

**EFFECT OF CAPITAL STRUCTURE ON FINANCIAL PERFORMANCE OF FIRMS
LISTED AT THE NAIROBI SECURITIES EXCHANGE**

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DECLARATION

This research project is my original work and has not been presented to any other institution or university.

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This research project has been submitted for examination with our approval as the university supervisor.

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ACKNOWLEDGEMENT

I thank God the almighty for giving me the means courage and strength and perseverance to complete the project also great appreciation goes to my supervisor for his time and dedication to ensure that I completed the project.

DEDICATION

This project is dedicated to my family members for the prayers and encouragement.

May the Lord, God Almighty bless them abundantly.

ABSTRACT

The choice between debt and equity financing has been directed to seek the optimal capital structure. Several studies show that a firm with high leverage tends to have an optimal capital structure and therefore it leads it to produce good performance, while the Modigliani-Miller theorem proves that it has no effect on the value of firm. The importance of these issues has only motivated researchers to examine the relationship between capital structure and firms financial performance. The objective of this study was to establish the effects of capital structure on financial performance of listed firms on securities exchange in Kenya.

The financial performance was measured in terms of return on equity while capital structure was measured in terms of debt ratio. The period of study was 2012. It is important to note that during this period of study, Kenya experienced political anxiety, leading to uncertainty in the securities market. This presents an interesting period of study considering the ups and downs of the trade cycle. The population of study consisted of all the 61 listed firms duly registered with capital market authority of Kenya in 2012. Secondary data used was obtained from the Nairobi securities exchange handbook and also in firm's publications. Data analysis was done by use of regression analysis model with the help of Statistical Package for Social sciences Software.

The results obtained reveal that there was an inverse relationship between capital structure and financial performance of listed firms in securities exchange in Kenya. The findings indicate that the higher the debt ratio, the less the return on equity which therefore supports the need to increase more capital injection rather than borrowing, as the benefits of debt financing are less than its cost of funding.

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ABBREVIATIONS AND ACRONYMS

NSE **Nairobi Securities Exchange**

CS **Capital structure**

CHAPTER ONE

INTRODUCTION

1.1 Background

To understand how companies finance their operations, it is necessary to examine the determinants of their financing or capital structure decisions. Company financing decisions involve a wide range of policy issues. At the private, they have implications for capital market development, interest rate and security price determination, and regulation. At the private, such decisions affect capital structure, corporate governance and company development (Green, Murinde and Suppakitjarak, 2002).

Knowledge about capital structures has mostly been derived from data from developed economies that have many institutional similarities (Booth et al., 2001). It is important to note that different countries have different institutional arrangements, mainly with respect to their tax and bankruptcy codes, the existing market for corporate control, and the roles banks and securities markets play.

Capital structure refers to a mixture of a variety of long term sources of funds and equity shares including reserves and surpluses of an enterprise. The historical attempt to building theory of capital structure began with the presentation of a paper by Modigliani & miller (MM) (1958). They revealed the situations under what conditions that the CS is relevant or irrelevant to the financial performance of the listed companies. Most of the decision making process related to the CS are deciding factors when determining the CS, a number of issues e.g. cost, various taxes and rate, interest rate have been proposed to explain the variation in Financial Leverage across firms

(Van Horne,1993;Hampton,1998; Titman and Wessels,1998).these issues suggested that the depending on attributes that caused the cost of various sources of capital the firm's select CS and benefits related to debt and equity financing.

The relationship between capital structure and financial performance is one that received considerable attention in the finance literature. How important is the concentration of control for the company performance or the type of investors exerting that control are questions that authors have tried to answer for long time prior studies show that capital structure has relating with corporate governance, which is the key issues of state owned enterprise.

To study the effects of capital structure or financial performance, will help us to know the potential problems in performance and capital structure. The study on capital structure attempts to explain the mix of securities and financing sources used by companies to finance investments (Myers, 2001). Brigham (2004) referred to Capital structure as the way in which a firm finances its operations which can either, be through debt or equity capital or a combination of both. According to Myers (2001), there was no universal theory on the debt to equity choice but noted that there were some theories that attempted to explain the capital structure mix. Myers (2001) cited the tradeoff theory which states that firms seek debt levels that balance the tax advantages of additional debt against the costs of possible financial distress.

The pecking order theory states that firms will borrow rather than issue equity when internal cash flow is not sufficient to fund capital expenditure (Myers, 2001). The theory concluded that the amount of debt will reflect the firms' cumulative need for external funds. The free cash flow theory on the other hand stated that dangerously high debt levels would increase firm value

despite the threat of finance distress when a firms' operating cash flow significantly exceed its profitable investment opportunities.

Financial performance is a subjective measure of how well a firm can use its' assets from its' primary business to generate revenues. Erasmus (2008) noted that financial performance measures like profitability and liquidity among others provided a valuable tool to stakeholders to evaluate the past financial performance and the current position of a firm. Brigham and Gapenski (1996) argued that in theory, the Modigliani and Miller model was valid however in practice, bankruptcy costs did exist and that these costs were directly proportional to the debt levels in a firm. This conclusion implied a direct relationship between capital structure and financial performance of a firm.

Financing and investment are two major decision areas in a firm. In the financing decision the manager is concerned with determining the best financing mix or capital structure for his firm. Capital structure decision is the mix of debt and equity that a company uses to finance its business (Damodaran, 2001). Capital structure has been a major issue in financial economics ever since Modigliani and Miller showed in 1958 that given frictionless markets, homogeneous expectations; capital structure decision of the firm is irrelevant.

Berger & di Patti (2006) concluded that more efficient firms were more likely to earn a higher return from a given capital structure, and that higher returns can act as a cushion against portfolio risk so that more efficient firms are in a better position to substitute equity for debt in their capital structure. This is an incidental of the trade-off theory of capital structure where

differences in efficiency enable firms to alter their optimal capital structure either upward or downwards. In addition, Singh & Hamid (1992) in their research used data on the largest companies in selected developing countries and found that firms in developing countries used more of debt finance in financing their growth than was the case in industrialized countries. Abor (2005) also found a positive relationship between total assets and return on equity and that profitable firms in Ghana depended more on debt as a main financing option due to a Perceived low financial risk.

1.1.1 Capital Structure

A firm's capital structure refers to the mix of its financial liabilities. As financial capital is an uncertain but critical resource for all firms, suppliers of finance are able to exert control over firms (Harris and Raviv, 1991). Debt and equity are the two major classes of liabilities, with debt holders and equity holders representing the two types of investors in the firm. Each of these is associated with different levels of risk, benefits, and control. It is the way the corporation finances its assets through some combination of equity, debt, or hybrid securities. A firm's capital structure is then a composition or structures of its liabilities.

A mix of a company's long-term debt, specific short-term debt, common equity and preferred equity. The capital structure is how a firm finances its overall operations and growth by using different sources of funds. Debt comes in the form of bond issues or long-term notes payable, while equity is classified as common stock, preferred stock or retained earnings. According to Harris and Raviv (1991), the Consensus is that "leverage increase with fixed assets, non-debt tax shields, investment Opportunities, and firm size, and decreases with volatility, advertising

expenditure, the probability Of bankruptcy, profitability, and uniqueness of the product.” Titman and Wessel (1988) state that Asset structure, non-debt tax shields, growth, uniqueness, industry classification, size, earnings Volatility and profitability are factors that may affect leverage according to different theories of Capital structure. Still, other authors may provide another set of potential determinants of capital Structure. This clearly shows that even if there is a consensus among researchers what factor may constitute a minimum set of attributes (Harris and Raviv, 1991).

1.1.2 Financial Performance

A firm’s financial performance, in the view of the shareholder, is measured by how better off the shareholder is at the end of a period, than he was at the beginning and this can be determined using ratios derived from financial statements; mainly the balance sheet and income statement, or using data on stock market prices (Berger and Patti, 2002).). These ratios give an indication of whether the firm is achieving the owners’ objectives of making them wealthier, and can be used to compare a firm’s ratios with other firms or to find trends of performance over time. Charreaux (1997) in Severin (2002), states that an adequate performance measure ought to give an account of all the consequences of investments, on the wealth of shareholders. The main objective of shareholders in investing in a business, is to increase their wealth. Thus the measurement of performance of the business must give an indication of how wealthier the shareholder, has become as a result of the investment over a specific time.

1.1.3 Capital Structure and financial performance

Hutchinson (1995) in his scholarly works argued that, financial leverage had a positive effect on the firm's return on equity provided that earnings' power of the firm's assets exceeds the average interest cost of debt to the firm. Taub (1975) also found significantly positive relationship between debt ratio and measures of profitability. Nerlove (1968), Baker (1973) and Petersen and Rajan (1994) also identified positive association between debt and profitability but for industries. In their study of leveraged buyouts, Roden and Lewellen (1995) established a significantly positive relation between profitability and total debt as a percentage of the total buyout-financing package.

However, some studies have shown that debt has a negative effect on firm profitability. Fama and French (1998), for instance argue that the use of excessive debt creates agency problems among shareholders and creditors and that could result in negative relationship between leverage and profitability. Majumdar and Chhibber (1999) found in their Indian study that leverage has a negative effect on performance. Gleason et al. (2000) support a negative impact of leverage on the profitability of the firm. In a polish study, Hammes (1998) also found a negative relationship between debt and firm's profitability. In another study, Hammes (2003) examined the relation between capital structure and performance by comparing Polish and Hungarian firms to a large sample of firms in industrialized countries. He used panel data analysis to investigate the relation between total debt and performance as well as between different sources of debt namely, bank loans, and trade credits and firms' performance measured by profitability. His results show a significant and negative effect for most countries. He found that the type of debt, bank loans or trade credit is not of major importance, what matters is debt in general.

Mesquita and Lara (2003), in their study found that the relationship between rates of return and debt indicates a negative relationship for long-term financing. They however, found a positive relationship for short-term financing and equity. Abor (2007) in his scholarly works on debt policy and performance of Medium Sized Enterprises found the effect of short-term debt to be significantly and negatively associated with gross profit margin for both Ghana and South African firms. This indicated that increasing the amount of short-term debt would result in a decrease in the profitability of the firms.

1.1.4 Nairobi securities exchange

The Nairobi Securities Exchange, which was formed in 1954 as a voluntary organization of stockbrokers, is now one of the most active capital markets in Africa. The administration of the Nairobi Securities Exchange is located on Tosica five storey building located at 55 Westlands road Nairobi. As a capital market institution, the Nairobi Securities Exchange plays an important role in the process of economic development. It helps mobilize domestic savings thereby bringing about the reallocation of financial resources from dormant to active agents. Long-term investments are made liquid, as the transfer of securities between shareholders is facilitated. The Nairobi Securities Exchange has also enabled companies to engage local participation in their equity, thereby giving Kenyans a chance to own shares. Companies can also raise extra finance essential for expansion and development. To raise funds, a new issuer publishes a prospectus, which gives all pertinent particulars about the operations and future prospects and states the price of the issue. Nairobi Securities Exchange also enhances the inflow of international capital. They can also be useful tools for privatization programmes.

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1.2 Research Problem

A firm's capital structure refers to the mix of its financial liabilities. It has long been an important issue from the strategic management standpoint since it is linked with a firm's ability to meet the demands of various stakeholders (Roy and Minfang, 2000). Debt and equity are the two major classes of liabilities, with debt holders and equity holders representing the two types of investors in the firm. Each of these is associated with different levels of risk, benefits, and control. While debt holders exert lower control, they earn a fixed rate of return and are protected by contractual obligations with respect to their investment. Equity holders are the residual claimants, bearing most of the risk and have greater control over decisions.

An appropriate capital structure is a critical decision for any business organization. The decision is important not only because of the need to maximize returns to various organizational constituencies, but also because of the impact such a decision have on an organization's ability to

deal with its competitive environment. Following the work of Modigliani and Miller (1958 and 1963), much research has been carried out in corporate finance to determine the influence of a firm's choice of capital structure on performance. The difficulty facing companies when structuring their finance is to determine its impact on performance, as the performance of the business is crucial to the value of the firm and consequently, its survival.

Managers have numerous opportunities to exercise their discretion with respect to capital structure decisions. The capital structure employed may not be meant for value maximization of the firm but for protection of the manager's interest especially in organizations where corporate decisions are dictated by managers and shares of the company closely held (Dimitris, and Psillaki, 2008). Even where shares are not closely held, owners of equity are generally large in number and an average shareholder controls a minute proportion of the shares of the firm. This gives rise to the tendency for such a shareholder to take less interest in the monitoring of managers who left to themselves pursue interest different from owners of equity.

In the past two years in Kenyan market in general, 2011 in particular the cost of funds increased significantly in the Kenyan debt market, this was as result of inflation that triggered monetary policy committee to increase the interest rates in the banking industry that spilled to the borrowers. The cost of funds thus affected firm's financial performance, increased prices of real estate properties

Studies have been done on capital structure and financial performance Rutto (2011) effect of capital structure change on share prices for firm quoted at the NSE, Lokong (2010) the relationship between capital structure & profitability of micro finance institutions in Kenya,

Muia (2008) the relationship between capital structure and financial performance of SMEs in Nairobi, Kitony (2007) a test of relationship between capital structure and agency costs. Findings appear to suggest that there is a significant impact of capital structure on company performance after controlling for company specific characteristics such as company size, non-duality, leverage and growth. The finding is of significant for investors and policy maker which will serve as a guiding for better investment decision. No sufficient exploitation study has been done on effect of capital structure on financial performance on listed firms in Nairobi security exchange. This study therefore seeks to fill in this gap by investigating capital structure on financial performance with specific reference to listed firms in Nairobi security exchange.

This research aims at determining how managers of the companies listed on the stock exchanges in Kenya combine the different sources of funding for their businesses, given the Unique characteristics of these economies and to determine, whether there exists a relationship between the capital structure and the return on shareholders' funding for these firms, as well as the relationship between the macroeconomic factors of the interest rate and the inflation rate with the capital structure and performance. Analysis of how the return on borrowed funds compared with the return on assets financed will also be carried out to determine, whether the return on assets warranted the borrowing.

1.3 Objective of the study

The focus of this study was to establish the Impact of Capital Structure on Performance of the firms listed at the Nairobi securities exchange.

1.4 Value of the Study

In the past, studies carried out on capital structure have concentrated on the developed countries

and on the relationship between firm growth and firm value. The findings of this study was to contribute information about the capital structure of firms in the developing countries like Kenya and the behaviour of these structures in relation to shareholders' objective of maximizing their wealth. This information was to provide financial institutions, consultants and entrepreneurs with the necessary tools to plan the financing of their businesses

The findings was also to provide information for the regulatory organizations involved in promoting investment, such as the Capital Markets Authorities in Kenya, to assist them analyse and harness the financial resources relevant to businesses.

It was also provide a basis for further research in capital structure theories, focusing on developing countries.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter examines the literature relevant to the study. It follows the conceptual framework, incorporate scholarly works and theories. The rationale of the study is to ascertain the role capital structure played in determining financial performance. The literature under review will be obtained from journal articles, websites and text.

2.2. Capital Structure Theory

Capital structure puts into perspective the way in which a firm finances its operations Brigham(2004), this can either be through debt or equity capital or a combination of both David (1979). Capital structure theory as attributed to Modigliani and Miller concluded that it doesn't matter how a firm finances its' operations and that the value of a firm is independent of its' capital structure making capital structure irrelevant. The study was based on the assumption that there were no brokerage costs, earnings before interest and tax were not affected by the use of debt and that investors could borrow at the same rate as corporations and lastly there was no information asymmetry. Although this statement didn't reject the possible preference of a firm's owner to a certain type of financing over others, it did affect the irrelevance of the value of the firm to the means of financing it given a perfect market (Fischer, Heinkel, & Zechner, 1989). A number of theories were from then onward advanced to explain capital structure notable among which are the pecking order theory and trade off theory which have been often than not a centre of debate.

2.2.1 Trade-off theory of Capital Structure and Taxes

Myers (2001) in his research on capital structure noted that the trade-off theory justifies moderate debt ratios. The purpose of the trade-off theory of capital structure is to explain the strategy a firm uses to finance investments which may be by equity and sometimes by debt. Tradeoff theory predicts that a weak firm will rely exclusively on a bank for debt capital. That is, for weak firms, bank debt dominates any mix of market and bank debt regardless of the priority structure. This result contradicts the notion that small/young firms avoid public debt because they lack access to such markets or face prohibitive costs in so doing (Hackbarth, Hennessy, & Leland, 2007). Within the tradeoff theory, there is a debt “pecking-order” with bank debt being preferred to market debt due to the lower implied bankruptcy costs. When the bank holds all ex post bargaining power, the desired level of debt tax shields can be achieved using only bank debt (Hackbarth et al., 2007). While Myers noted that the firm would borrow up to the point where the marginal value of tax shields on additional debt is offset by the increase in the present value of possible costs of financial distress (Myers 2001).

According to Modigliani & Miller (1958), the attractiveness of debt decreases with the personal tax on the interest income. A firm experiences financial distress when the firm is unable to cope with the debt holders' obligations. If the firm continues to fail in making payments to the debt holders, the firm can even be insolvent. The theory can be explained by costs of financial distress and agency costs (Pandey, 2005).

In addition direct costs of financial distress to include costs of insolvency which may manifest in the form of demoralised employees, customers who eventually stop purchasing a company's

products, investors who may decline to supply capital or avail it at a high cost and lastly managers who may pass up profitable investment opportunities to in order to avoid any sort of risk (Pandey, 2005).

Murinde et al (2002) stated that tax policy has an important effect on capital structure decisions of a firm. This is in the sense that corporate tax allows firms to deduct interest on debt when computing taxable profits. This suggests that tax advantages derived from debt would lead firms to be entirely financed through debt because interest payments associated with debt are tax deductible whereas payments associated with equity such as dividends aren't tax allowable deductions. This means that the effect of more or less debt in a firm may either reduce or increase firm value depending on the nature of one's business. It was concluded that trade-off theory couldn't account for the correlation between high profitability and low debt ratios. Rajan et al (1995) also confirmed a negative correlation between profitability and leverage for the United States, Japan and Canada although no significant correlations were found for France, Germany, Italy and Britain.

2.2.2 Pecking Order Theory

The pecking order theory as developed by Myers (1984) stated that firms prefer internal sources of finance; they adapt their target dividend payout ratios to their investment opportunities although dividends and payout ratios are gradually adjusted to shifts in the extent of valuable investment opportunities. In addition, Myers (1984) stated that in the event that external finance is required, firms are most likely to issue the safest security first that is to say they start with debt then possibly convertible debt then equity comes as last resort. In summary, Myers' argument was such that businesses adhere to a hierarchy of financing sources and prefer internal financing

when available. Should external financing be required, debt would be preferred over equity. Pandey (2005), also concurred with Myers' argument when he noted that managers always preferred to use internal finance and would only resort to issuing shares as a last resort. He went on to add that the pecking order theory was able to explain the negative inverse relationship between profitability and debt ratio within an industry however; the theory did not fully explain the capital structure differences between industries. Scherr et al (1993); Holmes et al (1991) and Quan (2002) considered the pecking order theory as an appropriate description of Medium Sized Enterprises' financing practises because debt is by far the largest source of financing and that small and medium enterprise managers tend to be owners of the business who do not normally want to dilute their ownership. In addition, they concurred that firms consequently tend to prefer internal financing to external financing of any sort and if they must obtain external funding, they have a preference of debt over equity.

They also noted that the order of preference reflected the relative costs of various financing options. Firms therefore would prefer internal sources of finance as compared to expensive or costly external finance and that firms that are profitable and therefore generate earnings are expected to use less debt than those that do not generate high earnings.

Cosh & Hughes (1994) on the other hand argued that within the overall pecking order theory, Small and Medium Sized Enterprises' when compared to large enterprises would depend more on holding excess liquid assets to meet discontinuities in investment programs, depend more on short term debt including trade credit and overdrafts, rely to a greater extent on hire purchase and leasing equipment. Therefore in relation to Small Medium Enterprises financing, Cosh & Hughes

(1994) proposed a refinement of the theory due to its lack of information to assess risk both on individual and collective basis.

2.3 Empirical evidence

The tradeoff theory suggests that firms can determine their optimal capital structure by striking a balance between the benefits and costs related with debt financing. According to Myers (1984) firms set a target debt to value ratio and steadily adjust towards the target ratio to balance the tradeoff between tax savings and bankruptcy cost. The purpose of the trade-off theory of capital structure is to explain the strategy a firm uses to finance investments which may be by equity and sometimes by debt, it was concluded that trade-off theory couldn't account for the correlation between high profitability and low debt ratios. Levels of capital mix are liable to increase the cost of debt and also the chance of default, bankruptcy and eventually liquidation of a firm (Myers, 2001).

Though most studies assume that bankruptcy costs of firms exist, yet it is commonly believed that such costs are negligible and the benefits of tax saving outweigh the bankruptcy costs.

Miller (1977) on the other hand argued that it doesn't matter how a firm finances its' operations and that the value of a firm is independent of its' capital structure making capital structure irrelevant, suggests that more profitable firms need to shelter their earnings and save taxes by opting for higher leverage in their capital structure. It was found out that firm's performance and high debt level are positively associated, a hypothesis that is supported by a number of studies including Gosh et al,(2000), Hadlock and James (2002), Abor (2005) and Bonaccorsi di patti (2006).

However, the static trade off theory is applicable only to one time period tradeoff between tax saving against the deadweight cost of bankruptcy. In practice firms operate for a long period of time, therefore dynamic trade off theories are more relevant to the real world in explaining the relationship between firm's performance and leverage. The focal point of these theories is that firms pursue an optimal debt ratio and any deviations resulting from random shocks are adjusted without any time lag and transaction costs. This proposition supports the view that firms would maintain high levels of debt to avail the tax saving benefit Kane et al. (1984) Brennan & Schwartz (1984) Goldstein et al. (2001) and Strebulaev (2007) However, the assumption that firms rebalance debt ratios swiftly without any transactions cost is being questioned. It is argued that since readjustment of debt ratios involve transaction costs, firms may take time to rebalance. Rather they may let their capital structure to deviate from the optimal capital structure and will rebalance only at the upper and lower limits (Fischer et al.,1989).

Empirically, studies reporting a negative relation between firm's performance and capital structure seem to be consistent with the predictions of pecking order theory in contrast to the tradeoff theory However, this seems to be too simple a view of the relationship between firm's performance and its capital structure.

In practice it is observed that profitable firms tend to retire their debt and maintain leverage close to the lower end, whereas loss making firms are found to have higher debt level and are close to the higher limit of debt ratio. This indicates that profitability may also reflect the growth aspect of firms. Thus in contrast to the static trade off theory the dynamic trade off theories suggests that firm performance and leverage may be negatively related, implying that trade off theory is

ambiguous on profit and debt to equity relation (Frank & Goyal, 2007). Accordingly, profitable firms are likely to use retained earnings and make less use of debt relative to less profitable firms. It implies firm's performance and debt are expected to be negatively associated.

Magara (2012) did a study on capital structure and its determinants at the Nairobi Securities Exchange. The study sought to find out the major determinants of capital structure. It was established that from the period 2007 to 2011, there was a positive significant relationship between the firm size, tangibility and growth rate and the degree of leverage of the firm. The study did not take into consideration macro- economic factors like inflation and interest rates.

Mwangi (2010) did a study on capital structure on firms listed at the Nairobi Stock Exchange also tried to look on the relationship between capital structure and financial performance. Data was collected using structured questionnaires. The study identified that a strong positive relationship between leverage and return on equity, liquidity, and return on investment existed

This hypothesis is also supported by a number of studies, to them the benefits of debt financing are less than it's negative aspects, so firms will always prefer to fund investments by internal sources Jensen and Meckling (1976) Kester (1986), Rajan and Zingales (1995) (Eriotis, et. al. 1997).and Fama and French (2002) Similarly, Harirs and Raviv (1991) Krishnan and Moyer (1977) and Gleason, Mathur and Mathur (2000) all found a significant and negative impact of capital structure on performance.

2.4 Summary

In comparison to the tradeoff theory the pecking order theory argues that pecking order behavior is adopted when firms prefer to avoid costs related to adverse selection and agency cost issues. In other words firms in the first place prefer to opt for internal source of retained earnings; if at all it has to opt for external funds it prefers debt to equity. Myers (1984) and (Myers & Majluf, 1984) Also the issuance equity imply involving external investors in the ownership structure, therefore when a firm issues new shares investors may believe the firm is overvalued and the managers may take advantage of this asymmetric information as he knows better about the firm's risk level than the investors (Myers,1984).

Thus, according to the pecking order theory the primary concern of a firm is to raise capital through retained earnings while tradeoff between firm's bankruptcy cost and tax shield of debt is a secondary issue. Accordingly, profitable firms are likely to use retained earnings and make less use of debt relative to less profitable firms. It implies firm's performance and debt are expected to be negatively associated.

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Although literature on capital structure theories and empirical evidence on the determinants of capital structure is abundant in case of developed countries, however except a few studies, the question whether capital structure of large firms influence their performance remains largely unexplored in developing countries.

One such study testing the hypothesis that capital structure is one of the main determinants of firm performance explains that the tax benefit of debt financing lead firms to borrow excessively. In doing so firms very often ignore the bankruptcy costs stemming from declining returns to excessive debt. Therefore, profit maximizing firms when diverge from an appropriate capital structure their bankruptcy or financing costs outweigh the tax benefits related with the tradeoff between debt and equity. Zeitun and Tian (2007) finds that capital structure has a significant and negative impact on firm's performance and underestimation of bankruptcy costs may lead firms to borrow excessively and carry high debt in their capital structure. However, others find mixed results regarding the impact of capital structure on firm's performance (Ebaid, 2007).

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was collected using structured questionnaires. The study identified that a strong positive relationship between leverage and return on equity, liquidity, and return on investment existed

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter sets out the methodology and design of the study. It describes the source of data, method of collection and a summary of the analyses that were carried out.

3.2 Research Design

The study was carried out using a longitudinal research design, employing secondary quantitative data. The data was obtained from Nairobi Securities Exchange Handbooks and published books of accounts of the companies listed in the Nairobi Securities Exchange.

3.3 Study Population

The population for this study constituted all listed companies in the Nairobi Securities Exchange. As at December 2012, there were 61 companies listed on the Nairobi Securities Exchange. A census survey was carried out for the study.

3.4 Data Collection method

Secondary data was used in the study. All the data was collected by review of documents, annual reports of the companies, the Nairobi Securities Exchange Handbooks and published books of accounts.

3.5 Data Analysis

Collected data was validated, coded and checked for any errors and omissions. Later the data was run through the statistical Package for Social Science (SPSS) Version 16. The objective was

met by computing the regression analysis of the variables. The β coefficients were calculated to measure the percentage of debt ratio. ANOVA was used to measure the effect of debt ratio on return on equity.

The equation for the regression model was expressed as:

$$ROE = \alpha + \beta_1 (I) + \beta_2 (FS) + \varepsilon$$

Where ROE = return on shareholders' funding (equity)

α, β_1, β_2 = Coefficients of the model

I = Debt ratio

$$\text{Debt ratio} = \text{long term debt} / (\text{shareholders equity} + \text{long term debt or } EBIT / \text{Interest})$$

ROE = Return on Equity

$$\text{Net Profit after Tax} / \text{Equity}$$

FS = firm size

ε = error term

3.6 Measurement of Variables

The capital structure was measured using the debt ratio and the firm financial performance was measured using the return on equity.

3.6.1 Debt ratio

The value of debt was arrived at using the unconventional formula, where the total liabilities (both long term and short term) were expressed as a proportion of the total funding. The values for the indebtedness was computed as below.

$$\text{Debt ratio} = \text{long term debt} / (\text{shareholders equity} + \text{long term debt})$$

3.6.2 Firm Performance

The performance of a company was considered as the return on equity. The benefit or return to the shareholder was expressed as the ratio of the net profit after taxes to the shareholders' funds. The net profit after tax was arrived at after deducting all obligatory expenses of the business including interest and taxes. The shareholder's fund included share capital, retained profits and other reserves. This ratio expressed the return in shillings for each shilling of the shareholder's funding. This was expressed mathematically by

$$\text{ROE} = \text{Profits after tax} / \text{Shareholders' funds (book value)}$$

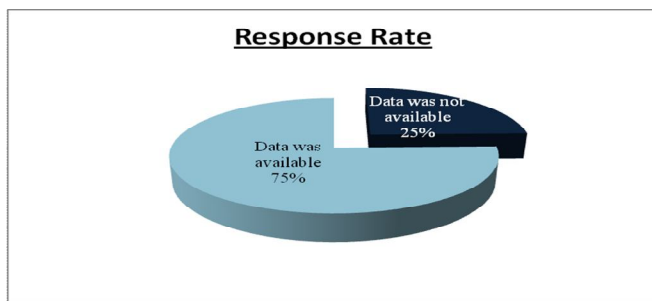
CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter covers data analysis, findings and discussions of the research. Secondary data was collected from Nairobi Securities Exchange Handbooks and published books of accounts of the 61 companies listed in the Nairobi Securities Exchange. Out the 61 companies listed in the Nairobi Securities Exchange, I were able to get published books of accounts of 46 companies representing a response rate of 75.41 % which was considered satisfactory for subsequent analysis. The response rate is represented in the pie chart 4.1.0 below. The data was thereafter analyzed using regression analysis.

Chart 4.1.0: Response rate



Source: Research Data 2013

4.2 Regression analysis

The research study wanted to establish the impact of capital structure on performance of the firms listed at the Nairobi securities exchange. To get performance of the firms listed in the Nairobi Securities Exchange, Return on equity (ROE) was calculated for the 75.41 percent of the firms whose financial statements were accessed by the researcher. On the other hand, capital

structure of the firms listed in the Nairobi Securities Exchange was obtained by calculating the debt ratio of the firms.

The research findings indicated that there was a weak positive relationship ($R = 0.332$) between the variables. The study also revealed that 11.0% of capital structure of the firms listed at the Nairobi securities exchange can be explained by the independent variables. From this study it is evident that at 90% confidence level, the variables produce statistically significant values (high t-values, $p < 0.1$.) hence when the variables are combined hence, they can be relied on to explain capital structure of the firms listed at the Nairobi securities exchange. However, when tested individually only debt ratio produces statistically significant values while firm size produces statistically insignificant values. The below model was used to establish of the relationship between capital structure and financial performance.

$$ROE = \alpha + \beta_1 (I) + \beta_2 (FS) + \varepsilon$$

The findings of the study are tabulated and discussed as below. They are as shown in the tables 4.2.0, 4.2.1 and 4.2.2 below.

Table 4.2.0 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2431.678	2	1215.839	2.661	.081 ^a

Residual	19650.235	43	456.982		
Total	22081.913	45			

a. Predictors: (Constant), Total Assets, Debt Ratio

b. Dependent Variable: ROE

Source: Research Data 2013

Positive effect was reported for total assets ($\beta = .010$). However, negative effect was reported for debt ratio ($\beta = -.472$). The results of the regression equation below shows that for a 1- point increase in the independent variables, capital structure was predicted to increase by 16.369, given that all the other factors were held constant. Sig value in the ANOVA table help us to determine if the condition means under study were relatively the same or if they were significantly different from one another the study found out sig value was 0.081. This value was less than 0.05 hence it can be concluded that there was statistically significant difference between the condition means

Table 4.2.1 Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	16.369	4.542		3.604	.001
Debt Ratio	-.472	.215	-.316	-2.193	.034

Total Assets	.010	.018	.081	.564	.576
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Dependent Variable: ROE

Source: Research Data 2013

Table 4.2.2 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.332 ^a	.110	.069	21.3771425

Source: Research Data 2013

4.5 Summary and interpretation of findings

The capital structure of the companies was measured by debt. Debt ratio was considered to be the long term debt divided by shareholders equity and long term debt. The findings from the study revealed that debt ratio had an inverse relationship on return on equity. Debt ratio ($\beta = -0.472$) indicates that with a 1 percent increase in Return on equity led to a 0.472 percent decrease in debt ratio as indicated in the table of co-efficients. This result is consistent with findings by Zeitun and Tian (2007) who also established that capital structure has a significant and negative impact on firm's performance.

From the study it was evident that at 95% confidence level, the debt ratio variable produced statistically significant values (high t-values, $p < 0.05$). From statistical theory, if $p > 0.1$ then the model is said not to be significant. This is concluded that a relationship could not be found among the model variables. From the co-efficients table, findings indicate that the p value for debt ratio was 0.034. 0.034 is found to be less than 0.05. The model was therefore significant at 95 % thus the findings can be accepted.

The result was also found not to be in agreement with Mwangi (2010) study on capital structure on firms listed at the Nairobi Stock Exchange on the relationship between capital structure and financial performance. Strong relationship was found to be between leverage and return on equity, liquidity, and return on investment. However, others find mixed results regarding the impact of capital structure on firm's performance. This can best be supported by the argument that borrowing introduces varying levels of risk to the company and on the return to shareholders.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter aims at linking and applying the results obtained from the study to solve real life capital structure and financial performance misalignments as described afore in the problem statement. This chapter will also elucidate the policy recommendations that policy makers can implement in order to better align institutions capital raising initiatives with the firms performance. Indeed, policy and firm decision makers can play a bigger role in ensuring that leverage risk considerations forms part of the criteria that firms use when making financing decisions as they know that it will ultimately impact on the firm's performance.

5.2 Summary and conclusions

The main objective of this study was to establish the impact of Capital Structure on Performance of the firms listed at the Nairobi securities exchange. To achieve the objective the researcher sampled firms listed under the Nairobi securities exchange that exhibited the characteristics for the study. Secondary data was used in this study. Data was collected by the review of documents, annual reports of the sampled companies published books of accounts.

The research findings indicated that there was a weak positive relationship ($R= 0.332$) between the variables. The study also revealed that 11.0% of capital structure of the firms listed at the Nairobi securities exchange can be explained by the independent variables.

From this study it is evident that at 90% confidence level, the variables produce statistically significant values (high t-values, $p < 0.1$.) hence when the variables are combined hence, they can be relied on to explain capital structure of the firms listed at the Nairobi securities exchange.

From the study findings it would be safe to conclude that debt ratio had an inverse relationship with return on equity. Capital structure theory as attributed to Modigliani and Miller concluded that it doesn't matter how a firm finances its' operations and that the value of a firm is independent of its' capital structure making capital structure irrelevant.

The conclusion is supported by the results of the regression analysis that the higher the debt ratio, the less the return on equity therefore showed us the need to increase more capital injection rather than borrowing as supported by Jensen and Meckling (1976) to them the benefits of debt financing are less than it's negative aspects, so firms will always prefer to fund investments by internal sources.

5.3 Policy Recommendations

It was considered to be very important when finance directors and managing directors trying to fund the firm's assets to understand the impact of capital structure on their financial performance as well the cost of funds. It was evident from the study and analysis arising thereof. This study established that capital analysis and asset structure analysis was a very important analysis used to boost firm's competitive advantage and consequently profitability. In addition the capital market analyst as well investment analyst should advise the investors as well firms on the optimal capital structure based on capital structure analysis.

Borrowing introduces a risk to the company and on the return to shareholders in terms of reducing the amount of profit available to them, as well as exposing their assets to dissolution in

the event of failing to repay the debt in the stipulated time. When a business's returns are likely to fluctuate greatly the use of increased debt magnifies the risk. Adequate emphasis must be placed on enabling such companies to employ more shareholders' funding than debt and reduce the risk that is inherent in the increased use of debt. Based on the results of the study the following recommendations were made.

5.3.1 Use equity rather than borrowing

The conclusion that borrowing does not always improve a firm's performance leads to the recommendation that firms should use shareholders' funds as much as possible before they undertake to borrow, so that they minimize the risks related to borrowing, which include interest on the debt exceeding the return on the assets they are financing. Firms must therefore be encouraged or assisted to obtain equity by listing on the exchanges. This can be done by educating and sensitization of business owners of the benefits of listing, as well as granting of special fiscal measures to encourage them to list.

5.3.2 Consider the leverage risk or leverage chance of the asset to be financed

When a firm has exhausted its shareholders' funding and chooses to finance its expansion of operations by borrowing, special consideration must be taken to ensure that the assets financed by the borrowed funds bring in a higher return than the interest the firm is required to pay on the debt. If this is not done, the firm will erode the reserves in order to pay the debt as the assets financed will not be making enough returns to cover the debt. The firm must select source of funding carefully to avoid falling into the leverage risk trap.

5.3.3 Encourage companies to list

The increase in debt has been found to reduce performance over time and increase the risks to the business owners. The Capital Market Authorities and the Exchanges should increase

education of the business community in the advantages of listing over borrowing. In Kenya a large proportion of businesses are small and medium enterprises but very few of these are listed on the NSE.

5.4 Limitations of the study

The researcher encountered quite a number of challenges related to the research and most particularly during the process of data collection. Due to inadequate resources, the researcher conducted this research under constraints of finances. In addition Nairobi Securities Exchange analysts had to be pushed to assist with data. This was done through many calls to remind them. Others wanted to be paid in order to give data. Other thought that the information they were requested to volunteer was confidential.

Time allocated for the study was insufficient while holding a full time job and studying part time. This was encountered during the collection of material as well as the data to see the study success. However the researcher tried to conduct the study within the time frame as specified.

5.5 Suggestions for Further Studies

Arising from this study, the following directions for future research in Finance were recommended as follows:

First, this study focused on all the 61 listed companies in the Nairobi Securities Exchange. Therefore, generalisations could not adequately be extended to every listed company as they have varying industry risk and asset structure. Based on this fact among others, it is therefore, recommended that a narrow based study covering a specific segment or company be done to find out the Impact of Capital Structure on Performance.

Similar studies to this can also be replicated in a few years to come to assess if the Impact of Capital Structure on Performance of the firms listed at the Nairobi Securities Exchange has changed as the Nairobi Securities Exchange continues to change.

Also the effect of capital structure on corporate strategy is also another area of interest which can be under the area of further research and a more intense study along that area can come in handy.

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APPENDIX I OF LISTED FIRMS

- 1 Express Ltd Ord
- 2 Hutchings Biemer Ltd
- 3 Kenya Airways Ltd
- 4 Longhorn Kenya Ltd
- 5 Nation Media Group Ord
- 6 Scangroup Ltd Ord
- 7 Standard Group Ltd Ord
- 8 TPS Eastern Africa (Serena) Ltd
- 9 Uchumi Supermarket Ltd
- 10 Sasini Tea & Coffee
- 11 Rea Vipingo
- 12 Kakuzi
- 13 Williamson Tea
- 14 Kapchorua Tea
- 15 Eaagads
- 16 Limuru Tea
- 17 Mumias Sugar Company
- 18 East African Breweries
- 19 British American Tobacco
- 20 BOC Kenya
- 21 Carbacid

- 22 Unga Group
- 23 Eveready East Africa
- 24 City Trust
- 25 Olympia Capital
- 26 Centum (ICDCI)
- 27 TransCentury
- 28 Kenya Power
- 29 KenGen
- 30 KenolKobil
- 31 Umeme
- 32 Car & General
- 33 Sameer Africa
- 34 CMC Holdings
- 35 Marshalls (EA)
- 36 Equity Bank
- 37 Kenya Commercial Bank
- 38 Cooperative Bank
- 39 Barclays Bank
- 40 Standard Chartered Bank
- 41 Diamond Trust Bank Kenya
- 42 NIC Bank
- 43 CFC Stanbic

- 44 Housing finance
- 45 National bank
- 46 East African Cables
- 47 Crown Paints
- 48 Athi River Mining
- 49 Bamburi Cement
- 50 East Africa Portland Cement (EAPCC)
- 51 Safaricom
- 52 AccessKenya
- 53 Britam
- 54 CIC insurance
- 55 Jubille insurance
- 56 Kenya re insurance
- 57 Liberty kenya
- 58 Pan african insurance

Date: Dec 2012

Source: NSE