

**CORPORATE TAX ON DEBT FINANCING FOR NON
FINANCIAL FIRMS LISTED IN THE NAIROBI SECURITIES
EXCHANGE**

BY

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DECLARATION

This research project is my original work, and has not been presented for any degree award in any other University.

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This research project has been submitted with my approval as the University Supervisor

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DEDICATION

To my Parents, my late husband Benson Agina, my children Ian, Diana and Chris Agina for your love and support and for the sacrifice you made in my education to become what I am today.

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LIST OF ABBREVIATIONS AND ACRONYMS

MM – Modigliani and Miller

NSE – Nairobi Security Exchange

CMA – Capital Markets Authority

MNC – Multinational Corporations

INTS – Interest

T – Tax

ABSTRACT

The study focuses on debt capital financing by non-financial quoted firms. The study therefore sought to find out the effect of corporate tax on debt capital financing by non-financial firms listed in the Nairobi Securities Exchange. The research methodology included all the non-financial firms listed in the Nairobi Securities Exchange with secondary data sourced from the Nairobi Securities Exchange Handbook from 2009 to 2012. The variables used are the determinants of debt such as equity, taxation, total assets, and earnings after tax and size as dependent variables against debt capital as independent variable. The data analysis used regression analysis to build the relationship. The findings were that equity had a negative significant relationship with debt whereas taxation had a positive insignificant relationship with debt. Thus as levels of taxation increases debt levels also increases. Total assets, earnings after tax and size on the other hand have a positive insignificant relationship with debt. In conclusion debt has a taxation benefit in terms of debt tax shield and thus should be embraced by managers as an alternative source of financing as opposed to equity.

CHAPTER ONE: INTRODUCTION

1.1. Background of Study

The goals of financial management include; acquisition; management and financing of assets. This study dwells on the financing aspect of financial management. Companies can finance their operations using either debt or equity financing. According to Myers and Majluf (1984) managers will follow a pecking order, using up internal funds first, then debt, and finally resorting to equity. The performance of companies is in most cases, based on the strength and strategy of financing their operations. Firms therefore search for the lowest-cost financial structures depending on the costs and risks involved in the various financing strategies (Titman and Wessels, 1988). One of the major issues of concern to firms is how to raise enough capital to sustain their operations. A more pertinent issue is the availability and the inherent cost of capital. While the basis of financing is dependent on a firm's decision (either through shareholders' or board of directors' approval), there are a number of underlying conditions or constraints that determine the ability of firms to raise such capital.

The capital structure question involves a firm's decision on how it finances itself with the theory of capital structure revolving around three main propositions to explain the actual capital-financing behavior; the dividend irrelevance theory(Modigliani and Miller,1977) which imposes that because debt composes of a tax shield, the higher proportion of leverage will be of benefit to each company concerned and it will decrease the cost of capital; the static trade-off theory (Kraus &Litzenberger, 1973) which is based on firms' observation of a target debt ratio, the pecking order hypothesis (Myers, 1984; Myers and Majluf, 1984) which is based on asymmetric

information as the influence of financing behavior and the agency theory (Jensen and Meckling, 1976) which considers the costs to the shareholders and managers of a firm for holding debt.

This research narrows down on the amount of corporate tax and levels of debt financing on the non-financial firms of quoted companies. Since for such companies, interest payments are tax deductible, but returns to equity investors are not. Dividends are subject to double taxation, and even returns to equity in form of capital gains are subjected to at least one level of tax, at the corporate level. Thus, there appears to be a strong incentive to use debt to fund the firm's activities. The study of capital structure in Kenya is important for two reasons; first, the pace of financial development in Kenya, especially the banking sector, has been high since the financial liberalization of 1996 which might have affected the financing of firms while the bond market has remained underdeveloped, which might have an effect on firm leverage. Secondly, there have been arguments by industry players that the current corporate tax rate is high and has resulted into firms being uncompetitive. Despite these arguments, the corporate tax rate has not changed from 30 per cent of profits for some time; hence it is important to establish the financing decisions of firms given the corporate tax rate. This will help in addressing the issue of corporate tax that has always been raised by the industry. The companies in the financial sector will be excluded from the study to remove any anomalies associated with this sector which is highly regulated by the central bank prudential on issues of liquidity, asset and capital holding, and provision for bad debts among other factors (Santos, 2001). The financial leverage of financial companies is not comparable to those non-financial companies (Mwangi, Anyango & Ameyia, 2012). Moreover, cash is the trading asset of banks and hence the levels of cash holding are expected to be significantly higher than for firms in other sectors. This research addressed the

issue of the corporate tax rate and the influence it has on the capital structure of quoted companies.

1.1.1. Corporate Tax

A tax is a financial charge or other levy imposed upon a taxpayer (an individual or legal entity) by a state or the functional equivalent of a state such that failure to pay, or evasion of or resistance to collection, is punishable by law. Taxes are also imposed by many administrative divisions. Taxes consist of direct or indirect taxes and may be paid in money or as its labor equivalent. Corporate tax can be viewed as either a tax on corporate capital (as the opportunity cost of capital supplied by shareholders is included in the tax base) or as a tax on profits (as the tax base is determined by subtracting costs of production from gross corporate incomes thus leaving only “profits”) (Rosen, 1995)

The study of Modigliani and Miller (1958) hypothesizes that the value of the firm is independent of its debt policy. The proposition is based on the critical assumption that corporate income taxes do not exist. In reality, corporate income taxes exist, and interest paid to debt- holders is treated as a deductible expense. Thus, interest payable by firms saves taxes. This makes debt financing advantageous. In their 1963 article, MM show that the value of the firm will increase with debt due to the deductibility of interest charges for tax computation, and the value of the levered firm will be higher than of the unlevered firm. The advantages of corporate income tax in Kenya include tax incentives such as tax holidays, zero rated commodities and interest rate tax shield.

Since corporation tax rates vary significantly between different countries, firms can reduce global tax payments by issuing debt primarily in high-tax countries. This is confirmed in several empirical studies investigating the financial decisions of affiliates of multinational firms by

finding that higher taxes are associated with higher debt-to-capital ratios. However, the magnitudes of tax effects found are rather small. For example, the results of Desai, Foley, and Hines (2004) suggest that a one percentage point higher tax rate leads to 0.471 percent higher debt-to-asset ratios for affiliates of US multinationals. Using data on European affiliates, Huizinga, Laeven, and Nicodeme (2008) report a similar semi-elasticity of about 0.435. Although existing studies find conclusive evidence that taxes affect the debt policy of multinational firms, the magnitudes of tax effects do probably vary significantly across firms. In Kenya, Corporation tax is a form of income tax that is levied on companies. Resident companies are taxable 30% with effect from year of income 2000 while non-resident companies are taxable at a rate of 37.5% with effect from year of income 2000.

1.1.2. Debt Financing by Firms

Debt is an amount of money borrowed by firms. Many corporations use debt as a method for making large purchases they could not afford under normal circumstances. Examples of debt include bonds, loans, commercial paper. According to Myers and Majluf (1984) debt is favored over equity as a source of external finance. The reason is that management will not issue new shares if the firm is undervalued, so issuance of new shares is a signal of overvaluation. This gives rise to adverse selection. It leads to the pecking order in corporate finance where a hierarchy exists as: internal finance, debt and external equity. Higher debt makes firms more vulnerable to shocks and increases the risk of bankruptcy. Creditors will demand a higher interest rate, which reflects a private cost. Firms thus take a tax shield of debt and the cost of financial distress. Situations in which the owners of corporations could increase their wealth by substituting debt for equity (or vice versa) would be incompatible with market equilibrium, and firms will issue debt until the marginal corporate tax rate is equal to the investor's personal tax

rate (Miller 1977). Hence at equilibrium, the tax structure determines the aggregate level of debt implying that leverage is determinate but irrelevant for the individual firm.

Due to asymmetric information, there can be a conflict of interest between managers and shareholders (Easterbrook, 1984; Jensen, 1986). Managers aiming to build an empire use free cash flow of spending on investment, including wasteful projects that are not in the interests of shareholders. Issuing debt constrains the use of free cash flow and protects shareholders against this opportunistic behavior of managers. Debt thus improves managerial decisions. Debt issuance may be a signal to outside investors that the firm is confident in its ability to service its debt in the future (Ross, 1977). Inefficiently high levels of debt will then be issued, reflecting costs. However, debt may also signal the opposite effect. Myers and Majluf (signaling 1984) argue that external financing can be interpreted by investors as a signal of bad health, e.g. due to lack of liquidity. In that case firms will be reluctant to engage in external financing. This causes adverse selection in external financing and the result is underinvestment and too little borrowing.

1.1.3. Corporate tax and debt financing

The tax debate in Kenya today is based on the premise that firms consider corporate tax rate to be high which in turn makes them incur high business costs, rendering them uncompetitive. This is despite the number of tax incentives and rebates that have been put in place to among other things encourage firm establishment, growth and listing. The overall goal of the incentives is to improve firm performance. An appropriate tax policy is important for improving the investment climate as the country implements its development agenda of being a middle income country by 2030. If firms view tax rates to be very high, then an increase in the tax rate will most likely lead

to firms adjusting their capital structure to cover the increased tax rates. However, this response depends on the market conditions, especially the costs of financing debt.

The static trade off theory of capital structure states that optimal capital structure is obtained where the net tax advantage of debt financing balances leverage related costs such as financial distress and bankruptcy, holding firms assets and investment decisions constant (Baxter, 2002). According to Myers (1984) firms adopting this theory could be regarded as setting a target debt-to-value ratio with a gradual attempt to achieve it.

If firms opt for more debt to cover increase in corporate taxes, then the credit market will be constrained as demand for debt financing will go up. However, if the costs of debt are so high, then firms will factor in increased taxes and thus face reduction in after tax profits especially if revenue is not growing at an equal rate. A negative effect of tax on company performance may also lead to a reduction in overall company tax revenue generation. Despite this, the corporate tax rate has been maintained at its current level for over a decade. This means that firms that are not able to use debt to shield their earnings from taxes have to cover the tax rate thus facing high business costs.

1.1.4. Non-Financial Firms in Nairobi Securities Exchange

The Nairobi Securities Exchange (NSE) is a public market for the trading of securities issued by publicly quoted companies in Kenya. The Nairobi stock exchange is the centre point of Kenya capital market; stocks are listed and traded on the exchange. The apex regulatory body is the Capital market authority. The regulation authority is under a government body the Ministry of finance and governed through the Capital Markets Authority Act Cap 485A (the CMA Act). The

Authority was established to regulate and oversee the orderly development of Kenya's Capital markets (2006, NSE handbook).

The NSE has been one of the most popular investments in Kenya in the recent past due to its high return. It has become an integral part of the Kenya economy and any fluctuation in this market influences financial lives of individuals as well as corporate entities. Presently 61 companies are listed at NSE and two indexes are computed daily; the NSE-20 share index which is equal weighted geometric mean for twenty large and most active stocks that represents of all sectors and the NSE all stock index which is value weighted arithmetic mean. Companies listed in NSE are categorized into five segments; Agriculture, Commercial and services, Financial and investments, Industrial and Allied and finally Alternative Investment Market Segment (AIS) (2006, NSE handbook). Investors expect returns on their investments and given a certain level of risks a rational investor expects to maximize his returns.

The companies in the financial sector will be excluded from the study to remove any anomalies associated with this sector which is highly regulated by the central bank prudential on issues of liquidity, asset and capital holding, and provision for bad debts among other factors (Santos, 2001). The financial leverage of financial companies is not comparable to those non-financial companies (Mwangi, Anyango & Ameyia). Moreover, cash is the trading asset of banks and hence the levels of cash holding are expected to be significantly higher than for firms in other sectors.

1.2.Research Problem

Tax systems typically favor corporate debt over equity, especially because interest payments are deductible for corporate income tax purposes while equity returns are not. This disparity in the

tax treatment raises the need of analyzing the association between the tax rate and leverage. Financial policies that are tax sensitive mostly involve making decisions regarding the capital structure, ownership structure and capital budgeting decisions.

A diversity of views exists as to whether debt affects the value of the firm. The traditional point of view is that debt adds value to a firm until the optimal point is reached. MM (1958) on the other hand argues that debt has no effect on the value of the firm due to the arbitrage process. They argued that identical income streams could not sell at different prices and if they do, arbitrage process would ensure that market values of levered and unlevered are the same thus making debt financing to be of no significance to the value of the firm. They argued that the firm's value is determined by its investment policy (real assets) and not the securities it issues. Their argument was based on the firm is unaffected by the division of the capital structure among debt and equity. This is because total value depends on underlying profitability and risk. In their second proposition MM (1963) recognize the existence of tax and conclude that issuance of debt can enhance the firm's value because interest payments are tax deductible. The value of the levered firm will be the sum of the value of the unlevered firm and the gain from leverage. This implies that firms should use 100 per cent debt financing to take advantage of the tax savings. In practice for many reasons no firm deliberately follows a policy of 100% debt financing.

Kim (1978) states that the disadvantage of debt is the potential cost of financial distress. Jensen and Meckling (1976) add that an additional disadvantage is the agency costs for equity holders and debt holders. Subsequent contributions by Miller (1977) suggest that the advantage of corporate borrowing is reduced by personal tax loss. As a result there is no optimum capital structure for a single firm. Also an article submitted by Miller (1990) concludes that the personal tax advantage of debt drives market prices to equilibrium implying leverage irrelevancy to

individual firms. According to Jensen and Meckling (1976) the use of debt limits management ability to reduce the firm's value through incompetence or perquisite consumption. Hence leverage results in maximization of the value of the firm. Stulz (1996), Ross (1997) and Leland (1998) suggest that firms add leverage in their capital structure in response to greater debt capacity; the associated increase in interest deductions reduces tax liabilities and increases firm's value. Numerous studies have been carried out on capital structure decisions. Kubel (2008) did a study between financial leverage and firm value at the Johannesburg stock exchange. He found out that financial leverage is negatively correlated with firm value. The study was conducted in a different market environment

This study mainly focuses on the effect of corporate tax rate on debt financing of quoted companies. With regard to the source of finance, the Kenyan tax strongly favors debt rather than equity capital mainly because it provides complete deductibility of interest expenses and no relief for the opportunity cost of equity capital. If the Kenyan policy makers take into consideration the bias against equity financing by the present tax system, then in the long run there might be a negative impact in the allocation of resources. This will arise because policy makers will pursue financial decisions that favor debt financing over equity financing. Numerous studies have been carried out to investigate the determinants of capital structure. A local study done by Odinga (2003), he used local data available at the Nairobi Stock Exchange to investigate the variables that affect the capital structure decision. He concluded that profitability and non-debt tax shield are the most important variables in determining leverage. His study however had a major limitation; he did not investigate the influence of the tax shield as a variable that affects the debt financing.

Abai (2003) did a study to investigate the determinants of corporate debt maturity structure for companies quoted at the NSE, he identified effective income tax rate as one of the determinants. Onsomu (2003), set out to determine if there is a relationship between debt and the value of Kenyan firms quoted at the NSE she concluded that there was no significant relationship between debt and the value of the firm. Ngugi (2008) considered the determinants of capital structure of firms listed on the Nairobi Stock Exchange, focusing on whether the firms target their capital structure or follow a hierarchical behavior, but with no specific focus on the impact of corporate tax on capital structure. Their finding that firms observe a target debt ratio to minimize the costs of debt also provides a possibility that these firms may also be exploiting the tax benefits in their financing decisions. The study did not find any significant effect of tax on capital structure on Kenyan firms.

Although many of these studies examine the determinants of capital structure of firms, none of them investigates the influence of tax on debt part of capital structure decision. The only study that has addressed the influence of corporate tax on capital structure is by Mutsotso (2007) who further conducted a study on the influence of the corporate tax rate on the capital structure of quoted companies at the NSE. The study provided evidence of substantial tax effect on the choice between debt and equity. The study concluded that changes in the marginal tax rate for any firm should affect financing decisions. A firm with a higher tax shield is less likely to finance with debt. The reason is that tax shields lower the effective marginal tax rate on interest deduction. The study further 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

However, the studies in that have been carried out identify in passing the role of tax in capital structure decision. Although these papers provide a useful insight into the firm's capital structure

determinants in this case the corporate tax rate. These earlier studies set a stage for the need to identify whether the corporate tax rate influences debt financing part of the capital structure. Therefore what are the effects of corporate taxes on debt financing by firms?

1.3.Objectives of the study

To establish the effects of corporate tax on debt financing by firms listed in the Nairobi Securities exchange.

1.4.Value of the study

The study will be beneficial to investors who are planning their portfolio. The objective of any investor is maximization of portfolio returns. The investors will be able to evaluate how corporate taxes on firm's leverage affect their returns.

The study is important to managers in coming up with the optimal capital structure. It informs managers on the tax benefits of higher leverage and the extent to which a firm benefits from interest tax shields.

The study is important to economists who are seeking to understand the tax benefit of leverage and appraise the functioning of interest tax shields on firm's value.

The study is important to scholars who seek to advance their knowledge on corporate tax and its impact on the capital structure especially leverage.

CHAPTER TWO: LITERATURE REVIEW

2.1.Introduction

The chapter summarizes information from other researchers who have earlier carried research on capital structure and the tax benefit of leverage on firm value. The specific areas covered are the capital structure theories and empirical evidence on their works.

2.2.Theoretical Review

The subject of tax benefit of leverage has captivated economists for a long time resulting in intensive theoretical modeling and empirical examinations. A number of conflicting theoretical models lacking strong empirical support define current attempts to explain the puzzling reality of the tax benefit of leverage to firms.

2.2.1.Trade off Theory

The original version of the trade-off theory grew out of the debate over the Modigliani- Miller theorem. When corporate income tax was added to the original irrelevance, this created a benefit for debt in that it served to shield earnings from taxes. Since the firm's objective function is linear, and there is no offsetting cost of debt, this implied 100% debt financing.

The static trade off theory of capital structure states that optimal capital structure is obtained where the net tax advantage of debt financing balances leverage related costs such as financial distress and bankruptcy, holding firms assets and investment decisions constant (Baxter, 2002). In view of this theory, issuing equity means moving away from the optimum and should therefore be considered bad news. According to Myers (1984) firms adopting this theory could

be regarded as setting a target debt-to-value ratio with a gradual attempt to achieve it. Myers (1984), however suggests that managers will be reluctant to issue equity if they feel it is undervalued in the market. The consequence is that investors perceive equity issues to only occur if equity is either fairly priced or overpriced. As a result investors tend to react negatively to an equity issue and management is reluctant to issue equity.

2.2.2. The Pecking Order Theory

The pecking order theory does not take an optimal capital structure as a starting point, but instead asserts the empirical that firms show a distinct preference for using internal finance over external finance (Donaldson, 1961). If internal funds are not enough to finance investment opportunities, firms may or may not acquire external financing, and if they do they will choose among the different external finance sources in such a way as to minimize additional cost of asymmetric information. The latter costs basically reflect the premium that outside investor asks for the risk of failure for the average firm in the market (Akerlof, 1970). The resulting pecking order of financing is as follows: internally generated funds first, followed by respectively low risk debt financing then equity financing.

In Myers and Majluf model (1984), outside investors rationally discount the firms' stock price when managers issue equity instead of riskless debt. To avoid this discount, managers avoid equity whenever possible. The Myers and Majluf model predicts that managers will follow a pecking order, using up internal funds first, then using up risky debt, and finally resorting to equity. In the absence of investment opportunities, firms retain profits and build up financial slacks to avoid having to raise external finance in the future.

2.2.3. The Agency Theory

The agency cost theory of capital structure states that an optimal capital structure will be determined by minimizing the costs arising from conflicts between parties involved. In many organizations the operations are run by managers who are agents executing the instructions of their principles who are shareholders. Jensen and Meckling (1976) argue that agency costs play an important role in financing decisions due to the conflict that may exist between shareholders and debt holders. If companies are approaching financial distress, shareholders can encourage management to take decisions, which, in effect, expropriate funds from debt holders to equity holders. Sophisticated debt holders will then require a higher return for their funds if there is potential for this transfer of wealth. Debt and accompanying interest payments, however, may reduce the agency conflict between shareholders and managers. Debt holders have legal redress if management fails to make interest payments when they are due, hence managers concerned about potential loss of job, will be more likely to operate the firm as a efficiently as possible in order to meet the interest payments, thus aligning their behavior closer to shareholder wealth maximization.

2.3.Determinants of Debt

Banerjee et al (2000), building on earlier work by Myers and Majluf (1984), use a dynamic adjustment model and establish that the effects of various factors determining the optimal leverage was as expected in the UK. In the USA, however, they find expected growth to have a strong positive effect on leverage indicating that debt is available to finance growth at a much greater extent in the USA. They find tangibility of assets, size of the firm, and expected growth as measured by the ratio of the market to book value of a firm to affect the optimal leverage

positively, while profitability and the variability of operating profits influence it negatively. This study will explore each determinant and identify other determinants that have been established in recent studies.

2.3.1. Taxes

One factor which has been considered to be important to the choice of debt is tax. Brick and Ravid (1985) analyze tax implications of debt maturity and argue that expected value of tax shields depends on maturity structure whenever the term structure of interest is not flat. Under the assumptions of a positive tax advantage of debt and a positively sloped yield curve, it is argued that firm borrowers prefer long term debt that raises the firm value. This is because in early years the present value of interest tax shields from long term debt is greater than that from rolling short term debt. Then, issuing long term debt reduces the firms expected tax liability, which in turn increases the firm's current market value.

2.3.2. Asset structure (Tangible versus Intangible Assets)

One of the biggest determinants of the cost of financial distress is the tangibility of a company's underlying assets. Tangible assets such as plants and property retain their value even in bankruptcy, so capital intensive firms can support higher levels of debt at lower costs because there is little threat to bondholders that the assets they claim to be worthless. Many companies maintain a lot of their value in technology and human capital, assets that may only have value as part of going concern. These firms stand to lose more from going bankrupt and an efficient bond market will recognize that. They will pay a higher cost for debt and typically support lower leverage ratios than similar firms with more tangible assets. Myers (1984) asserts that firms holding valuable intangible assets tend to borrow less than firms holding mostly tangible assets.

Long and Malitz (1983) found a significant positive relationship between the rate of capital expenditure (in fixed plant and equipment) and the level of borrowing. In Kenya the view that firms with tangible assets borrow more is supported by both Kamere (1987) and Omondi (1996). This means that firms in Kenya prefer debt issues than equity issues that are supportive of the pecking order hypothesis.

2.3.3. Growth

As observed by Titman and Halt (1988) equity controlled firms have tendency to invest sub optimally to expropriate wealth from the firms' bondholders. The cost associated with this agency relationship is likely to be higher for firms in growing industries, which have more flexibility in their choice of future investments. Therefore, expected future growth should be negatively related to long-term debt levels. Myers (1977) however noted that this agency problem is instigated if the firms issue short term rather than long-term debt.

In support of this, Lon and Malitz (1983) found a significant negative relationship between rates of investment in advertising and research and development (R&D) and the level of borrowing. Advertising and Research and Development act as proxies for growth.

Kamere (1987) has indicated similar views. The prediction of growth on capital structure is in contrast with the pecking order theory prediction. This is because the high growth firms are particularly subject to adverse selection problem and according to the pecking order theory they should be indicative of more debt issues. Using growth as proxy for pecking order theory prediction then, it would be appropriate to conclude that firms in Kenya do not follow the pecking order philosophy in their financing choices. However, this would be termed too shallow for making such a major conclusion.

2.3.4. Size

There is a relationship between size and the level of leverage (Titman and Wessels, 1988). Chua and McConnel (1982) provide evidence that suggests that direct bankruptcy costs appear to constitute a larger proportion of a firm's value as that value decreases. It is also the case that relatively large firms tend to be more diversified and less prone to bankruptcy. This indicates that large firms should be more highly leveraged.

The cost of issuing debt and equity is much more with small firms than large ones as noted by Musili (2005). This suggests that small firms may be more leveraged than large firms and may prefer to borrow short term rather than issue long-term debt because of the lower fixed costs associated with this alternative. (Titman and Wessels, 1988). This may be supportive of pecking order prediction since small firms are faced with adverse selection problem.

In Kenya, Kamere (1987) found out that long-term debt and the value of total assets (size) are positively correlated. This suggests that the use of debt financing may be higher among large firms than among smaller ones. This is inconsistent with the pecking order theory prediction.

2.3.5. Profitability

Brigham and Gapenski (1990) observed that firms with very high rates of return on investments use relatively little debt. The practical reason is that highly profitable firms do not need to do much debt financing since their high rates of return enable them to do their financing with retained earnings. This behavior is consistent with pecking order theory prediction.

Myers (1977) cites evidence from Donaldson (1961) and Brealey and Myers (1984) that suggests that firms prefer raising capital, first from retained earnings second from debt and third from

issuing new equity. He suggests that this behavior may be due to the costs of issuing new equity. These can be the costs discussed in Myers and Majluf that arise because profitability of a firm, and hence the amount of earnings available to be retained should be an important determinant of current capital structure.

Contrary, Omondi (1996) found out that Kenyan firms tend to borrow more when their profits are high. He gives an explanation for this, that high profits serve as an incentive to the firm to invest more and this is what may warrant borrowing for expansion of business. Omondi's finding on profitability would be indicative that firms in Kenya do not follow the pecking order theory of capital structure in their financing choices. However, Odinga (2003) found a significant negative relationship between leverage and profitability. He argued that profitable firms financed most of their investment opportunities from retained earnings and borrowed less to avoid contractual obligations to pay. Equity is more secure in the sense that investors do not demand the required rate of return.

2.4. Empirical studies

Global empirical evidence on tax benefit of debt is contradictory and mixed. The Miller and Modigliani (1958) proposition that the value of the firm is independent of its debt policy and that corporate income taxes do not exist has been widely criticized. In reality, corporate income taxes exist, and interest paid to debt-holders is treated as a deductible expense. This makes debt financing advantageous. Modigliani and Miller (1963), show that the value of the firm will increase with debt due to the deductibility of interest charges for tax computation, and the value of the levered firm will be higher than the value of the unlevered firm. The classic arbitrage based irrelevance propositions provide settings in which arbitrage by investors keeps the value of

the firm independent of its leverage. In addition to the original Modigliani and Miller paper, important contributions include papers by Hishlifer (1966) and Stieglitz (1969).

An important precursor to modern dynamic trade-off theories was Stieglitz (1973), who examines the effects of taxation from a public finance perspective. Stieglitz's model is not a trade-off theory, since he took the drastic step of assuming uncertainty. The first dynamic models to consider the tax savings versus bankruptcy cost trade-off are Kane et al. (1984) and Brennan and Schwartz (1984). Both analyzed continuous time models with uncertainty, taxes, and bankruptcy costs, but no transaction costs. Since firms react to adverse shocks immediately by rebalancing costless, firms maintain high levels of debt to take advantage of the tax savings.

Leverage is considered one form of tax shield. When a firm has more debt, it follows that they should have less tax responsibilities (Porcano, 1986). Profitability, on the other hand, should translate into higher effective tax rates simply because a firm will have more taxable income. The effect is even more pronounced in countries with progressive tax rates like Korea and Taiwan.

We find the evidence used to support the pecking order theory even less persuasive. A number of studies have demonstrated a strong negative relation between past profitability and leverage. That is, higher profits and operating cash flows tend to be associated with lower rather than higher leverage ratios (Rajan and Zingales, 1995).

Theoretical models of optimal capital structure predict that companies with more taxable income and fewer non-debt tax shields should have higher leverage ratios. But studies that examine the effect of non-debt tax shields (depreciation, tax loss carry forwards, and investment tax credits)

on corporate leverage have found that companies with more non debt tax shields appear to have, if anything, more debt in their capital structures (Titman and Wessels, 1988).

Before we conclude that taxes are unimportant in the capital structure decision, however, it is important to recognize that the tax variables in these studies are at best proxies for a company's effective marginal tax rate. Companies with investment tax credits, high levels of depreciation, and other non-debt shields tend to have mainly tangible fixed assets. Since fixed assets generally represent good collateral, the non-debt tax shields may not be a proxy for a low marginal tax rate, but rather for low contracting costs associated with debt financing. In an attempt to avoid the difficulties stemming from proxy variables, a fairly recent study by John Graham used a sophisticated simulation method to provide a more accurate measure of companies' effective marginal tax rates. After simulating such rates for thousands of companies over the period 1980-1999, Graham reported a positive association between corporate debt and tax rates.

Kayhan and Titman (2007) found that firm histories are also important in influencing capital structure changes but only on a short horizon as over time firm capital structures tend to move toward target debt ratios. They find leverage deficit effect to be driven by survival bias for over levered firms, unlike for under levered firms which tend to increase their leverage hence showing no signs of survival bias.

Other studies have also considered how multinational companies (MNCs) adjust their capital structure in the presence of tax. For instance, Panteghini (2009) show that MNCs can shift a proportion of their income by means of intra firm borrowing and lending so as to avoid taxation, as long as the costs of income shifting is low, as this raises the tax benefit of debt financing. The amount shifted, however, depends on tax rate differential income (Panteghini, 2009; Egger et al.,

2010). Hence, financial choices are affected by tax shifting activities, and the equilibrium tax rate depends on how costly it is to shift income (Panteghini, 2009). However, Schindler and Schjelderup (2012) find that affiliates with minority owners have a less tax-efficient financing structure since costs and benefits of debt shifting are shared asymmetrically between minority and majority owners. Taking the mode of ownership as endogenous, foreign-owned firms have higher debt ratio on average compared to domestically-owned firms in the host country, which increases with host country's statutory corporate tax rate (Egger et al., 2010). This implies that foreign-owned firms tend to leverage more in the face of higher taxes so as to take advantage of tax benefits compared to domestically-owned firms.

Mutsotso (2007) further conducted a study on the influence of the corporate tax rate as the capital structure of quoted companies at the NSE. The study provided evidence of substantial tax effect on the choice between debt and equity. The study concluded that changes in the marginal tax rate for any firm should affect financing decisions. A firm with a higher tax shield is less likely to finance with debt. The reason is that tax shields lower the effective marginal tax rate on interest deduction. The study further 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.

The impact of policy change in the tax rates on the capital structure of firms in Kenya has not been given much consideration before. Ngugi (2008) considered the determinants of capital structure of firms listed on the Nairobi Stock Exchange, focusing on whether the firms target their capital structure or follow a hierarchical behavior, but with no specific focus on the impact of corporate tax on capital structure. Their finding that firms observe a target debt ratio to minimize the costs of debt also provides a possibility that these firms may also be exploiting the tax benefits in their financing decisions. The study did not find any significant effect of tax on

capital structure on Kenyan firms. This study differs with previous studies on capital structure in Kenya (e.g., Ngugi, 2008) by considering nonlinearities that exist in determining the choice of capital, that is, on the proportion of debt held. We also estimate determinants of capital structure by considering different term structures of debt to establish whether there are any variations in the results. This is important since firms are likely to adjust their financing ratios differently depending on whether they hold more short term or long term debt in their capital structures. Hence, the response will vary both by the level of debt held and the proportions of different terms of debt in the capital structure. Njoroge (2009) did a study on effective corporate tax rate and firm finance and established that large firms endure higher political costs which are reflected in higher effective tax rates.

Use of debt in financing has increased in emerging markets as well. Mitton (2007), for instance, attributes increase in debt ratios in emerging markets to changes in the characteristics of emerging market firms. For these firms, they find the most prominent determinants of capital structure to be size, profitability, asset tangibility, and growth opportunities, which lead to higher optimal debt levels. Ngugi (2008) find the use of debt for a sample of listed firms in Kenya to be mainly due to the internal financing gap and that the demand for debt is influenced by non-debt tax shields. Firms are found to minimize their costs by observing a target debt ratio and that capital financing behavior of firms is determined by capital market imperfections. This finding is supported by Abor et al. (2011) who find that corporate borrowing decisions of firms in Ghana, Nigeria, Kenya, and South Africa are not influenced by the corporate tax rate. However, these findings may be limited to the leverage measure and the tax ratio used (Green and Murinde, 2008). A study by Ko and Yoon (2011), for instance, established that Korean firms that held low

debt levels following the Asian financial crisis lost significant tax savings compared to their counterparts that held high debt levels.

A recent study by Pfaffermayr et al. (2013) also established that debt ratio is associated positively with the corporate tax rate and negatively with firm age and that tax-induced advantage of debt is more important for older firms than for younger ones. Age of a firm in this case determines the level of leverage with older firms likely to have lower debt ratios by the fact that they have accumulated enough resources over time and hence can easily finance their operations.

2.5. Summary of Literature Review

When regarding to a firm's capital structure, the Modigliani- Miller theorem opened a literature on the fundamental nature of debt versus equity. The capital structure of a firm is the result of - the transactions with various suppliers of finance. In the perfect capital markets world of Modigliani and Miller, the costs of different costs of financing do not vary independently and therefore there is no extra gain from opportunistically choosing among them. Nevertheless, financing clearly matters and that as a consequence of taxes, differences in information and agency costs. The various theories of capital structure differ in their interpretation of these factors. Each emphasizes some cost and benefits of alternative financing strategies, so they are not designed to be general. Although many of these studies examine the determinants of capital structure of firms, none of them investigates the influence of tax on debt part of capital structure decision. In Kenya, there has been no empirical investigation into this subject .The only study that has addressed the influence of corporate tax on capital structure is by Mutsotso (2007) who further conducted a study on the influence of the corporate tax rate on the capital structure of

quoted companies at the NSE. However, no studies have been conducted to identify the effect of corporate tax on debt financing by quoted companies.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1.Introduction

This chapter sets out the methodology that was used in gathering the data, analyzing the data and reporting the results. Here the researcher aimed at explaining the methods and tools that were used to collect and analyze data in order to get proper and maximum information related to the subject under study.

3.2.Research and design

The study was both cross sectional and longitudinal in nature. It covered different non-financial firms in the Nairobi Securities Exchange covering a period between 2009 and 2012. Here we looked at the financial statement for a period of four years from 2009 to 2012. It was aimed at explaining the relationship between the variables (corporate tax and amount debt). The emphasis was to study the impact of corporate tax on debt financing by firms listed in Nairobi Securities Exchange.

3.3.Population

The target population was the 50 non-financial listed companies at the NSE between the periods of 2009 to 2012. The four year period is chosen because it is sufficient to establish the relationship between corporate tax and amount of debt and the determinants of debt of firms.

All the companies that met the fulfillment of using both equity and debt financing as part of their capital structure were included in the study. The firms that had been continuously using debt and equity as part of their capital structure for the four years under observation. The reason for using

listed companies is because of availability of information. Unlike private companies, listed companies are required by law to have their financial information published. The companies that do not meet the requirement of using debt as part of their capital structure were not included in the final sample of 50 listed companies.

3.4.Data Collection

Secondary data of a sample of non-financial firms was collected from company financial statements and annual reports covering the period 2009-2012 with additional information from the Nairobi Securities Exchange (NSE). There are 61 firms listed at the NSE, 11 of which are financial firms. Financial companies are not considered as they are providers of credit and thus their company annual reports may not give a proper reflection of the capital structure and any other factors that may affect company financing. Firms with equity financing only were also included resulting in a final sample of 50 firms.

3.5.Data Analysis

The objective of this study was to determine the impact of tax on the amount of debt employed by firms at NSE. Therefore the amount of debt employed (DCapital) was the dependent variable, and amount of tax paid (Tax Paid) the independent variable. The other independent variables that include firm size (Size), profitability (ROA), industry (Industry) and risk (Risk) are control variable. The equations and variables used for the study are given below:

$$DCapital = \alpha + \beta_1 Tax\ Paid + \beta_2 Size + \beta_3 ROA + \beta_4 Industry + \beta_5 Risk + \epsilon_i \dots\dots\dots \text{equation 3.1}$$

Where parameters α and β are coefficients to be generated by the regression, and β are multipliers that describe the size of the effect the independent variables are having on your

dependent variable, and α is the value *dependent* is predicted to have when all the independent variables are equal to zero.

The relevant statistics associated with regression analysis useful in establishing the significance of coefficients are:

- Coefficients of Independent Variables - In simple or multiple linear regression, the size of the coefficient for each independent variable gives you the size of the effect that variable is having on your dependent variable, and the sign on the coefficient (positive or negative) gives you the direction of the effect. In regression with a single independent variable, the coefficient tells you how much the dependent variable is expected to increase (if the coefficient is positive) or decrease (if the coefficient is negative) when that independent variable increases by one. In regression with multiple independent variables as is the case in this study, the coefficient tells you how much the dependent variable is expected to increase when that independent variable increases by one, *holding all the other independent variables constant*. Remember to keep in mind the units which your variables are measured in.
- P- Value, regression software compares the t statistic on your variable with values in the *Student's t distribution* to determine the P. The P value tells you how confident you can be that each individual variable has some correlation with the dependent variable, which is the important thing. The P value is the probability of seeing a result as extreme as the one you are getting (a t value as large as yours) in a collection of random data in which the variable had no effect. A P of 5% or less is the generally accepted point at which to reject the null hypothesis. With a P value of 5% (or .05) there is only a 5% chance that results you are seeing would have come up in a random distribution, so you can say with

a 95% probability of being correct that the variable is having some effect, assuming your model is specified correctly.

- *t* – value is the *coefficient* divided by its *standard error* and it tells whether the value of the coefficient is different zero.
- *Confidence interval*- If 95% of the *t* distribution is closer to the mean than the *t*-value on the coefficient you are looking at, then you have a *P* value of 5%. This is also referred to a significance level of 5%.
- Standard error is an estimate of the *standard deviation* of the coefficient, the amount it varies across cases. It can be thought of as a measure of the precision with which the regression coefficient is measured. If a coefficient is large compared to its standard error, then it is probably different from 0
- The *R*-squared of the regression is the fraction of the variation in the dependent variable that is accounted for (or predicted by) independent variables. (In regression with a single independent variable, it is the same as the square of the correlation between your dependent and independent variable.) The *R*-squared is generally of secondary importance, unless your main concern is using the regression equation to make accurate predictions. The *P* value tells you how confident you can be that each individual variable has some correlation with the dependent variable, which is the important thing.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1.Introduction

In this chapter, the descriptive statistics of the study variables is discussed. This chapter also discusses the empirical findings of this study and also gives a summary of the findings and interpretations with regard to the study objective. The objective of this study was to find out the effects of corporate tax on debt financing by non-financial firms listed at the N.S.E.

4.2.Results

The data that was used was that of 50 non-financial firms out of the total firms listed at the NSE. These were the firms that had all the required data for the last four years. Data for each company was computed for independent variables of equity, taxation, total assets, and earnings after tax, and size against the dependent variable of Debt capital. The data was then coded and entered into the SPSS version 17 and minitab. The following regression analysis represents the dependent and independent variable computations

4.2.1. Descriptive Statistics

The descriptive table displays the sample size, mean, standard deviation, and standard error for each of the five variables in each industry. The industry with the largest sample is commercial.

Table 4.1. Descriptive Statistics

Industry		Equity Capital	Total Debt	Taxation	Total Assets	Earnings After Tax
Agriculture	Mean	Ksh.'000 2,175,128	Ksh.'000 630,805	Ksh.'000 145,933	Ksh.'000 3,166,889	Ksh.'000 307,258
	N	27	27	27	27	27
	Std. Deviation	2,118,345	665,496	150,344	3,026,920	316,018
	Minimum	55963	11693	4992	84794	-124113
	Maximum	6573054	2116420	563792	9462027	993729
Automobiles and Accessories	Mean	2,427,769	725,919	97,784	1,644,011	147,727
	N	16	11	12	12	16
	Std. Deviation	1,922,333	519,777	77,642	641,222	178,012
	Minimum	132513	500	-28424	567,095	-181,146
	Maximum	5736158	1678310	267674	2326723	539609
Commercial	Mean	5,219,187	4,084,645	357,484	14,147,719	537,210
	N	31	29	31	32	31
	Std. Deviation	6,619,834	10,320,563	397,726	24,197,714	1,194,283
	Minimum	155276	0	3484	431357	-4083000
	Maximum	22962000	37081000	1581000	78743000	3538000
Construction and Allied	Mean	7,675,041	3,457,012	752,942	1,4871,817	1,480,718
	N	20	20	20	20	20
	Std. Deviation	899,0190	3,078,456	965,998	12,662,809	2,295,106
	Minimum	836943	47352	37694	1858452	-821486
	Maximum	30861000	9993361	2626000	43038000	6970000
Energy and Petroleum	Mean	43,097,026	32,814,603	1,290,947	118,692,300	5,284,165
	N	17	17	13	17	13
	Std. Deviation	56,098,857	36,323,974	1,123,922	17,193,0052	15,765,521
	Minimum	6445725	212129	129286	29435336	-6284575
	Maximum	239447000	90620430	3811000	755933000	57110000
Insurance	Mean	4439883	3378138	174961	20487115	1074927

	N	20	12	20	20	20
	Std. Deviation	4,175,371	4,886,006	100,954	11,456,610	1,054,169
	Minimum	157500	0	34731	3490495	-1957305
	Maximum	14613155	13844611	408802	47417562	2801892
Investment Services	Mean	5753466	3013927	129938	10545756	592019
	N	10	8	12	10	12
	Std. Deviation	3,310,721	3,528,220	157,325	7,214,898	671,957
	Minimum	492993	0	-17487	1074236	35139
	Maximum	10041242	8505563	490368	22424264	2292383
Manufacturing and Allied	Mean	6489512	1916160	896468	12664040	2038660
	N	28	28	24	28	28
	Std. Deviation	7,618,097	3,968,812	1,298,617	15,298,211	3,196,829
	Minimum	1653	0	1170	997672	-123994
	Maximum	26755181	19982236	4066936	54584316	11186113
Telecommunications and Technology	Mean	32,694,208	4,938,163	2,581,162	55,160,767	6,485,962
	N	8	8	8	8	8
	Std. Deviation	33,548,170	5,248,722	2,747,438	57,010,458	6,934,556
	Minimum	2415	438924	2592	2265714	7951
	Maximum	72590584	12282945	5818632	121899677	15148038
Total	Mean	9,802,882	5,801,668	570,418	24,047,389	1,503,969
	N	177	160	167	174	175
	Std. Deviation	22,678,236	1,5746,103	1,061,650	64,277,957	4,953,967
	Minimum	1653	0	-28424	84794	-6284575
	Maximum	239447000	90620430	5818632	755933000	57110000
Coefficient Of Variation		2.31	2.71	1.86	2.67	3.29

The variable with the highest observations is equity capital (177) while one with the lowest is total debt (160). In terms of standard deviation the industry is Energy and Petroleum with the

variable with the highest standard variation relative to its average is earnings after tax (3.29) reflecting variations in borrowing policies in sampled firms; while the variable with the highest standard variation relative to its average is taxation. The low variability in taxation is not surprising given that the corporate tax rate remained constant and the high variability in earnings is supported by the observation that the sampled firms came from nine different industries. In analyzing each variable we start with Equity Capital where in terms of ranking the mean, the Industry whose mean ranks as number one is Energy and Petroleum while Agriculture ranks last as number nine, in terms of covariance the Industry with the highest COV is Energy and Petroleum at 1.302 while Investment services has the lowest COV at 0.575. This means that Investment services with the lowest COV is more stable and consistent; In the total debt variable, the Industry whose mean ranks as number one is Energy and Petroleum while again Agriculture ranks as number nine, in terms of covariance commercial has the highest COV at 2.527 while Automobile and Accessories has the lowest COV at 0.716 meaning it is the most stable and consistent; In the taxation variable, Telecommunication and Technology ranks first in terms of mean and Automobile and Accessories ranks last while Insurance has the lowest COV at 0.577 and Manufacturing and Allied has the highest COV at 1.449; Total Assets analysis shows that Energy and Petroleum's mean ranks as number one while Commercial also has the largest COV at 1.710 and Automobile and Accessories has the least mean and lowest COV at 0.390; Lastly in Earnings after tax variable Telecommunication and Technology mean ranks as number one and Automobile and Accessories ranks last while the COV of Energy and Petroleum is largest at 2.983 while Insurance has the lowest COV at 0.980.

4.2.2. Correlation Analysis

Correlations measure how variables or rank orders are related. The bivariate correlations procedure computes the pair wise associations for a set of variables and displays the results in a matrix. At this stage of the study correlations is useful for determining the strength and direction of the association between two variables at a time. The results of the correlations are presented in Table 4.2. Note that the Pearson correlation coefficient measures the linear association between two scale variables.

Table 4:2 Correlations

		Equity Capital	Total Debt	Taxation	Total Assets	Earnings After Tax
Equity Capital	Pearson Correlation	1	.427**	.629**	.962**	.886**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	177	160	165	173	173
Total Debt	Pearson Correlation	.427**	1	.247**	.385**	.069
	Sig. (2-tailed)	.000		.002	.000	.395
	N	160	160	149	156	156
Taxation	Pearson Correlation	.629**	.247**	1	.500**	.636**
	Sig. (2-tailed)	.000	.002		.000	.000
	N	165	149	167	161	167
Total Assets	Pearson Correlation	.962**	.385**	.500**	1	.895**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	173	156	161	174	169
Earnings After Tax	Pearson Correlation	.886**	.069	.636**	.895**	1
	Sig. (2-tailed)	.000	.395	.000	.000	
	N	173	156	167	169	175

* Correlation is significant at the 0.01 level (2-tailed); *. Correlation is significant at the 0.05 level (2-tailed).

The focus in this study is the impact of taxation on the level of borrowings (total debt). However this does not stop us from commenting on other correlations in table 4.2. The highest correlation is between total assets and equity capital at 0.962** and statistically significant (p=0.0001) are increased so is equity capital. The second highest correlation is between total assets and earnings after tax of 0.895** and statistically significant. The third highest correlation is between earnings after tax and equity capital of 0.886** and statistically significant. The correlation between Total Debt and Equity Capital is 0.427** and significant, p- value =.0001 suggesting that managers adjust debt level to equity levels. The fourth highest correlation is between equity capital and taxation at 0.629** and statistically significant.

The lowest correlation is between Debt and taxation at 0.247**and statistically significant (p=0.002), and Debt and EAT has a correlation of 0.069 with a p value of =0.395

4.2.3. Regression Analysis

Linear Regression estimates the coefficients of the linear equation, involving one or more independent variables that best predict the value of the dependent variable. In this study the key variables are debt capital as dependent variable and taxation as independent variable. The objective is to establish whether the amount paid as taxation impact on the amount borrowed. The other variables namely, equity capital, total assets and earnings after tax are control variables. The first regression is without control variables while the second on is with control variables. The first regression below test the extent to which taxation on its own is useful in predicting the amount of debt to be borrowed (see equation 1).

DEBT =2.69E+09 + 2.71 TAXATION.....equation 1

149 cases used 47 cases contain missing values

Predictor	Coef	SE Coef	T	P
Constant	2685185845	1115888689	2.41	0.017
TAXATION	2.7147	0.8774	3.09	0.002

S = 11850216443 R-Sq = 6.1% R-Sq(adj) = 5.5%

The regression coefficient between the amount of tax paid and the debt amount is 2.71 which mean if tax increases by a unit, the debt increases by a factor of 2.71 which is statistically insignificant and a t value of 3.09 and P value of 0.002. This means that when the tax amount is high investors tend to borrow more.

The regression equation is
 $DEBT = 5.05E+08 + 0.607 EQUITY + 3.04 TAXATION + 0.0967 ToT Assets - 3.80 EAT$. Equation 2

145 cases used 51 cases contain missing values

Predictor	Coef	SE Coef	T	P
Constant	504982916	716933366	0.70	0.482
EQUITY	0.6071	0.1158	5.24	0.000
TAXATION	3.0434	0.8976	3.39	0.001
ToTAsset	0.09672	0.04344	2.23	0.028
EAT	-3.7968	0.2939	-12.92	0.000

S = 7309758539 R-Sq = 65.9% R-Sq (adj) = 64.9%

Analysis of Variance

Source	DF	SS	MS	F	P
Regression	4	1.44445E+22	3.61112E+21	67.58	0.000
Residual Error	140	7.48056E+21	5.34326E+19		
Total	144	2.19250E+22			

Source	DF	Seq SS
EQUITY	1	3.91524E+21
TAXATION	1	1.31996E+19
ToT Asset	1	1.59598E+21
EAT	1	8.92006E+21

The regression coefficient of between the amount of earnings after tax (EAT) mean and the debt amount is -3.80 which means that for every one unit change in EAT the debt amount decreases by a factor of -3.80 and with a t-value of -12.92 and p-value of 0001, this coefficient is statistically significant. This is interpreted to mean that as earnings decreases the amount borrowed increases because the retained earnings as a source of finance is not available. This is in line with the pecking order theory that stipulates that debt is used as a source of capital after exhausting retained earnings. The regression coefficient between the amount of Equity and Debt is 0.607 meaning that for every increase of Equity the debt increases by a factor of 0.607 and

with a t-value of 5.24 and p-value of 0.0001 this coefficient is statistically significant. This is interpreted to mean that as Equity increases the amount borrowed increases because Equity is an alternative source of financing. The tradeoff theory contrasted MM (1963) by implying that, in real world, firms rarely use 100 percent debt. The primary reason is that firms limit their use of debt to reduce the probability of financial distress (bankruptcy) and also that interest rate on debt becomes prohibitively high at high debt levels. The results also corroborate the empirical evidence obtained by Kaumbuthu (2011) who found a negative relationship between financial leverage and ROE. The finding however, is in line with the findings by, Javed & Akhtar (2012) who found the relationship between debt to equity ratio and return on equity to be significantly positive. The findings additionally, contradicted the agency theory postulated by Jensen & Meckling (1976) and extended by Elliotts (2002). The agency theory postulate that the use of leverage (long-term debt) in the capital structure can be used to mitigate the agency conflict by forcing managers to invest in profitable ventures that benefit the shareholders. For total assets the regression coefficient of between the amount of earnings total assets mean and the debt amount is 0.0967 which means that for every one unit change in total assets the debt amount increases by a factor of 0.0967 and with a t-value of 2.23 and p-value of 0.028, this coefficient is statistically significant. This is interpreted to mean that as total assets increases the amount of debt also increase this is consistent with the earlier studies such as Titman and Wessels (1988) as well Flannery and Rangan (2006). The finding is also consistent with the tradeoff theory but against the pecking order theory which predicts a negative relationship between leverage and size, with larger firms exhibiting increasing preference for equity relative to debt. From R-Square we see that 65.9% of the variations in the debt capital can be attributed to the independent variables.

The p-value for each term tests the null hypothesis that the coefficients are not significant. A low p-value less than 0.05 indicates that you can reject the null hypothesis. In other words, the explanatory variable that has a low p-value is likely to be a meaningful addition to your model because changes in the explanatory value are related to changes in the response variable. Conversely, a larger (insignificant) p-value suggests that changes in the independent variables are not associated with changes in the level of borrowing (debt).

The regression results in equation above indicate that financial leverage is statistically significant at 1 percent level. The results also show that the 52.62% of the total variability in the response variable (Debt capital) can be attributed to the explanatory variables (Tax, Equity, Total Assets, Earnings after Tax and Size). The results indicate that there was a significant positive relationship between financial leverage and performance of non-financial companies listed in the NSE as measured by determinants of debt.

The findings show that there is weak positive relationship between total debt and total equity 0.427, debt and taxation 0.247, debt and total assets 0.385, and debt and earnings after tax 0.069. However there is a weak linear relationship between debt to total assets ratio and equity to total assets ratio (-0.020) while there is a positive linear relationship between debt to total assets ratio and tax to total assets ratio (0.001)

4.3. Discussions

From the regression analysis it is evident that there is significant influence of taxation on debt capital. However there exists a positive relationship between taxation and debt capital in that an increase in the levels of taxation would lead to a possible increase to the amount of debt capital employed by a firm. The analysis also indicates that earnings after tax have a negative significant

influence on debt. Thus taxation is a determinant of debt capital while earnings after tax is not a determinant of debt by firms listed in the NSE. Total assets, Equity, Size had a positive relationship with debt capital. Thus Total assets, Equity, Size determined Debt Capital of companies listed in the Nairobi Securities Exchange. These results are consistent with capital structure relevance theories. The result agrees with the Modigliani and Miller (1977) which imposes that because debt composes of a tax shield, the higher proportion of leverage will be of benefit to each company concerned and it will decrease the cost of capital. However the results are contrary to the findings of (Modigliani and Miller,1958) which concluded that there is no significant relationship between taxes and Debt.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Debt financing refers to the explicit or implicit decision of the Board of Directors regarding the amount of debt that should be used to finance a venture in the capital structure. This decision is considered a financing decision because the profits of the corporation are an important source of financing available to the firm.

The main objective of the study was to find out the effects of tax on debt financing in the non-financial firms in NSE. We collected Secondary data of a sample of non-financial firms from company financial statements and annual reports covering the period 2009-2012 with additional information from the Nairobi Securities Exchange (NSE). The finding is that an increase in taxation leads to a significant increase in debt financing meaning this positive impact on debt financing means that taxation influences the level of debt financing positively.

5.2. Conclusion

The findings give an insight into the influence of the tax rate on the capital structure of companies listed at the Nairobi Stock Exchange. There exists a positive relationship between the corporate tax rate and the debt leverage ratios. It is very clear that companies at the NSE take the impact of taxation into consideration before choosing between debt and equity.

A direct relationship exists between the tax rate and the debt leverage ratio in all the four segments of the NSE. The Agricultural sector had the strongest relationship, followed by the Industrial & Allied sector, the Commercial & Services sector was third and the

Finance & Investment came fourth. The significant difference in the relationship in the different segments can be attributed to the fact that firms in some sectors such as Finance & Investment do not give much regard to the tax savings that result from tax deductibility of interest expense. An analysis of the changes in the means of debt leverage ratios revealed that the changes were not consistent with the changes in the tax rates. This is in line with the argument by Ross (1985) that with other non-debt tax shields; the impact of interest tax shield is crowded out". In accordance with this argument, the model predicted a negative relationship between non-debt tax shield and leverage.

5.3. Limitations of the study

There were factors that affected the macroeconomic environment that would have affected the accuracy of this research. These factors include the increased inflation between 2009 and 2012. The second factor was the sky rocketing bank interest rates between 2009 and 2012 due to high domestic borrowing. These factors would have affected the decision making of firms as regards the capital structure. This would be because of the unrealistic high cost of debt due to the economic disparities that existed during the time.

Some quoted companies at the Nairobi Stock Exchange were not included in the sample due to unavailability of data and other companies" data were outliers. This reduction in sample size would have affected the calculations of this study.

5.4. Suggestions for further research

This research was mainly focused on finding the effects of corporate tax on debt financing of non-financial companies listed at the Nairobi Stock Exchange. From the data obtained, the factors found to determine the effects of debt financing were tax rate, size, and also the

profitability of the company. This research can be extended to look for other factors that determine the capital structure, since I believe there are many more that were not included in this research. It is important that a similar study is also conducted with a bigger sample and time horizon by using advanced time series models to enhance our understanding of the association between the tax and the capital structure.

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APPENDICES

Appendix 1: Listed Companies at the Nairobi Security Exchange

Agricultural sector

1. Eaagads Limited
2. George Williamson Kenya Limited
3. Kakuzi Limited
4. Kapchorua Limited
5. Limuru Tea Company Limited
6. Rea Vipingo plantation limited
7. Sasini tea & coffee limited

Commercial & Services sector

1. Express Kenya Limited
2. Kenya Airways Limited
3. Nation Media group
4. TPS Serena limited
5. Standard group
6. Uchumi Supermarkets

7. Hutching Biemer

8. Longhorn Kenya

9. Scan group

Construction & Allied sector

1. Athi river Mining
2. Crown Paints Kenya
3. Bamburi cement Limited
4. E.A.Cables
5. E.A.Portland cement Ltd

Automobile & Accessories

1. Car & general Kenya Limited
2. CMC holdings
3. Marshall E.A Limited
4. Sameer Africa

Energy & Petroleum

1. KenGen

2. Kenol Kobil

3. Kenya Power & Lighting Co Ltd

4. Total Kenya Limited

5. Umeme Ltd

Insurance

1. British American Investments Co

2. CIC Insurance Group

3. Jubilee Holdings

Manufacturing

1. Baumann & Co.

2. Kenya Orchards Ltd

3. Unga group Ltd

4. BAT Kenya Limited

5. East Africa Breweries Ltd

6. Mumias Sugar Co.

7. Eveready EA

4. Kenya Re Corporation

5. Liberty Kenya Holdings

6. Pan Africa Insurance

Investment

1. Centium Investment Company

2. Olympia Capital Holding

3. Trans – Century Ltd

4. Nairobi Security Exchange

5. B.O. C Kenya

Telecommunication

1. Safaricom Ltd

Growth &Enterprise Market Segment

1. Home Africa Ltd

Appendix 2: Data Collection Tool

COMPANY	AMOUNT OF EQUITY	AMOUNT OF DEBT	AMOUNT OF TAX	SIZE	PROFITABILITY	INDUSTRY