

**THE RELATIONSHIP BETWEEN LEVERAGE AND MARKET TO BOOK VALUE
RATIO: EVIDENCE FROM FIRMS LISTED AT THE NAIROBI SECURITIES
EXCHANGE**

BY:

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DECLARATION

I declare that this is my own original work and to the best of my knowledge it has not been submitted for a degree award in any other University or institution of higher learning.

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DEDICATION

This research project is dedicated to my parents for constantly reminding me that ambition is priceless. It is also dedicated to my wife who taught me that the greatest task can be accomplished if it's done a step at a time. Finally, I dedicate it to my beloved daughter and son who make me look forward to each new day.

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LIST ABBREVIATIONS

BHARs – Buy and Hold Abnormal Returns

COMPUSTAT–Standard and Poor’s storage of annual, quarterly financial statements

CRSP – Centre for Research in Security Prices

MB – Market to Book Ratio

NDTS – Non Debt Tax Shields

NSE – Nairobi Securities Exchange

ROCE – Return on Capital Employed

ABSTRACT

Market to book ratio has been used to measure the premium that an investor is paying for the assets of a company. It is a ratio of market value to the assets of the firm compared to the book value of the same assets. On the other hand, leverage is an indication of the level of debt usage compared to equity in the firms' financing structure. The empirical work that has been carried out to determine the relationship between leverage and market to book ratio has focused on the market to book ratio being used as a proxy for growth options. Lower target leverage ratios have been maintained by firms to mitigate the underinvestment problem when future opportunities arise as per the trade-off Theory. The relationship between historical market-to-book ratio and current leverage is consistent with partial adjustment model of leverage.

This study focussed on establishing the extent of the relationship between leverage and market to book ratio with evidence from firms listed at the Kenya's Nairobi Securities Exchange. Regression analysis on data from a sample of 36 companies listed at the Exchange for five years period from 2006 to 2010 was conducted to examine the variables leverage and Market to Book Ratio while controlling for Profitability, Growth of the firm, Size, Liquidity of the firm, Tangibility and Non-debt tax shield.

The study revealed that leverage of the firm can be accounted for by market value to book ratio. A strong negative relationship between leverage and Market to Book Ratio was established from the results of the regression analysis employed in the study. Market to book ratio therefore is one of the variables which needs to be taken into account as firms decide on the target leverage. The positive relationship with leverage was established among the following control variables; growth of the firm, size of the firm, liquidity of the firm and tangibility of the firm. Any positive change on these variables is therefore going to lead to an increase in the leverage positions. The reasons for this may be because growth will lead to increased demand for external funds, size will encourage the firm to borrow, liquidity has the impact of leading to favorable credit assessments and tangibility has the role of providing assets for collateral.

CHAPTER ONE:

INTRODUCTION

1.1 Background of the Study

Market-to-book ratio, as observed by Shleifer (2000) can be loosely thought of as a measure of cheapness of a stock. Wahlen, et al., (2008) demonstrates that market-to-book ratio reflects what the market value is, but it does not tell about what the ratio should be given the estimates of a company's intrinsic value. Garman and Forgue (2012) explains that market-to-book ratio also referred to as price-to-book ratio as an indication of the premium that an investor is paying for the net assets of a company. Pratt (2011) describes market value to book ratio as being arrived at after dividing market value of a company's stock by its book value. Ratios equal to 1 indicate that a company's net book value is perceived by the market as a fair reflection of the company's true value.

Rajan and Zingales (1995) and Booth et al. (2001) also showed that the determinants of capital structures are highly sensitive to choice of leverage. 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.

There is growing attention to the manner in which firms adjust, or fail to adjust, their leverage. The adjustment pattern is of interest because it can help distinguish alternative theories of capital structure Frank and Goyal (2003). Trade-off theory suggests that capital structure is beneficial to equity investors as long as they are rewarded to up to a point where tax deductibility of interest is offset by against potential bankruptcy costs. Under this theory corporate leverage is determined by managers making trade-offs between various costs and benefits of debt and equity, in particular tax savings Graham (2003). According to this theory, firms with higher market-to-book ratios also have higher growth opportunities Hovakimian, Opler, and Titman (2001), and they intend to keep lower current target leverage ratios in order to mitigate the underinvestment problem when future opportunities arise Myers (1977). They are thus more likely to issue equity when they realize new investment opportunities and downwardly adjust their target leverage ratios but also firms with higher market-to-book ratios are more likely to issue equity not because they intend to downwardly adjust their target leverage ratios, but because they face lower external financing costs. As explained by Myers (1984), under this theory, managers undo the effects of shocks, causing the leverage ratio to be mean reverting.

Welch (2003) has forcefully challenged this implication of the trade-off theory. To him, shocks to the stock market affect capital structure but since firms do not take steps to re-establish a leverage target, the levels of debt and equity do not influence subsequent leverage adjustments. Another challenge to the trade-off theory is the market timing theory. Market timing theory primarily advocates that capital structure evolves as a cumulative outcome of past attempts to time the equity market Baker and Wurgler (2002). It is observed that managers who time the equity market will also time the debt market. If market timing affects debt and equity issuance decisions, then measures of the equity market (the market-to-book ratio) and the debt market (the interest rate) ought to have significant impacts on changes in

leverage. A study by Stein (1996) had showed that managers can time the market to maximize current shareholders' wealth. Baker and Wurgler (2002) used an external finance weighted average market to book ratio (calculated as the external capital weighted by historical market to book ratio) to capture companies' equity market attempts. The authors show that, after controlling for companies' growth opportunities based on the use of market value to book ratio, debt is inversely related to historical market to book ratio. This relationship allows authors to accept the equity market timing hypothesis. The empirical evidence obtained by Baker and Wurgler (2002), shows that low-leverage companies with a high market value to book ratio raise funds by issuing shares, whereas high-leverage companies raise funds when their market value to book ratio is low.

Trade-off theory, market timing theory, and Welch's (2003) theory of capital structure all make claims about the determinants of adjustments to corporate debt and equity. Thus firms prefer equity when relative cost of equity is low and prefer debt otherwise. This view of market-to-book ratio has been the main basis for a formal argument of the market timing hypothesis Baker and Wurgler (2002). Welch (2004) shows that the driving force of leverage ratios is market valuation of equity. In fact, when resorting to external financing, firms with more favourable equity market valuations are more likely to issue equity, thus further deviating away from their original leverage ratios. This evidence is consistent with the notion that firms care more about external financing costs than their target leverage ratios.

Frank and Goyal (2008) noted that the debate with regard to the relationship between market-to-book ratio and current leverage is ongoing. According to Liu (2009), the relationship between historical market-to-book ratio and current leverage is consistent with partial adjustment model of leverage. Firms make partial adjustments towards the target leverage each year leading to the firm's current leverage being related to past targets. Liu (2009) designed the study to differentiate between, partial adjustment explanation from market timing explanation by evaluating the role of market-to-book ratio in the results which had been found to be a proxy for stock market misvaluation under market timing and as a proxy for growth under the partial adjustment model. The finding of the study was that the

historical market-to-book ratios can explain current leverage because market-to-book ratio is a proxy for growth options and not because it is a proxy for market mis-valuation.

Strebulaev and Yang's (2006) suggestion of the link between the higher market-to-book ratios of debt-free firms and capital markets' overvaluation is not accurate rather companies that employ conservative debt policy are more profitable according to Myers (2001), have valuable growth opportunities Graham (2000), and hold large amounts of cash Graham (2000), which tends to lead to better operating performance Mikkelson and Partch (2003). Therefore, the reason that the higher market-to-book ratios for zero-debt firms is the result of the market's recognition of debt-free firms' growth opportunities supported by their financial flexibility, rather than mistaken overvaluation by the capital markets.

Frank and Goyal (2003) examined the empirical implications of the trade-off theory, the market timing theory, and Welch's theory of capital structure using aggregate US data for 1952 to 2000. They explored the existence of a long-run leverage ratio to which the system reverts. They found the deviations from that ratio as being helpful in predicting debt adjustments, but not equity adjustments. Consequently they found a high market-to-book ratio as being associated with subsequent debt reduction.

The expected theoretical relationship between leverage and market to book ratio has been addressed by Constantinides (2003), who advocates that it is based on trade off theory and that the value of future opportunities can be estimated by Market to Book Ratio. He notes that there is a strong inverse relationship between market-to-book ratios and debt ratios, consistent with the observation that growth firms borrow less.

1.1.1 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 Statement of the Problem

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 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. Market value to book has been shown to explain leverage with Eltayeb (2011) using Market to book ratio to overcome the deficiency of just using stock price as a basis for valuation. He found that Market to book ratio 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, Balako (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 payout with companies that optimally engage financial leverage in their operations standing a chance of favourable competitive situations because of the absence of financial inhibitions. Therefore empirical evidence relating to implications and the significance of Market Value to Book Ratio and financial leverage among firms quoted at the NSE is scanty. This study will endeavor to ascertain the impact of one those factors, firm value on financing decisions of quoted companies. The study will seek 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

To determine the relationship between leverage and market value to book ratio for firms listed at the Nairobi Securities Exchange.

1.4 Value of the Study

Investors and financiers of firms would be interested to know the value that market value to book ratio has in determining the capital structure and more particularly the leverage position of the firm. This would add to the confirmation of the factors that contribute to the choice of the firm either going to the shareholders or external financiers for capital.

Practitioners in the management of firms in Kenya would find the study useful since it would act as a point of reference in determining when to change the capital structure mix. They would be in a position to analyze the market value to book ratios and come up with decision on the appropriate and most ideal source of investment funds.

The study would be of great importance to future researchers and scholars as it will add to field of knowledge on the effect of market value to book ratio on leverage. It would also motivate further study in the area.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section provides a review of the theoretical literature on firm financing. 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

2.2.1 Pecking Order Theory

In the theory of firm's capital structure and financing decisions, the pecking order theory was developed by Myers and Majluf (1984). It states that companies prioritize their sources of financing (from retained earnings to debt to equity) according to the law of least effort or of least resistance, preferring to raise equity as a financing means of resort. Thus, the form of debt a firm chooses can act as a signal of its need for external finance.

The pecking order theory is popularized by Myers (1984). The pecking order theory can be explained from the perspective of asymmetric information and the existence of transaction costs. Asymmetric information costs arise when a firm chooses not to use external financing and therefore pass up a positive NPV investment. Equity is a less preferred means to raise capital because when managers as firm's insiders (who are assumed to know better about true condition of the firm than investors) issue new equity, investors believe that managers think that the firm is overvalued and managers are taking advantage of this over-valuation. Managers will issue securities when the market price of the firm's securities is higher than the real firm value. The deviation between the market price of the firm's securities and real firm value arise, because investors, having inferior information about the value of the firm's assets, can misprice equity Myers and Majluf (1984).

Sophisticated investors are aware of the fact that firms have the incentive to issue new shares when the market overvalues the existing shares. Therefore, investors will rationally adjust the

price they are willing to pay, causing new shares, to be underpriced in the market. If firms have to finance new projects by issuing equity, underpricing may be so severe that new investors capture more of the NPV of the new project, resulting in a loss to existing shareholders. If this is the case then the project will be rejected even if its NPV is positive, because managers act in favor of the existing shareholders. This underinvestment can be avoided by financing the new project with security that is not severely undervalued Myers (1984), Myers and Majluf (1984).

Myers (1984) suggests that asymmetric information and transaction costs overwhelm the forces that determine optimal leverage in the trade-off models. To minimize these financing costs, firms prefer to finance their investment first with internal cash flows. Only if there's residual financing need they will use external capital in the following order; first safe debt, then risky debt and finally equity issues. So, contrary to the trade-off theory, the pecking order theory predicts no long run target capital structure. There is no optimal debt-equity mix because there are two kinds of equity, retained earnings at the top of the pecking order and the issue of new shares at the bottom Myers (1984).

In the short run, Myers' (1984) simple pecking order theory suggests that firms increase or decrease their debt ratio if they have a negative free cashflow or positive free cashflow respectively, of the current period. The only thing that could be observed is a different financing behavior of firms with relatively more debt as opposed to firms with relatively low debt.

2.2.2 The Agency Theory

The duty of top managers is to manage the company in such a way that returns to shareholders are maximized thereby increasing the profit figures and cashflows Elliot (2002). Hence, the main problem that shareholders face is to make sure that managers do not use up the free cash flow by investing in unprofitable or negative net present value (NPV) projects. Instead these cash flows should be returned to the shareholders, for example through dividend payouts Jensen (1986).

Pinegar and Wilbricht (1989) discovered that principal-agent problem can be dealt with to some extent through the capital structure by increasing the debt level and without causing any radical increase in agency costs. Similarly, Lubatkin and Chatterjee (1994) argue that increasing the debt to equity ratio will help firms ensure that managers are running the business more efficiently. Hence, managers will return excess cash flow to the shareholders rather than investing in negative NPV projects since the managers will have to make sure that the debt obligations of the firm are repaid. Thus, managers that are not able to meet the debt obligations can be replaced by more efficient managers who can better serve the shareholders. This means that leverage firms are better for shareholders as debt level can be used for monitoring the managers.

2.2.3 The Free Cash Flow Theory

Jensen (1989) states that when free cash flows are available to top managers, they tend to invest in negative NPV projects instead of paying out dividends to shareholders. He argues that the compensation of managers increase with an increase in the firm's turnover. Hence the objective of the company is to increase the size of the firm by investing in all sorts of projects even if these projects have a negative NPV. Dorff (2007) argued that compensation of managers tend to increase when there is an increase in the firm's turnover. Jensen (1986) defines free cash flow as the amount of money left after the firm has invested in all projects with a positive NPV and states that calculating the free cash flow of a firm is difficult since it is impossible to determine the exact number of possible investments of a firm.

Lang, Stulz and Walking (1991) uses the Tobin's q as a proxy to determine the quality of investment. Firms with a high ' q ' showed that firms were using their free cash flows to invest in positive NPV projects whereas firms with low ' q ' showed that firms were investing in negative NPV projects and therefore, the free cash flows should instead be paid out dividends to the shareholders. As a whole, this study is in line with the free cash theory and was considered as very reliable among economists. We can conclude that using free cash flows to invest in negative NPV projects leads to an increase in agency costs.

2.2.4 Trade-Off Theory (Optimal 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 Rotnana 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 less. 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).

2.2.5 Static Trade-Off Theory

The Static trade-off theory focuses on the benefits and costs of issuing debt. It predicts that an optimal target financial debt ratio exists, which maximizes the value of the firm. The optimal point can be attained when the marginal value of the benefits associated with debts issues exactly offsets the increase in the present value of the costs associated with issuing debt Myers (2001). Trade-off theory allows the bankruptcy cost to exist. It states that there's an advantage to financing with debt (namely, tax benefit of debts) and that there's a cost of

financing with (bankruptcy costs of debt). The benefits of debt are the tax deductibility of interest payments. The tax deductibility of corporate interest payments favors the use of debt. The marginal benefit of further increases in debt declines as debt increases, while the marginal cost increases, so that a firm that is optimizing its overall value will focus on this trade-off when choosing how much debt and equity to use for financing. Debt financing limits the free cash flow available to managers and thereby helps to control this agency problem Jensen and Meckling (1976). The costs associated with issuing more debt are the costs of financial distress Modigliani and Miller (1963) and the agency costs triggered by conflicts between shareholders and debtors Jensen and Meckling (1976). Costs of financial distress are likely to arise when a firm uses excessive debt and is unable to meet the interest and principal payments.

2.3 Empirical Review

Since Modigliani and Miller (1958) proved irrelevance of financial leverage in frictionless perfect capital markets, numerous theoretical and empirical papers have addressed the corporate choice of capital in imperfect capital markets. Recently, there have been a number of articles that examined conservative leverage policy in US firms. Graham (2000) develops interest-deduction benefit functions by estimating a series of marginal tax rates and argues that firms could increase their value by about 15 percent if they used the optimal amount of debt. Surprisingly, he finds that large, profitable, liquid firms that face low-expected distress costs use debt conservatively. For these firms, the optimal level of debt per finance theory would certainly be greater than the zero debt policy that we examine. Also, conservatism in the use of debt according to Graham is positively correlated with excess cash holdings and weakly related to future acquisitions.

They document that financial conservatism is not an industry-specific phenomenon, even though conservative firms are frequently found in industries thought to be sensitive to financial distress. Also, low-leverage firms have relatively high market-to-book ratios, follow a pecking order style financial policy, and stockpile financial slack to be prepared for a decline in the internal funding and/or to finance acquisitions and capital expenditures. They argue that financial conservatism is largely a transitory financial policy, which is inconsistent

with Lemmon *et al.* (2008) who claim that firms maintain remarkably stable leverage ratios over time. As we previously noted, we specifically examine firms that maintained a zero-debt policy for multiple years.

Strebulaev and Yang (2006) investigate the tendency of many large non-financial, non-utility firms on the CRSP/COMPUSTAT data set over the period of 1962-2003 to avoid debt (i.e. zero-leverage puzzle), and find that industry and size alone cannot explain the zero-leverage phenomenon. Also, they find that zero-leverage firms are on average smaller than their proxies, more profitable, pay higher income taxes, have higher market-to-book ratios, and hold substantially higher cash balances. Conditioning on the dividend payment, they find that zero-leverage firms pay substantially larger dividends than their dividend-paying proxies. Similar to Graham's (2000) findings, they argue that the zero-leverage behavior is a persistent phenomenon.

Using the COMPUSTAT data set for the period of 1971-2002, Byoun (2006) tests nine hypotheses related to the financial characteristics, corporate governance structures, and financial market conditions for debt-free firms. He finds qualitatively similar results to Strebulaev and Yang (2006) regarding debt-free firms' financial traits. They find that debt-free firms tend to be smaller in size, hold more cash and marketable securities, and pay higher dividends relative to levered firms. Our analysis of sample firms with extremely conservative debt policy is compatible with their results. By segmenting the sample into small and large debt-free firms, Byoun finds that small debt-free firms are less profitable, but large debt-free firms are more profitable than levered firms of similar size.

Devoset *al.* (2010) seeks plausible accounts for why firms choose an extremely conservative leverage policy (no debt for three consecutive years) by testing three hypotheses: managerial entrenchment, financial flexibility, and credit constraints. They examine all non-financial, non-regulated firms on the COMPUSTAT and CRSP data set from 1990 to 2008, and document that the internal and external governance mechanisms are not weaker for zero-debt firms compared to their levered control firms, which indicates that zero-debt policy is not induced by managerial entrenchment. Their results provide mixed support for the financial

flexibility hypothesis in that debt-free firms hold significantly more cash and initiate debt when investment opportunities materialize. They argue that zero-debt firms' lack of reputation in credit markets is a primary reason why they remain unlevered.

Existing studies are primarily concerned with the motivation for financial conservatism and characteristics of the firms that operate with zero or low leverage. Strebulaev and Yang (2006) address the long-term stock performance of these financially conservative firms and propose a testable hypothesis, “divergence in beliefs.” They argue that firm choices to avoid debt could be due to differential perceptions of debt-free firms between managers and capital markets. They assert that zero-debt firms' higher market-to-book ratios relative to proxy firms can lead insiders to believe that their equity is overvalued, i.e. unlevered firms' managers have lower valuation of their firms than the financial markets. They argue that in the long term, the disparity in valuation between managers and capital markets will be corrected. They find significantly negative buy-and-hold abnormal returns (BHARs) of debt-free firms over the period of 1962-1998, but the significance almost disappears for the period of 1987-1998. They claim the results are supportive of the divergence in beliefs hypothesis. They also document the results from the Fama-French three-factor models and the four-factor models, reporting negative abnormal performance by the debt-free firms with the three-factor model. However, the significance disappears when the momentum factor is added.

Strebulaev and Yang (2006) that the higher market-to-book ratio is linked with overvaluation of zero-debt firms. We reason that zero-debt firms' higher market-to-book ratios could be due to their relatively healthier financial condition coupled with growth options and financial flexibility. Studies on capital structure find that profitability and growth opportunities are inversely related to the debt ratio Graham (2000). Wald (1999, p. 172) reports that profitability has “the largest single effect on debt/asset ratios”. More recently, Byoun (2006) finds that large debt-free firms are more profitable, have more growth options, and hold more cash.

In Kenya, Balako (2007) examined voluntary disclosure practices in the annual reports of listed companies in Kenya from 1992 to 2001. The study investigates the extent to which

corporate governance attributes, ownership structure and company characteristics influence voluntary disclosure of various types of information. It was found that, disclosures of all types of information are influenced by corporate governance attributes, ownership structure and corporate characteristics among. The corporate characteristics examined in the research were: size, leverage, type of audit firm, profitability and liquidity. Among these characteristics leverage was found to be significant for financial disclosures.

Bitok et al., (2011), discussed the determinants of leverage at the Nairobi Securities Exchange, Kenya. In the study all the 54 firms listed in the Nairobi Securities Exchange were considered but excluded financial firms and utilities because they are considered highly regulated and their leverage levels are heavily influenced by regulation. The study considered three leading theories of capital structure were reviewed; static trade off theory, pecking order theory and agency cost theory. It was found that the static trade-off theory which suggests that optimal capital structure exists and is a trade-off between net tax benefit of debt financing and bankruptcy cost, provides the most robust explanation of leverage for Kenyan listed firms for the period 2003 to 2008. It was found that firms with more tangible assets are in a position to provide collateral for debts, so these firms raise more debt. Further, larger and more profitable firms maintain high debt ratios, while firms with higher growth rate use less debt financing. In summary, the findings were that firm leverage is positively associated with both asset tangibility, profit, macro-economic and size, and negatively associated with firm-level profitability and non-tax debt tax shield.

Chebii, Kipchumba and Wasike (2011) undertook a study to find out the role of capital structure in dividend payouts and whether high level of debt in the capital structure contributes to payment or non-payment of dividends. The study covered companies listed at the exchange for the period 1998 to 2004. Secondary data from 34 companies was used. It found that there is a significant relationship between capital structure and dividend payout with companies that optimally engage financial leverage in their operations standing a chance of favourable competitive situations because of the absence of financial inhibitions.

2.3.1 Debt Financing

Debt holders have a prior claim on the company's cash flows relative to shareholders, who are entitled only to any residual cash flow after debt holders have been paid. This therefore means that the fixed claim of debt holders causes the residual claim of the stockholders to become less certain, and this increases the cost of stock (Brigham and Houston (2004)). Debt financing has two important advantages; first, interest paid is tax deductible, which lowers debt's effective cost. Second, debt holders get a fixed return, so stockholders do not have to share their profits if the business is extremely successful. It also reduces the likelihood of poor managerial decision making and serves as a monitoring device.

However, debt also has disadvantages, first, the higher the debt-equity ratio, the riskier the company, and the higher the cost of both debt and equity. Second, if a company falls on hard times and operating income is not sufficient to cover interest charges, its stockholders will have to make up the shortfall, and if they cannot, bankruptcy will result. Good times may be just around the corner, but too much debt can keep the company from getting there and thus can wipe out the stockholders (Pandey (2005)) and thirdly, financial distress: As the firm increases its leverage, the probability of financial distress increases therefore the present value of financial distress cost increases.

2.3.2 Equity Financing

Managers are in a better position to forecast a company's free cash flow than are investors, and academics calling this Information Asymmetry. Suppose a company's stock price is sh. 50 per share. If the managers are willing to issue new stock at sh. 50 per share, the investors reason that no one would sell anything for less than its true value. Therefore, the true value as seen by the managers with their superior information must be less than sh. 50. Thus, investors perceive an equity issue as a negative signal and this usually causes the stock price to fall (Brigham and Ehrhardt (2007)).

Lambert and Larcker (1986) argued that managers of firms financed mostly with equity (where there are a large number of shareholders with very small shareholding power) tend to have this behaviour. In this case, since it will be difficult to regroup all the shareholders to

pressure and control the management and as a result, the shareholders prefer to sell their stocks instead of incurring agency costs to solve this problem. On the other hand, companies with a small number of shareholders with large shareholding can more easily regroup themselves to pressure and control the management on how to run the firm. The study of Dolmat-Connel (2002) showed that the profitability of firms increase considerably when managers are given shares of the company. This is because the managers will work in the interest of the shareholders since the managers themselves own shares of the firm. Therefore, linking the ownership structure to management can solve the principal agent problem.

2.3.3 Hybrid Securities

Hybrids are a class of securities that have the characteristics of both an interest bearing security and a share. In simple terms, the issuer of the hybrid pays the investor a known regular return (interest) and at maturity the investor may receive shares (equity). Examples of hybrids are convertible notes and convertible preference shares. When the price of the firm's common stock rises above the conversion price, the market price of the convertible security will normally rise to a level close to its conversion value. When this happens, many convertible holders will not convert, because they already have the market price benefit obtainable from conversion and can still receive fixed periodic interest payments. Because of this behavior, virtually all convertible securities have a call feature that enables the issuer to encourage or 'force' conversion. The call price of the security generally exceeds the security's par value by an amount equal to a year's stated interest on the security. Although the issuer must pay a premium for calling a security, the call privilege is generally not exercised until the conversion value of the security is 10 to 15 percent above the call price. This type of premium above the call price helps to assure the issuer that the holders of convertible will convert it when the call is made, instead of accepting the call price.

Unfortunately, there are instances when the market price of a security does not reach a level sufficient to stimulate the conversion of associated convertibles. If the firm raised these funds through the sale of equity, a large number of shares would have to be sold because of their low market price. This in turn, could result in dilution of existing ownership. Another means

of financing the call would be the use of debt or preferred stock, but this use would leave the firm's capital structure no less levered than before the call Gitman (2006).

2.4 Key Determinants of Capital Structure

Titman and Wessels (1958) enumerated key attributes in determining capital structure. They include asset structure, growth, uniqueness, industry classification, size, earnings and volatility. Other authors have documented other factors determining capital structure choice by firms Chittenden *et al.*, (1996), Coleman and Cole (1999) and Al-Sakran (2001).

2.4.1 Profitability

Corporate performance has been identified as a potential determinant of capital structure. The tax trade-off models show that profitable firms will employ more debt since they are more likely to have a high tax burden and low bankruptcy risk Ooi (1999). However, Myers (1984) prescribes a negative relationship between debt and profitability on the basis that successful companies do not need to depend so much on external funding. They, instead, rely on their internal reserves accumulated from past profits. Titman and Wessels (1988) and Barton *et al.* (1989), agree that firms with high profit rates, all things being equal, would maintain relatively lower debt ratio since they are able to generate such funds from internal sources. Empirical evidence from previous studies Chittenden *et al.*, (1996), Coleman and Cole (1999) and Al-Sakran (2001) appears to be consistent with the pecking order theory. Most studies found a negative relationship between profitability and debt financing.

2.4.2 Growth

Applying pecking order arguments, growing firms place a greater demand on their internally generated funds. Consequentially, firms with high growth will tend to look to external funds to finance the growth. Firms would; therefore, look to short-term, less secured debt then to longer-term more secured debt for their financing needs. Myers (1977) confirms this and concludes that firms with a higher proportion of their market value accounted for by growth opportunity will have debt capacity. Auerbach (1985) also argues that leverage is inversely related to growth rate because the tax deductibility of interest payments is less valuable to

fast growing firms since they usually have non-debt tax shields. Michaelas *et al.* (1999) found future growth positively related to leverage and long-term debt, while Chittenden *et al.* (1996) and Jordan *et al.* (1998) found mixed evidence.

2.4.3 Tax

Different authors on capital structure have given different interpretations of the impact of taxation on corporate financing decisions in the major industrial countries. Some are concerned directly with tax policy. For instance Auerbach (1985), MacKie-Mason (1990), etc. studied the tax impact on corporate financing decisions. The studies provided evidence of substantial tax effect on the choice between debt and equity. They concluded that changes in the marginal tax rate for any firm should affect financing decisions. A firm with a high tax shield is less likely to finance with debt. The reason is that tax shields lower the effective marginal tax rate on interest deduction. Graham (1996) on his part concluded that, in general, taxes do affect corporate financial decisions, but the extent of the effect is mostly not significant. Ashton (1991) confirms that any tax advantage to debt is likely to be small and thus have a weak relationship between debt usage and tax burden of firms. De Angelo and Masulis (1980) on the other hand, show that depreciation, research and development expenses, investment deductions, etc. could be substitutes for the fiscal role of debt. Titman and Wessels (1988) provided that, empirically, the substitution effect has been difficult to measure as finding an accurate proxy for tax reduction that excludes the effect of economic depreciation and expenses is tedious.

2.4.4 Tangibility

Tangibility which is a reflection of firm's asset structure is an important determinant of the capital structure of a new firm. The extent to which the firm's assets are tangible and generic would result in the firm having a greater liquidation value Harris and Raviv (1991) and Titman and Wessels (1988). Studies have also revealed that leverage is positively associated with the firm's assets. This is consistent with Myers (1977) argument that tangible assets, such as fixed assets, can support a higher debt level as compared to intangible assets, such as growth opportunities. Assets can be redeployed at close to their intrinsic values because they are less specific Williamson (1988) and Harris (1994). Thus, assets can be used to pledge as

collateral to reduce the potential agency cost associated with debt usage Smith and Warner (1979), Stulz and Johnson (1985), Feri and Jones (1979), Marsh (1982), Long and Matlitz (1985) and Allen (1995) provide empirical evidence of a positive relationship between debt and fixed assets. The empirical evidence suggests a positive relation consistent with the theoretical arguments between asset structure and leverage for large firms Van der Wijst and Thurik, (1993), Chittenden *et al.*, (1996) and Michaelas *et al.*, (1999).

2.4.5 Risk

Given agency and bankruptcy costs, there are incentives for the firm not to utilise the tax benefit of debt within the static framework model. As a firm is exposed to such costs, it has a greater incentive to reduce its level of debt within its capital structure. One firm variable which impacts upon this exposure is firm operating risk, in that the more volatile a firm's earnings streams, the greater the chance of the firm defaulting and being exposed to such costs. Firms with relatively higher operating risk will have incentives to have lower leverage than more stable earnings firms. Empirical evidence suggests that there is a negative relationship between risk and leverage of small firms Ooi (1999) and Titman and Wessels (1988).

2.4.6 Size

Size plays an important role in determining the capital structure of a firm. Researchers have taken the view that large firms are less susceptible to bankruptcy because they tend to be more diversified than smaller companies Smith and Warner (1979) and Ang and McConnell (1982). Following the trade-off models of capital structure, large firms should accordingly employ more debt than smaller firms. According to Berryman (1982), lending to small businesses is riskier because of the strong negative correlation between the firm size and the probability of insolvency. Hall (1995) added that, this could partly be due to the limited portfolio management skills and partly due to the attitude of lenders. Marsh (1982) and Titman and Wessels (1988) report a contrary negative relationship between debt ratios and firm size. Marsh (1982) argues that small companies, due to their limited access to equity capital market tend to rely heavily on loans for their funding requirements. Titman and Wessels (1988) further posit that small firms rely less on equity issue because they face a

higher per unit issue cost. The relationship between firm size and debt ratio is, therefore, a matter for empirical investigation.

2.4.7 Non-Debt Tax Shields

Reducing corporate tax burden can not only be made from interest tax shields but the existence of non-debt tax shields provides an alternative (less costly) means of reducing income taxes and may serve to mitigate the benefit of debt tax shields Cloyd (1997). Various non-debt tax shields include accelerated depreciation and investment tax credits (Allen and Mizuno, 1989).

DeAngelo and Masulis (1980) perceive tax deductions for depreciation and investment tax credits as substitutes for the tax benefits of debt financing. Firms with large non-debt tax shields will employ less debt in their capital structure due to a positive relation between investment-related tax shields and the probability of losing the deductibility of debt tax shields. In line with the proposition of DeAngelo and Masulis (1980), Bowen et al. (1982), MacKie-Mason (1990), Dhaliwal et al. (1992), Givoly et al. (1992), Allen (1995), Cloyd et al. (1997) and Ayers et al. (2001) have all confirmed tax substitution hypothesis. Similarly, Schulman et al. (1996) note that if a firm uses sufficient tax shields from depreciation to reduce taxable income to zero, debt may yield no additional tax benefit, and capital structure decisions will be based on non-tax considerations.

Contrary to the assertions by DeAngelo and Masulis (1980), some studies have suggested an inverse relationship between non-debt tax shields and debt (Givoly et al., 1992; Allen, 1995; Wiwattanakantang, 1999; De Miguel and Pindado, 2001; Ozkan, 2001). However, the results of Titman and Wessels (1988) do not provide support for an effect on debt ratios arising from non-debt tax shields. On their part, Bradley et al. (1984) found a significant positive relation between firm leverage and the amount of non-debt tax shields suggesting that firms that invest heavily in tangible assets generate relatively high levels of depreciation and tax credits, thereby tending to have higher financial leverage. The lack of negative relation between non-debt tax shields and leverage ratios contradicts the theory that focuses on the substitutability between non-debt and debt tax shields (interest tax shields) as argued by De

Angelo and Masulis (1980). Commenting on the positive relation between debt and non-debt tax shields, Graham (2005) notes that one problem with using non-debt tax shields, in the form of depreciation and investment tax credits, is that they are positively correlated with profitability and investment. If profitable firms invest heavily and also borrow to fund their investment, it can lead to a positive relation between debt and non-debt tax shields and overwhelm the tax substitution between interest and non-debt tax shields Sayilgan, Karabacak and Küçükkocaoğlu (2006).

Following the definition used by Titman and Wessels (1988), Ozkan (2001) and Chen (2003), Sayilgan, Karabacak and Küçükkocaoğlu (2006) used the ratio of annual depreciation expense to total assets as a proxy of non-debt taxshields [NDTS] arguing that depreciation is the most significant element among non-debt tax shields.

2.4.8 Market to Book Ratio

Garman and Forgue (2012) explains that market-to-book ratio also referred to as price-to-book ratio as an indication of the premium that an investor is paying for the net assets of a company. Market to book ratio has been used as a proxy for market prices of stocks with Baker & Wurgler (2002), documenting that Market-based metrics are used to fulfill the deficiency of using just stock price as market valuation, as observing price volatility only is insufficient to reveal the proportional market and accounting values of net assets. Market timing was used to measure the market timing opportunities perceived by managers.

As price-to-book ratios are based on expectations of future ROCE, they also should be related to operating liabilities Nissim and Penman (2003). They had explored the implications of operating liabilities for price-to-book ratios by regressing the price-to-book ratio on the level of and change in operating liability leverage and then decomposing the level and the change into leverage from contractual and estimated liabilities. By the prescription of the residual income model, price-to-book ratios are based not only on expected profitability but also on the cost of equity capital and the expected growth in book value. Therefore, the effect of operating liabilities on expected profitability (as reflected in price-to-book), was identified by including controls for expected growth and risk (which

determines the cost of equity capital).The three findings from the study were First; distinguishing operating liability leverage from financing leverage explains cross-sectional differences in future book rates of returns and price-to-book ratios, after controlling for information in total leverage and current book rate of return. Second, current changes in operating liability leverage add further explanatory power. Third, but less strongly, distinguishing estimated operating liabilities from contractual operating liabilities further differentiates future rates of return and price-to-book ratios.

Several prior papers have reported a negative relation between growth options and book leverage. For example, Rajan and Zingales (1995) document a negative relation between book leverage and the market-to-book ratio (a commonly used proxy for growth options) in seven countries including the United States. However, Fama and French (2002) argue that their methods understate standard errors. Barclay, Morellec and Smith (2003) attempted to provide a direct test hypothesis and to document the robustness of the prior results. They re-examined below the empirical relation between book leverage and growth options. Their focus was on the market-to-book ratio as a proxy for growth options. Their findings indicated a negative relation between book leverage and growth options.

Financial leverage, tangible assets, profitability and liquidity are the firm characteristics where the market estimators (Market to book ratio and Q-ratio) are more likely to diverge in classifying firms into market outperformers and underperformers Eltayeb (2011). However, firm size, R&D expenses and free cash flow showed no difference with all market estimators .In his study of Japanese firms listed at the Tokyo Stock Exchange, he found out that market-to-book ratio is more sensitive to market level factors. Consistent with Baker and Wurgler (2002), he found that market-to-book ratio is recommended under market timing hypothesis due to its reliance on market factor.

2.5 Summary of Literature

From the discussions above, it can be noted that pecking order theory, the agency theory, the free cash flow theory, the trade-off theory and the static trade off 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 financial leverage 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.

Valuation and financial leverage are two factors that have been discussed in several studies and also in general literature. We still have gaps in the knowledge of how the leverage is affected by market measures. 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 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 be the best in explaining if two variables are related and if they vary together with the help of enough information or data for testing cause and effect relationship. It aimed to explore the relationship between market value to book ratio and financial leverage of firms listed at the NSE and the empirical evidences that help answer the research objective.

3.3 Target Population

The study population was composed of all the listed companies of NSE, 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 leading to a total population of 49 companies.

3.4 Sample Size

Sampling was employed to select 36 companies listed at the NSE whereby available information and data was stratified by time periods for a period of five years between years 2006 to 2010. The sample excluded financial companies because their leverage is highly dependent on regulation.

3.5 Data Collection

Secondary data from financial statements of companies quoted on the Nairobi Securities Exchange was collected using data collection forms.

3.6 Data Analysis

Regression analysis was used to analyze the data and find out whether there exists a relationship between financial leverage and the firms' market-to-book ratio. In this research a dynamic econometric model was employed to assess the joint relationship between market value to book ratio and leverage of firms. To investigate this relationship the study formulated a regression equation. This approach provides an opportunity to study long run determinants and short run dynamics in a unified framework. As the above empirical evidence indicates, it seemed plausible that the direction of causality is multivariate and thus co-integration approach allows treatment of variables as endogenous in the long-run. The following equation described what determines leverage and in the context of market to book value is considered and also incorporating control variables. Leverage is the dependent variable while Market-to-Book ratio is the independent variable. Profitability, growth, size, liquidity, tangibility and non-tax shield are introduced as control variables.

$$LEV = \beta_0 + \beta_1 MBV + \beta_2 PROF + \beta_3 GRO + \beta_4 SIZE + \beta_5 LIQ + \beta_6 TANG + \beta_7 NON TAX + \varepsilon$$

Where; LEV is the firm leverage, MBV is the market value to book ratio, PROF denotes profitability, GRO represents growth of the firm, SIZE represents the size of the firm, LIQ denotes the liquidity of the firm which is a measure of risk, TANG denotes the share of fixed assets of the firm, NON TAX represents the non-debt tax shield, $\beta_0, \beta_1, \dots, \beta_7$; are the regression coefficients and ε is the error term.

Leverage is measured by debt equity ratios

MBV is the ratio of market value to book value computed as $[(\text{book total assets} - \text{book equity}) + \text{market equity}] / \text{book assets}$

Profitability is measured by ratio of earnings before interest and tax to total assets.

Growth of the firm is measured by book value of assets less book value of equity divided by book value of assets (total assets- equity/ total assets).

Size is measured by ratio of sales to total assets of the firm.

Liquidity is measured by ratio of sales to total assets of the firm.

Tangibility is measured by ratio of current assets to current liabilities.

Non-debt tax shield is measured by depreciation divided by total assets.

**CHAPTER FOUR:
DATA ANALYSIS AND INTERPRETATION**

4.1 Introduction

This chapter presents the research findings on the relationship between leverage and market value to book ratio for firms listed at the Nairobi Securities Exchange. The study was conducted on 41 firms listed at the NSE where secondary data from the period of 2006 to 2010 was used in the analysis. Regression analysis was used in analysis the data.

4.2 Regression Analysis

Table 4.1: Panel data model for fixed and random effects models

Dependent variable: debt-to-equity ratio			
	OLS	FE	RE
	(1)	(2)	(3)
Profitability	-2.529 (0.410)	-0.644 (0.242)	-1.107 (0.225)
Growth	1.482 (0.220)	0.211 (0.101)	0.399 (0.085)
Size	0.095 (0.036)	0.169 (0.098)	0.160 (0.033)
MBV	-0.070 (0.006)	-0.020 (0.008)	-0.042 (0.007)
Non-debt tax shield	-0.002 (0.109)	0.119 (0.080)	0.069 (0.076)
Tangibility	-2.390 (0.314)	-0.283 (0.224)	-1.161 (0.169)
Liquidity	0.210 (0.203)	-0.215 (0.188)	0.035 (0.136)
Number of observations	41	41	41
R ²	0.6691	0.7779	0.7267

It is obvious that coefficients for our main independent variable, Market to Book value ratio is statistically significant across the models. Thus, the MBV ratio influences debt to equity ratio (leverage of the firm). This study has confirmed these findings by depicting a negative relationship between leverage and Market to Book Ratio. This study has confirmed these

findings by depicting a negative relationship between leverage and profitability. The study found a positive relationship between growth of the company and leverage. This study has confirmed some of these findings by depicting a positive relationship between leverage and growth. This study has confirmed some of these findings by depicting a positive relationship between leverage and firm size.

Year 2006

Table 4.2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.886 ^a	.785	.752	.632

Adjusted R squared is coefficient of determination which tell us the variation in the dependent variable due to changes in the independent variable, from the findings in the above table the value of adjusted R squared was 0.752 an indication that there was variation of 75.2% on the leverage of companies listed at the NSE due to changes in the independent variable which are ratio of market value to book value, Profitability, Growth of the firm, Size, Liquidity of the firm, Tangibility and Non-debt tax shield at 95% confidence interval . This shows that 75.2% changes in leverage of the company could be accounted for by market value to book value, profitability, Growth of the firm, Size, Liquidity of the firm, Tangibility and Non-debt tax shield. R is the correlation coefficient which shows the relationship between the study variable, from the findings shown in the table above there was a strong positive relationship between the study variable as shown by 0.886.

Table 4.3: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	Constant	3.327	.534		6.227	.000
	MBV	-.118	.077	-.164	-1.519	.133
	Profitability	-.198	.099	-.237	-2.011	.048
	Growth	.271	.130	.278	2.083	.040
	Size	.035	.124	.036	.285	.776
	Liquidity	.208	.093	.268	2.231	.028
	Tangibility	.112	.087	.158	1.294	.199
	Non-debt tax shield	-.250	.107	-.305	-2.346	.021

The established regression equation for year 2006 was

$$Y = 3.327 - 0.118MBV - 0.198 PROF + 0.271GRO + 0.035SIZE + 0.208 LIQ + 0.112 TANG - 0.250 Non Debt$$

From the above regression equation it was revealed that holding leverage of the company could be accounted for by market value to book value, Profitability, Growth of the firm, Size, Liquidity of the firm, Tangibility and Non-debt tax to a constant zero, leverage of firms listed at the NSE would stand at 3.327, a unit increase in market value to book ratio of the company would lead to decrease in the leverage of the company by a factor of 0.118, unit increase in profitability of the company would lead to decrease in leverage of the company by factors of 0.198, unit increase in growth would lead to increase in leverage of the company by a factor of 0.271, unit increase in size would lead to increase in the leverage of the firm by a factor of 0.035, a unit increase in liquidity of the firms listed at the NSE would lead to increase in leverage of the firms by factors of 0.208, unit increase in tangibility would lead to increase in leverage of the company by a factor of 0.112, further unit increase in non-debt tax shield would lead to decrease in leverage by a factor of 0.250.

Year 2007

Table 4.4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.832 ^a	.692	.653	.583

Adjusted R squared is coefficient of determination which tell us the variation in the dependent variable due to changes in the independent variable, from the findings in the above table the value of adjusted R squared was 0.653 an indication that there was variation of 65.3% on the leverage of companies listed at the NSE due to changes in the independent variable which are ratio of market value to book value, Profitability, Growth of the firm, Size, Liquidity of the firm, Tangibility and Non-debt tax shield at 95% confidence interval . This shows that 65.3% changes in leverage of the company could be accounted for by market value to book ratio, profitability, Growth of the firm, Size, Liquidity of the firm, Tangibility and Non-debt tax shield. R is the correlation coefficient which shows the relationship between the study variable, from the findings shown in the table above there was a strong positive relationship between the study variable as shown by 0.832.

Table 4.5: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t		Sig.
		B	Std. Error	Beta			
1	Constant	2.809	.519		5.414	.000	
	MBV	-.012	.049	-.026	-.256	.799	
	Profitability	-.016	.099	-.024	-.166	.868	
	Growth	.102	.078	.164	1.301	.197	
	Size	.088	.104	.104	.844	.401	
	Liquidity	.058	.100	.075	.573	.568	
	Tangibility	.162	.092	.188	1.757	.083	
	Non-debt tax shield	-.173	.076	-.247	-2.269	.026	

From the data in the above table the established regression equation for year 2007 was

$$Y = 2.809 - 0.012MBV - 0.016 PROF - 0.102 GRO +0.088 SIZE +0.058 LIQ +0.162 TANG - 0.173 Non Debt$$

From the above regression equation it was revealed that holding leverage of the company could be accounted for by market value to book value, Profitability, Growth of the firm, Size, Liquidity of the firm, Tangibility and Non-debt tax to a constant zero , leverage of firms listed at the NSE would stand at 2.809 , a unit increase in market value to book value of the company would lead to decrease in the in the leverage of the company by a factors of 0.012, unit increase in profitability of the company would lead to decrease in leverage of the company by factors of 0.016 , unit increase in growth would lead to decrease in leverage of the company by a factor of 0.102 , unit increase in size would lead to increase in the leverage of the firm by a factors of 0.088 , a unit increase in liquidity of the firms listed at the NSE would lead to increase in leverage of the firms by factors of 0.058 , unit increase in tangibility would lead to increase in leverage of the company by a factor of 0.162, further unit increase in non-debt tax shield would lead to decrease in leverage by a factor of 0.173.

Year 2008

Table 4.6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.757 ^a	.573	.526	.805

Adjusted R squared is coefficient of determination which tell us the variation in the dependent variable due to changes in the independent variable, from the findings in the above table the value of adjusted R squared was 0.526 an indication that there was variation of 52.6% on the leverage of companies listed at the NSE due to changes in the independent variable which are ratio of market value to book value, Profitability, Growth of the firm, Size, Liquidity of the firm, Tangibility and Non-debt tax shield at 95% confidence interval . This shows that 52.6% changes in leverage of the company could be accounted for by market value to book value, profitability, Growth of the firm, Size, Liquidity of the firm, Tangibility and Non-debt tax shield. R is the correlation coefficient which shows the relationship

between the study variable, from the findings shown in the table above there was a strong positive relationship between the study variable as shown by 0.757.

Table 4.7: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	Constant	2.385	.408		3.944	.348
	MBV	-.209	.089	-.222	-2.347	.021
	Profitability	-.069	.095	-.080	-.732	.466
	Growth	.134	.097	.135	1.375	.173
	Size	.270	.091	.269	2.951	.004
	Liquidity	.022	.092	.019	.236	.814
	Tangibility	.210	.118	.182	1.769	.081
	Non-debt tax shield	-.254	.109	-.281	-2.322	.023

From the data in the above table the established regression equation for year 2008 was

$$Y = 2.385 - 0.209 \text{ MBV} - 0.069 \text{ PROF} + 0.134 \text{ GRO} + 0.270 \text{ SIZE} + 0.022 \text{ LIQ} + 0.210 \text{ TANG} - 0.254 \text{ Non Debt}$$

From the above regression equation it was revealed that holding leverage of the company could be accounted for by market value to book ratio, Profitability, Growth of the firm, Size, Liquidity of the firm, Tangibility and Non-debt tax to a constant zero, leverage of firms listed at the NSE would stand at 2.385, a unit increase in market value to book value of the company would lead to decrease in the leverage of the company by a factor of 0.209, unit increase in profitability of the company would lead to decrease in leverage of the company by factors of 0.069, unit increase in growth would lead to increase in leverage of the company by a factor of 0.134, unit increase in size would lead to increase in the leverage of the firm by a factor of 0.270, a unit increase in liquidity of the firms listed at the NSE would lead to increase in leverage of the firms by factors of 0.022, unit increase in tangibility would lead to increase in leverage of the company by a factor of 0.210, further unit increase in non-debt tax shield would lead to decrease in leverage by a factor of 0.254.

Year 2009

Table 4.8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.925 ^a	.855	.815	.535

Adjusted R squared is coefficient of determination which tell us the variation in the dependent variable due to changes in the independent variable, from the findings in the above table the value of adjusted R squared was 0.815 an indication that there was variation of 81.5% on the leverage of companies listed at the NSE due to changes in the independent variable which are ratio of market value to book value, Profitability, Growth of the firm, Size, Liquidity of the firm, Tangibility and Non-debt tax shield at 95% confidence interval . This shows that 81.5 % changes in leverage of the company could be accounted for by market value to book value, profitability, Growth of the firm, Size, Liquidity of the firm, Tangibility and Non-debt tax shield. R is the correlation coefficient which shows the relationship between the study variable, from the findings shown in the table above there was a strong positive relationship between the study variable as shown by 0.925.

Table 4.9: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	Constant	1.614	.394		4.098	.000
	MBV	-.263	.067	-.385	-3.911	.000
	Profitability	-.111	.056	-.207	-1.991	.050
	Growth	.233	.079	.317	2.940	.004
	Size	.010	.058	.016	.169	.866
	Liquidity	.011	.071	.016	.154	.878
	Tangibility	.069	.088	.084	.780	.438
	Non-debt tax shield	-.066	.089	-.073	-.741	.461

From the data in the above table the established regression equation for year 2006 was

$$Y = 1.614 - 0.263 \text{ MBV} - 0.111 \text{ PROF} + 0.233 \text{ GRO} + 0.010 \text{ SIZE} + 0.011 \text{ LIQ} + 0.069 \text{ TANG} - 0.066 \text{ Non Debt}$$

From the above regression equation it was revealed that holding leverage of the company could be accounted for by market value to book value, Profitability, Growth of the firm, Size, Liquidity of the firm, Tangibility and Non-debt tax to a constant zero, leverage of firms listed at the NSE would stand at 1.614, a unit increase in market value to book value of the company would lead to decrease in the leverage of the company by a factor of 0.263, unit increase in profitability of the company would lead to decrease in leverage of the company by factors of 0.111, unit increase in growth would lead to increase in leverage of the company by a factor of 0.233, unit increase in size would lead to increase in the leverage of the firm by a factor of 0.010, a unit increase in liquidity of the firms listed at the NSE would lead to increase in leverage of the firms by factors of 0.011, unit increase in tangibility would lead to increase in leverage of the company by a factor of 0.069, further unit increase in non-debt tax shield would lead to decrease in leverage by a factor of 0.066.

Year 2010

Table 4.10: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.860 ^a	.740	.718	.608

Adjusted R squared is coefficient of determination which tell us the variation in the dependent variable due to changes in the independent variable, from the findings in the above table the value of adjusted R squared was 0.718 an indication that there was variation of 71.8% on the leverage of companies listed at the NSE due to changes in the independent variable which are ratio of market value to book value, Profitability, Growth of the firm, Size, Liquidity of the firm, Tangibility and Non-debt tax shield at 95% confidence interval. This shows that 71.8% changes in leverage of the company could be accounted for by market value to book ratio, profitability, Growth of the firm, Size, Liquidity of the firm, Tangibility and Non-debt tax shield. R is the correlation coefficient which shows the relationship between the study variable, from the findings shown in the table above there was a strong positive relationship between the study variable as shown by 0.860.

Table 4.11: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	Constant	1.908	.578		3.300	.001
	MBV	-.022	.054	-.042	-.410	.683
	Profitability	-.032	.104	-.037	-.304	.762
	Growth	.340	.088	.453	3.886	.000
	Size	.155	.090	.189	1.721	.089
	Liquidity	.038	.095	.041	.400	.690
	Tangibility	.048	.077	.050	.485	.629
	Non-debt tax shield	-.166	.073	-.122	-.903	.369

From the data in the above table the established regression equation for year 2006 was
 $Y = 1.908 - 0.022 \text{ MBV} - 0.032 \text{ PROF} + 0.340 \text{ GRO} + 0.155 \text{ SIZE} + 0.038 \text{ LIQ} + 0.048 \text{ TANG} - 0.166 \text{ Non Debt}$

From the above regression equation it was revealed that holding leverage of the company could be accounted for by market value to book value, Profitability, Growth of the firm, Size, Liquidity of the firm, Tangibility and Non-debt tax to a constant zero, leverage of firms listed at the NSE would stand at 1.908, a unit increase in market value to book value of the company would lead to decrease in the leverage of the company by a factors of 0.022, unit increase in profitability of the company would lead to decrease in leverage of the company by factors of 0.032, unit increase in growth would lead to increase in leverage of the company by a factor of 0.340, unit increase in size would lead to increase in the leverage of the firm by a factors of 0.155, a unit increase in liquidity of the firms listed at the NSE would lead to increase in leverage of the firms by factors of 0.038, unit increase in tangibility would lead to increase in leverage of the company by a factor of 0.048, further unit increase in non-debt tax shield would lead to decrease in leverage by a factor of 0.166.

4.3 Summary and Interpretation of Findings

The study found that variation in leverage of the firm can be accounted for by market value to book ratio, profitability, growth of the firm, Size, liquidity of the firm, Tangibility and

Non-debt tax shield. The study further revealed that there was strong relationship between leverage of the firm and ratio market value to book value, profitability, growth of the firm, Size, liquidity of the firm, tangibility and non-debt tax shield. From the regression equation it was revealed that growth of the firm, size of the firm, liquidity of the firm and tangibility of the firm had positive relationship with leverage of the firm, the study also found a negative relationship between leverage of the firm and ratio of market to book value of the firm, profitability and non-debt tax shield.

The study had intended to determine the relationship between leverage and market value to book ratio for firms listed at the Nairobi Securities Exchange. From the findings on the regression analysis, adjusted R squared is coefficient of determination which tell the variation in the leverage of the firm listed in the NSE due to changes in the ratio of market value to book value, Profitability, Growth of the firm, Size, Liquidity of the firm, Tangibility and Non-debt tax shield , the study revealed that value of adjusted R square ranged between 0.815 and 0.526, this is an indication that variation in leverage of the firm can be accounted for by market value to book value, profitability, growth of the firm, Size, liquidity of the firm, Tangibility and Non-debt tax shield. The study further revealed that there was strong relationship between leverage of the firm and ratio market value to book value, profitability, growth of the firm, Size, liquidity of the firm, tangibility and non-debt tax shield.

The established regression equation for year 2006 was

$$Y = 3.327 - 0.118MBV - 0.198 PROF + 0.271GRO + 0.035SIZE + 0.208 LIQ + 0.112 TANG - 0.250 Non Debt$$

The established regression equation for year 2007 was

$$Y = 2.809 - 0.012MBV - 0.016 PROF + 0.102 GRO + 0.088 SIZE + 0.058 LIQ + 0.162 TANG - 0.173 Non Debt$$

The established regression equation for year 2008 was

$$Y = 2.385 - 0.209 \text{ MBV} - 0.069 \text{ PROF} + 0.134 \text{ GRO} + 0.270 \text{ SIZE} + 0.022 \text{ LIQ} + 0.210 \text{ TANG} - 0.254 \text{ Non Debt}$$

The established regression equation for year 2009 was

$$Y = 1.614 - 0.263 \text{ MBV} - 0.111 \text{ PROF} + 0.233 \text{ GRO} + 0.010 \text{ SIZE} + 0.011 \text{ LIQ} + 0.069 \text{ TANG} - 0.066 \text{ Non Debt}$$

The established regression equation for year 2010 was

$$Y = 1.908 - 0.022 \text{ MBV} - 0.032 \text{ PROF} + 0.340 \text{ GRO} + 0.155 \text{ SIZE} + 0.038 \text{ LIQ} + 0.048 \text{ TANG} - 0.166 \text{ Non Debt}$$

These results are summarized in the table below;

Table 4.122: Summary of Regression Results

Year	β_0	MBV	PROF	GRO	SIZE	LIQ	TANG	NON TAX
2006	3.327	-0.118	-0.198	0.271	0.035	0.208	0.112	-0.250
2007	2.809	-0.012	-0.016	0.102	0.088	0.058	0.162	-0.173
2008	2.385	-0.209	-0.069	0.134	0.270	0.022	0.210	-0.254
2009	1.614	-0.263	-0.111	0.233	0.010	0.011	0.069	-0.066
2010	1.908	-0.022	-0.032	0.340	0.155	0.038	0.048	-0.166

From the above regression equations, it was revealed that there is a negative relationship between leverage and market to book ratio. The relationship between leverage and profitability was established to be negative. The results revealed that there is a positive relationship between leverage and growth. There is also a positive relationship between leverage and size. The relationship between leverage and liquidity was found to be positive. A positive relationship was also established between leverage and tangibility of the firm.

Finally, the relationship between leverage and non-debt tax shield was found to be negative. These findings agreed with past empirical studies as highlighted in the discussion below.

The negative relationship between leverage and Market to Book ratio confirms the findings of Rajan and Zingales (1995) who had documented a negative relation between book leverage and the market-to-book ratio in various countries. The relationship is also consistent with Frank and Goyal (2003) who upon examining the empirical implications of the trade-off theory, the market timing theory, and Welch's theory of capital structure using aggregate US data had found a high market-to-book ratio as being associated with subsequent debt reduction. This study has confirmed these findings by depicting a negative relationship between leverage and Market to Book Ratio.

The findings of this study also concur with findings of Myers (1984) who found that there exist a negative relationship between profitability of the company and leverage of the company. Myers (1984) prescribed a negative relationship between leverage and profitability on the basis that successful companies do not need to depend so much on external funding. They, instead, rely on their internal reserves accumulated from past profits. Titman and Wessels (1988) and Barton *et al.* (1989), agree that firms with high profit rates, all things being equal, would maintain relatively lower debt ratio since they are able to generate such funds from internal sources. Empirical evidence from previous studies (Chittenden *et al.*, 1996; Coleman and Cole, 1999; Al-Sakran, 2001) appears to be consistent with the pecking order theory. This study has confirmed these findings by depicting a negative relationship between leverage and profitability.

The study found a positive relationship between growth of the company and leverage. This concur with the findings of Michaelas *et al.* (1999) found future growth positively related to leverage and long-term debt, Myers (1977) had confirmed that firms with a higher proportion of their market value accounted for by growth opportunity will have debt capacity. However not all previous studies have confirmed a positive relationship between growth and leverage. Auerbach (1985) had argued that leverage is inversely related to growth rate because the tax deductibility of interest payments is less valuable to fast growing firms since they usually

have non-debt tax shields. Chittenden et al. (1996) and Jordan et al. (1998) found mixed evidence. This study has confirmed some of these findings by depicting a positive relationship between leverage and growth.

The findings of this study have confirmed a positive relationship between size and leverage. Past researchers have taken the view that large firms are less susceptible to bankruptcy because they tend to be more diversified than smaller companies Smith and Warner (1979) and Ang and McConnel (1982). However against this view are Marsh (1982) and Titman and Wessels (1988) who reported a contrary negative relationship between debt ratios and firm size. Marsh (1982) argues that small companies, due to their limited access to equity capital market tend to rely heavily on loans for their funding requirements. Titman and Wessels (1988) further posit that small firms rely less on equity issue because they face a higher per unit issue cost. This study has confirmed some of these findings by depicting a positive relationship between leverage and firm size.

According to the results of the study, a negative relationship was established between liquidity and leverage. Liquidity which was used as a proxy for risk has been depicted by previous studies as having a negative relationship to leverage. Empirical evidence suggests that there is a negative relationship between risk and leverage of small firms Ooi (1999) and Titman and Wessels (1988) since firms with relatively higher operating risk will have incentives to have lower leverage than more stable earnings firms. This study has confirmed some of these findings by depicting a positive relationship between leverage and liquidity.

From the study, a positive relationship between tangibility and leverage was established. This is consistent with Studies have also revealed that leverage is positively associated with the firm's assets. This is consistent with Myers (1977) argument that tangible assets, such as fixed assets, can support a higher debt level as compared to intangible assets, such as growth opportunities. Assets can be redeployed at close to their intrinsic values because they are less specific Williamson (1988) and Harris (1994). Thus, assets can be used to pledge as collateral to reduce the potential agency cost associated with debt usage Smith and Warner (1979), Stulz and Johnson (1985), Feri and Jones (1979), Marsh (1982), Long and Matlitz

(1985) and Allen (1995) provide empirical evidence of a positive relationship between debt and fixed assets. The empirical evidence suggests a positive relation consistent with the theoretical arguments between asset structure and leverage for large firms Van der Wijst and Thurik, (1993), Chittenden *et al.*, (1996) and Michaelas *et al.*, (1999). This study has confirmed these findings by depicting a positive relationship between leverage and non-debt tangibility.

Non Debt Tax Shield was found to have negative relationship with leverage and this was in agreement with the findings of Auerbach (1985), MacKie-Mason (1990) who studied the tax impact on corporate financing decisions. The studies provided evidence of substantial tax effect on the choice between debt and equity. They concluded that changes in the marginal tax rate for any firm should affect financing decisions. A firm with a high tax shield is less likely to finance with debt. The reason is that tax shields lower the effective marginal tax rate on interest deduction. While the assertions by DeAngelo and Masulis (1980) had suggested otherwise. Other studies which have suggested an inverse relationship between non-debt tax shields and debt include Givoly *et al.*, 1992; Allen, 1995; Wiwattanakantang, 1999; De Miguel and Pindado, 2001; and Ozkan, 2001. This study has confirmed these findings by depicting an inverse relationship between leverage and non-debt tax shields.

CHAPTER FIVE:
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

This study was intended to reveal the nature of relationship that exists between leverage and market to book ratio. The focus was to determine the role that Market to Book ratio plays to influence the firms' decision in either going for more debt or equity in their financing decisions. In order to achieve this objective, the study was designed to collect and analyse the relevant data for Kenyan listed companies.

In order to determine the relationship between leverage and market to book ratio, the study sort evidence from firms listed at the Kenya's Nairobi Securities Exchange. Regression analysis on data from a sample of 36 companies listed at the Exchange for five years period from 2006 to 2010 was conducted to examine the variables leverage and Market to Book Ratio while controlling for Profitability, Growth of the firm, Size, Liquidity of the firm, Tangibility and Non-debt tax shield. A suitable regression model was designed in order to capture all the relevant variables of the study.

The study revealed that leverage of the firm can be accounted for by market value to book ratio. There was strong negative relationship between leverage and Market to Book Ratio of the firm. The relationship between leverage and two control variables namely; profitability and Non-Debt Tax Shield was negative. A positive relationship between leverage and the other four control variables namely; growth, size, liquidity and tangibility was established.

The findings of this study have enriched the existing literature on leverage and the factors that tend to account for leverage levels of firms. It has shown that Market to Book Ratio is key factor that managers should review in their choice of leverage. Increasing Market to Book Ratio will favor equity issuance in whatever form as opposed debt. Debt will increase when the Market to book ratio is below 1. The leverage position was therefore found to be partly derived by Market to Book Ratios. This finding is useful to motivate further studies on this area.

5.2 Conclusions

The objective of the study was to determine the relationship between leverage and market value to book ratio for firms listed at the Nairobi Securities Exchange. The findings of the study confirmed that there exists a negative relationship between leverage and Market to Book ratio. This can be explained by various factors such as the role of a high share prices increasing the Market to Book Ratio in turn leading to firms opting to issue more equity which will be highly priced leading to higher proceeds from the issue.

Upon examining other variables that have an impact on leverage, the following control variables depicted a negative relationship with leverage; profitability and non-debt tax shields. The negative relationship between leverage and profitability shows that profitable companies prefer to use more of equity compare to debt. Non Debt Tax Shield was found to have negative relationship with leverage. The reason may be that firms will opt to take advantage of lower the effective marginal tax rate on interest deduction.

The positive relationship with leverage was established among the following control variables; growth of the firm, size of the firm, liquidity of the firm and tangibility of the firm. Any positive change on these variables is therefore going to lead to an increase in the leverage positions. The reasons for this may be because growth will lead to increased demand for external funds, size will encourage the firm to borrow, liquidity has the impact of leading to favorable credit assessments and tangibility has the role of providing assets for collateral.

Market to book ratio therefore is one of the variables which needs to be taken into account as firms decide on the target leverage ratio. Practitioners will then need to consider the market to book ratio whenever they intend to adjust leverage either by issuing more equity or if the decision is to otherwise acquire more debt. It will enable the firms to know the consequence that adoption of any of these two financing decisions has on the Market to Book ratio hence pre-empt the valuation. The firm will then be able to operate within the most optimal selection when faced with the decision.

5.3 Policy Recommendations

From the above discussion and conclusion the study recommends that companies at NSE must follow the financing hierarchy as postulated by the pecking order concept i.e. internal funds should be used before debt financing and then equity as equity and debt financing are more expensive and they affect the capital structure of the company compared to internal funds.

The study also recommends that companies must take note of their market to book ratios as well as profitability, growth, size, liquidity, tangibility, non-debt tax shields because these will affect financing decisions. All this will have a bearing on the leverage levels of these firms. Management will therefore need to keep a close watch on these variables to assist in determining the impact that they will have on the leverage levels.

It is recommended that financiers of companies including both shareholders and debt issuers keep a watch on market to book ratios as well as the other determinants of leverage. This will aid in an attempt to predict the possible leverage position of the firm. By doing this well in advance potential problems of illiquidity and potential adverse effects of inadequate capital or over-borrowing can be avoided.

5.4 Limitations of the Study

In attaining its objective the study was limited to 47 firms listed companies in the NSE. Financial companies were excluded since their leverage is highly dependent on legislation. The study could not therefore incorporate the impact on these of companies.

Secondary data was collected from the firm financial reports. The study was also limited to the degree of precision of the data obtained from the secondary source. While the data was verifiable since it came from the Nairobi Securities Exchange publications, it nonetheless could still be prone to these shortcomings.

The study was limited to establishing the relationship between leverage and market value to book ratio for firms listed at the Nairobi Securities Exchange. For this reason the non-listed firms could not be incorporated in the study.

The study was based on a five year study period from the year 2006 to 2010. A longer duration of the study will have captured periods of various economic significances such as booms and recessions. This may have probably given a longer time focus hence given a broader dimension to the problem.

5.5 Suggestions for Further Studies

A study can be designed to find out how what variables are applicable to financial companies. This will give an indication as to what factors are critical in arriving at the leverage status of these firms.

From the findings and conclusion, the study recommends an in-depth study to be carried out on the relationship between leverage and other determinants of capital structure namely size, growth, profitability, liquidity, non-debt tax shield and tangibility. This will help to allow more insight not only on the factors but on multi-variation among them.

Given the arguments of whether it is the trade-off theory, market timing theory or partial adjustment model of leverage that strongly influences leverage, it would be important to carry out a study with a bias to determining which of these factors is more superior or applicable in determining leverage in Kenyan firms. This will assist more knowledge on the strength of these theories in leverage determination.

In order to better understand bankruptcy issues, it would be interesting to carry out a study to determine the factors that lead to failure by firms to service their debts and ultimately leading to financial distress. This can be analyzed with a view of determining if the previous factors determining leverage had pointed to the need of increasing leverage in the first instance.

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Appendix I: Population of listed Companies at the NSE as at January 2006

AGRICULTURAL

1. Eaagads Ltd
2. Kapchorua Tea Co. Ltd
3. Kakuzi Ltd
4. Williamson Tea Kenya Ltd
5. Rea Vipingo Plantations Ltd
6. Sasini Ltd
7. Limuru Tea Co. Ltd
8. Unilever Tea Kenya Ltd

COMMERCIAL AND SERVICES

9. Kenya Airways Ltd
10. Nation Media Group
11. Standard Group Ltd
12. TPS Eastern Africa (Serena) Ltd
13. Hutchings Biemer Ltd
14. Uchumi Supermarket Ltd
15. Express Ltd

AUTOMOBILES AND ACCESSORIES

16. Car and General (K) Ltd
17. CMC Holdings Ltd
18. Sameer Africa Ltd
19. Marshalls (E.A.) Ltd

BANKING

20. Barclays Bank Ltd
21. CFC Bank Ltd
22. Diamond Trust Bank Kenya Ltd
23. Housing Finance Co Ltd
24. Kenya Commercial Bank Ltd
25. National Bank of Kenya Ltd
26. NIC Bank Ltd
27. Standard Chartered Bank Ltd

INSURANCE

28. Jubilee Holdings Ltd

29. Pan Africa Insurance Holdings Ltd

INVESTMENT

30. City Trust Ltd

31. Olympia Capital Holdings Ltd

32. Centum Investment Co Ltd

MANUFACTURING AND ALLIED

33. B.O.C Kenya Ltd

34. British American Tobacco Kenya Ltd

35. Carbacid Investments Ltd

36. East African Breweries Ltd

37. Mumias Sugar Co. Ltd

38. Unga Group Ltd

39. Eveready East Africa Ltd

40. Kenya Orchards Ltd

41. Athi River Mining

CONSTRUCTION AND ALLIED

42. A.Baumann CO Ltd

43. Bamburi Cement Ltd

44. Crown Berger Ltd

45. E.A. Cables Ltd

46. E.A. Portland Cement Ltd

ENERGY AND PETROLEUM

47. KenolKobil Ltd

48. Total Kenya Ltd

49. Kenya Power & Lighting Co Ltd

Appendix 2: Sample

AGRICULTURAL

1. Eaagads Ltd
2. Kapchorua Tea Co. Ltd
3. Kakuzi Ltd
4. Williamson Tea Kenya Ltd
5. Rea Vipingo Plantations Ltd
6. Sasini Ltd
7. Limuru Tea Co. Ltd

COMMERCIAL AND SERVICES

8. Kenya Airways Ltd
9. Nation Media Group
10. Standard Group Ltd
11. TPS Eastern Africa (Serena) Ltd
12. Express Ltd

AUTOMOBILES AND ACCESSORIES

13. Car and General (K) Ltd
14. CMC Holdings Ltd
15. Sameer Africa Ltd
16. Marshalls (E.A.) Ltd

INVESTMENT

17. City Trust Ltd
18. Olympia Capital Holdings Ltd
19. Centum Investment Co Ltd

MANUFACTURING AND ALLIED

20. B.O.C Kenya Ltd
21. British American Tobacco Kenya Ltd
22. Carbacid Investments Ltd
23. East African Breweries Ltd
24. Mumias Sugar Co. Ltd
25. Unga Group Ltd
26. Eveready East Africa Ltd
27. Kenya Orchards Ltd
28. Athi River Mining

CONSTRUCTION AND ALLIED

- 29. A.Baumann CO Ltd
- 30. Bamburi Cement Ltd
- 31. Crown Berger Ltd
- 32. E.A. Cables Ltd
- 33. E.A. Portland Cement Ltd

ENERGY AND PETROLEUM

- 34. KenolKobil Ltd
- 35. Total Kenya Ltd
- 36. Kenya Power & Lighting Co Ltd