the findings by relating the findings of this study to the findings of other researchers. The discussion is based on the research objectives which were (i) to examine the levels of debt and equity employed in financing business operations by companies listed on the (DSE), (ii) to identify the significant factors influencing the choice between debt and equity by companies listed on the (DSE), and (iii) to examine the management's opinions on the factors they perceive to have influence on the choice between debt and equity by companies listed on the (DSE). Lastly this chapter provides conclusions and recommendations based on the findings.

5.1. Summary of the Findings

For the purpose of the study, the necessary data was collected from companies' financial statements. A questionnaire was also sent to each of the selected companies to assess whether the (CFOs) are aware of the various factors that are significant in influencing the capital structure of companies listed on the (DSE). A sample of 9 companies out of the 15 listed companies were selected for this study for the years from 2000 to 2009. This study has used ratio analysis to accomplish its objectives. Econometric model and Descriptive Statistics have been employed in the analysis. The major findings of the study may be summarized as under:

Most of the companies listed on the (DSE) are found to employ high levels of equity that debt. The descriptive analysis shows that, the levels vary across companies with EABL employing the highest mean equity level of 72.4% and KQ employing the highest mean debt level of 70.3% for the period of 10 years.

The econometric analysis has shown that, profitability, size, growth opportunity, non-debt tax shields and industry class are the major factors influencing the capital structure of companies listed on the (DSE) while the rest of the factors which are asset tangibility, earnings volatility and effective tax rate are not important.

The opinion of the financial managers indicate that, Asset tangibility, profitability, company size, earnings volatility, effective tax rate and industry class are important factors in

influencing the capital structure while growth opportunity and non-debt tax shields are perceived as not so important.

5.2.0. Discussion and Implication

Under this section, the findings in this study are discussed by relating them to the findings of other researchers.

5.2.1. Debt and Equity Levels employed by companies listed on the (DSE)

The findings in this study reveal that, companies listed on the DSE prefer a mixed type of capital structure. That is they are not in favour of equity or debt alone as a method of business financing. However, equity seems to be pre-dominant.

According to the results in table 4.1, Kenya Airways (KQ) has employed the highest mean debt level of 70.3% in financing its operations and has employed the lowest mean equity level which is 29.7%. The other companies like (EABL), Twiga Cement (TWG), Simba Cement (SMB) and Swissport (SWS) have employed the highest amount of mean equity which are 72.4%, 72%, 71.9% and 70.9 respectively. In turn these companies unlike Kenya Airways use relatively the lowest amounts of debt in financing which is 27.6%, 28%, 28.1% and 29.1 for (EABL), (TWG), (SMB) and (SWS) respectively.

The possible explanation is that these companies, that is, EABL, TWG, SMB and SWS, are profitable companies in that, they depend on internal sources to finance most of their operations and investments and hence they require low level of debt. On the other hand, it may be explained that, Kenya Airways is relatively unprofitable company and hence requires more debt to finance most of its operations since the internal funds are insufficient.

This explanation in both cases is supported by the information in appendix 3 which indicates that EABL, TWG, SMB, and SWS, are relatively profitable companies while Kenya Airways is relatively unprofitable.

On average, the results in table 4.1 and 4.2 in chapter four indicate that the companies listed on (DSE) have employed 37 % debt and 63% equity for a period of 10 years. This debt level is lower than reported for most developed countries. For example a debt level of 58% and 54% was reported for companies in the U.S and U.K. respectively.

It is argued that, developed countries are highly levered than the developing countries, the reason being limited availability of external financing in emerging markets. While this

seems to be true, it is also observed that the level of debt varies considerably across developing countries. The study conducted by Booth et al. (2001) in 10 developing countries revealed that, they employed debt levels as follows; Brazil 30.7%, Mexico 35.4%, Jordan 44.7%, Malaysia 40.9%, Thailand 50.9% and Zimbabwe 40.3% ,India 67.1%,South Korea 73.4%,Pakistan,65.6%,Turkey 56.1%,

Although debt is considered as a cheaper type of capital since interest payments are tax deductible, on average, a great majority of companies listed on (DSE) do not employ more debt relatively to equity. The implication of this is that managers try to avoid the risk of bankruptcy as debt is tied to contractual payment for which the company may be liquidated in case of failure to honour the contract. Also Since borrowing interest rates are higher in the country at the moment, this may be discouraging borrowing.

5.2.2. Significant Factors Influencing the Capital Structure by Companies listed on the (DSE)

The coefficient for asset tangibility of 0.3669 is positive but statistically insignificant. The results indicate that, asset tangibility has no influence on capital structure of companies listed on the (DSE).

There are prior empirical findings which support the positive relationship between asset tangibility and capital structure. These include the study by Rajan and Zingales (1995), Friend and Lang (1988), Titman and Wessels (1988), Drobetz and Fix (2003), Parsely (2002) and Twite (2003) who found a significant positive relationship. However, the results of this study contradict the study done by Daskalakis and Psilaki (2006), Nivorozhkin (2005), Booth et al (2001) and Huang and Song (2002) who found a significant negative relationship between asset tangibility and capital structure.

The coefficient for profitability of -1.6776 is statistically significant at 1% level. The results indicate that profitability has a negative influence on the capital structure of companies listed on the (DSE). That is, the more profitable the companies are, their use of debt financing will decrease. The findings of this study support the findings by Clifford, Klock and Mark (1992), Booth et al., (2001), Munyo (2004), Al-Sakran (2001) who also found a significant negative relationship between profitability and capital structure. On the other hand, the findings of this study contradict the study by Abor (2005), Taub (1975) and

Roden and Lewelles (1995) who found a significant positive relationship between profitability and capital structure.

The coefficient for company size of 0.20676 is positive and statistically significant at 1% level. The results indicate that company size has a positive influence on the capital structure of companies listed on the (DSE). The results mean that, large companies are more trusted by the lenders and may use this advantage to obtain external borrowing. Empirical results that support the positive relation between company size and capital structure include Nagano (2003), Al-Sakran (2001) and Boateng (2004).

The coefficient for growth opportunity of 0.5568 is positive and statistically significant at 10% level. The results indicate that, growth opportunities have a positive influence on the capital structure of companies listed on the (DSE). It means that growth opportunities add value to the company and hence companies that have high growth opportunity their use of debt is expected to increase. Other studies which found positive relationship includes the study done by Baskin (1989). Studies that contradict with this finding include Pao, Pikas and Lee (2003) and Dittmar (2002) and Rajan and Zingales (1995).

The estimated coefficient of non-debt tax shields is negative and statistically significant at 1% level. The results indicate that companies with large amount of non-debt tax shields use less debt in financing. The result is also supported by the study of De Angelo and Masulis (1980), Buferna et al., (2000), Chaplinky and Niehaus (1993) who found a significant negative relationship. The findings however, contradict the study by Prasad et al., (2001) who found that in Thailand, the non-debt tax shields had no significant influence on the capital structure.

The coefficient for earnings volatility of 0.07403 is positive but statistically insignificant. The results indicate that earnings volatility does not influence the capital structure of companies listed on the (DSE). This result contradicts the results by Bradley et al. (1984) and Noe and Ramirez (1991), Bhaduri (2002), Narayanan and Lukose (2004), Booth et al. (2001) who found a negative significant relationship between earnings volatility and the capital structure.

The coefficient for effective tax rate of -0.4820 is statistically insignificant. However, the positive relationship supports the study by Jehera and Lyold (1996) and contradicts the

study by Sogorb and Mira (2005), Negash (2002), Booth et al. (2001) who found a negative relationship.

The coefficient for industry is -0.1710 and is statistically significant at 1% level. The implication of this is that, companies in different industries have differing preference on the use of debt and equity in financing business operations, however it is found that, the majority of manufacturing companies listed on the (DSE) prefer more equity to debt as a source of finance.

5.2.3. An examination of the management opinions on the factors influencing capital structure of companies listed on the (DSE)

The questionnaire results show that 89% of the CFOs believed that asset tangibility was an important factor influencing capital structure of the companies listed on the (DSE). The result is not supported by the regression results for which it is shown that asset tangibility is not a significant factor in influencing the capital structure of companies listed on the (DSE). The opinions of the CFOs are consistent with the opinions of the CFOs in the survey which was done by Gajurel, Dinesh Prasad (2005). In that survey, 70% of the CFOs believed that asset tangibility was important factor in influencing capital structure.

Also, the questionnaire results indicate that all the CFOs believed that, profitability was important in influencing the capital structure. This result is consistent with the results from the regression analysis which identified company profitability as one of the most significant factors influencing capital structure of companies listed on the (DSE). The results is also consistent with the survey results done by Gajurel, Dinesh Prasad (2005). In that survey, 95% of the CFOs believed that company profitability was important factor in influencing capital structure.

Moreover the 78% of the CFOs believed that company size was important in influencing capital structure of companies listed on the (DSE). This result is consistent with the results from the regression analysis. The results is also consistent with the findings by Gajurel, Dinesh Prasad (2005) where it was found that 70% of the CFOs believed that company size was an important factor in influencing capital structure.

In addition, 56% of the CFOs believed that growth opportunity was important in influencing capital structure choice of companies listed on the (DSE). This result is also consistent with

the results from the regression analysis in this study in which it is found that growth opportunity is a significant factor in influencing the capital structure of companies listed on the (DSE). The result is also supported with the opinion of the CFOs in the study by Gajurel, Dinesh Prasad (2005) in which it was found that 60% of the CFOs believed that growth opportunity was an important factor in influencing capital structure.

Nevertheless, 67% of the CFOs believed that non-debt tax shields have an influence on the capital structure. The result is consistent with the findings from the regression analysis whereby it was revealed that, non-debt tax shields is a significant factor influencing capital structure choice of companies listed on the (DSE). However, this result is not supported by the survey results in the study done by Gajurel, Dinesh Prasad (2005). In that study, only 15% of the CFOs believed that non-debt tax shield was an important factor.

Moreover 89% of the CFOs in this study, believed that earnings volatility was an important factor influencing capital structure of companies listed on the (DSE). However the opinions of the CFOs are inconsistent with the results from the regression analysis. The opinions of the CFOs in this study are supported by the opinions of the CFOs in the survey done by Gajurel, Dinesh Prasad (2005) in which 55% of the CFOs believed that earnings volatility was an important factor.

Contrary to the results of the regression analysis which indicated that effective tax rate was not significant in explaining the capital structure, 78% of the CFOs believed that effective tax rate was an important factor in influencing the capital structure of companies listed on the (DSE). However, the opinions of the CFOs in this study are consistent with the opinions of the CFOs in the survey done by Frank Bancel and Asha R. Mitto (2004) in European firms in which 60% of the FCOs believed that effective tax rate was an important factor.

Lastly, consistent with the results from the regression analysis which showed that industry class was an important factor influencing the capital structure of companies listed on the (DSE), 89% of the CFOs in this study believed the same. The results, however, are not supported by the results in the survey by Erika Grundströmer and Jannie Gustafsson (2007) in Swedish listed firms in which only 26% of the CFOs believed that industry was important factor.

5.3. Conclusions

This study has examined, first the levels of debt and equity employed in financing the business operations by companies listed on the (DSE). It has been found that, the majority of companies employ more equity than debt. The results show that, there are variations in the levels of debt and equity across companies. Generally the results show that on average of 10 years, companies listed on the (DSE) have employed about 63% equity and 37% debt.

The thesis has also tested the influence of 8 factors on the choice of capital structure through using Least Square Method by running multiple regression analysis on the dataset of the selected listed companies on the (DSE) for the period 2000 to 2009. Multiple regression analysis in this study suggests that the model explains around 76% of the variations in the dependent variable. The adjusted explanation of the model is about 71%. Thus the unexplained proportion of the variations is satisfactorily low.

The findings show that industry class is the most significant factor influencing capital structure of companies listed on the (DSE) followed by company profitability, company size, non-debt tax shields and lastly growth opportunity. Asset tangibility, earnings volatility and effective tax rate have no influence.

It is revealed that there is a negative influence of industry class on capital structure. The results indicate that most of the manufacturing companies listed on the (DSE) employ relatively high levels of equity in financing business operations than the rest of the industries.

The regression results also show that, there is a negative influence of company profitability on capital structure. This result indicates that most of the companies listed on the (DSE) are profitable and they prefer more equity financing, hence their use of debt is low.

Moreover, the regression results show that there is a positive influence of company size on capital structure. This result indicates that larger companies listed on the (DSE) are trusted by the lenders and they use this advantage to obtain external borrowing.

Also, the regression results show that, there is negative influence of non-debt tax shields on capital structure. This result indicates that companies listed on the (DSE) with large amount

of non-debt tax shields do not see the need of borrowing in order to benefit from interest shields, hence they debt levels remain low.

In addition, the regression result show that, there is a positive influence of growth opportunity on capital structure of companies listed on the (DSE).The results indicate that, companies listed on the (DSE) have higher growth opportunity and this growth opportunity is valued by lenders and hence they use this advantage to obtain external borrowing.

The questionnaire results indicate that asset tangibility, company profitability, company size, earnings volatility, effective tax rate and industry are the most important factors that influence the capital structure of companies listed on the (DSE).The CFOs believe that growth opportunity and non-debt tax shields are not so important. Some of the contradiction between the regression results and the questionnaire results may be attributed to the reason that, some of the CFOs of the companies listed on the (DSE) perceive certain factors as important while in reality, they are not.

The findings of this study differ from the findings of other researchers in developing countries. While booth et al. (2001) found a negative significant relation between asset tangibility and capital structure, this study confirms a positive insignificant relationship. Moreover the study of Booth et al. (2001), found a negative relationship for effective tax rate and earnings volatility. This study finds positive and insignificant relationships. The study concludes that, capital structure decision varies from country to country and from industry to industry and should be dealt as such. The following are the contribution offered by this study;

The thesis proves statistically, the positive influence for effective tax rate, asset tangibility and earnings volatility on capital structure choice, different from most of research on capital structure in developing countries, whereby a negative relationship for these factors was observed.

The thesis has shown that, there exist variations in the levels of debt and equity among companies.

Also, the findings contribute towards a better understanding of the financing behaviour for companies listed on the (DSE).This useful insight will help external investors and

shareholders who possess less information than the insiders (managers). They will be able to know the variables that influence the capital structure decisions and hence make informed decisions.

The finding also contributes for a better understanding for managers. The result will help them to establish the optimal financing vehicle so that to add value to the company and thereby increase shareholders wealth.

The contribution of this study is also for lenders and business people. They will be able to evaluate the company's performance on the particular emphasis of the level of risk before giving the funds to these companies.

5. 4.Recommendations

It is observed that majority of the companies in the sample have employed more equity than debt. This is a good sign because heavy reliance on debt may not be a positive sign for the survival of the firm.

Before designing capital structure of any company, careful attention should be paid on the appropriate features of capital structure for example various factors influencing capital structure. It is observed that some executives do not pay attention on their capital structure, this is evidenced by the fact that some CFOs believed that certain factors were important while the regression analysis showed them as not important.

The results call upon policies to be adopted in further development of the (DSE) capital market to enable expansion of sources of finance, by providing incentives for companies to borrow. Lenders should reduce the interest rate to encourage companies to borrow.

The results reveal that there is no theory that simultaneously predicts the full set of the reliable factors; this warrants further development of the capital structure theories.

5.5. Direction for future research

Analyse the similarities and differences of capital structure in Tanzania across firm categories (e.g. small, medium and large firms). It is a fact that gathering data from these companies will be difficult and time consuming, but if it can be done patiently, then the study of capital structure will represent the bigger portion of the country's economy.

A further study is recommended for examining why capital structures of different companies differ.

A study similar to this may be conducted on the companies listed on the (DSE). However in order to solidify the findings new variables not included in this study should be considered, for example managerial discretion should be included to test whether better managerial teams are more capable of assessing the “true” value of firms, balancing its capital structure to increase the value of the firm.

Other variables that may be included is board composition to test whether the presence of non-executive directors have influence on the capital structure decisions.

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APPENDICES.

Appendix 1: Cover letter for the questionnaire.

Dear sir/Madam.

I am Jacob Kumalija, a Tanzanian citizen, pursuing a master degree at Strathmore University in Nairobi-Kenya. This semester I am writing my master thesis in finance. The purpose of my thesis is to investigate the factors influencing the company's choice of capital structure. I have selected to send out a questionnaire to companies quoted on the Dar es Salaam Stock Exchange (DSE), and I believe that this method will be time effective to you as a manager.

The questions concern motives and decision behind chosen capital structure (debt or equity). There are also questions regarding information asymmetry and agency problem within your company. The questionnaire is in English and you are requested to answer in English as well. This questionnaire consists of 8 questions.

I want to point out that this questionnaire is of great importance for the thesis and I am utterly grateful for your participation in this survey.

Kindly Regards.

Jacob Kumalija

Appendix 2: The outline of the questionnaire.

NAME OF THE COMPANY.....

Questions.

1. In your opinion, which factors below influence capital structure of your company? Please tick the relevant factors.

(i) Asset tangibility.

(ii) Company profitability.

(iii) Company size.

(iv) Company growth opportunity.

(v) Non-debt tax shield.

(vi) Earnings Volatility.

(vii) Effective tax rate.

2. What other factors do you think may influence the capital structure of your company? Please, mention them.

.....

.....

Appendix 3: Data containing variables and their quantities.

CO	YEAR	D/E	AT	PR	SZ	GO	NT	EV	ET	IC
TCC	2009	0.692	0.331	0.441	25.732	0.151	0.044	0.481	0.132	1
	2008	0.603	0.393	0.446	25.327	0.203	0.063	0.325	0.135	1
	2007	0.402	0.502	0.408	25.134	0.255	0.072	0.504	0.112	1
	2006	0.568	0.564	0.304	25.020	0.125	0.065	0.059	0.300	1
	2005	0.383	0.425	0.391	24.831	0.125	0.062	0.803	0.110	1
	2004	0.383	0.378	0.436	24.797	0.103	0.056	0.038	0.132	1
	2003	0.340	0.325	0.396	24.857	0.127	0.048	0.117	0.046	1
	2002	0.268	0.336	0.369	24.815	0.095	0.050	0.021	0.047	1
	2001	0.416	0.354	0.359	24.823	0.026	0.048	0.343	0.016	1
	2000	0.384	0.371	0.269	24.816	0.061	0.047	0.182	0.017	1
SPT	2009	0.359	0.462	0.526	23.101	0.016	0.079	0.169	0.286	0
	2008	0.618	0.414	0.461	23.076	0.108	0.075	0.062	0.323	0
	2007	0.295	0.442	0.532	22.997	0.116	0.069	0.021	0.308	0
	2006	0.421	0.426	0.558	22.929	0.137	0.061	0.142	0.310	0
	2005	0.341	0.354	0.587	22.745	0.123	0.071	0.370	0.288	0
	2004	0.445	0.340	0.502	22.585	0.062	0.080	0.116	0.333	0
	2003	0.489	0.438	0.494	23.089	0.112	0.077	0.042	0.305	0
	2002	0.457	0.428	0.497	23.037	0.127	0.072	0.082	0.316	0
	2001	0.358	0.434	0.545	22.963	0.130	0.065	0.256	0.309	0
	2000	0.381	0.390	0.573	22.837	0.093	0.066	0.243	0.299	0
TOL	2009	0.515	0.777	-0.029	23.046	0.213	0.065	2.436	0.000	1

	2008	0.574	0.779	-0.054	23.106	0.140	0.066	3.010	0.000	1
	2007	0.456	0.774	-0.004	22.985	0.285	0.065	1.861	0.000	1
	2006	0.736	0.727	0.016	22.600	0.281	0.060	3.157	0.000	1
	2005	0.547	0.729	-0.008	22.457	0.001	0.063	0.861	0.000	1
	2004	0.493	0.753	-0.061	22.434	0.052	0.061	5.755	0.000	1
	2003	0.515	0.776	0.669	22.443	0.098	0.056	0.063	0.000	1
	2002	0.596	0.728	0.004	22.529	0.141	0.123	2.009	0.000	1
	2001	0.642	0.741	0.035	22.446	0.027	0.062	3.308	0.000	1
	2000	0.520	0.765	0.304	22.439	0.075	0.059	2.909	0.000	1
TAT	2009	1.022	0.538	0.216	23.204	0.173	0.046	3.261	0.041	1
	2008	1.000	0.595	0.554	23.118	0.693	0.041	4.816	0.082	1
	2007	0.790	0.438	-0.122	23.289	-0.689	0.051	1.706	0.000	1
	2006	1.277	0.686	0.136	23.765	0.433	0.047	1.900	0.029	1
	2005	1.661	0.743	-0.169	23.650	-0.088	0.052	2.936	0.230	1
	2004	1.159	0.737	0.066	23.695	0.184	0.032	4.682	0.027	1
	2003	1.423	0.755	0.015	23.666	0.278	0.037	0.460	0.098	1
	2002	0.895	0.918	0.030	23.396	0.173	0.041	2.418	0.001	1
	2001	1.290	0.517	-0.052	23.681	0.048	0.036	3.809	0.063	1
	2000	1.469	0.837	0.041	23.531	0.231	0.035	2.571	0.050	1
TBL	2009	1.221	0.687	0.331	26.577	0.211	0.038	0.055	0.299	1
	2008	1.112	0.684	0.419	26.285	0.217	0.050	0.142	0.320	1
	2007	0.796	0.677	0.486	26.004	0.208	0.052	0.117	0.331	1

	2006	0.540	0.691	0.519	25.829	0.135	0.047	0.274	0.317	1
	2005	0.410	0.666	0.475	25.676	0.160	0.052	0.169	0.323	1
	2004	0.346	0.660	0.379	25.744	0.138	0.052	0.206	0.317	1
	2003	0.360	0.693	0.314	25.745	0.287	0.049	0.391	0.322	1
	2002	0.288	0.632	0.312	25.421	0.080	0.066	0.176	0.216	1
	2001	0.271	0.678	0.280	25.367	-0.014	0.053	0.077	0.011	1
	2000	0.483	0.651	0.320	25.314	0.184	0.084	0.127	0.021	1
SMB	2009	0.261	0.732	0.377	25.478	-0.012	0.026	0.014	0.306	1
	2008	0.447	0.667	0.487	25.210	0.294	0.024	0.256	0.300	1
	2007	0.362	0.601	0.500	24.954	0.208	0.029	0.492	0.315	1
	2006	0.382	0.528	0.470	24.616	0.158	0.038	1.191	0.306	1
	2005	0.568	0.582	0.273	24.376	0.233	0.028	0.122	0.313	1
	2004	0.316	0.401	0.347	24.020	0.141	0.041	0.135	0.306	1
	2003	0.354	0.700	0.432	25.344	0.251	0.025	0.374	0.303	1
	2002	0.405	0.634	0.494	25.082	0.183	0.027	0.842	0.308	1
	2001	0.372	0.565	0.485	24.785	0.196	0.034	0.657	0.311	1
	2000	0.475	0.492	0.372	24.496	0.187	0.035	0.129	0.310	1
TWG	2009	0.359	0.740	0.358	25.983	0.204	0.039	0.370	0.302	1
	2008	0.589	0.724	0.298	25.851	0.242	0.020	0.152	0.303	1
	2007	0.305	0.585	0.423	25.358	0.493	0.028	0.560	0.310	1
	2006	0.280	0.427	0.406	24.955	0.162	0.022	0.246	0.300	1
	2005	0.410	0.519	0.431	24.675	0.111	0.072	0.167	0.300	1

	2004	0.474	0.626	0.423	25.917	0.053	0.064	0.163	0.289	1
	2003	0.447	0.732	0.418	25.605	0.176	0.032	0.111	0.307	1
	2002	0.293	0.655	0.409	25.157	0.053	0.029	0.266	0.305	1
	2001	0.345	0.506	0.421	21.842	0.223	0.048	0.137	0.298	1
	2000	0.442	0.473	0.414	25.296	0.115	0.031	0.189	0.295	1
KA	2009	3.363	0.751	0.076	25.040	0.188	0.049	2.027	0.279	0
	2008	1.915	0.721	0.072	25.064	0.029	0.044	0.077	0.298	0
	2007	2.571	0.737	0.077	25.071	0.113	0.044	0.142	0.314	0
	2006	3.015	0.742	0.100	24.962	0.250	0.037	0.261	0.310	0
	2005	2.145	0.743	0.123	24.523	0.364	0.039	1.663	0.350	0
	2004	2.459	0.730	0.069	24.132	0.128	0.040	2.790	0.373	0
	2003	2.305	0.737	0.023	23.912	0.091	0.038	0.483	0.338	0
	2002	1.949	0.629	0.048	23.812	0.307	0.039	0.962	0.179	0
	2001	2.382	0.734	0.046	24.022	0.246	0.039	2.227	0.356	0
	2000	2.127	0.683	0.036	23.862	0.110	0.039	1.637	0.259	0
EABL	2009	0.533	0.471	0.386	24.302	0.080	0.032	0.136	0.282	1
	2008	0.557	0.473	0.370	24.230	0.256	0.031	0.158	0.250	1
	2007	0.545	0.418	0.342	24.161	0.099	0.024	0.100	0.290	1
	2006	1.330	0.455	0.346	23.900	0.080	0.033	0.043	0.250	1
	2005	0.370	0.439	0.363	23.842	0.153	0.033	0.168	0.330	1
	2004	0.157	0.698	0.339	23.167	0.066	0.035	0.934	0.320	1
	2003	0.148	0.752	0.210	23.160	0.075	0.040	0.087	0.310	1

2002	0.344	0.275	0.202	23.990	0.176	0.037	0.250	0.266	1
2001	0.153	0.725	0.275	23.164	0.168	0.038	0.511	0.270	1
2000	0.246	0.514	0.206	23.575	0.178	0.039	0.169	0.290	1

Appendix 4: Results of Correlation Matrix Analysis.

	ET	EV	NT	GO	SZ	PR	AT
IC	-0.388	0.092	-0.240	0.028	0.252	-0.009	0.097
ET		-0.532	-0.313	0.118	0.343	0.431	-0.138
EV			0.052	0.100	-0.427	-0.589	0.410
NT				-0.190	-0.371	0.091	0.182
GO					0.132	0.180	0.182
SZ						0.252	0.024
PR							-0.515



Appendix 5: Results of Regression Analysis.

The regression equation is

$$D/E = -2.72 + 0.367 AT - 1.68 PR + 0.207 SZ + 0.557 GO - 7.95 NT + 0.0740 EV \\ - 0.482 ET - 1.17 IC$$

Predictor	Coef	SE Coef	T	P	VIF
Constant	-2.723	1.035	-2.63	0.010	
AT	0.3669	0.3160	1.16	0.249	1.7
PR	-1.6776	0.2873	-5.84	0.000	2.4
SZ	0.20676	0.04230	4.89	0.000	1.7
GO	0.5568	0.2967	1.88	0.064	1.3
NT	-7.951	2.670	-2.98	0.004	1.6
EV	0.07403	0.04493	1.65	0.103	2.3
ET	-0.4820	0.4592	-1.05	0.297	2.6
IC	-1.1710	0.1184	-9.89	0.000	1.8

$$S = 0.350286 \quad R\text{-Sq} = 76.0\% \quad R\text{-Sq}(\text{adj}) = 73.6\%$$

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	8	31.4889	3.9361	32.08	0.000
Residual Error	81	9.9387	0.1227		
Total	89	41.4276			

$$\text{Durbin-Watson statistic} = 1.51473$$

Appendix 6: List of Companies Sampled for the study which are listed on (DSE)

S/N	Company Name	Symbol
1.	Tol Gases Limited	TOL
2.	Tanzania Breweries Limited	TBL
3.	Tanzania Tea Packers Limited	TATEPA
4.	Tanzania Cigarette Company Limited	TCC
5.	Tanga Cement Company Limited	SIMBA
6.	Swissport Tanzania Limited	SWISSPORT
7.	Tanzania Portland Cement Company Limited	TWIGA
8.	Kenya Airways Limited	KA
9.	East African Breweries Limited	EABL