THE RELATIONSHIP BETWEEN CAPITAL STRUCTURE AND FIRM VALUE FOR COMPANIES LISTED AT NAIROBI SECURITIES EXCHANGE

BY

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DECLARATION

This research project is my original work and has not been submitted anywhere for examination in any other university or institute of higher learning.

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I thank the almighty God for giving me the grace and making all things possible.

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I cannot find words to express my gratitude to my husband, daughter ............. and my son ........................, sisters, brothers and my parents whose encouragement, support, patience and understanding enabled me complete my studies.

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DEDICATION

To my parents Mr. ................. and Mrs. ............. whose foresight in education and constant encouragement drove me to this level of education. To my husband Mr. ................. and children ........and ........... for your love and understanding throughout the period. I love you all.
ABSTRACT

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. Firm values vary with different levels of debt usages. The relationship between capital structure and firm value has been the subject of considerable debate throughout the literature. The study sought to establish the relationship between capital structure and firm value for companies listed at Nairobi Securities Exchange. The causal study design was employed in this research. The study sampled 38 companies that have continuously and actively traded at the NSE for the last five years whereby data was stratified by time periods for periods between years 2009 to 2013. The study used secondary quantitative data to analyze the relationship between capital structure and firm value. Secondary data was obtained by abstraction method from financial statements for the 38 companies to be covered as they have been published by NSE. This data covered the period 2009 to 2013. Descriptive analysis was used to analyze the data. The study used a regression model to predict the extent to which the identified independent variables affect the dependent variable. In this case, SPSS version 18 was used in regression analysis and computation of coefficients. From the above regression model, the study found out that there were factors influencing the firm value of companies listed at the Nairobi Securities Exchange, which are capital structure and size of the firm. They influenced it positively. The study found out that the intercept was 0.645 for all years. The two independent variables that were studied (capital structure and size of the firm) explained a substantial 65.4% of firm value of companies listed at the Nairobi Securities Exchange as represented by adjusted R² (0.654). The study concludes that capital structure and size of the firm influence the firm value positively. The study recommends that in order for a firm to increase its value it must increase its growth and its size. It further recommends that other studies should be done to determine whether other factors such as debt tax shield, liquidity and growth affect firm’s value. The study recommends that owing to the less cost incurred in obtaining short term loans than long term ones, companies should go for short term loans since despite changing the firm’s capital structure to the worse, this will improve their value as increasing short term debts with a relatively low interest rate will lead to an increase in profit levels which will have a positive impact on firm value. The study suggests that further study can be done on the relationship between capital structure and firm value of firms not listed at the NSE. This will make it easier to do a comparison and see whether the results will be the same.
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ABBREVIATIONS

CDSC - Central Depository and Settlement Corporation

CFOs - Chief Financial Officers

CSE - Chittagong Stock Exchange

DSE - Dhaka Stock Exchange

NSE - Nairobi Securities Exchange

PM - Profit Margin

ROA - Return on Asset

STDTA - Short-term debt to Total assets

WACC - Weighted Average Cost of Capital
CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

There is a considerable number of theories and research on the effect of capital structure on firm value, size and profitability. According to Modigliani and Miller (1958), the value of the firm, that is, its stock price, does not depend on the capital structure of the firm. This theory by Modigliani and Miller is based on a set of simplifying assumptions. These assumptions include no taxes, no transaction costs and no information asymmetry. The theory says that the total market value of all financial assets issued by a firm is determined by the risk and return of the firm’s real assets, not by the mix of issued securities (Byström, 2007).

The main idea behind Modigliani and Miller’s theory is that a rational investor can create any capital structure on his/her own. Therefore, the firm should not focus much on its capital structure. “If the investor is highly indebted, the risk and return of the firm’s stock (to the investor) will simply be the same as if the firm was highly levered” (Byström, 2007). This substitution called homemade leverage and the finding that a more leveraged firm doesn’t only yield higher returns to the investor but also a higher risk, is the crux of Modigliani and Miller’s theory.

Modigliani and Miller (1963) went further to hypothesize that the value of a firm, in a world with corporate taxes, is positively related to its debt. The theory further, states that profitable firms will tend to use more debt in order to capture the tax shield offered by debt financing of investments. According to this theory, in an all-equity firm, only
shareholders and tax authorities have claims on the firm. The value of the firm is owned by the shareholders and the portion going to taxes is just a cost. According to Modigliani and Miller (1963) the value of the levered firm has three claimants, namely: the shareholders, debt holders and tax recipients (Government). Therefore, the value of the levered firm is the sum of the value of the debt and the value of the equity. In these instances, value is maximized with the structure paying the least in the form of taxes (Hillier, et al., 2010).

Other theories on capital structure include the pecking order theory and the market timing theory. According to the pecking order theory firms prefer internal finance and if external finance is required, firms issue the safest security first. That is, they start with debt, then possibly hybrid securities then equity as a last resort (Myers, 2001). This assumes that a firm’s debt ratio will be reflective of its cumulative requirements for external finance. In contrast to the trade-off and pecking order theories of capital structure, Baker and Wurgler (2002) found that firms with low levels of leverage raised capital when their market valuations were high as measured by the market-to-book ratio whereas firms with high levels of leverage raised capital when their market valuations were low. This theory is known as the market timing capital structure theory.

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.

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.” Kochhar, (1996) 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 Firm Value

Firm value is an economic measure reflecting the market value of a whole business (Kurshev and Strebulaev, 2005). According to Ehrhard and Bringham (2003), it is a sum of claims of all claimants: creditors (secured and unsecured) and equity holders (preferred and common). Firm value is one of the fundamental metrics used in business valuation, financial modeling, accounting, portfolio analysis, etc.
Firm value is calculated by adding a corporation’s market capitalization, preferred stock, and outstanding debt together and then subtracting out the cash and cash equivalents found on the balance sheet (Ehrhard and Bringham, 2003). (In other words, firm value is what it would cost to buy every single share of a company’s common stock, preferred stock, and outstanding debt. The reason the cash is subtracted is simple: once you have acquired complete ownership of the company, the cash becomes yours).

1.1.3 Capital Structure and Firm Value

The relationship between capital structure and firm value has been the subject of considerable debate throughout the literature. According to Messbacher (2004) capital structure has an impact on the market value of a firm as it affects companies’ current ratio, operating leverage, earnings per share, and dividend payout ratio or share capital of a firm.

Leverage ratios indicate the extent to which a firm has used debt and its ability to meet debt obligations. Leverage is that portion of a firm’s fixed costs that presents risk on the firm. Financial leverage, a measure of financial risk, refers to a long term financing with fixed financing charges, of the company’s assets. The higher the financial leverage the higher the financial risk and therefore the higher the cost of capital. As Harris and Raviv (1991) argue, different measures of leverage can produce different results and also can affect the interpretation of the results. The equity capital of a firm can be measured in terms of either market or book value. Shim and Siegel (2000) argues that from a theoretical standpoint the market value should be used, because it factors all available information.
It is well documented that market valuation is a key determinant of capital structure. Eltayeb, (2011), Long and Malitz (1985), Smith and Watts (1992), Barclay, Smith and Watts (1995), all document a negative relation between market leverage and the market-to-book ratio, a commonly used proxy for growth options. Rajan and Zingales (1995) extend this analysis to show that the relation between market leverage and the market-to-book ratio is negative and significant across seven different countries. Nissim and Penman (2003) in their empirical analysis showed that since price-to-book ratios are based on expected profitability, they explain how price-to-book ratios are affected by the two types of leverage i.e. operating and financial leverage.

1.1.4 The Nairobi Securities Exchange

Established in 1954, the Nairobi Securities Exchange NSE (2011) was as a voluntary association of stock brokers with the objective to facilitate mobilization of resources to provide long term capital for financing investments. Through stringent listing requirements the market promotes higher standards of accounting, resource management and transparency in the management of business. The Nairobi Securities Exchange deals in both variable income securities and fixed income securities. Variable income securities are the ordinary shares, which have no fixed rate of dividend payable, as the dividend is dependent upon both the profitability of the company and what the board of directors decides. The fixed income securities include Treasury and Corporate Bonds, preference shares, debenture stocks - these have a fixed rate of interest/dividend, which is not dependent on profitability (NSE (2007)).
The NSE is regulated by Capital Markets Authority CMA (2011) which provides surveillance for regulatory compliance. The exchange has continuously lobbied the government to create conducive policy framework to facilitate growth of the economy and the private sector to enhance growth of the stock Ngugi and Njiru (2005). The NSE is also supported by the Central Depository and Settlement Corporation (CDSC) which provides clearing, delivery and settlement services for securities traded at the Exchange. It oversees the conduct of Central Depository Agents comprised of stockbrokers and investments banks which are members of NSE and Custodians CDSC (2004). These regulatory frameworks are aimed to sustain a robust securities market.

1.2 Problem Statement

A firm’s capital structure refers to the mix of its financial liabilities. It has long been an important issue from the strategic management standpoint since it is linked with a firm’s ability to meet the demands of various stakeholders (Roy & 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. According to Ehrhard and Bringham (2003), the value of a business based on the going concern expectation is the present value of all the expected future cash flows to be generated by the assets, discounted at the company’s weighted average cost of capital (WACC). From this it can be seen that the WACC has a
direct impact on the value of a business. (Johannes and Dhanraj, 2007). The choice between debt and equity aims to find the right capital structure that will maximize stockholder wealth. WACC is used to define a firm’s value by discounting future cash flows. Minimizing WACC of any firm will maximize value of the firm (Messbacher, 2004). Therefore, the essence of financial management is the creation of shareholder value.

Most of previous empirics agree that market valuation amongst the main determinants of capital structure. Ruan, Tianand & Ma (2011), found that managerial ownership affects capital structure, which in turn affects firm value. Blanchard et al. (1993) observed that it is rational for firms issuing new shares opportunistically, when stock prices are high, and then invest the proceeds in bonds. Graham and Harvey (2001) emphasize the enormity of stock price, as they find that about 68% of CFOs identify the extent of under/overvaluation as top factors that affect the decision of issuing common stock or convertible debt. However, empirical evidence has revealed that these factors are not always applicable to all organizations in designing the financing pecking order. For instance, Booth et al (2001) found out that factors affecting capital structure decisions in developed and developing countries are the same. However, the findings of Rutherford (1985) indicate that Japanese firms relied heavily on debt financing while US and UK firms relied more on equity financing. Factors influencing capital structure decisions are mostly firm specific or market based.

Firm values vary with different level of debt usages. Firm values increase with increase of debt until the marginal benefits from leverage equal to the marginal bankruptcy costs,
at this point, the firm's value reaches its maximum level, if we further increase the level of debt usages, firm values not only increases but also decrease as per the trade-off theory later extended to include the agency costs Jensen and Meckling (1976). Consecutively, Peterkort and Nielsen (2005) connects market-to-book ratio firm value as a risk factor with firm’s capital structure. Their argument has been erected on the expected association between (i) financial risk and measures of capital structure based on the market value of equity and (ii) asset risk and measures of capital structure based on the book value of equity. Firm value has been shown to explain leverage with Eltayeb (2011) using firm value to overcome the deficiency of just using stock price as a basis for valuation. He found that firm value is recommended under market timing hypothesis due to its reliance on market factor.

Baker and Wurgler 2002 document the persistence of market valuation effect on firm’s capital structure using market to book ratio. They show that with the presence of time-varying targets and adjustment costs, historical market value to book has a significant impact on leverage even when firms do not time the market. Other studies have questioned the market timing interpretation of the data. For example, Leary and Roberts (2005), Hovakimian (2006), Flannery and Rangan (2006), Alti (2006), and Kayhan and Titman (2007) provide evidence that market timing, even if it exists, does not have long-run impact on firms' leverage and that firms do actively rebalance their leverage ratios toward some target level. The basis of questioning market timing hypothesis has been on the basis of interpretation of the data. Liu (2009) found that with the presence of time
varying targets and adjustment costs, historical market-to-book has a significant impact on leverage even when firms do not time the market.

In Kenya, studies by Barako (2007) found that, disclosures of all types of information are influenced by corporate governance attributes, ownership structure and corporate characteristics among which leverage was found to be significant for financial disclosures. Bitok et al., (2011), found the static trade-off theory which suggests that optimal capital structure exists and a trade-off between net tax benefit of debt financing and bankruptcy cost, provides the most robust explanation of leverage for Kenyan listed firms. Chebii, Kipchumba and Wasike (2011) found that there is a significant relationship between capital structure and dividend pay-out with companies that optimally engage financial leverage in their operations standing a chance of favourabe competitive situations because of the absence of financial inhibitions.

Several other studies have been done which includes in Kenya which includes Kioko (2005) did a study on capital structure choice. a survey of industrial firms in Kenya, Wandeto (2005) did an empirical investigation of the relationship between dividend changes & earnings, cash flows & capital structure for firms listed in the NSE, Habid (2006) did a study on the impact of profitability on capital structure of companies listed at NSE, Nyaboga (2008) did a study on the relationship between capital structure and agency cost, Ochieng (2009) did an empirical analysis of capital structure rebalancing by firms listed at the NSE, Gitau (2009) did a study on the effect of capital structure on firm value of all the companies quoted in NSE and the findings of the study indicated contradictory results against theoretical predictions thus leaving a research gap that this
new approach may assist to disentangle the mixed findings and help provide new insights to fill gaps in the literature on capital structure research. Therefore empirical evidence on the relationship between capital structure and firm value for companies listed at Nairobi Securities Exchange is scanty. This study therefore sought to answer the following research question, what is the relationship between market value to book ratio and leverage of firms listed at the Nairobi Securities Exchange?

1.3 Objective of the study

The objective of the study was to establish the relationship between capital structure and firm value for companies listed at Nairobi Securities Exchange.

1.4 Significance of study

Limited research exists on the effects of capital structure and firm value in Kenya, as a result very little known on how capital structure affects firm value. The findings of this study would therefore contribute information on the capital structure of firms in the developing countries like Kenya and the behaviour of these structures in relation to firm value. This study would provide financial institutions, consultants and entrepreneurs with the necessary tools to plan the financing of their businesses. The findings would also provide information to the regulatory organizations involved in promoting investment, such as the Capital Markets Authorities in Kenya, to assist them analyze and harness the financial resources relevant to businesses. This study would also act as a guide for the financial managers to design their optimum capital structure to maximize the market value of the firm and minimize the agency cost. It would also provide a basis for further research in capital structure theories, focusing on developing countries.
CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section provides a review of the literature on the relationship between capital structure and firm value. This study begins the theoretical principles underlying capital structure and then discusses the empirical literature on firm level variables that affect the leverage of firms.

2.2 Theoretical Review

The study was guided by the following theories

2.2.1 Pecking Order Theory

In the pecking order theory there is no well-defined target of the debt-equity mix, because there are two kinds of equity, internal and external, one at the top of the pecking order and one at the bottom for each firm's observed debt ratio reflects its cumulative requirements for external finance (Myers, 1984). The pecking order arises if the costs of issuing risky securities such as transactions costs and the costs created by management’s superior information about the value of the firm’s risky securities overwhelm the costs and benefits proposed by the trade-off model (Fama & French, 2005).

According to the pecking order theory, firms will first finance new investments with retained earnings, then with safe debt, then risky debt and finally, but only under duress, with outside equity in order to lessen adverse selection costs (Fama & French, 2005).
Although the pecking order theory is based on the adverse selection based on information asymmetry, it has been proven that information asymmetry does not need to exist for a financing hierarchy to arise. It has, however, been shown that other factors such as incentive conflicts could generate a pecking order behaviour (Leary & Roberts, 2010). Titman and Wessels (1988) also found that transaction costs may also be an important factor in the pecking order behaviour and this is substantiated by the fact that short-term debt ratios are negatively related to firm size. This variance in financing practice probably reflects the high transaction costs that small firms face when they issue long-term debt or equity (Titman & Wessels, 1988).

It is usually thought of the cost of external finance as that of administration and underwriting and in other cases the underpricing of new securities, however, asymmetric information creates the possibility of costs related to rejecting positive net present value (NPV) projects. One such incentive cost could be the reflection on the shareholders of a firm that the managers are not adequately representing the interest of the shareholders through their excessive risk averse. Managers may on the other hand feel that they have more information on the cost and benefits of debt than shareholders when choosing to pass up on new investment opportunities when the earnings of the firm or investment project are volatile (Lewellen, 2006).

Although a firm might have initiated a pecking order, it may sometimes choose to not follow the pecking order so that it can maintain a spare debt capacity or hold internal earnings in favour of debt if it is believed that it will be essential to fund profitable future investment opportunities (Ryen et al, 1997).
The other reason why firms might choose to maintain a spare debt capacity would be to maintain their credit ratings. Spare debt capacity also enhances the firm’s ability to endure periods of poor performance and allows for the execution of a recovery plan (Shivdasani & Zenner, 2005).

2.2.2 The market timing theory

Equity market timing refers to the practice of issuing shares at a high price (when their valuations are higher relative to book value and past market valuations) and repurchasing them at low prices (when their market valuations are lower). As a result observed capital structures are a function of the past market valuations of securities instead of a desire to attain an optimum capital structure or as a consequence of following a pecking order (Baker & Wurgler, 2002).

According to Baker and Wurgler (2002) four outcomes of their empirical studies support their market timing hypothesis, and they are as follows: An analysis of past financing decisions show that firms tend to issue equity instead of debt when their share price is higher relative to the book value and previous market values and they tend to repurchase the shares when their current market values are lower than past values; analyses of long-run stock returns following corporate finance decisions suggest that timing the equity market is successful for firms on average (Dreyer, 2010); earnings forecasts and realisations around equity issues suggest that firms issue equity where there is investor market optimism about future earnings prospects (Dreyer, 2010); two thirds of Chief Financial Officers (CFOs) admit to market timing in anonymous surveys (Dreyer, 2010)
According to DeAngelo et al (2010) most firms with attractive market timing opportunities tend to fail to issue stock. One probable reason for this failure to issue stock is the investor rationality that would influence the managers to disguise their attempts to sell overvalued stocks. Rational investors would almost instantly recognize any attempts to sell off overvalued stocks and as a result would reduce the price they are willing to pay for the stock. As indicated by Baker and Wurgler (2002) one other explanation could be that managers are simply unable to time the market. This seems to resonate with the recent events where prominent financial institutions repurchased their shares at higher prices after the 2008 financial meltdown (DeAngelo, DeAngelo & Stulz, 2010). DeAngelo et al (2010) have concerted to the view that firms issue stocks primarily to fund the firm’s short-term liquidity needs and market timing only plays an ancillary role in making the decision.

### 2.2.3 Trade-Off Theory

The theory explains the friction between costs of financial distress and tax deductibility of the costs of finance Chirinko and Singha (2000). It suggests that firm’s trade-off several aspects, including the exposure of the firm to bankruptcy and agency costs against the tax benefits associated with debt usage, offsetting these considerations is the tax benefits encourage debt use by firms (tax deductibility interest) and the final capital structure adopted by a firm will be a trade-off between these tax benefits and costs associated with bankruptcy and agency.
This implies that there’s a target or optimal debt-equity ratio for a firm Rotnano et al, (2000) that changes only as benefits and costs alter over time. The main benefit of debt is the tax advantage of interest deductibility Modigliani and Miller (1963). The primary costs are those associated with financial distress and the personal tax expense bondholders incur when they receive interest income Miller (1977). The trade-off theory of capital structure therefore predicts that firms will choose their mix of debt and equity financing to balance costs and benefits of debt. The tax benefit of debt and control of free cashflow problems push firms to use more debt financing while bankruptcy costs and other agency problems provide firms with incentives to use les. The theory describes a firm’s optimal capital structure as the mix of financing that equates the marginal costs and benefits of debt financing. One of the main empirical prediction of this theory is that debt ratios will tend to be mean reverting as firms use the external capital markets strategically to keep their values at a close to their optimum Lemmen et al., (2002).

2.3 Determinants of Firm Value for Listed Companies

The following are some of the determinants of firm value for listed companies

2.3.1 Profitability

The greater the profitability of a firm, the more assignable profit there is, and the higher is the value of the company. Profitability thus has a significantly positive influence on firm value. The pecking order theory holds that highly profitable corporations are not over-dependent on external funds, and thus profitability has a significantly negative influence on leverage. However, when the leverage increases, both agency and bankruptcy costs increase rapidly as a result. Since leverage generally has a markedly
negative influence on firm value, leverage becomes the mediator variable in the influence of profitability on firm value. In addition, two moderator variables exist in the research industry type and firm size.

Haugen and Baker (1996) and Yang et al. (2010) proved that the greater is firm profitability, the more distributable earnings there are for shareholders, and thus the expected firm value will be higher. ROA shows the management efficiency of the enterprise’s assets, and is also a positive measure of firm value.

2.3.2 Capital structure

Modigliani and Miller (1958) proposed the capital structure irrelevance theory, which states that under the assumption of a perfect capital market, the choice of bonds or stocks makes no difference to firm value; in other words, capital structure has no influence on firm value. A perfect capital market does not have corporate tax or transaction costs, and when information asymmetry is not a concern, a firm’s value is determined by its ability to create value, no matter whether the capital it uses is from internal or external sources.

Modigliani and Miller (1963) then extended their model, and assumed that there is corporate tax and issuing debts has no risk, because the interest charges from debt can reduce corporate tax, and thus act as tax shields. The weighted average fund cost will fall as capital structure rises, and companies would thus try to finance their operations by obtaining as much capital through raising loans as they can, and the higher the proportion of debt becomes, the more they gain from tax saving, and thus the more firm value rises.
The MM model fails to predict it because it considers only the tax saving effect of debt and ignores the cost of financial risk and agency cost when debt increases. In practice no firm carries 100 percent debt. The Trade-off theory states that when a firm issues debt, both the profit (tax shields) and costs (agency costs and bankruptcy cost) should be considered. When a firm first begins debt financing, the agency and bankruptcy costs the debt causes are low, and firm value increases as capital structure rises. However, as capital structure rises, so does the risk of bankruptcy. When the margin benefit equals the margin cost, firm value reaches its maximum, and this is the optimal capital structure (Jensen & Meckling, 1976; Myers, 1977; Harris & Raviv, 1990). Bankruptcy cost was first introduced by Stiglitz (1974), who stated that while issuing debt has a tax shield effect, as the debt increases the interest expense grows accordingly, and the possibility of encountering a financial crisis rises. Therefore, shareholders and creditors would require a higher return as compensation for the increasing risk, which increases the costs of both funding and bankruptcy.

2.3.3 Dividend pay-out ratio

Dividend payout ratio is considered as one of the key factor affecting value of a firm because regular dividend payment provides an investment-recovery mechanism for investors and hence, valued as a better company from the perspective of investors looking for liquidity in their investment objectives. According to Brealey and Myers (2002) dividend policy has been kept as the top ten puzzles in finance. Dividends are commonly defined as the distribution of earnings (past or present) in real assets among the shareholders of the firm in proportion to their ownership. Dividend policy connotes to the
payout policy, which managers pursue in deciding the size and pattern of cash distribution to shareholders over time. Managements’ primary goal is shareholders’ wealth maximization, which translates into maximizing the value of the company as measured by the price of the company’s common stock. Dividend policy of a firm has implication for investors, mangers and lenders and other stakeholders. For investors, dividends – whether declared today or accumulated and provided at a later date are not only a means of regular income, but also an important input in valuation of a firm.

In 1961, Merton Miller and Franco Modigliani (M&M) showed that under certain simplifying assumptions, a firms’ dividend policy does not affect its value. The basic premise of their argument is that firm value is determined by choosing optimal investments. The net payout is the difference between earnings and investments, and simply a residual. Because the net payout comprises dividends and share repurchases, a firm can adjust its dividends to any level with an offsetting change in share outstanding. From the perspective of investors, dividends policy is irrelevant, because any desired stream of payments can be replicated by appropriate purchases and sales of equity (Petit, 1972). M&M concluded that given firms optimal investment policy, the firm’s choice of dividend policy has no impact on shareholders wealth. In other words, all dividend policies are equivalent.

2.3.4 Fixed assets

Fixed assets possessed by the firm is an important factor, as it improves the solvency position of the firm by giving an additional protection to creditors and shareholders.
2.4 Empirical Review

After decades of intense scrutiny, capital structure effects on firm value continues to be a popular research topic in finance and accounting literature. The optimal capital structure, pecking order, agency theory and signalling theories have all contributed very useful but sometimes mixed guidance to academics and practitioners seeking to understand what management’s financing decisions do to the value of a firm (Oraluck & Mohamed, 2004).

A number of studies have been recently carried out on the effect of capital structure on firm value. Oraluck and Mohamed, (2004) conducted a study in Australian which looked at both debt and equity disclosures with the aim to observe and quantify value-enhancing and value-reducing capital structure changes of 10-50 per cent. The research design centred on the concept of relative capital structure by relating a firm’s debt-equity ratio to that of the industry median in each year over a 13-year period (1991 – 2003). The findings from the study indicated that the market reacts positively to announcements of financing events that lead to the firm’s capital structure moving closer to their relative industry median debt-equity ratio. The study also indicated that for firms changing the debt-equity ratios away from the median (value decreasing events) it lead to either less positive or negative abnormal returns. These are consistent with the idea of optimal capital structure, if relative capital structure is a proxy for optimal ratio. Thus, the market perceives the industry median as an appropriate capital structure benchmark in the Australian market (Oraluck & Mohamed, 2004).

Muhammad et al, (2012) did a study in Pakistan to examine the impact of capital structure on firms’ financial performance in Pakistan top 100 consecutive companies in
Karachi Stock Exchange for a period of four years from 2006 to 2009. Exponential generalized least square regression was used to test the relationship between capital structure and firms’ financial performance. The results showed that all the three variables of capital structure, Current Liabilities to Total Assets, Long Term Liabilities to Total Assets, Total Liabilities to Total Assets, negatively impacts the Earnings Before Interest and Taxes, Return on Assets, Earning Per Share and Net Profit Margin whereas the Price Earnings Ratio shows a negative relationship with Current Liabilities to Total Assets and a positive relationship is found with Long Term Liabilities to Total Assets where the relationship is insignificant with Total Liabilities to Total Assets. The results also indicated that Return on Equity has a insignificant impact on Current Liabilities to Total Assets and Total Liabilities to Total Assets but a positive relationship exists with Long Term Liabilities to Total Assets. These results, in general, lead to the conclusion that capital structure choice is an important determinant of financial performance of firms (Muhammad et al, 2012).

Anup and Suman, (2010) conducted a study in Bangladesh which attempted to test the influence of debt-equity structure on the value of shares given different sizes, industries and growth opportunities with the companies incorporated in Dhaka Stock Exchange (DSE) and Chittagong Stock Exchange (CSE) of Bangladesh. For the robustness of the analysis samples were drawn from the four most dominant sectors of industry i.e. engineering, food & allied, fuel & power, and chemical & pharmaceutical to provide a comparative analysis. A strong positively correlated association is evident from the empirical findings when stratified by industry (Anup & Suman, 2010).
To see the relationship between capital structure and firm value in Bangladesh the research paper considered share price as proxy for value and different ratios for capital structure decision. The interesting finding of the study suggested that maximizing the wealth of shareholders requires a perfect combination of debt and equity, whereas cost of capital has a negative correlation in this decision and it has to be as minimal as possible. This was also seen that by changing the capital structure composition a firm can increase its value in the market. Nonetheless, this could be a significant policy implication for finance managers, because they can utilize debt to form optimal capital structure to maximize the wealth of shareholders (Anup & Suman, 2010).

Ruan et al, (2011) conducted a study in China that examined the influence of managerial ownership on firm performance through capital-structure choices, using a sample of China’s civilian-run firms listed on the Chinese stock market between 2002 and 2007. The empirical results demonstrated a nonlinear relationship between managerial ownership and firm value. Managerial ownership drives the capital structure into a nonlinear shape, but in an opposite direction to the effect of managerial ownership on firm value. The results of simultaneous regressions suggested that managerial ownership affects capital structure, which in turn affects firm value (Ruan et al, 2011).

It was also found that managerial ownership does not influence firm value significantly when capital structure is added into the equation. Managerial ownership significantly affects capital structure, and capital structure affects corporate performance directly. These results address the influence of managerial shareholding on capital structure, which in turn affects firm value. Furthermore, capital structure is endogenously determined by
both firm value and managerial ownership in Chinese civilian-run listed companies between 2002 and 2007 (Ruan et al, 2011).

Iorpev & Kwanum, (2012) carried out a study in Nigeria. The study examined the impact of capital structure on the performance of manufacturing companies in Nigeria. The annual financial statements of 15 manufacturing companies listed on the Nigerian Stock Exchange were used for this study which covered a period of five (5) years from 2005-2009. A multiple regression analysis was applied on performance indicators such as Return on Asset (ROA) and Profit Margin (PM) as well as Short-term debt to Total assets (STDTA), Long term debt to Total assets (LTDTA) and Total debt to Equity (TDE) as capital structure variables. The results showed that there was a negative and insignificant relationship between STDTA and LTDTA, and ROA and PM; while TDE was positively related with ROA and negatively related with PM. STDTA was significant using ROA while LTDTA was significant using PM. The study concluded that statistically, capital structure is not a major determinant of firm performance. It recommended that managers of manufacturing companies should exercise caution while choosing the amount of debt to use in their capital structure as it affects their performance negatively (Iorpev & Kwanum, 2012).

A second study aimed to provide evidence on the impact of capital structure on a firm’s value was carried out in Nigeria by Ogbulu and Emeni in 2012. The analysis was implemented on a sample of 124 companies quoted on the Nigerian Stock Exchange (NSE) for the year ended 31st December 2007. The ordinary least squares method of regression was employed in carrying out this analysis. The result of the study revealed
that in an emerging economy like Nigeria, equity capital as a component of capital structure is irrelevant to the value of a firm, while Long-term-debt was found to be the major determinant of a firm’s value. Following the findings of the study, corporate financial decision makers are advised to employ more of long-term-debt than equity capital in financing their operations since it results in a positive firm value (Ogbulu & Emeni, 2012).

2.5 summary of literature review

From the discussions above, it can be noted that pecking order theory, the trade-off theory and the market timing theory offer the theoretical framework on the capitals structure decisions and the resultant performance measures. They have offered a useful framework in understanding financing and resultant firm value. Empirical studies in the area of capital structure and firm value offer a broad set of both consistent and contradictory results. Both conservatism and risk taking tendencies have been observed in the various studies conducted. Firm value and capital structure are two factors that have been discussed in several studies and also in general literature. We still have gaps in the knowledge of how firm value is affected by capital structure. The area is still being explored by researchers in the context of previous empirical work.
CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The chapter presents the research design, population of the study, sample size, data sources and data analysis procedure together with the model specification.

3.2 Research Design

The causal study design was employed in this research. Causal research design suggests causal linkages between variables by observing existing phenomena and then searching back through available data in order to try to identify plausible causal relationships. It was concerned with determining cause and effect relationship and to understand which variable is dependent and which is independent. This research design was the best in explaining if the two variables are related and if they vary together with the help of enough information or data for testing cause and effect relationship. It was aimed to explore the relationship between capital structure and firm value of firms listed at the NSE.

3.3 Target Population

Target population in statistics is the specific population about which information is desired. According to Ngechu (2004), a population is a well-defined or set of people, services, elements, and events, group of things or households that are being investigated. The population of interest of this study comprised of all 62 companies listed at the Nairobi Securities Exchange (NSE, 2013). Thus the study was conducted through census
survey owing to the small number of NSE listed companies from all sectors i.e. agricultural, automobiles and accessories, banking, commercial and services, construction and allied, energy and petroleum, insurance, investment, manufacturing and allied and telecommunications and technology sectors.

3.4 Sample Size

Orodho (2004) defines sampling as; “the process of selecting a sub set of cases in order to draw conclusion about the entire set”. In this research, the study sampled 38 companies that have continuously and actively traded at the NSE for the last five years whereby data was stratified by time periods for periods between years 2009 to 2013. The sample excluded financial companies (banks and insurance) because their leverage is highly dependent on regulation.

3.5 Data Collection Method and Instruments

The study used secondary quantitative data to analyze the relationship between capital structure and firm value. Secondary data was obtained by abstraction method from financial statements for the 38 companies to be covered as they have been published by NSE. This data covered the period 2009 to 2013.

3.6 Data Analysis

Descriptive analysis was used to analyze the data where Statistical Package for Social Science (SPSS Version 21) was used for data analysis. The study also used inferential statistics such as regression analysis to analyze the data and find out whether there exists
a relationship between capital structure and firm value. To investigate this relationship
the study formulated a regression equation.

3.6.1 Conceptual Model
The relationship among the variables was estimated using a function:

\[ TQ = f(Cs) \] .................................Equation 1

\[ TQ = \frac{\text{Tobin's Q} (D/E, \text{firm value})}{
\text{TQ} = \frac{\text{Total Mkt Value/Total Asset Value}}{
\text{Firm Value}} = \alpha + \text{Earnings per share} + \text{dividend payout ratio} + \% \text{ of Public Shareholding} + \text{fixed asset turnover} + \text{long term debt to total assets} + \text{current ratio} + \text{operating leverage} + \text{sales growth} + \text{share capital} + \epsilon \ldots \ldots \ldots \ldots \text{Where } \alpha = \text{constant, } \epsilon = \text{residual component}
\]

\[ Cs = \text{Proxy for capital structure (D/E)}. \]

The study used a regression model to predict the extent to which the identified
independent variables affect the dependent variable. In this case, SPSS version 18 was
used in regression analysis and computation of coefficients. The regression line was
represented by the following model:

\[ TQ = \beta_1 D/E + \beta_2 \ln S + \epsilon \ldots \ldots \ldots \ldots \text{Equation 2} \]
Where:

\[ S = \text{The measure of how small or large the firm is based on the total assets of the firm} \]

The size of a firm was determined by Sales revenues, Profits, Cash flows, Capital invested, Production output, Number of employees, Number of outlets or locations, Value of the business (market capitalization) and Market share.

In order to find out the value relevance of effects of capital structure on firm value, the model must be significant. Results are said to be statistically significant within the 0.05 level, which means that the significance value must be smaller than 0.05. The significance was determined by the t-value, which indicates how many standard error means the sample diverges from the tested value.
CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the information processed from the data collected during the study on the relationship between capital structure and firm value for companies listed at Nairobi Securities Exchange. The sample composed of 38 companies that have been continuously and actively traded at the NSE for the last five years between 2009 and 2013.

4.2 Descriptive Statistics

Table 4.1: Summary of the study variables

<table>
<thead>
<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total asset</td>
<td>1.59E+10</td>
<td>1.83E+10</td>
<td>2.13E+10</td>
<td>2.23E+10</td>
<td>2.50E+10</td>
<td>20,560,000</td>
<td>3,539,491,488</td>
</tr>
<tr>
<td>Total Mkt Value</td>
<td>5,584,830</td>
<td>4,335,735</td>
<td>8,580,566</td>
<td>5,997,341</td>
<td>6,277,661</td>
<td>6,155,200</td>
<td>1,545,807,492</td>
</tr>
<tr>
<td>Leverage</td>
<td>5.8243</td>
<td>2.741610</td>
<td>2.64879</td>
<td>3.599268</td>
<td>4.379383</td>
<td>3.84</td>
<td>1.31</td>
</tr>
</tbody>
</table>

29
Source: Author (2014)

Table 4.1 shows the summary of the study variables from the companies listed at Nairobi Securities Exchange. From the summary total assets have been steadily increasing with the highest been recorded in the year 2013 (2.50E+10) and with a mean of 20,560,000,000. On size the year 2010 recorded the lowest size at 8.9965 and the highest was recorded in 2013 (9.2926) and had a mean score of 9.12. The market value had the most fluctuations recording 5,584,838,716.38 in 2009 then decreased in 2010 (4,335,735,469.63) then 2011 recorded the highest value at 8,580,566,761.88 then it drastically dropped in 2012 (5,997,341,914.88) and then again increased with a little margin in the year 2013 (6,277,661,997.56). The average of market value for the five years stood at 6,155,228,972. The year 2009 recorded the highest leverage (5.8243775) while 2011 recorded the lowest (2.64879), the average of leverage for the five years was 3.84.

4.3 Tobin Q of the Companies

The study calculated the Tobin Q of companies listed at NSE.

Table 4.2: Tobin Q of firms listed at NSE

<table>
<thead>
<tr>
<th>Companies listed at NSE</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobin Q Average</td>
<td>0.1325</td>
<td>0.1834</td>
<td>0.1657</td>
<td>0.3162</td>
<td>0.2423</td>
<td>0.1592</td>
<td>0.1325</td>
<td>0.3162</td>
</tr>
</tbody>
</table>

Source, Research Data
According to table above, the Q-ratio of all the companies were below 1. Since the Tobin's q is less than 1, then the market value is less than the recorded value of the assets of the company which suggests that the market may be undervaluing the companies listed at NSE. The same is presented in the figure below:

![Tobin Q Average](image)

**Figure 4.1: Tobin Q Average**

**Source, Research Data**

Taking a look at the variations in the Q ratio it shows that from year 2009 the Tobin Q increased up to the peak which was realized in year 2012 suggesting that firm were increasing becoming valued only to fall in year 2013 tough slightly.

**4.4 Regression Results**

The study conducted a cross-sectional multiple regression on the relationship between capital structure and firm value over the period 2009 – 2013 of companies listed at Nairobi Securities Exchange. Coefficient of determination explains the extent to which
changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (Firm value of companies listed at Nairobi Securities Exchange) that is explained by all the two independent variables (Capital structure and Size of the firm).

Table 4. 3: Results of multiple regression between firm value of the companies listed at the Nairobi Securities Exchange and the combined effect of the selected predictors, Capital structure and Size of the firm

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.829</td>
<td>0.687</td>
<td>0.654</td>
<td>0.163</td>
</tr>
</tbody>
</table>

Source: Author (2014)

The two independent variables (Capital structure and Size of the firm) that were studied, explain only 65.4% of the firm value of the companies listed at the Nairobi Securities Exchange as represented by the adjusted $R^2$. This therefore means the two variables (Capital structure and Size of the firm) contribute to 65.4% of firm value of companies listed at the Nairobi Securities Exchange, while other factors not studied in this research contributes 34.6% of firm value of the companies listed at the Nairobi Securities Exchange. Therefore, further research should be conducted to investigate the other (34.6%) factors influencing firm value of the companies listed at the Nairobi Securities Exchange.
Table 4. 4: Summary of One-Way ANOVA results of the regression analysis between firm value of the companies listed at the Nairobi Securities Exchange and predictor variables of Capital structure and Size of the firm

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>2.453</td>
<td>2</td>
<td>0.613</td>
<td>21.354</td>
<td>0.00216</td>
</tr>
<tr>
<td>Residual</td>
<td>1.12</td>
<td>35</td>
<td>0.029</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3.573</td>
<td>37</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source: Author (2014)**

From the ANOVA statistics in table 4.4, the processed data, which are the population parameters, had a significance level of 0.00216 which shows that the data is ideal for making a conclusion on the population’s parameter. The F calculated at 5% Level of significance was 21.354. Since F calculated is greater than the F critical (value = 3.27), this shows that the overall model was significant i.e. there is a significant relationship between firm value and its determinants (Capital structure and Size of the firm).

**Table 4. 5: Regression coefficients of the relationship between firm value and the two predictive variables**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.645</td>
<td>0.311</td>
<td>2.074</td>
<td>0.0447</td>
</tr>
<tr>
<td>Capital structure</td>
<td>0.736</td>
<td>0.151</td>
<td>0.529</td>
<td>4.874</td>
</tr>
<tr>
<td>Size of the Firm</td>
<td>0.547</td>
<td>0.143</td>
<td>0.493</td>
<td>3.825</td>
</tr>
</tbody>
</table>

Dependent variable: Firm value of companies listed at the Nairobi Securities Exchange
Source: Author (2014)

The coefficient of regression in table 4.5 above was used in coming up with the model below:

\[ FV = 0.645 + 0.736CS + 0.547SF \]

Where \( FV \) is Firm Value, \( CS \) is Capital Structure and \( SF \) is Size of the firm. According to the model, all the variables were significant as their significance value was less than 0.05. The two variables (capital structure and size of the firm) were positively correlated with firm value of the companies listed at the Nairobi Securities Exchange. From the model, taking all factors (capital structure and size of the firm) constant at zero, firm value of the companies listed at the Nairobi Securities Exchange was 0.645. The data findings analyzed also shows that taking all other independent variables at zero, a unit increase in capital structure will lead to a 0.736 increase in firm value of the companies listed at the Nairobi Securities Exchange while a unit increase in size of the firm will lead to a 0.547 increase in firm value of the companies listed at the Nairobi Securities Exchange. This infers that capital structure has the most effect to the firm value of companies listed at the Nairobi Securities Exchange.

4.5 Summary and Interpretation of Findings

From the above regression model, the study found out that there were factors influencing the firm value of companies listed at the Nairobi Securities Exchange, which are capital structure and size of the firm. They influenced it positively. The study found out that the intercept was 0.645 for all years.
The two independent variables that were studied (capital structure and size of the firm) explain a substantial 65.4% of firm value of companies listed at the Nairobi Securities Exchange as represented by adjusted $R^2$ (0.654). This therefore means that the two independent variables contributes 65.4% of the firm value of companies listed at the Nairobi Securities Exchange while other factors and random variations not studied in this research contributes a measly 34.6 % of the firm value of companies listed at the Nairobi Securities Exchange.

The study established that the coefficient for capital structure was 0.736, meaning that capital structure positively and significantly influenced the firm value of companies listed at the Nairobi Securities Exchange. This is contrary to Modigliani and Miller (1958) who proposed the capital structure irrelevance theory, which states that under the assumption of a perfect capital market, the choice of bonds or stocks makes no difference to firm value; in other words, capital structure has no influence on firm value. A perfect capital market does not have corporate tax or transaction costs, and when information asymmetry is not a concern, a firm’s value is determined by its ability to create value, no matter whether the capital it uses is from internal or external sources.

However Modigliani and Miller (1963) then extended their model, and assumed that there is corporate tax and issuing debts has no risk, because the interest charges from debt can reduce corporate tax, and thus act as tax shields. The weighted average fund cost will fall as capital structure rises, and companies would thus try to finance their operations by obtaining as much capital through raising loans as they can, and the higher the proportion of debt becomes, the more they gain from tax saving, and thus the more firm value rises.
Empirical evidences from the previous studies are in consistence with the Agency Cost Theory for their reporting of negative relationship between capital structure and firm value. Joshua (2008) contains the list to include: Friend and Lang (1988); Barton et al., (1989); Van der Wijst and Thurik (1993); Chittenden et. al., (1996); Jordan et al., (1998); Shyam-Sunder and Myers (1999); Mishra and McConaughy (1999); Michaelas et al., (1999) but Petersen and Rajan, (1994) reported a positive relationship.

Tianyu (2013) states that capital structure and firm value are important to corporate finance. Therefore, firms take different strategies to adjust capital structure to get a better firm value. However still the studies mostly conducted in one country setting or neglect the angle from listed companies across countries. The study encompassed 2 developed countries (Germany and Sweden) and a developing country (China) to test the impact from capital structure to firm value of period 2003-2012 with more than 1200 listed companies in Germany and Sweden and more than 1000 listed companies in China. The result showed that capital structure has a significant negative effect to firm performance in China, whereas, significant positive effect in 2 European countries before financial crisis happened in 2008.

The study also deduced that size of the firm positively influenced firm value of companies listed at the Nairobi Securities Exchange as it had positive coefficient (0.547). The relationship between size and firm value has been empirically proven to be positive by several works such as: Barclay and Smith, (1996); Friend and Lang, (1988); Barton et (1989); Mackie-Mason, (1990); Kim et al., (1998); Al-Sakran, (2001), Hovakimian et al., (2004) as contained in Joshua (2008). The studies hold a point that larger firms tend to
use debt while smaller ones are more likely to use equity, in their respective finances. Aryeetey, Baah-Nuakoh, Duggleby, Hettige and Steel (1994) on their study on the Ghanaian firms found that smaller firms have greater problems with credit than larger ones, hence more firm value.

Mehrani and Rasayyan in a study investigated on the relationship between size of the firm and firm value of companies listed in the Tehran Stock Exchange during 1995-2006 in 189 companies. The results indicated that there is a positive and significant relationship between size of the firm and firm value (Mehrani and Rasayyan, 2009).
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary, conclusion and recommendations of the main findings on the relationship between capital structure and firm value. This chapter presents the discussions drawn from the data findings analyzed and presented in the chapter four. The study was conducted by use of secondary sources such as published reports. Data was then tallied by computing percentages of variations in response as well as describing and interpreting the data in line with the study objectives and assumptions through use of statistical package for social sciences (SPSS) version 21.0. The chapter is structured into discussions, conclusions, recommendations and areas for further research.

5.2 Summary of Findings

The study sought to establish the relationship between capital structure and firm value for companies listed at Nairobi Securities Exchange. The causal study design was employed in this research. Causal research design suggests causal linkages between variables by observing existing phenomena and then searching back through available data in order to try to identify plausible causal relationships. The study sampled 38 companies that have continuously and actively traded at the NSE for the last five years whereby data was stratified by time periods for periods between years 2009 to 2013. The study used secondary quantitative data to analyze the relationship between capital structure and firm value. Secondary data was obtained by abstraction method from
financial statements for the 38 companies to be covered as they have been published by NSE. This data covered the period 2009 to 2013.

Descriptive analysis was used to analyze the data. The study used a regression model to predict the extent to which the identified independent variables affect the dependent variable. In this case, SPSS version 18 was used in regression analysis and computation of coefficients. From the above regression model, the study found out that there were factors influencing the firm value of companies listed at the Nairobi Securities Exchange, which are capital structure and size of the firm. They influenced it positively. The study found out that the intercept was 0.645 for all years. The two independent variables that were studied (capital structure and size of the firm) explained a substantial 65.4% of firm value of companies listed at the Nairobi Securities Exchange as represented by adjusted $R^2$ (0.654). The study concludes that capital structure and size of the firm influence the firm value positively.

5.3 Conclusions

Many empirical and theoretical studies have proven that capital structure really influences firm's value but the major concern contemporarily in modem cooperate finance is how to resolve the conflicts between the managers and the owners in the control of resources and how will that control mechanism speak on the firm performance (Jensen, 1986;1989). Capital structure represents one of many instruments that can preserve corporate governance efficiency and protect its ability to create value.
The study examined the relationship between capital structure and firm value for companies listed at Nairobi Securities Exchange. The two independent variables that were studied (capital structure and size of the firm) explain a substantial 65.4% of firm value of companies listed at the Nairobi Securities Exchange as represented by adjusted $R^2 (0.654)$. This therefore means that the two independent variables contributed 65.4% of the firm value of companies listed at the Nairobi Securities Exchange.

The study established that the coefficient for capital structure was 0.736, meaning that capital structure positively and significantly influenced the firm value of companies listed at the Nairobi Securities Exchange. This is contrary to Modigliani and Miller (1958) who proposed the capital structure irrelevance theory, which states that under the assumption of a perfect capital market, the choice of bonds or stocks makes no difference to firm value; in other words, capital structure has no influence on firm value. A perfect capital market does not have corporate tax or transaction costs, and when information asymmetry is not a concern, a firm’s value is determined by its ability to create value, no matter whether the capital it uses is from internal or external sources.

However Modigliani and Miller (1963) then extended their model, and assumed that there is corporate tax and issuing debts has no risk, because the interest charges from debt can reduce corporate tax, and thus act as tax shields. The weighted average fund cost will fall as capital structure rises, and companies would thus try to finance their operations by obtaining as much capital through raising loans as they can, and the higher the proportion of debt becomes, the more they gain from tax saving, and thus the more firm value rises.
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Tianyu (2013) states that capital structure and firm value are important to corporate finance. Therefore, firms take different strategies to adjust capital structure to get a better firm value. However still the studies mostly conducted in one country setting or neglect the angle from listed companies across countries. The study encompassed 2 developed countries (Germany and Sweden) and a developing country (China) to test the impact from capital structure to firm value of period 2003-2012 with more than 1200 listed companies in Germany and Sweden and more than 1000 listed companies in China. The result showed that capital structure has a significant negative effect to firm performance in China, whereas, significant positive effect in 2 European countries before financial crisis happened in 2008. The study thus concludes that there is a strong and positive relationship between capital structure and firm value for companies listed at the Nairobi Securities Exchange.

The study also deduced that size of the firm positively influenced firm value of companies listed at the Nairobi Securities Exchange as it had positive coefficient (0.547). The relationship between size and firm value has been empirically proven to be positive by several works such as: Barclay and Smith, (1996); Friend and Lang, (1988); Barton et
(1989); Mackie-Mason, (1990); Kim et al., (1998); Al-Sakran, (2001), Hovakimian et al., (2004) as contained in Joshua (2008). The studies hold a point that larger firms tend to use debt while smaller ones are more likely to use equity, in their respective finances. Aryeetey, Baah-Nuakoh, Duggleby, Hettige and Steel (1994) on their study on the Ghanaian firms found that smaller firms have greater problems with credit than larger ones, hence more firm value.

Mehrani and Rasayyan in a study investigated on the relationship between size of the firm and firm value of companies listed in the Tehran Stock Exchange during 1995-2006 in 189 companies. The results indicated that there is a positive and significant relationship between size of the firm and firm value (Mehrani and Rasayyan, 2009). The study therefore concludes that there is a positive and significant relationship between the size of the firm and firm value for companies listed at the Nairobi Securities Exchange.

5.4 Limitations of the Study

The findings of this study are limited to companies that had traded consistently at the NSE for 5 year period that the study covered, that is, 2009 to 2013. These companies were 38. It thus, follows that the results of this study is not necessarily representative of the entire population of listed and non-listed companies.

The study is also limited to the extent of accuracy of the data set used being that the study used secondary data sources which are at times prone to manipulations to suit specific needs. However, this is overcome by the fact that the financial reports meant for public consumption are accurate as they are audited reports.
The study also faced limitations owing to the differences in classifications of assets and liquidity among the financial and non-financial firms. This rendered financial companies segment inappropriate sample for the study.

Time limit was a major constrain in this study. The scope of this research was for the five years ending and including the year 2013. It is not known whether the results would hold if a longer period would have been researched upon. Further it is not possible to tell whether the same findings will hold for the period after 2013.

Since this study used secondary data which was collected for other purposes, the quality of the data may be a weakness of this study. It is not possible to tell from this research whether the results are simply due to the nature and quality of data used or whether it is the true picture of the situation. Actually the use of the data from the various sources is based on the assumption that the data are accurately captured.

5.5 Recommendations and Suggestions

5.5.1 Policy Recommendations

From the findings and conclusions, the study recommends that in order for a firm to increase its value it must increase it growth and it size. It further recommends that other studies should be done to determine whether other factors such as debt tax shield, liquidity and growth affects firm’s value.

The study recommends that owing to the less cost incurred in obtaining short term loans than long term ones, companies should go for short term loans since despite changing the
firm’s capital structure to the worse, this will improve their value as increasing short term debts with a relatively low interest rate will lead to an increase in profit levels which will have a positive impact on firm value.

Various strategies can be employed by companies listed in Nairobi Securities Exchange in order to improve its capital structure. The companies should integrate their operations, streamline the cost structure and strengthen their balance sheet. The companies should remain on track in eliminating redundancies and driving merger synergies across their future operations.

In addition, the companies should believe that closed debt refinancing will further improve their financial position by providing operating benefits through a simplified capital structure and substantially improved liquidity.

Improvement can also be achieved by increasing the leverage ratio resulting in lower agency costs of outside equity and improved firm performance, all else held equal. However, when leverage becomes relatively high, further increases generate significant agency costs of outside debt – including higher expected costs of bankruptcy or financial distress – arising from conflicts between bondholders and shareholders.

The improvement in capital structure can also be achieved through the substantial equity injections from the companies’ main shareholder, a move that demonstrates their commitment to the companies. The company should use the equity injections and new debt issues primarily to acquire equities in global financial institutions as well as other
regional investments. The concentration of risk in the financial sector, however, remains high and the adverse impact of weakening financial markets continues to be a concern.

5.5.2 Suggestions for Further Research

The study suggests that further study can be done on the relationship between capital structure and firm value of firms not listed at the NSE. This will make it easier to do a comparison and see whether the results will be the same.

The relationship that came out in as far as firm value is concerned was that there is a positive relationship between capital structure and size of the firm and capital structure. Other studies should research to show the relationship between other aspects that affect the firm value.

Further, a study should be done on all the major companies in Kenya in order to get a large enough sample for generalization of results on the relationship between capital structure and firm value.
REFERENCES


APPENDICES

Appendix I: Sampled Companies

1. B.O.C Kenya Ltd Ord 5.00
2. British American Tobacco Kenya Ltd Ord 10.00
3. Carbacid Investments Ltd Ord 5.00
4. East African Breweries Ltd Ord 2.00
5. Mumias Sugar Co. Ltd Ord 2.00
6. Unga Group Ltd Ord 5.00
7. Eveready East Africa Ltd Ord.1.00
8. Kenya Orchards Ltd Ord 5.00
9. Athi River Mining Ord 5.00
10. Bamburi Cement Ltd Ord 5.00
11. Crown Berger Ltd Ord 5.00
12. E.A.Cables Ltd Ord 0.50
13. E.A.Portland Cement Ltd Ord 5.00
14. KenolKobil Ltd Ord 0.05
15. Total Kenya Ltd Ord 5.00
16. KenGen Ltd Ord. 2.50
17. Kenya Power & Lighting Co Ltd
18. Car and General (K) Ltd Ord 5.00
19. CMC Holdings Ltd Ord 0.50
20. Eaagads Ltd Ord 1.25
21. Express Ltd Ord 5.00
22. Kakuzi Ord.5.00
23. Kapchorua Tea Co. Ltd Ord Ord 5.00
24. Kenya Airways Ltd Ord 5.00
25. Limuru Tea Co. Ltd Ord 20.00
26. Longhorn Kenya Ltd
27. Marshalls (E.A.) Ltd Ord 5.00
28. Nation Media Group Ord. 2.50
29. Olympia Capital Holdings ltd Ord 5.00
30. Rea Vipingo Plantations Ltd Ord 5.00
31. Safaricom Ltd Ord 0.05
32. Sameer Africa Ltd Ord 5.00
33. Sasini Ltd Ord 1.00
34. Scangroup Ltd Ord 1.00
35. Standard Group Ltd Ord 5.00
36. TPS Eastern Africa (Serena) Ltd Ord 1.00
37. Trans-Century Ltd
38. Williamson Tea Kenya Ltd Ord 5.00