EFFECT OF CAPITAL STRUCTURE ON VALUE OF FIRMS LISTED IN NAIROBI SECURITIES EXCHANGE

BY

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DECLARATION

This research project is my original work and has not been submitted for examination in any other university.

Signature _____ _____

Vincent Kiptum Kiprop Date

D61/65051/2013

The research project has been submitted for examination with my approval as the University supervisor.

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DEDICATION

I dedicate this work to my parents for the role played in laying my foundation, Sister Irene for her guidance and unconditional financial support.

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ABBREVIATIONS

DPS	Dividends per Share
MM	Modigliani and Miller
NYSE	New York Stock Exchange
NSE	Nairobi Securities Exchange
OLS	Ordinary Least Square
SSE	Shangai Stock Exchange
WACC	Weighted Average Cost of Capital

ABSTRACT

The research objective was to establish the effect of capital structure on the value of firms listed at the NSE. This study used a descriptive survey design. Companies listed at the NSE formed the population of this study and were considered a representative sample of other firms in Kenya. To achieve the objective the researcher sampled 18 firms listed under the Nairobi securities exchange that exhibited the characteristics for the study using the Stratified random sampling technique. Secondary data was used in this study. Secondary data on firms listed on the NSE was collected for the financial periods of 2009, 2010, 2011, 2012 and 2013. Data was analyzed using ratio analysis, multiple regression analysis and correlation analysis. Analyzed data was presented using bar graphs, charts and tables. A confidence interval of 95% was used by the researcher as the level of significance to the hypotheses of the study.

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

A company applies its assets in its business to generate a stream of operating cash flows. After paying taxes, the firm makes distributions to the providers of its capital and retains the balance for use in its business. If company a is all equity financed, the entire after-tax operating cash flow each period accrues to the benefit of its shareholders (in the form of dividend and retained earnings). If instead the company has borrowed a portion of its capital, it must dedicate a portion of the cash flow stream to service this debt. Moreover, debt holders have the senior claim to a company's cash flow; shareholders are only entitled to the residual. The company's choice of capital structure determines the allocation of its operating cash flow each period between debt holders and shareholders. The debate over the significance of a company's choice of capital structure is unresolved. But, in essence, it concerns the impact on the total market value of the company (i.e.; the combined value of its debt and its equity) of splitting the cash flow stream into a debt component and earn equity component. Financial experts traditionally believed that increasing a company's leverage, i.e. increasing the proportion of debt in the company's capital structure, would increase value up to a point. But beyond that point, further increases in leverage would increase the company's overall cost of capital and decrease its total market value (Stulz, 1990)

Modigliani and Miller challenged that view in their famous 1958 article. They argued that the market values the earning power of a company's real assets and that if the company's

capital investment program is held fixed and certain other assumptions are satisfied, the combined market value of a company's debt and equity is independent of its choice of capital structure. Since Modigliani and Miller published their capital structure irrelevancy paper, much attention has focused on the reasonableness of these "other assumptions", which include the absence of taxes, bankruptcy costs, and other imperfections those exist in the real world. Because of these imperfections, a company's choice of capital structure undoubtedly does affect its total market value. However, the extent to which a company's choice of capital structure affects its market value is debated.

1.1.1 Capital Structure

Capital structure is the mix of debt and equity that a company uses to finance its business (Damodaran, 2001). In capital structure decisions managers are concerned with determining the best financing mix or capital structure for their firm. Capital structure has been a major issue in financial economics ever since Modigliani and Miller showed in 1958 that given frictionless markets, homogeneous expectations; the capital structure adopted by a firm is irrelevant. By relaxing the assumptions and analyzing their effects, theories seek to determine whether an optimal capital structure exists or not, and if so what could possibly be its determinants. Capital structure could have two effects; according to Desai (2007) firms of the same risk class could possibly have higher cost of capital with higher leverage. Second, capital structure may affect the valuation of the firm, with more leveraged firms, being riskier and consequently valued lower than the less leveraged firms.

If the manager of a firm has the shareholders' wealth maximization as his objective, then capital structure is an important decision, for it could lead to an optimal financing mix which maximizes the market price per share of the firm. 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 there residual claimants, bearing most of the risk and have greater control over decisions. (Roy and Minfang, 2000).

An appropriate capital structure is a critical decision for any business organization. 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).

1.1.2 Firm Value

Leland and Toft (1991) states that the value of a firm is the value of its assets plus the value of tax benefits enjoyed as a result of debt minus the value of bankruptcy cost associated with debt. Hence the value of a firm is comprised of both equity and long term debt. Equity includes paid-up share capital, share-premium, reserves and surplus or retained earnings. Igben (2004) defines paid-up capital as the portion of the called-up capital which has been paid-up by the shareholders. He also describes reserves as

amounts set aside out of profits earned by the company, which are not designed to meet any liability, contingency, commitment or diminution in value of assets known to exist at the balance sheet date. Reserves may be voluntarily created by directors or statutorily required by law. Share premium is the excess amount derived from the issue of shares at a price that is above its par value. Lastly, retain earnings are profit plough back into a company in order to create more resources for operations and invariably increase in the value of the firm. On the other hand long term debt includes long term loans, debentures and bonds (Igben ,2004).

Modigliani (1980) points out that, the value of a firm is the sum of its debt and equity and this depends only on the income stream generated by its assets. The value of the firm's equity is the discounted value of its shareholders earnings called net income. That is, the net income divided by the equity capitalization rate or expected rate of return on equity. The net income is obtained by subtracting interest on debt from net operating income. On the other hand, the value of debt is the discounted value of interest on debt.

1.1.3 Capital Structure and Firm Value

According to Leland and Pyle (1977) and Ross (1977), the debt level is positively related to the value of the firm and there is a positive effect for the ownership of the major shareholders on firm value.

Different researchers have come up with different results on how the capital structure affects the value of the firm. MM, trade off and pecking order theories have been confirmed empirically by different researchers. Investors care more for dividend than

interest payment of firms in an emerging stock market. Firms with a stable revenue stream and sound asset base facing a lowers the risk of bankruptcy.

There is a correlation implied firms with larger investment opportunities were perceived by lenders to have higher risk (bankruptcy costs). There is a positive impact of corporate taxation on a firm's debt ratio, suggesting that the corporate tax system provides a systematic incentive for higher leverage. Optimal debt structure is determined by balancing the optimal agency cost of debt and the agency cost of managerial discretion. Gearing ratio and debt positively affect share prices, while equity negatively affected share prices.

1.1.4 Nairobi Securities Exchange

The population of this study comprised of all the 62 companies listed at the Nairobi Securities Exchange in the twelve sectors as at 30th September 2014 i.e. agriculture, commercial and services, telecommunication and technology, automobiles and accessories, banking, insurance, investment, manufacturing and allied, energy and petroleum, construction and allied, investment services and growth and enterprise market segment(GEMS) respectively.(www.nse.co.ke). A sample of 18 firms was used as a representative of the entire population since it was not possible for the researcher to examine the entire population because of the magnitude of data gathered.

1.2 Research Problem

According to Leland, Pyle and Ross (1977), the debt level is positively related to the value of the firm and there is a positive effect for the ownership of the major shareholders

on firm value. Leland, Pyle and Ross (1977) propose that managers will take debt/equity ratio as a signal, by the fact that high leverage implies higher bankruptcy risk (and cost) for low quality firms. Since managers always have information advantage over the outsiders, the debt structure may be considered as a signal to the market. Ross's model suggests that the value of firms will rise with leverage, since increasing leverage increases the market's perception of value. Suppose there is no agency problem, i.e. management acts in the interest of all shareholders. The manager will maximize company value by choosing the optimal capital structure; highest possible debt ratio. High-quality firms need to signal their quality to the market, while the low-quality firms' managers will try to imitate. According to this argument, the debt level should be positively related to the value of the firm.

Akinyomi and Olagunju (2013) in ascertaining the determinants of capital structure of firms in Nigeria found that leverage had a negative relationship with firm size and tax on one hand and a positive relationship with tangibility of assets, profitability and growth on the other hand. However, only with tangibility of assets and tax that significant relationship was established. Furthermore, a significant relationship was established between tangibility of assets and size, tax and size, tangibility of assets and tax, tangibility of assets and growth, and finally between tax and growth in Nigeria.

The government and the private sector have invested heavily in creating an enabling environment for doing business in Kenya and, indeed, some companies have performed exceedingly well as a result. Several companies however are experiencing declining performance and some have even been delisted from the NSE in the last decade.

Momentous efforts to revive the ailing and liquidating companies have focused on financial restructuring. However managers and practitioners still lack adequate guidance for attaining optimal financing decisions (Kibet,Kibet,Tenei and Mutwol, 2011) yet many of the problems experienced by the companies put under statutory management were largely attributed to financing (Chebii, Kipchumba and Wasike ,2011). This situation has led to loss of investors' wealth and confidence in the stock market. Studies on the relationship between various financing decisions and performance have produced mixed results.

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.

Despite many researches having conducted on capital structure and the value of the firm, there has been no consensus on how capital structure affects the value of a firm and some studies in Kenya have been done on a sectoral basis hence the findings of such studies cannot be generalized for the entire population hence this study was intended to establish the effect of capital structure on value of firms listed in the NSE.

1.3 Research Objective

The research objective was to establish the effect of capital structure on the value of firms listed at the NSE

1.4 Value of the Study

This research sought to act as a guide for the firm managers to design their optimum capital structure to maximize the market value of their firms and minimize the related agency costs. It also sought to ensure that they maximize the shareholder's wealth since firm performance will improve as a result of the adoption of an optimum capital structure as reflected in the share prices of their respective companies.

Also shareholders will benefit from the findings of this research. This category includes both current and prospective shareholders of the companies listed at NSE in Kenya. They will be in a position to understand the implications of various debts to equity ratios on the

value of their firms and hence they will be in a position to make prudent and better financing decisions when asked to make such decisions in regard to the operations of the firms they have invested in.

The findings, conclusions and recommendations of this study will provide new knowledge, insights and provide a blue print of what needs to be researched further.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter covered theoretical framework, determinants of capital structure, and empirical studies.

2.2 Theoretical Framework

The theories of capital structure attempts to explain the capital structure, firm value and cost of capital and by extension, whether there is an optimal capital structure that maximizes firm value and minimizes overall cost of capital (WACC)

2.2.1 Modigliani-Miller Theory

Modigliani and Miller suggest that the composition of the capital structure is an irrelevant factor in the company's market valuation. They have really attacked the traditional position that companies have the optimal capital structure. In Modigliani and Miller (1958) strengthened the net operating income approach by adding a behavioral dimension to it. They were awarded the Nobel Prizes (Franco Modigliani in 1985, and Merton Miller in 1990) for their widely recognized contributions to financial theory.

In Van Horne (1998), the MM position is based on the following assumptions: the fundamental building block for the hypothesis of MM is a perfect capital market i.e. there is a free flow of information in the market that can easily be accessed by investors and that there are no costs involved in obtaining the information, securities issued and traded in the market are infinitely divisible, no transaction costs such as flotation costs,

underpricing major issues, brokers, transfer taxes, etc., all participants in the market are rational that they are trying to maximize profits or minimize their losses, all investors have homogeneous expectations about future earnings of all firms in the market, the company can be classified into the class `equivalent return ' such that firms in each class have exactly the same profile of business risk, a company can be taken as perfect substitutes for one another and all companies in a particular class have a common level of capitalization rate and lastly there is no corporate tax.

Modigliani and Miller (1958) have stated the arbitration process to support their position that the value of the company with leverage cannot be higher than the value of a company with no leverage. On the other hand, the value of a company with no leverage cannot be higher than the value of a company with leverage. The substance of this argument is that investors can replicate any combination of capital structure by substituting the company leverage with the `home-made ' leverage. Home-made leverage refers to individual loans prepared by investors in the equivalent ratio as the company with leverage. Therefore, leverage of company is not something that is distinctive that investors cannot carry out it alone. Therefore, the leverage in the capital structure has no importance in a perfect capital market. It implies that, firms that are identical in all respects, except for their capital structure, must have the equal value. In the event that they have a different valuation, the arbitration process will initiate. This will maintain to occur until the two companies command the same valuations. At this position, the market reaches equilibrium or stability.

2.2.2 Pecking Order Theory

According to this hypothesis, the company follows a specific order of preferences in financing decisions (Myers, 1984; Myers and Majluf, 1984). The most popular mode of financing is retained earnings. The advantage of financing through retained earnings is that it has no related flotation costs. Additionally, retained earnings do not require external supervision by the provider of capital. When the internal accruals are not adequate to finance the proposed investment, then the company resorts to debt financing. The issue of debt does not result in dilution of equity capital and has no implications on stock ownership. The next way of financing in the hierarchy is the issuance of preference capital. This was followed by a variety of hybrid instruments like convertible instruments. The least preferred mode of financing is issue of equity (Donaldson, 1961; Myers, 1984; Myers and Majluf, 1984). This is only reliable as a last option. Pecking order theory is a behavioral approach to capital structure. This is based on the principle that financing decisions are made in a way that causes the least difficulty to the management.

2.2.3 Trade-off Theory

The major benefit of debt financing is that it provides a tax shelter that increases the available remaining to be distributed to shareholders of equity. Nevertheless, the main disadvantage related with debt financing is the risk of bankruptcy (Warner, 1977; Haugen and Senbet, 1978, Andrade and Kaplan, 1998). Increased levels of leverage, while resulting in the availability of a larger tax shields also necessitate a higher cost line of financial distress. The company is trying to trade-off between the size of the tax shelter and financial distress costs. Higher probability of financial distress is in terms of start-ups

and high growth businesses. The company is exposed to the risk of uncertain cash flow streams and low tangible asset base. Therefore companies should not place high confidence on the debt in their capital structure. On the other hand, firms with a stable revenue stream and sound asset base facing a lower risk of bankruptcy. This company can apply a moderately higher level of leverage in their capital structure.

2.3 Determinants of Capital Structure

2.3.1 Collateral Value of Assets

Most capital structure theories argue that the type of assets owned by a firm in some way affects its capital structure choice. Scot (1976) suggests that, by selling secured debt, firms increase the value of their equity by expropriating wealth from their existing unsecured creditors. Arguments put forth by Myers and Majluf (1984) also suggest that firms may find it advantageous to sell secured debt. Their model demonstrates that there may be costs associated with issuing securities about which the firm's managers have better information than outside shareholders. Issuing debt secured by property with known values avoids these costs. For this reason, firms with assets that can be used as collateral may be expected to issue more debt to take advantage of this opportunity.

2.3.2 Non-Debt Tax Shields

Tax shields lower the effective marginal tax rate and interest deductions. When tax shields are exhausted (with loss carry forwards) or with a high probability of facing a zero tax rate, a with firm high tax shield is less likely to finance with debt (DeA*n*gelo and Masulis, 1981)

2.3.3 Growth

It is important to note that the dividend payout of the firm could affect choice of capital in financing growth. Generally, firms with low dividends payout are able to retain more profit for investments. Such firms would therefore depend more on internally generated funds and less on debt financing. On the other hand, firms with high dividend payout are expected to rely more on debt in order to finance their growth opportunities (Titman, 1988)

2.3.4 Size

Size has been viewed as a determinant of a firm's capital structure. Larger firms are more diversified and hence have lower variance of earnings, making them able to tolerate high debt ratios. Smaller firm, may find it relatively more costly to resolve information asymmetries with lenders, thus may present lower debt ratio. Lenders to larger firms are more likely to get repaid than lenders to smaller firms, reducing the agency costs associated with debt; therefore larger firms will have larger debts. (Donaldson, 1961)

2.3.5 Firm risk

One variable that affects the exposure to firm risk is the firm's operating risk, in that the more volatile the firm's earnings stream, the greater the chance of the firm defaulting and being exposed to such costs. According to Johnson (1997), firms with more volatile earnings growth may experience more situations in which cash flows are too low for debt service. Kim and Sorensen (1986) also observed that firms with a high degree of business risk have less capacity to sustain financial risks and thus use less debt.

2.3.6 Profitability

Myers(1984) that suggests that firms prefer raising capital, first from retained earnings, second from debt, and third from issuing new equity. He suggests that this behavior may be due to the costs of issuing new equity. These can be the costs that arise because of asymmetric information, or they can be transaction costs. In either case, the past profitability of a firm, and hence the amount of earnings available to be retained, should be an important determinant of its current capital structure.

2.4 Empirical Studies

Jiang and Jiranyakul (2013) in comparing the decision on dividend payout of listed firms in New York Stock Exchange (NYSE) and Shanghai Stock Exchange (SSE), carried out a study using firm-level panel data from the two exchanges covering the period from 1992 – 2008. The study chose the two stock markets because NYSE is a well-developed stock market while SSE is an emerging one. The empirical study performed panel regression estimates for 378 listed firms in SSE and 537 listed firms in NYSE and from the fixed effect estimates found that the factors that explained dividend payout of firms in NYSE poorly explained dividend payout of firms in SSE. The evidence from the study supports previous literature that there is a difference in dividend policy of firms between advanced and emerging stock markets. The study implied that investors cared more for dividend than interest payment of firms in an emerging stock market.

Pandey (2001) examined the determinants of capital structure of Malaysian companies using data from 1984 to 1999. He classified data into four sub-periods that corresponded

to different stages of the Malaysian capital market. Debt was decomposed into three categories: short-term, long-term, and total debt. Both book value and market value debt ratios were calculated. The results of pooled ordinary least square (OLS) regressions showed that growth variable had positive significant influence on all types of book and market value debt ratios. This finding supports both trade-off and pecking order theories. He further explained that Malaysian firms have higher short-term than long-term debt ratios. Thus, it seems that they employ short-term debt to finance their growth.

Drobetz and Fix (2003) tested leverage predictions of the trade-off and pecking order models using Swiss data. They found that firms with more investment opportunities applied less leverage, which supported both the trade-off model and a complex version of the pecking order model. They found that among all proxy variables, the strongest and most reliable relationship was between investment opportunities and leverage. They explained that companies with high market-to-book ratios had significantly lower leverage than companies with low market-to-book ratios. Their result was consistent with both the trade-off theory and the extended version of the pecking order theory.

According to Pandey (2001), the multivariate-pooled OLS regression results showed that the coefficient of investment opportunity (market-to-book value ratio) variable was insignificant throughout. This contradicted the pecking order theory of Myers (1977, 1984) that suggested that companies with high market-to-book value would have lower long-term debt ratios because of the problem of under-investment. However, his correlation matrix showed that investment opportunity variable had inverse relation with book and market value short-term debt and long-term debt ratios. He explained that

correlation implied firms with larger investment opportunities were perceived by lenders to have higher risk (bankruptcy costs).

Sogorb-Mira and López-Gracia (2003) tested leverage predictions of the trade-off and pecking order models using Spanish data. They found that firms with more investment opportunities applied less leverage, which supported both the trade-off model and as a complex version of the pecking order model.

O.Brienet. al (2013) conducted a study to determine how capital structure influences diversification performance on Japanese firms from the transaction cost economics (TCE) perspective. The analysis was implemented on all the firms listed in the Pacific-Basin Capital Markets (PACAP) Japan database that had market value information available from 1991 to 2001 with a book value of equity of more than 3 billion Yen. They analyzed data using the Hausman-Taylor instrumental variables (IV) regression model. Their empirical tests support TCE by showing that firms accrue higher returns from leveraging their resources and capabilities into new markets when managers are shielded from the rigors of the market governance of debt, particularly bond debt. The study also found that the detrimental effects of debt are exacerbated for R&D intensive firms and that debt is not necessarily harmful to firms that are either contracting or managing a stable portfolio of markets.

Pfaffermayr et. Al (2013) conducted a study to analyze the relationship between corporate taxation, firm age and debt using a cross-section of around 405,000 firms from 35 European countries and 127 NACE three-digit industries compiled by the Bureau van

Dijks AMADEUS database between 1999 and 2004. The empirical study applied regression analysis to determine the effects of corporate taxation and firm age on debt financing, and on how the influence of corporate taxation changes over the life-time of a firm. They found a positive impact of corporate taxation on a firm's debt ratio, suggesting that the corporate tax system provides a systematic incentive for higher leverage.

Leland, Pyle and Ross (1977) propose that managers will take debt/equity ratio as a signal, by the fact that high leverage implies higher bankruptcy risk (and cost) for low quality firms. Since managers always have information advantage over the outsiders, the debt structure may be considered as a signal to the market. Ross's model suggests that the value of firms will rise with leverage, since increasing leverage increases the market's perception of value. According to this argument, the debt level should be positively related to the value of the firm.

Stulz (1990) argues that debt can have both a positive and negative effect on the value of the firm (even in the absence of corporate taxes and bankruptcy cost). He develops a model in which debt financing can both alleviate the overinvestment problem and the underinvestment problem. Stulz (1990) assumes that managers have no equity ownership in the firm and receive utility by managing a larger firm. The "power of manger" may motivate the self-interested managers to undertake negative present value project. To solve this problem, shareholders force firms to issue debt. But if firms are forced to pay out funds, they may have to forgo positive present value projects. Therefore, the optimal

debt structure is determined by balancing the optimal agency cost of debt and the agency cost of managerial discretion.

Ibrahim (2009) examined the impact of capital structure choice on firm performance in Egypt, using a multiple regression analysis in estimating the relationship between leverage level and firm's performance, the study cover between 1997 and 2005. Three accounting based measures of financial performance (return on Equity, return on Assets and gross profit margin) were used. The result revealed that capital structure choice decision in general, has a weak-to-no impact on firm's performance.

Akinyomi and Olagunju (2013) in ascertaining the determinants of capital structure of firms in Nigeria employed a descriptive survey research design with the population comprising of 86 manufacturing firms listed in the Nigerian Stock Exchange, out of which a sample size of 24 was obtained. The study analyzed the data using correlation coefficient and regression analysis pertaining to a ten year-period of 2003-2012 that amounted to 240 firm-year observations. The results of the study revealed that leverage had a negative relationship with firm size and tax on one hand and a positive relationship with tangibility of assets, profitability and growth on the other hand. However, only with tangibility of assets and tax that significant relationship was established. Furthermore, a significant relationship was established between tangibility of assets and size, tax and size, tangibility of assets and tax, tangibility of assets and growth, and finally between tax and growth in Nigeria.

Kibetet.al (2013) conducted this study to investigate the relationship between capital structure and share prices in the Nairobi Securities Exchange (NSE). The study assessed effect of debt, equity and gearing ratio on share price. The study used panel data pertaining to energy sector over the period 2006-2011 and employed a multiple regression statistical technique to analyze the data. Firstly, they used descriptive statistics to check the features of variables and then Pearson's coefficient of correlation to check the causal relationship between the variables. Third multiple regressions was used to test the collective relationship as elaborated in hypotheses. The results indicated that the variables debt, equity and gearing ratio are significant determinants of share prices for the sector under consideration. Further, gearing ratio and debt were found to positively affecting share prices, while equity negatively affected share prices.

Musiegaet.al (2013) in examining the relationship between a firm's capital structure and performance studied a sample of 30 non-financial firms listed on NSE over a 5 year period of 2007-2011. In the study the analysis was performed using both descriptive statistics and inferential statistics by applying linear regression analysis. The study used five performance measures: return on asset (ROA), return on equity (ROE), earning per share (EPS), and dividend payout (DPO), market price to book ratio of stock as dependent variables and three capital structure measures: short term debt to asset ratio (STDA), long term debt to asset ratio (LTDA) and total debt to asset ratio (TDA) as independent variables. Size of the firm taken as natural logarithm of sales was considered as a moderating variable. The results indicated a significant positive correlation between total assets (TA) of a firm and capital structure proxies, indicating that long term debts

were utilized by large firms that had large assets which could be used to act as collateral for securing the loans. Thus as per the study, firms on NSE appeared to use less debt in their capital structure making many firms pay less interest thereby not increasing the risks the firm may be exposed to, as debt tends to reduce performance.

Kamere (1987) did a research on some factors that influence capital structure of public companies in Kenya. From his research, he concluded that profitability was a very important and major factor that influenced capital structure decisions in firms in NSE. His observation was that those companies whose profits were very high borrowed very little, that is; they did not borrow so much since some of the profit would be ploughed back into the business. He further noted that those with small profit would not be able to plough back any substantial amount into the business; therefore, they were forced to seek additional funds from outside sources. In fact, this result concurred with the pecking order theory which argues that in the presence of asymmetric information, a firm would prefer internal finance over the other sources of finance, but would issue debt if internal funds were exhausted. However, Omondi (1996) in his research on capital structure in Kenya came up with a conclusion that totally contradicted the Pecking order theory. In his research, he observed that those firms in NSE and with high returns on investments used relatively high debt. That is, those firms which recorded high profit were also found to have borrowed much.

Musilo (2005) carried out a research on capital structure choices, a survey of industrial firms in Kenya. His objective was to find out the factors that motivate management of industrial firms in choosing their capital structure. The research found out that industrial

firms are more likely to follow a financing hierarchy than to maintain a target-debt to equity ratio, and that the models based on corporate and personal taxes, bankruptcy, and other leverage related cost are not as useful in determining the financing mix as are the models that suggest that new financing reveals aspects of the firm's marginal asset performance. He further added that, the importance managers attach to specific capital structure theories is not related to managerial perceptions of market efficiency.

Kaumbuthu (2011) carried out a study to determine the relationship between capital structure and return on equity for industrial and allied sectors in the Nairobi Securities Exchange during the period 2004 to 2008. Capital structure was proxied by debt equity ratio while performance focused on return on equity. The study applied regression analysis and found a negative relationship between debt equity ratio and ROE. The study focused on only one sector of the companies listed in Nairobi Securities Exchange and paid attention to only one aspect of financing decisions. The results of the study therefore may not be generalized to the other sectors.

In an effort to validate MM theory in Kenya, Maina and Kondongo (2013) investigated the effect of debt-equity ratio performance of firms listed at the Nairobi Securities exchange. A census of all firms listed at the Nairobi Security Exchange from year 2002-2011 was the sample. The study found a significant negative relationship between capital structure (DE) and all measures of performance. This results collaborated MM theory that, indeed capital structure is relevant in determining the performance of a firm. The

study further found that that firms listed at NSE used more short-term debts than long term.

2.5 Summary of Literature Review

Different researchers have come up with different results on how the capital structure affects the value of the firm. MM, trade off and pecking order theories have been confirmed empirically by different researchers. Investors care more for dividend than interest payment of firms in an emerging stock market. Firms with a stable revenue stream and sound asset base facing a lowers the risk of bankruptcy.

There is a correlation implied firms with larger investment opportunities were perceived by lenders to have higher risk (bankruptcy costs). There is a positive impact of corporate taxation on a firm's debt ratio, suggesting that the corporate tax system provides a systematic incentive for higher leverage. Optimal debt structure is determined by balancing the optimal agency cost of debt and the agency cost of managerial discretion. Gearing ratio and debt positively affect share prices, while equity negatively affected share prices.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter covered research design, target population, Sampling, data collection, data analysis, data presentation and the analytical model.

3.2 Research Design

This study used a descriptive survey design since the main objective of the study was to establish the effect of capital structure on the value of firms listed at the NSE and thus quantitative data was collected and analyzed so as to uncover the relationship between the two variables (Kothari, 1990).

3.3 Target Population

The unit of analysis was the firm. The population of this study comprised of all the 62 companies listed at the Nairobi Securities Exchange in the twelve sectors as at 30th September 2014i.e. agriculture, commercial and services, telecommunication and technology, automobiles and accessories, banking, insurance, investment, manufacturing and allied, energy and petroleum, construction and allied, investment services and growth and enterprise market segment(GEMS) respectively.(www.nse.co.ke).

The above was chosen because their financial statements, both the statement of the Financial Position and the statement of Comprehensive Income were readily available at the NSE and the Capital Markets Authority (CMA) libraries. The availability of the above statements minimized time and money that could be used if primary data for the above research could have been employed. Further the above statements were not subject

to distortion and alteration as compared to primary data that is highly subjective in nature hence the results of this research are highly reliable and valid.

Hence companies listed at the NSE formed the population of this study and were considered a representative sample of other firms in Kenya. This is in line with Yabei and Izumida (2005), who was contend that most studies use data from large enterprises, particularly listed companies, due to enormous difficulties in collecting data for smaller enterprises.

3.4 Sampling

Stratified random sampling was used since it ensured that the desired representation from the 12 sectors in the population was achieved and the researcher was able to get information about the entire population. This was because it was not possible to examine all the 62 firms listed at the NSE thus sufficiently accurate results were obtained with the help of this sampling technique (Mugenda, 1999). A sample of 18 firms was used for this study to be a representative of the entire population so as to uncover the effect of capital structure on the value of firms listed at the NSE. The 18 firms will be chosen randomly from 12 sectors using the formula;

$$ni = \frac{n}{N}(Ni)$$

Where **ni** is the number of firms selected from each sector,**n** is the strata sum, **Ni** is the sample size and **N** is the total population. The two firms in the investment services and Growth Enterprise Market Segment sectors respectively were excluded by the researcher

because it was not possible to get adequate data about their financials and thus isolated fully by the researcher from analysis.

3.5 Data Collection

Secondary data on firms listed on the NSE was collected for the financial periods of 2009, 2010, 2011, 2012 and 2013. Secondary data was collected from different sources including audited published financial statements of firms listed on the NSE as well as from the NSE Hand Books were readily available at the NSE and the Capital Markets Authority (CMA) libraries.

3.6 Data Analysis

Data was analyzed using ratio analysis, multiple regression analysis and correlation analysis. The following ratios were computed; debt to equity ratio, proprietory ratio, debt to total assets ratio and the retention ratio respectively (Kieso et al, 1996). A multiple regression was run to determine the effect of capital structure on the firm's value using Microsoft Excel. Further correlation analysis was computed to determine the strength of the relationship between the capital structure and the value of a firm.

3.7 Data Presentation

Analyzed data was presented using bar graphs, charts and tables. This data presentation was intended to provide a visual view of the relationship between the capital structures adopted by firms listed at the NSE and their respective values.

3.8 Analytical Model

The model that was regressed in this study was presented in a relational form as follows:

Firm value = f (capital structure)

Thus Firm value = f (debt to equity ratio, proprietory ratio, debt to total assets ratio, and the retention rate hence;

FV = a+b1x1+b2x2+b3x3 +b4x4 +e; where

FV=the value of the firm

a=Constant

X1= Debt to Equity ratio

X2= Proprietory ratio

X3= Debt to total assets ratio

X4=Retention rate

e= Error term

a, b1,b2,b3 and b4 are parameters to be estimated. The apriori expectation is that a≠0, b1≠0, b2≠0, b3≠0, and b4≠0

$$\text{Debt to equity ratio} = \frac{\text{Total liabilities}}{\text{Total stakeholder's equity}}$$

$$\text{Proprietary ratio} = \frac{\text{Total Equity}}{\text{Total Assets}} \times 100$$

Debt to Total assets Ratio = Total Liabilities

$$\frac{\text{Total Liabilities}}{\text{Total Assets}} \times 100$$

Retention Rate = 1- dividends payout ratio

Dividends payout ratio = Dividends per share

$$\frac{\text{Dividends per share}}{\text{Earnings per share}} \times 100$$

Earnings per share = Net Income - Preference dividends

$$\frac{\text{Net Income - Preference dividends}}{\text{No of ordinary share outstanding}}$$

DPS = Total ordinary dividends

$$\frac{\text{Total ordinary dividends}}{\text{No of ordinary share outstanding}}$$

Value of the firm (FV) = Market Price per Share

HO; There is no relationship between capital structure and value of firms listed at the NSE

HA; There is a positive between relationship capital structure and value of firms listed at the NSE

A F-test will be carried out to test the above hypotheses. A confidence interval of 95% was be used.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

In this chapter, the results of the researcher have been presented, analyzed and discussed. The main objective of this study was establishing the effect of capital structure on the value of firms listed at the NSE. Secondary data was collected for eighteen firms listed at the NSE which were selected randomly to be a representative sample of the sixty two firms in total listed at the NSE. The data was collected for the financial periods of 2009, 2010, 2011, 2012 and 2013 respectively. Data was collected from different sources including audited published financial statements of firms listed on the NSE as well as from the NSE Hand Books collected from the NSE offices. The firms listed under investment services and Growth Enterprise Market Segment sectors respectively were excluded by the researcher because it was not possible to get adequate data about their financials and thus isolated fully by the researcher from analysis.

4.2 Descriptive Statistics

MEASURE	THE VALUE OF THE FIRM	DEBT TO EQUITY RATIO	PROPRIETORY RATIO	DEBT TO TOTAL ASSETS RATIO	RETENTION RATE
Mean	44.68	1.87	0.69	0.56	0.71
Median	40.15	0.99	0.60	0.45	0.70
Standard Deviation	51.51	2.05	0.51	0.29	0.24
Minimum	4.98	0.27	0.14	0.22	(0.04)
Maximum	223.60	6.25	2.09	1.17	1.00

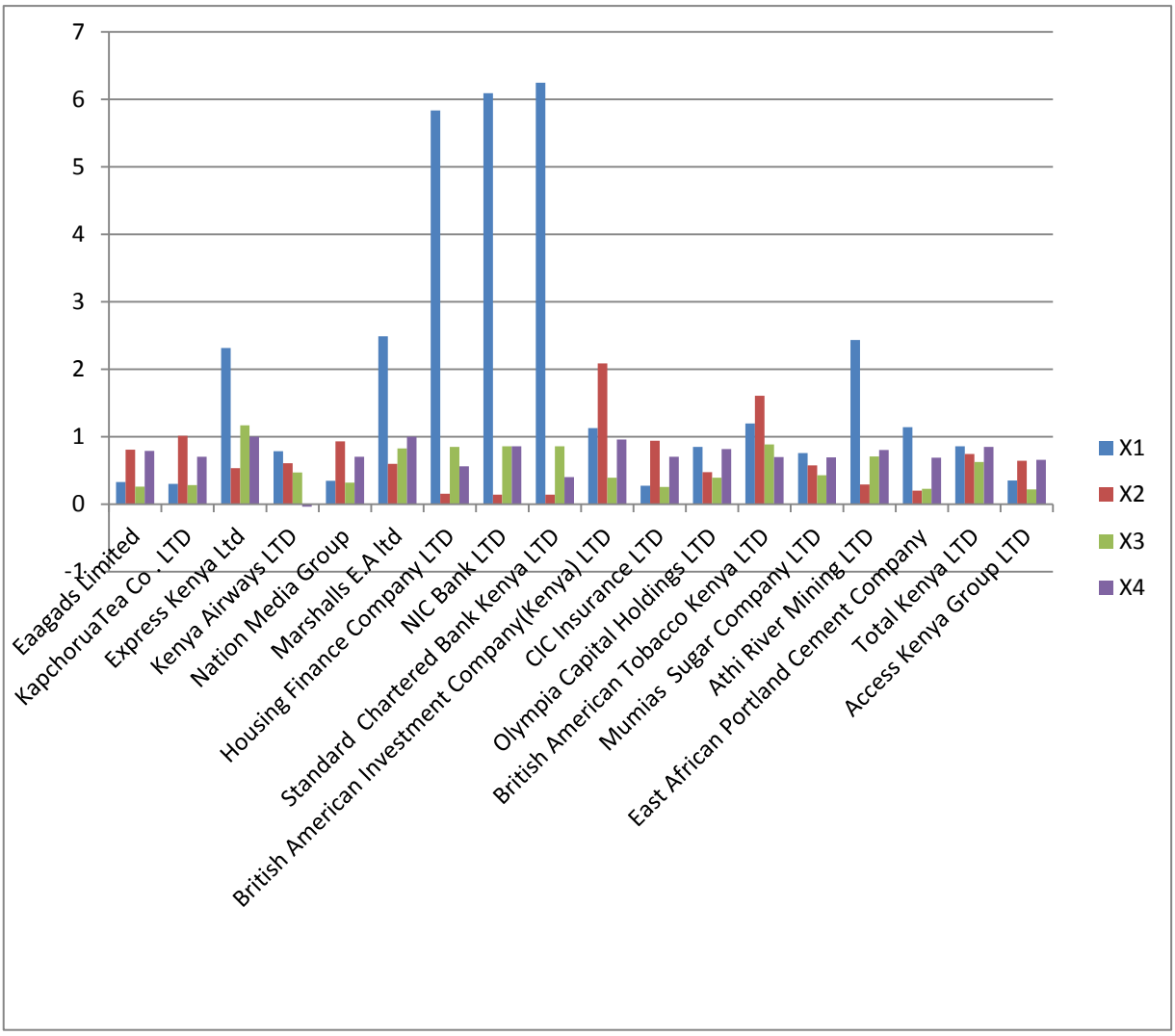
Table (i)

Based on the table above for the five year period share prices for firms listed at the NSE ranged between ksh 4.98 and ksh 223.60 and the average price for the same period was ksh 44.68. This implies that share prices for firms listed at the NSE were not normally distributed and this might have been caused by demand and supply of such shares as influenced by factors such as earnings of such companies and their reputations as reflected in the frequency at which they make profits and declare dividends to their shareholders. The debt to equity ratio indicate that some firms are highly levered while others are less levered and that is why the median is lower than the mean and the highest of the ratios among the firms listed at the NSE. The proprietory and the debt to total assets ratios among firms listed at the NSE are relatively same. Lastly on the retention rates it is evidenced that some firms do not pay dividends to their shareholders but rather reinvest the same in other profit generating activities while others give out to their shareholders all their distributable net incomes.

4.3 Data Presentation

4.3.1 Comparison of ratios

Figure (i)



Where X1= Debt to Equity Ratio

X2= Proprietory Ratio

X3= Debt to Total Assets Ratio

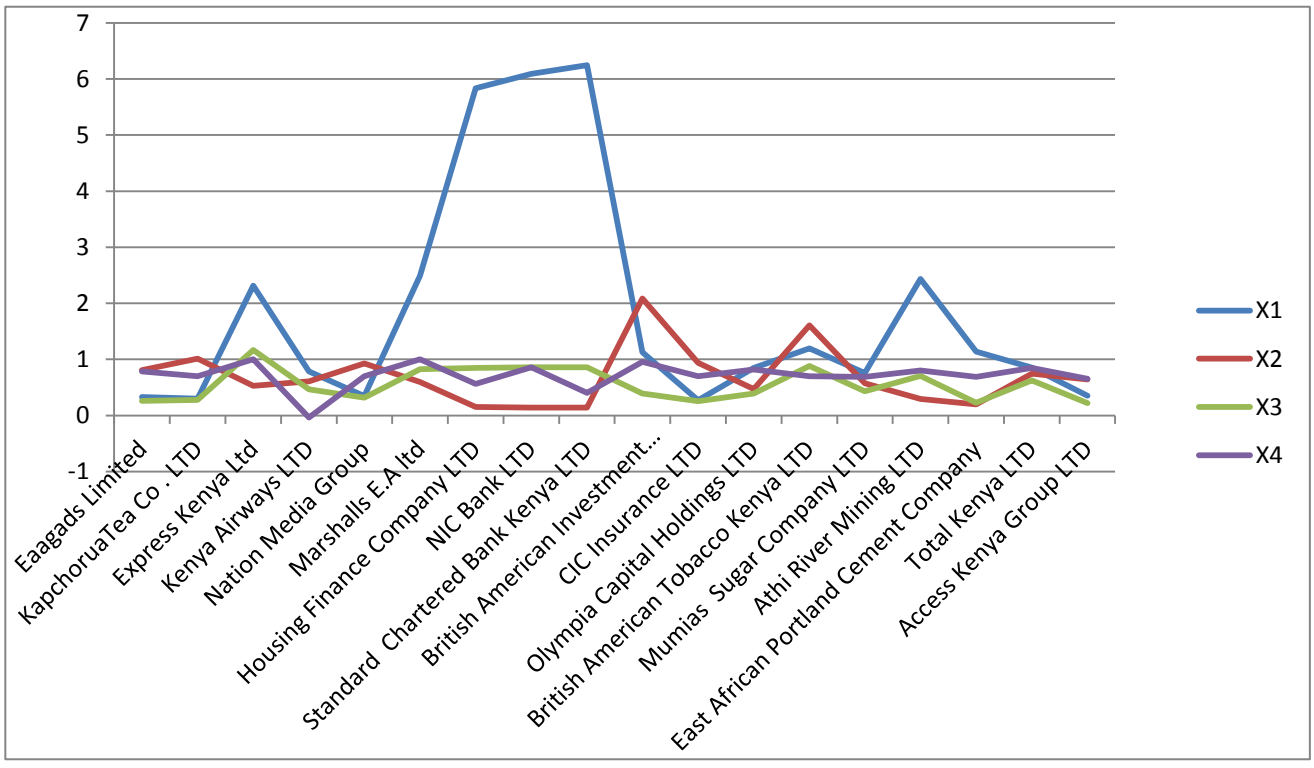
X4= Retention Rate

Based on the above figure majority of the firms listed at the NSE have higher debt to equity ratios than debt to total assets ratios, proprietory ratios and retention rates. This implies that they are levered in the sense that they finance their assets and operations through debt more than equity. The above observation may have been motivated with the ease of access to loanable funds as compared to both private and non-listed companies because lenders view them as good credits rather than as having both elements of moral hazard and adverse selection. On average firms listed at the NSE have relatively stable proprietory and debt to total assets ratios because they are determined by the level of gearing embraced by them. The researcher was in apposition also to find that few firms pay all their net incomes to their shareholders and thus majority have high retention rates. Lastly firms in the banking sector emerged to be highly geared, followed by those in the construction and allied sector and commercial and services sector respectively. This could be attributed to the nature of their operations in the sense that they require a lot of liquid funds o sustain their operations.

4.3.2 Behaviour of Ratios

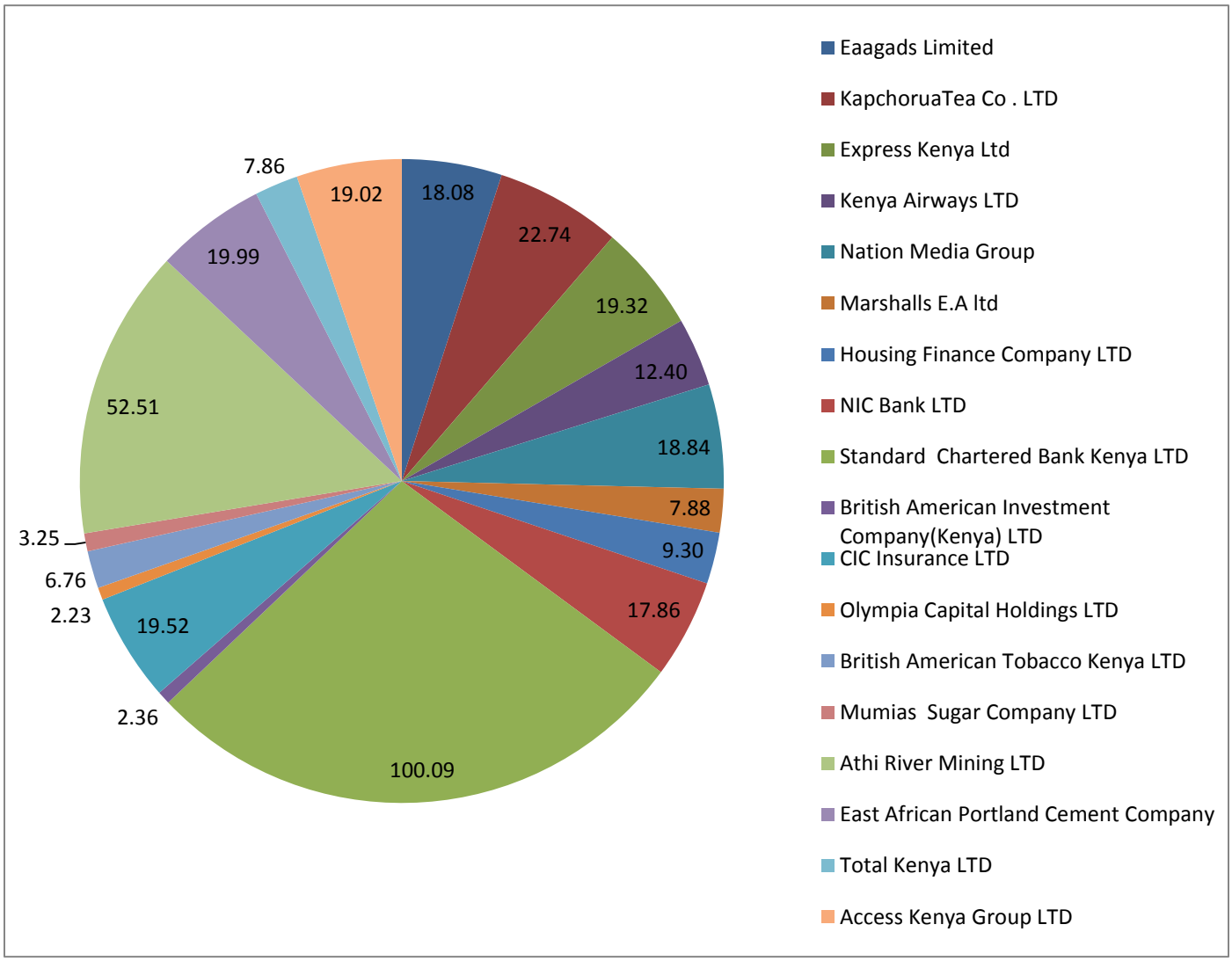
From the figure below, debt to equity ratios for the firms listed at the NSE for the five year period was found to be the highly volatile ratio out of the four ratios concerned by the researcher for this analysis. The above observation could be largely attributed to the growth and expansion of the operations of firms listed at the NSE which lead to more leverage among these firms. The proprietory ratios of both the banking and construction and allied sectors also fluctuated above the NSE average over time. This was as a result of them floating new shares in an effort to reduce finance costs related with debt and for the shareholders of such companies to retain control of their organizations. Both the retention and debt to total assets ratios were average for the firms listed at the NSE.

Figure (ii)



4.3.3 Firm Value Proportions

Figure (iii)



Standard Chartered Bank Ltd, Athi River Mining Ltd and East African Portland Cement Ltd leads in values in relation to the total value of all the 18 firms considered in the above analysis by the researcher. Olympia Kenya Ltd is the last followed by Britam and Mumias Sugar Company Ltd in that order. This implies that the share prices of shares of Standard Chartered Bank Ltd have been the highest while those of Mumias Sugar Company Ltd have been the lowest among the 18 selected NSE companies over the entire 5 year period. This implies that the shares of Standard Chartered Bank Ltd, Athi River Mining Ltd and East African Portland Cement Ltd were the most attractive to investors unlike the shares of Olympia Kenya Ltd, Britam and Mumias Sugar CompanyLtd respectively.

4.4 Correlation Analysis

Table (ii); Appendix 2

The researcher computed the coefficient of correlation for the above model with two main objectives in mind; to measure the strength of the relationship between capital structure and the value of firms listed at the NSE and to know the direction of the relationship between the two variables above. He found that r=0.56. This implies that that there is a strong positive relationship between capital structure and the value of firms listed at the NSE.

4.5 Regression Analysis and Hypotheses Testing

4.5.1 Coefficient of Determination

Table (iii)

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.561211059
R Square	0.314957852
Adjusted R Square	0.104175653
Standard Error	48.75746246
Observations	18

ANOVA

	Df	*SS*	*MS*	*F*	*Significance F*
Regression	4	14208.90762	3552.227	1.494234	0.260655607
Residual	13	30904.7719	2377.29		
Total	17	45113.67951			

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	71.86181765	44.09200749	1.629815	0.127119
X Variable 1	11.91670493	9.32528274	1.277892	0.223635
X Variable 2	-12.42021067	28.38367232	-0.43758	0.668871
X Variable 3	-17.17117991	58.44522284	-0.2938	0.773549
X Variable 4	-43.96572983	52.57723335	-0.83621	0.418141

From the above table the researcher arrived at the following regression model;

Y= 71.86+11.92X1-12.42X2-17.17X3-43.97X4

Where Y= The value of the firm

X1= Debt to Equity Ratio

X2= Proprietory Ratio

X3= Debt to Total Assets Ratio

X4= Retention Rate and

11.92,-12.42,-17.17 and -43.97 are the regression coefficients respectively for the above ratios.

This means that the debt to equity ratios of firms listed at the NSE have a high explanatory power on the values of those firms. The same is followed by their proprietory, debt to total assets and retention rates respectively in a descending order. The coefficient of determination (R2) for this model is 31.50% which is a low R2 as compared to more reliable regressions which by the rule of thumb usually have a R2 of 80% and above. This further shows that the data points are scattered along the regression line. It indicates that about 31.50% of the variations in the value of the firm among firms listed at the NSE are explained by variations in their debt to equity ,proprietory, debt to total assets and retention ratios whereas 68.5% are explained by other independent variables. This means that the researcher might have left out some major independent variables in his analysis e.g. times interest earned ratio, CEO,s experience of firms listed at the NSE, firms profitability and firm's reputation respectively.

4.5.2 F- Test Statistics

Statistical tests were carried out to find out whether capital structure affects the value of firms listed at the NSE. The test followed the following steps;

HO; There is no relationship between capital structure and value of firms listed at the NSE

HA; There is a positive relationship between capital structure and value of firms listed at the NSE

A confidence interval of 95% was selected. The researcher chose to undertake a to-tail test. A statistical decision is made by rejecting the null hypothesis if the test statistic lies in the critical region; or fails to reject H0. The computed value of F was arrived using the formula below;

$$F = \frac{r2/k}{(1-r)/(n-k-1)}$$

Where k=degree of freedom for the numerator i.e. 4

n-k-1= degree of freedom for the denominator i.e 18-4-1

Hence the computed F= 1.49 and the table value = 1.13.

Hence since the computed value was greater than the table value the researcher rejected the null hypothesis and therefore concluded that there is a positive relationship between capital structure and value of firms listed at the NSE.

4.6 Discussion of Research Findings

The study had the specific objective of establishing the effect of capital structure on value of firms listed in Nairobi Securities Exchange. Based on the above analysis the researcher concluded that majority of the firms listed at the NSE have higher debt to equity ratios than debt to total assets ratios, proprietory ratios and retention rates. This implies that they are levered in the sense that they finance their assets and operations through debt more than equity. The above observation may have been motivated with the ease of access to loanable funds as compared to both private and non-listed companies because lenders view them as good credits rather than as having both elements of moral hazard and adverse selection.

From the above analysis the researcher found that debt to equity ratios for the firms listed at the NSE for the five year period were the highly volatile ratios out of the four ratios concerned by the researcher for this analysis. The above observation could be largely attributed to the growth and expansion of the operations of firms listed at the NSE which lead to more leverage among those firms. The share prices of shares of Standard Chartered Bank Ltd have been the highest while those of Mumias Sugar Company Ltd have been the lowest among the 18 selected NSE companies over the entire 5 year period. This implies that the shares of Standard Chartered Bank Ltd, Athi River Mining Ltd and East African Portland Cement Ltd were the most attractive to investors unlike the shares of Olympia Kenya Ltd, Britam and Mumias Sugar Company Ltd respectively.

The researcher also concluded that 31.50% of the variations in the value of the firm among firms listed at the NSE are explained by variations in their debt to equity

,proprietory, debt to total assets and retention ratios whereas 68.50% are explained by other independent variables and hence there is a strong positive relationship between capital structure and the value of firms listed at the NSE.

Stulz (1990) found that debt can have both a positive and negative effect on the value of the firm (even in the absence of corporate taxes and bankruptcy cost). He develops a model in which debt financing can both alleviate the overinvestment problem and the underinvestment problem. Stulz (1990) assumes that managers have no equity ownership in the firm and receive utility by managing a larger firm. The "power of manger" may motivate the self-interested managers to undertake negative present value project. To solve this problem, shareholders force firms to issue debt. But if firms are forced to pay out funds, they may have to forgo positive present value projects. Therefore, the optimal debt structure is determined by balancing the optimal agency cost of debt and the agency cost of managerial discretion. The researcher does not agree with the above findings since according to his analysis there is a strong positive relationship between capital structure and the value of firms listed at the NSE.

Capital structure could have two effects; according to Desai (2007) firms of the same risk class could possibly have higher cost of capital with higher leverage. Second, capital structure may affect the valuation of the firm, with more leveraged firms, being riskier and consequently valued lower than the less leveraged firms. If the manager of a firm has the shareholders' wealth maximization as his objective, then capital structure is an important decision, for it could lead to an optimal financing mix which maximizes the market price per share of the firm. Also the above analysis does not confirm the above

findings because according to the researcher debt to equity ratio proved to be having a higher explanatory power as compared to proprietory, debt to total assets and retention ratios respectively hence leverage is positively related to the value of firms listed at the NSE.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides the summary of the findings from chapter four, and also provides the conclusion of the study based on the objectives of the study. The conclusions and recommendations drawn are in quest of addressing the research objective of the study for establishing the effect of capital structure on the value of firms listed at the NSE.

5.2 Summary of Findings

The topic that the researcher was dealing with was the effect of capital structure on the value of firms listed at the NSE. The research objective was to establish the effect of capital structure on the value of firms listed at the NSE. The researcher had the following research question in mind when conducting his research; whether there is a relationship between capital structure and the value of firms listed at the NSE and if there exist a relationship then what is the strength of such a relationship. This study used a descriptive survey design. Companies listed at the NSE formed the population of this study and were considered a representative sample of other firms in Kenya. To achieve the objective the researcher sampled 18 firms listed under the Nairobi securities exchange that exhibited the characteristics for the study using the Stratified random sampling technique.

Secondary data was used in this study. Secondary data on firms listed on the NSE was collected for the financial periods of 2009, 2010, 2011, 2012 and 2013. Secondary data was collected from different sources including audited published financial statements of firms listed on the NSE as well as from the NSE Hand Books were readily available at the NSE and the Capital Markets Authority (CMA) libraries. Data was analyzed using ratio analysis, multiple regression analysis and correlation analysis. The following ratios were computed; debt to equity ratio, proprietory ratio, debt to total assets ratio and the retention ratio respectively. A multiple regression was run to determine the effect of capital structure on the firm's value using Microsoft Excel. Further correlation analysis was computed to determine the strength of the relationship between the capital structure and the value of a firm. Analyzed data was presented using bar graphs, charts and tables. A confidence interval of 95% was used by the researcher as the level of significance to the hypotheses of the study.

The researcher also concluded that 31.50% of the variations in the value of the firm among firms listed at the NSE are explained by variations in their debt to equity ,proprietory, debt to total assets and retention ratios whereas 68.50% are explained by other independent variables and hence there is a strong positive relationship between capital structure and the value of firms listed at the NSE.

5.3 Conclusion

From the findings of this study and the ensuing discussion, this research points out the importance of having relevant capital structures being employed by firms listed at the

NSE. The study confirms that the Trade-off Theory is valid in the sense that the capital structure to be adopted by an organization will be a balance between tax shields associated with the level of debt used and the related the risk of bankruptcy.

From the study findings it would be safe to conclude that capital structure had a positive relationship with the value of firms listed at the NSE. 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 which this research does not uphold and thus capital structure is relevant. 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 its value. In addition 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

5.4 Recommendations

Based on the results of the study the following recommendations were made; Firms are encouraged to use equity rather than borrowing. The conclusion that borrowing does not always improve a firm's performance leads to their commendation 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. They should take consideration the amount of leverage incurred because it is a major determinant of firm's capital structure, this is obvious in both the highly geared and lowly geared firms. Firms can also employ the use of cheap finance sources instead of expensive fixed interest bearing debts. Identifying weaknesses of investment may be best one to improve the firm's value, because it indicates the area which decision should be taken.

Secondly, the government should create an enabling business friendly environment so that businesses can thrive and thus increase firm's performance level. This is evident in the fact that macroeconomic variables positively affect the performances of most firms in Kenya.

Thirdly, inflation and exchange rate also affect the listed company's value. Therefore, the government should consider economic growth as a means to control the inflation.

Also other companies should be encouraged to list. 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.

Lastly the NSE and Capital markets Authority should ensure that the financial year ends of companies listed at the NSE are same for comparison purposes especially for stock prices. Also the definition of items included in financial statements of the listed companies should be same.

5.5 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.

The researcher intended to include the times interest earned ratio in his study being one of the capital structure ratios but could be in a position to incorporate it because majority of the firms listed at the NSE do not report interest expense separately but only total expenses are shown in their financial statements hence the researcher had no option but to exclude the above ratio in his analysis.

Also the findings of the researcher could not be generalized to mean that there is a positive relationship between capital structure and the value of firms listed at the NSE because they were arrived from a sample hence for generalization to be achieved a census approach could have been appropriate and this can be done by other researchers in reference to the topic which the researcher dealt with.

5.6 Suggestions for Further Research

Arising from this study, the following directions for future research in Finance were Recommended as follows: First, this study focused on 18 listed companies in the Nairobi Securities Exchange. Therefore, generalizations could not adequately be extended to all the 62 companies listed at the NSE. Based on this fact among others, it is therefore, Recommended that a census approach be employed and then the findings being compared.

Similar studies to this can also be replicated in a few years to come to asses if the Impact of Capital Structure on the values of the firms listed at the Nairobi Securities Exchange has changed as the Nairobi Securities Exchange continues to change. This is because with time and improvement in technology the way NSE operations are conducted could have

changed and thus there is need to monitor the effect of capital structure on value of firms listed at the NSE from time to time.

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. Further the effect of capital structure on the value of firms can be done on SACCO's as well as private non listed firms and comparison of the findings being done.

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APPENDICES

Appendix 1: List of Sampled Firms Listed at the NSE

Table (iv)

AGRICULTURAL
Eaagads Ltd
Kapchorua Tea Co. Ltd
COMMERCIAL AND SERVICES
Express Ltd
Kenya Airways Ltd
Nation Media Group
TELECOMMUNICATION AND TECHNOLOGY
Access Kenya Group LTD
AUTOMOBILES AND ACCESSORIES
Marshalls (E.A.) Ltd
BANKING
Housing Finance Co Ltd
NIC Bank Ltd
Standard Chartered Bank Ltd
INSURANCE
British-American Investments Company (Kenya) Ltd
CIC Insurance Group Ltd
INVESTMENT
Olympia Capital Holdings ltd
MANUFACTURING AND ALLIED
British American Tobacco Kenya Ltd
Mumias Sugar Co. Ltd
CONSTRUCTION AND ALLIED
Athi River Mining Ltd

E.A.Portland Cement Ltd
ENERGY AND PETROLEUM
Total Kenya Ltd

Source: NSE 2014, (www.nse.co.ke).

Appendix 2: Correlation Analysis

Table (ii)

	THE VALUE OF THE FIRM	DEBT TO EQUITY RATIO	PROPRIETORY RATIO	DEBT TO TOTAL ASSETS RATIO	RETENTION RATE
THE VALUE OF THE FIRM	1				
DEBT TO EQUITY RATIO	0.486569668	1			
ROPRIETORY RATIO	-0.397459322	-0.533143343	1		
EBT TO TOTAL ASSETS ATIO	0.222482961	0.684239525	-0.241932774	1	
ETENTION RATE	-0.277968197	-0.063646525	0.220004778	0.16883621	1

Appendix 3:

Table (v)

Standard Normal Distribution Table

Z	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	0.0000	0.0040	0.0080	0.0120	0.0160	0.0199	0.0239	0.0279	0.0319	0.0359
0.1	0.0398	0.0438	0.0478	0.0517	0.0557	0.0596	0.0636	0.0675	0.0714	0.0753
0.2	0.0793	0.0832	0.0871	0.0910	0.0948	0.0987	0.1026	0.1064	0.1103	0.1141

0.3	0.1179	0.1217	0.1255	0.1293	0.1331	0.1368	0.1406	0.1443	0.1480	0.1517
0.4	0.1554	0.1591	0.1628	0.1664	0.1700	0.1736	0.1772	0.1808	0.1844	0.1879
0.5	0.1915	0.1950	0.1985	0.2019	0.2054	0.2088	0.2123	0.2157	0.2190	0.2224
0.6	0.2257	0.2291	0.2324	0.2357	0.2389	0.2422	0.2454	0.2486	0.2517	0.2549
0.7	0.2580	0.2611	0.2642	0.2673	0.2704	0.2734	0.2764	0.2794	0.2823	0.2852
0.8	0.2881	0.2910	0.2939	0.2967	0.2995	0.3023	0.3051	0.3078	0.3106	0.3133
0.9	0.3159	0.3186	0.3212	0.3238	0.3264	0.3289	0.3315	0.3340	0.3365	0.3389
1.0	0.3413	0.3438	0.3461	0.3485	0.3508	0.3531	0.3554	0.3577	0.3599	0.3621
1.1	0.3643	0.3665	0.3686	0.3708	0.3729	0.3749	0.3770	0.3790	0.3810	0.3830
1.2	0.3849	0.3869	0.3888	0.3907	0.3925	0.3944	0.3962	0.3980	0.3997	0.4015
1.3	0.4032	0.4049	0.4066	0.4082	0.4099	0.4115	0.4131	0.4147	0.4162	0.4177
1.4	0.4192	0.4207	0.4222	0.4236	0.4251	0.4265	0.4279	0.4292	0.4306	0.4319
1.5	0.4332	0.4345	0.4357	0.4370	0.4382	0.4394	0.4406	0.4418	0.4429	0.4441
1.6	0.4452	0.4463	0.4474	0.4484	0.4495	0.4505	0.4515	0.4525	0.4535	0.4545
1.7	0.4554	0.4564	0.4573	0.4582	0.4591	0.4599	0.4608	0.4616	0.4625	0.4633
1.8	0.4641	0.4649	0.4656	0.4664	0.4671	0.4678	0.4686	0.4693	0.4699	0.4706
1.9	0.4713	0.4719	0.4726	0.4732	0.4738	0.4744	0.4750	0.4756	0.4761	0.4767
2.0	0.4772	0.4778	0.4783	0.4788	0.4793	0.4798	0.4803	0.4808	0.4812	0.4817
2.1	0.4821	0.4826	0.4830	0.4834	0.4838	0.4842	0.4846	0.4850	0.4854	0.4857
2.2	0.4861	0.4864	0.4868	0.4871	0.4875	0.4878	0.4881	0.4884	0.4887	0.4890
2.3	0.4893	0.4896	0.4898	0.4901	0.4904	0.4906	0.4909	0.4911	0.4913	0.4916
2.4	0.4918	0.4920	0.4922	0.4925	0.4927	0.4929	0.4931	0.4932	0.4934	0.4936
2.5	0.4938	0.4940	0.4941	0.4943	0.4945	0.4946	0.4948	0.4949	0.4951	0.4952
2.6	0.4953	0.4955	0.4956	0.4957	0.4959	0.4960	0.4961	0.4962	0.4963	0.4964
2.7	0.4965	0.4966	0.4967	0.4968	0.4969	0.4970	0.4971	0.4972	0.4973	0.4974
2.8	0.4974	0.4975	0.4976	0.4977	0.4977	0.4978	0.4979	0.4979	0.4980	0.4981
2.9	0.4981	0.4982	0.4982	0.4983	0.4984	0.4984	0.4985	0.4985	0.4986	0.4986
3.0	0.4987	0.4987	0.4987	0.4988	0.4988	0.4989	0.4989	0.4989	0.4990	0.4990