CORPORATE LEVERAGE CLIENTELE EFFECT AT THE NSE: AN EMPIRICAL STUDY.

BY



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DECLARATION

THIS RESEARCH IS MY ORIGINAL WORK AND HAS NOT BEEN PRESENTED FOR A DEGREE IN ANY OTHER UNIVERISTY.

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DEDICATION

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ABSTRACT

Modigiliani and Miller, 1958, and 1963, proved that interest tax shield was important in determining the value of a firm. They urged that, where interest expense arising from corporate debt is deductible before arriving at taxable income, the value of the firm increased by the amount of present value of interest tax shield less the present value of financial distress. Modigiliani and Miller argued that the advantage of using debt at a corporate level is in the deductibility of interest expense before arriving at the taxable income and at a personal level, the equity income is generally taxed at a lower rate than the debt income.

Miller, 1977, developed a model that incorporated the corporate and personal tax rates on equity and personal income in determining the gain from corporate leverage rate (hereafter referred to as GFL). Using Miller's model, the study empirically investigated the characteristics of the GFL for firms listed in the Nairobi Stock Exchange (NSE). Further, the research investigated whether the listed firms consider the gain from leverage in sourcing for corporate finance.

The study considered all the listed firms in the NSE with the exception of financial and banking institutions. Secondary data was obtained from the audited financial statements for the period 1990 to 2001, a period of 12 years. The data on corporate tax rate, personal tax rate for equity and debt incomes, interest expense charged, corporate tax charged, total debt, shareholder funds (equity) and tax paid was obtained. Data analysis was done using MS SPSS version 10 and MS Excel 2000.

The results revealed that, a total of thirty-three (33) firms had employed the maximum GFL (at 37 percent), while three- (3) firms had attained a GFL of 33.5 percent and six firms had the rate at 25.9 percent. Given the tax rates in Kenya, the gain from leverage range between 22 percent and 37 percent. This implies that Kenyan finance managers recognised the importance of GFL. In addition, the results show that, the coefficient of correlation between the GFL and the corporate tax rate (Tc) was positive and strong at 0.931. Similar results were obtained for the relationship between combined effect of corporate, and personal taxes and the gain from leverage with coefficient of correlation of 0.966. Also,

relationship between personal tax loss (or personal tax - Td) on interest income and gain from leverage (r = -0.908). The multivariate regression analysis also suggests that all factors combined have a significant contribution to capital structure decisions, with coefficient of correlation of 0.694.

However, it was noted that, the correlation coefficient between the combined effect of corporate tax rate and personal tax rate and the debt equity ratio is weak, at (0.482) and negative. Similar results were obtained for the relationship between (i) nominal interest rate and debt equity ratio (r = -0.595), (ii) nominal interest rate to corporate tax rate GFL (r = 0.223) and (iii) corporate tax rate and debt equity ratio (r = -0.279). Further, the results show that there is a delayed effect on debt equity ratio resulting from changes in corporate and personal tax rates, which shows that, the coefficient of correlation was (0.482) and (0.809) one-year afterwards. On the other hand the nominal interest rate has no delayed effect to debt equity ratio. These results are expected in that tax changes affect the financial results one year down the line while the interest rate on debt income take effect immediately.

Further, the results reveal that the debt equity ratio have remained more or less unchanged, raising doubts as to whether interest tax shield was considered as a single most important factor in view of the declining corporate tax rate (which dropped from 42.5 percent in 1990 to 30 percent in 2001). The results also suggest that firms listed in the NSE do not cluster around a given ratio of interest tax shield.

The study proved that the GFL rate is important in determining and sourcing for corporate debt and equity finance. This implies that finance managers in Kenya consider the GFL in sourcing for finance. In order to obtain the maximum gain from leverage the results imply that Kenyan firms have established a clientele for debt and equity finance. In regard to corporate, nominal interest, personal tax rates and debt equity ratio, the results suggest that finance managers do not consider these factors in isolation as important. This implies that there are other important factors that are considered more important in sourcing for finance. It is recommended that corporate finance managers should obtain debt and equity finance that yields the maximum gain from leverage rate while the fiscal monetary policy makers should consider using the gain from leverage rate as a tools to vary the debt usage in the economy.

CHAPTER 1: INTRODUCTION

1.1 Background

Brealey and Myers, (1988), stated that debt financing has one important advantage under the corporate income tax system in that interest that the company pays is a tax-deductible expense (Income Tax Act Cap 470, Section 15(3)(a)(i)). Dividends and retained earnings are not. This means that the amount of earnings paid in taxes is reduced and thus making more earnings available to debt and stockholders. This means that, companies in a tax paying position will find debt capital cheaper than equity capital.

Pandey, (1999), argued that the objective of a firm should be directed towards the maximisation of the value of the firm. Thus the capital structure (the firm's mix of debt and equity capital) decisions should be examined from the point of its impact on the value of the firm. A firm should aim to have a capital structure, which maximises its market value. Capital structure decisions are made simultaneously with new investment decisions, thus creating inseparable relationships between impact on firm value and the investment decisions.

Modigliani and Miller, (1958), (hereafter referred to as "MM") argued that in a world with no corporate taxes, the market value of a firm and the cost of capital remain invariant to the capital structure changes. They demonstrated that the value of a firm is given by the sum of the market value of equity and market value of debt. In world with corporate taxes, the value of the firm will increase with increase in debt due to deductibility of interest charges for tax computations and the value of a levered firm is higher than that of un-levered firm. They demonstrated that the value of levered firm after tax earning consists of after tax operating income plus interest tax shield. They also proved that the present value of interest tax shield is independent of the cost of debt, Pandey, (1999).

Eugene and French, (1998), suggested that many factors including taxes, bankruptcy and agency costs, proxy effects and asymmetric information play a role in the relationship between firm's value and financing decisions. A part from taxes, however, factors that link value and financing decisions all operate through pre-tax profitability (net cash flows). They noted that exchange of equity for debt produced the only evidence that corporate debt may

have large tax benefits that increase firm's value. Masulis, (1983), found out that exchange of debt for equity produce higher stock prices.

Graham, Lemmon & Schallheim, (1998), documented an important empirical finding, that there exists a positive relationship between debt levels and the taxes. They also noted that many previous studies examining the correlation between debt levels and tax rate did not show a positive relation.

Because of tax deductibility of interest charges, a firm can increase its value or lowering its cost of capital continuously with leverage. The theory assumes that the optimal capital structure is reached when the firm employs 100 percent debt. However, in reality firms do not employ debt to this extent nor are lenders ready to lend beyond certain limits. This limitation could be explained by two possibilities; that is the impact of both corporate and personal taxes on corporate borrowing is that personal income tax may affect the advantage of the interest tax shield. Debt holders pay personal income tax on any interest they receive. Secondly, borrowing may involve extra costs (costs of financial distress), which may also offset the advantage of the interest tax shield. Perhaps this indicates that there are other factors that are considered in determining the amount of debt a firm should employ.

A classical taxation system views the company and the shareholders as separate entities. They are taxed separately as if their incomes had nothing to do with each other. Corporate income is first taxed as a corporate income then when distributed to shareholders it is again taxed as personal income. Wilkinson, (1992), argued that corporations are separate entities requiring their own tax treatment. Hence, firms attract a taxation treatment different from that accorded to the individual investors.

The Income Tax Act, Cap 470, of the Laws of Kenya, allows interest on borrowed funds to be deducted before profits are subjected to corporation tax (Section 15(3)(a)(i)). Where a firm's deductible interest exceeds the investment income, the excess interest is carried forward to the next succeeding year. This implies that the corporation tax rate, the resulting interest tax shield and the profitability levels could be an important factor in determining the sources of financing alternatives. In Kenya, it is not clear whether managers of firms consider the tax advantage on debt as important and if so to what extent has this influenced

the capital structure decisions of their firms. We note that the corporation tax rates have declined from 45 percent in 1987 to 30 percent 2001 (Table III). The decline in corporate tax rate should have a corresponding lower interest tax shield and this should ideally dictate less demand for use of debt finance other things held constant.

Miller's hypothesis on the effect of corporate and personal taxes states that, investors are required to pay personal taxes on income earned by them. Thus individual investors view taxes to include both the corporate and personal taxes. Thus firms should consider both personal and corporate taxes when making capital structure decisions. Pandey, (1999), stated that total earnings of a firm are distributed as either interest income and/or equity income (dividends) and that both earnings are subjected to personal taxes. The net income to the debt and equity holders is therefore dependent on the tax system and the applicable rates. In Kenya, both dividends and interest are taxed at a specified tax rate in any given tax period (Income Tax Act Cap 470, Section 3(2)(b)).

Miller's model, (the model is explained in Chapter 2), shows the relationship between the personal tax rates on equity income and debt income and the corporate tax rate. The model indicates that when all taxes are at variance, there is a point at which it is advantageous for a firm to obtain debt finance and also noted that there is a point at which debt finance is not valuable to shareholders.

This implies that tax rates both on corporate and personal incomes has a significant contribution in deciding the composition of the capital structure of a firm and the form of investments into which individuals may apply their funds. Given this scenario, it is not clear whether Kenyan investors both individuals and corporate consider tax levels in deciding their sources of funds in case of firms or portfolio of investments in case of individual inventors.

In reality, it is unlikely that the tax rate on interest income is equal to the tax rate on equity income. Further, the personal tax rates on equity income vary depending on the amount of income earned. In Kenya, the Income Tax Act, Cap 470, treats interest and dividend income as chargeable to tax at a fixed rate (also referred to as the withholding tax rate) for individual and firms.

In general different firms have different dividend payout ratios. This fact implies that investors may hold some stocks in preference to others depending on their preferences and personal tax implications. Elton and Gruber argued that different payout ratios attract different stockholder clientele. This phenomenon is attributed to the fact that individual and corporate tax payers who are at a higher tax bracket prefer low payout stocks while that group of investors who are in the low tax bracket prefer high dividend payouts.

This implies that the Kenyan investors would consider more profitable to belong to a given tax group in order to maximise the after tax cash flows. It is, not clear, whether Kenyan individuals and corporate investors consider dividend payout and the corresponding tax implications in deciding their investment portfolios that maximises their financial well being.

Pandey, (1999), using the Miller's model noted that corporate borrowing is advantageous when;

$$(1\text{-}Td) > (1\text{-}Ts)(1\text{-}Tc)$$

Where; Tc, Ts and Td are the personal tax rate on debt income, personal tax rate on personal equity income and corporate tax rate respectively.

A firm should stop borrowing when

$$(1\text{-}Td) = (1\text{-}Ts)(1\text{-}Tc) \text{ or } (1\text{-}Td) < (1\text{-}Ts)(1\text{-}Tc)$$

In general, however, there are difficulties in determining appropriate personal tax rate for debt holders and shareholders in different tax brackets. For simplicity purposes the marginal tax rates will be preferred where different rates are applicable to an individual investor. In reality, personal tax rates on income to shareholders and debt holders differ. In Kenya, the tax on qualifying interest and qualifying dividend is chargeable once at source (withholding tax) at a specified tax rate. The tax rates for non-qualifying interest and dividend incomes are different but fixed.

In order to gain from tax savings, firms should ensure that corporate tax savings is greater than personal tax loss and as such firms should stop borrowing when corporate tax rate is

equal to personal tax rate. Further, if personal tax is higher on debt interest than on equity income, corporate borrowing may end up reducing the firm's market value (Brealey & Myers 1981)

1.2 Statement of the Problem

Equity and debt holders are concerned with the depletion of their wealth, which may result as a consequence of applying inappropriate quantities of equity and debt finance. Debt finance increases the value of a firm by the amount of the interest tax shield. The ability of a firm to utilise debt finance partly depends on the willingness of the lenders to extend credit and partly on the target capital structure of the firm. Likewise, stockholders are ready to put their funds in a firm if the returns are acceptable to them. Both debt and stockholders are the owners of a firm. They are partly concerned with the after tax income due to them and capital gains available to them in case of shareholders. In determining their net income, corporate and personal taxes on incomes (interest & debt) are first deducted. This deduction may affect certain group of investors more than others due to the different tax rates applicable to them. It is, therefore, important that investors minimise that tax payable by them from both debt and equity incomes. Equally firms must attempt to source finance that brings a firm closer to its optimal capital structure and equally attracts those investors who are likely to have a significant gain from a higher after tax income.

In order for a firm to achieve an optimal capital structure, it is important that investors are grouped according to tax rates that provide minimum tax payable. The minimum tax payable should be established for both interest and dividend income. It is unlikely that an investor may have both interest and dividend income from a one firm. However, where this is the case, the tax exposure on both incomes should be at minimum. This approach ensures that both the firm and stockholder and/or debt holders maximise their return on investments. The returns are measured by the gain from leverage (GFL) in case of an investing firm and income net of all taxes (corporate and individual) due to an investor in case of individuals. In order for this to be realised, a firm should aim at attracting a certain class of investors, both equity and debt holders who are willing to extend finance at terms which are mutually beneficial to all.

From a Kenyan context, it is, not clear, whether firms that borrow establish appropriate capital structure mix that maximise gains from the use of leverage and minimise the tax exposure to stock and/or debt holders, when making investment decisions.

It is, therefore, important that a study that investigates any relationship between the gain from leverage and the after tax income to due various investors to a firm be undertaken with a view to establish appropriate sources of funds (capital mix) and appropriate financing decisions.

This study aims at investigating whether corporate and individual investors consider tax effects on interest and dividend income in making their investments decision and whether it is beneficial to group different investors according to different tax preferences. This grouping would provide ready answers to potential investors in defining appropriate investment opportunities that maximises the after tax income. The study also aims at establishing optimal capital structures given the likely suitable class of investors for a firm. The study is restricted to the listed firms in the Nairobi Stock Exchange.

Secondly, the study aims at attempting to determine appropriate rates of gains from leverage for different firms given their corporate and personal withholding tax rates, and associating this with appropriate clientele for equity and debt finance, as a source of finance to a firm. The study will also attempt to investigate the current capital structures for the listed firms by comparing the gain from leverage for different debt/equity ratios and establish whether the current structures are optimal on firm-by-firm bases. The later is a suggested area for further research by Kiogora 2000.

1.3 Objectives of the Study

(a). Establish the impact of the interest tax shield in capital structure decisions for firms in Kenya

(b). Determine whether the tax rates on both corporate and personal incomes have a significant influence to the capital structure of a firm

(c). Establish whether firms in the same industry have similar level of gain from leverage

(d). Establish whether the current capital structures of firms are optimal from a tax perspective given the gains from leverage after the corporate and personal taxes.

1.4 Research Hypotheses

(a). Hypothesis I

H_0: interest tax shield is significantly greater than personal tax loss on interest income.

H_1: interest tax shield is not significantly greater than personal tax loss on interest income.

To prove this hypothesis, data on the percentage interest tax shield to outstanding debt will be regressed against the tax charged on interest income to the debt holder of ten (10) years. The ratio will be compared and establish whether there is any relationship that exists.

(b). Hypothesis II (a)

H_0: investors do not consider the corporate and personal taxes in determining the debt, i.e. H_0: r=0

H_1: investors consider the corporate and personal taxes in determining the debt, i.e. H_0: r#0

To test this research hypothesis, data on the percentage gains from leverage (computed using Miller's model) for a period of ten (10) years and data on the ratio between debt and equity shall be compared and establish whether there is any relationship that exists. If there exists no relationship between combined effect of corporate, and personal taxes and debt-equity ratio, then the correlation coefficient is zero or near zero.

(c). Hypothesis II (b)

H_o: The supply of corporate debt does not expand as long as the corporate tax rate exceeds the personal tax rate, i.e. H_o: r = 0

H_1: The supply of corporate debt expands as long as the corporate tax rate exceeds the personal tax rate, i.e. H_1: r # 0

To test the above hypothesis, the corporate tax rate and the combined personal tax rates on equity and interest incomes will be compared against the debt equity ratio over a period of 12 years. Combined effect of the corporate and personal taxes will be obtained by computing the rates as follows: Corporate tax rate plus 1 minus corporate tax rate multiplied by personal tax rate on equity income plus the personal tax rate on debt income i.e. Tc +(1-Tc)*Tp + Td.

(d). Hypothesis III

H_0: firms in the same industry cluster around a given ratio of interest tax shield.

H_1: firms in the same industry do not cluster around a given ratio of interest tax shield.

To test the research hypothesis, a ratio between interest tax shield and total capital shall be used. Average ratios for each industry will be computed, analysed with a view to establish whether there is any clustering around the industry. In order to establish a trend and arrive at a reasonable conclusion, twelve (12) years data will be used.

1.5 Importance of the Study

(a). The study will serve to provide additional insights to the tax authorities and policy makers on the impact of varying the corporate and personal tax rates and the use of debt finance in the economy.

(b). To the investors, the research will serve to establish whether there is merit for finance managers to alter the capital mix in view of the changes in the personal and corporate tax rates.

(c). The research will also provide a basis or means of testing selected theories in capital structure namely the effect on personal taxes on debt and equity finance using Miller's model.

1.6 Assumptions

(a). Firms grouped into various sectors in the NSE experience similar levels of business risk. The beta values are considered constant for each industry.

(b). Book values are equally good representatives of the market values for debt and equity.

1.7 Envisaged Limitations

(a). Accounting practices that govern preparation of financial statements may differ from one firm to the other and thus may not accurately show the correct economic condition of each firm.

(b). Some firms may have potential for tax shields but do not have the profits to take advantage of them. This will pose a limitation in determining interest tax shield for loss making firms. Such firms are not exposed to taxation in the year in which such losses are made. The firms in this category will be excluded from the study.

(c). The personal tax rates on interest and dividend incomes are largely fixed and therefore may not provide a clear indication of what impact taxation on these two forms of investor incomes have on capital structures for each firm.

(d). Not all companies have debt finance in their capital structure. These will be excluded from the study.

CHAPTER 2: LITERATURE REVIEW

Raising of funds is an important function of a finance manager. In practice, managers use different combinations of debt and equity to finance investments. The fundamental question is why do finance manager's use this combination in financing investments. Also, what is the significance of this ratio to the value of the firm and how does it affect wealth maximisation goal of the shareholders and debt holders.

Taxes are potentially an important consideration in a firm financing decision, Eugene & French, (1998).

Many theories of capital structure imply that, other things held constant, the incentive to use debt finance increases with a firm's marginal tax rate due to the tax deductibility of interest expenses, Graham, Lemmon & Schallheim, (1998). However, there is a limit to the extent to which a firm can use debt finance. Turnbull, (1979), noted that in a world with corporate taxes, where interest payments are tax deductible, it has long been recognised that the issuance of debt can enhance the value of the firm and that there is a limit on the amount of debt the firm can potentially use.

Under perfect capital markets, the financing decisions are irrelevant (MM with no corporate tax). However, in practice taxes and bankruptcy costs have an impact on the capital structure mix as well as the value of the firm. Financial economists argue that there is an optimal capital structure, which maximises the market value of the firm. In justifying the optimal capital structure, various finance theories have been used some of which have been explained in this chapter.

Franks, (1985), et al, summarised the motives for corporate borrowing in world without taxes as follows;

(a). It is cheaper to raise debt due to lower transaction costs

(b). Use of debt allows a corporate to inject more capital without losing controlling interest

(c). Due to the uncertainty tied to the use of debt, the management may not wish to make public the product that is generating the large positive net present values. Also the market may not believe management. Under such conditions, Franks, (1985), concludes that, a firm may have to employ more debt and less equity than they would otherwise employ.

In addition Franks, (1985), et al, acknowledged that in a world with corporate taxes, corporate borrowing is limited by the following factors:

(a). The cost of distress increases as excessive debt is used. Both lenders and borrowers avoid excessive debt financing even if there is tax savings accruing from the use of debt finance.

(b). If there exists differences in the costs of monitoring debt between firms, he argued that, the resulting costs would differ across the firms. The lower the monitoring costs the higher debt levels and vise versa.

(c). Debt-equity ratio for the industry is used as a guideline. These guidelines assist in ensuring a modest debt level for firm in a given industry.

2.1. Capital structure Theory: The Trade-off Model

The trade-off model originated from the Modigliani and Miller (MM), (1958), theory of relevance on taxes to capital structure of a firm. MM argued that in a world with corporate taxes, firms should use 100 percent debt financing. MM, argued that, the difference between the value of the levered and un-levered firm is the tax savings (product of the market value of debt and the corporate tax rate). As debt continues to increase, the amounts in tax savings continue to increase proportionately. MM, (1958), argued that in a world with no corporate taxes, the alteration of capital structure does not change the value of the firm, i.e. capital structure is irrelevant. However, they argued this holds under the following assumptions;

(a). The shareholders can borrow on the same terms as a corporation
(b). There are no taxes
(c). There are no costs to bankruptcy and financial distress

(d). The capital market is highly competitive and efficient

(e). There are no transaction costs

MM argued that in world with corporate taxes, the value of a levered firm is equal to the value of un-levered firm plus present value of tax shield provided by debt (gain from leverage). However, there exist market imperfections such as corporate taxes, bankruptcy and agency costs that make the value of a firm dependent on the type of financing used. Bankruptcy costs occur when payments must be made to third parties other than the shareholders. The payment may be in form of trustee fees, legal fees and other costs such as costs on re-organisation. These costs are deducted from the value of the net assets.

As the proportion of debt in a firm increases, the probability of incurring bankruptcy and agency costs also increases. In addition, the tax shield resulting from interest on debt increases with increase in firm's debt. This phenomenon results in a trade-off between the tax savings resulting from interest on debt and the bankruptcy and agency costs. Accordingly, firms should aim to optimise the net value of the tax shield and the bankruptcy/agency costs.

Brigham and Gapenski, (1996), argued that the trade-off model reaches the reasonable conclusion that some debt is good and too much debt is bad and that an optimal capital structure exists for each firm. An optimal capital structure is found by balancing the interest tax shield benefits provided by leverage against financing distress and equity costs[1].

The trade-off models have only limited empirical support[2]. In this respect, firms that invest primarily in tangible assets tend to borrow more heavily than firms whose value stems from intangible assets. However, empirical evidence refutes other aspects of the trade-off models.

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[1] *Brigham & Gapenski, (1996);Intermediate Financial Management; The Dryden Press; Fifth Edition; pg. 395 - 396.*

[2] *Taggat Robert A. J (1977),; A model of Corporate Financing Decisions; Journal of Finance; Dec 1977, pg. 1467-1484. Paul Marsh; The Choice between equity and Debt; Journal of Finance; March 1982, pg. 121-144*

Brigham & Gapenski, (1996), noted that there is some evidence that firms financing decision are consistent with a target capital structure. However, the explanatory power of the models is very low, suggesting that trade-off model only capture a part of actual behaviour.

In addition, it is not clear whether the firms tax rate has a predictable material effect on its capital structure. In other words, what significance would varying the firm's tax rate have on its capital structure?

Actual debt to equity ratio tend to vary widely across similar firms within a given industry, whereas, the trade-off models suggests that similar firms should have similar debt ratios. Some of the factors that may explain these variations include; factors unique to individual firms and managerial attitude. Kiogora, (2000), attributed the different debt-equity ratio to the two factors namely; the ease with which a company can obtain debt finance and the business risk to which a firm is exposed to.

In summary, the empirical evidence support for trade-off model is weak, suggesting that other factors that are at work. The interest tax shield depends only on the corporate tax rate, Brigham & Gapenski, (1997). Further, existence of corporate taxes and deductibility of interest expense provides strong incentives to borrow.

DeAngelo and Masulis, (1980), argued that firms with plenty of non-interest tax shield e.g. shield from depreciation, financial leases and investment tax credits tend to borrow less[3]. The availability on non-debt related deductions affects the level of debt as a source of tax savings. This suggests that existence of these alternative non-debt tax shields make the interest deductibility redundant. They argued that firms select a level of debt that is negatively related to the level of available tax shield substitutes such as depreciation, depletion and investment tax credits.

The relationship between the trade-off and asymmetric information can be used to attempt to explain other factors that affect the capital structure of a firm.

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[3] *Weston & Copeland, (1992) pg. 595.*

Asymmetric information[4] may have a significant effect on the capital structure. Managers try to maximise value for the current stockholders and not new ones. For example, if the firm has excellent prospects, management will not want to issue new shares. However, if things look bleak, issuing a new stock offering would benefit current stockholders. Hence, therefore, investors take a stock offering to be a signal of bad news; so stock prices tend to decline when new issues are announced. As a result, new equity financings may be relatively expensive and this fact must be incorporated into the capital structure decisions.

The net effect of trade-off and asymmetric information theories are that;

(a). Debt finance provides benefits because of the interest tax shield resulting from the deductibility of interest expense.

(b). Financial distress and agency cost place limits on the use of debt. Beyond some point, these costs offset the tax advantage of debt.

(c). Because of asymmetric information, firms should maintain some reserve borrowing capacity in order to be able to take advantage of good investment opportunities without having to issue stock at distressed prices. Thus, the actual debt ratio will generally be lower than that suggested by the trade-off model.

Due to asymmetric information, we should expect that the listed firms have industry average capital structure mix and the capital structure should display a lower than optimal capital structure for each firm. Asymmetric information favours the use of internal equity, debt and external equity, in that in order, as investors perceive firm's securities to be overvalued when external finance is sought. In other words debt is less expensive when compared with external equity.

In summary, the trade-off model leads to the conclusion that both non-debt and all debt are bad while moderate debt level is good. Also, the assets structure of a firm has an influence

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[4] *Asymmetric information refers to a situation a manager knows more about his/her firm's future than do the analysts and investors who follow the firm's performance. Eugene F. Brigham & Louis C. Gapenski (1996); Intermediate Financial Management; The Dryden Press; Fifth Edition; pg. 23.*

on the level or capacity of debt a firm can attract. Further, capital structure mix is also influenced by asymmetric information; this may lead to lower than optimal capital structure for a firm. In addition, the lower the transaction costs on debt finance and the fact that the shareholders retain controlling interest of the firm, favours use of debt finance.

2.2. The Millers Model; Relationship between Corporate and Personal Tax Rate on Equity & Interest Incomes

Miller's model considers the effects of both the corporate and personal taxes to the value of a firm. Also, it shows that the advantage of corporate borrowing is reduced by personal tax loss. This means that there is an optimum capital structure where the personal tax gains are highest or in other words, where personal tax loss is at its lowest. The model shows that when all taxes (personal taxes on interest & dividend income and corporate tax) are at variance, there is point at which it is advantageous for a firm to obtain debt finance. Also there is equally a point at which debt finance is not valuable. The value is determined by the net after tax gains attributable to different classes of stakeholders in a firm. Miller developed a model that shows how the corporate and personal taxes could cancel out by varying the personal taxes on debt and equity incomes and leave the firm value independent of capital structure. He came up the following Model;

$$\text{Gain From Leverage (GFL)} = \left[\frac{1-(1-Tc)(1-Ts)}{(1-Td)}\right] \cdot D$$

Where: Tc = Corporate Tax Rate on Corporate Income
Ts = Personal Tax Rate on income from stocks
Td = Personal Tax Rate on income from debt
D = Market Value of debt

The model shows the net tax effects on the value of the firm. The higher the net tax effects the higher is the value of the levered firm. This is the extra value that a levered firm gains from leverage and it is over and above that of un-levered firm.

At equilibrium when (1-Td) would equal (1-Tc)(1-Ts), means that the tax advantage of debt to the firm would exactly be off-set by personal taxation, hence the capital structure would have no effect on the firm's value. Thus, according to Miller, (1977), the conclusion derived from the original Modigliani and Miller proposition of zero tax model would be correct i.e. GFL = 0. In other words, where tax rates are not equal then it matters.

By fixing the corporate tax rate (Tc) and the personal tax rate (Ts) on equity income and varying the personal tax rate on debt income, Miller showed that there is a corporate leverage clientele effect. In reality, this implies that individual taxpayers in low tax bracket would benefit from investing in highly levered corporations. Investors in high tax bracket would benefit more from investing in corporations with low degrees of leverage, Weston & Copeland, (1988). See table below.

Gain From Debt

Td	G= Tax Benefit of Corporate Debt
.0	.512
.2	.390
.3	.303
.4	.187
.5	.024
.6	-.220
.7	-.627

Source: Table 15.9 – Weston & Copeland (1992), Page 593. Tc = 39% & Ts = 20%

In Miller's theory, the supply of corporate debt expands as long as the corporate tax rate exceeds the personal tax rate. This implies that corporation tax shield on interest has an effect on the capital structure of a firm when viewed on its own.

Eugene & Kenneth, (1998), argued that in a situation in which investors avoid personal taxes on all investment returns, the corporate debt tax shield increases firm's value by the market value of the corporate savings on expected interest payments.

Brealey and Myers, (1981), summaries key implications of the Millers model. They state that using Miller's model there is an "optimal debt equity ratio for corporations as whole". The optimal debt equity ratio is "determined by corporate tax rate and the funds available to individual investors in various tax brackets". In order to explain this phenomenon the corporate and personal tax rates are varied. If the corporation tax is increased the interest tax shield increases leading to lower residue for equity holders. This leads to migration from equity shareholding to debt holding, thus creating a higher debt equity ratio, i.e. there is reduced income to equity investors as a result of increased corporate tax. If personal tax rates on interest income are increased, the migration reverses leading to lower debt equity ratio. If both personal and corporate tax rates are varied in the same direction, there is no migration and there is no change in the debt-equity ratio.

Reflecting this concept to the Kenya scenario, where the corporate tax has continued to decline at a higher rate than the personal tax rates (refer to Table III & IV), we would expect a shift from the use of debt finance to use of equity finance, leading to declining debt-equity ratio.

Pandey, (1999), argued that where the personal tax on equity income is positive, investors could be induced to hold to debt securities where the total tax on equity income (Tc + (1-Tc) *Ts) is higher than the maximum tax on interest income. Where this is the case, more debt can be raised until investors in this tax bracket are covered. Taken in the Kenyan context, assuming corporate tax rate (Tc) of 30 percent and withholding tax on equity income (qualifying rate) of 5 percent, then total tax on equity income would be (0.3 + (1-0.3)(.05)) = 0.335 or 33.5 percent and 37 percent (for non-qualifying equity income). Assuming other things are held constant and general withholding tax rate on interest income of 15 percent and the highest tax rate on personal equity income of 30 percent implies that investors with interest income and whose tax rate on this income is lower than 33.5 percent or 37 percent stand to gain from the investment more by advancing debt finance to companies. Using this argument, one can conclude that there is abundance of debt finance to the corporations in Kenya, which is cheaper.

In summary, the existence of corporate taxes favours the use of debt finance due to deductibility of interest expense and the resulting interest tax shield it provides. The interest tax shield increases the value of the firm. Existence of personal taxes on interest reduces the

value of interest tax shield resulting from the use of debt finance. This implies that the corporate tax rate and the personal tax rate on interest income have an effect on the value of a firm. MM, (1963), and Franks et al, (1985), argued that debt has net tax benefits that do increase the value of the firm. In contrast, Miller, (1977), argued that, "debt has no tax benefits because the personal tax costs of debt just off-set corporate tax benefits". This contradiction points out the need for further research in this area.

2.3. Tax Clientele Effect on Interest & Dividends

Pandey, (1999), noted that investors are required to pay personal taxes on the income earned by them. From the investor's point of view, taxes will include both corporate and personal taxes. He reckoned that a firm should aim at minimising the total taxes both corporate and personal when deciding what to borrow. Total earnings of a firm will be distributed as either interest income or equity income. For tax purposes, dividends are treated differently from interest income. In Kenya, the interest and dividend incomes are taxed at appropriate withholding tax rates applicable to corporate and individual investors.

Personal tax rates on interest and dividend income are unlikely to be equal meaning that an investor would prefer one form of income than the other. Further, a firm will have a large number of shareholders and debt holders in different tax brackets. Pandey, (1999), suggests that interest income is taxed at a higher rate than equity income for individual investors. Generally, withholding tax rates for interest are higher when compared to the rates applicable to dividend income.

Interest payments made by corporations are deductible expense to the firms but dividends paid on its own stock are not. This differential treatment of dividends and interest payments has an important effect on the manner in which firms raise capital, Weston and Brigham, (1981). The fact that investors both individuals and corporate have different tax rates on dividend income suggest that some investors may hold some stocks in preference to others. Brigham & Gapenski, (1996), stated that different groups of stockholders prefer different dividend payout policies. They noted that stockholders have different investment patterns and preferences. The investment patterns are determined by such factors such as; the need for

cash and capital gains. From a tax perspective, it is not clear how the different rates affect the investor's choice of which company/(ies) to invest in.

Using Miller's model, Pandey, (1999), showed that the value of the firm would be reduced when the personal tax rate of lenders is higher than that of shareholders. He suggests that corporate borrowing is advantageous when (1-Tc)(1-Tp) < (1-Td). He suggested that the firm's value is affected by the leverage when the personal tax rates of shareholders and debt holders differ. It is not clear as to what extent are our financial managers and investors recognise this.

In reality there are three partners who share the incomes from a firm, these are stockholders, debt-holders and the tax authorities. The goal of a firm is to minimise the taxes taken by the tax authority. Levi and Sarnat, (1994), pointed out that, Miller's argument that there is a point at which use of debt may increase or decrease the income to the debt and stockholders. In order to prove this argument, assume the personal tax rate on equity income Tp, tax rate on personal income to debt income Td and corporate tax rate is Tc. Miller argued that when (1-Tc)(1-Tp) > (1-Td) the firm should issue less debt but more equity, this would increase the firm's owners (debt and stockholders) income. This is attributed to the fact that only those investors with a lower Td would be attracted. Similarly, if, (1-Tc)(1-Tp) < (1-Td), investors would be better off by shifting funds from equity to debt hence increasing net income. This shift implies that the firm would attract more debt-holders with high tax (Td). At equilibrium, (i.e. (1-Tc)(1-Tp) = (1-Td)), Miller, (1977), argued that the capital structure does not matter (i.e. $V_U=V_L$) and that personal tax on debt and equity has no effect on capital structure.

Miller speculates that we will find a clientele effect in that firms with a high proportion of debt in their capital structure will attract those investors whose Td is low. Similarly those firms with a high proportion of equity will attract those investors with a high Td.

Elton and Gruber noted that firms with different payout ratios attract different stockholder clientele. This phenomenon they attributed it to the effect of personal taxes on personal incomes. They noted that stockholders who pay relatively lower tax rates on dividends would prefer high payout stocks. On the other hand, they argued that low dividend payout companies attract high tax stockholders. The fact that investors have different tax rates suggests that investors may hold some stock in preference of others. We are looking for

evidence as to whether our corporate managers consider this. This preference for particular stocks depending up on an investor's marginal tax rate implies a tax clientele effect.

Miller, (1977), suggests that in order to entice taxable investors into the market for corporate debt, the rate of interest on such bonds has to be high enough to compensate for the taxes on interest income under the personal income tax. Ideally, the interest rate has to keep rising to attract investors in higher tax brackets. This means that the after tax returns on interest income to debt holders must remain attractive to investors.

The overall objective of the firm is to minimise the tax and increase the net incomes to the owners of the firm through use of appropriate proportions of debt and equity capital. Further, investors would be keen to minimise tax resulting from the debt and equity incomes by investing appropriate proportion of their funds in equity and/or debt, which ensures that they only remain within appropriate tax brackets. Specifically, Miller's model showed that, if the term, (1-(1-Tc)(1-Tp)/(1-Td)), is positive then a firm should issue debt and if it is negative then it should not issue debt.

2.4. Taxation on Dividends and Interest Income in Kenya: The Provisions in the Income Tax Act Cap 470.

Income Tax Act Cap 470 prescribes the manner in which interest and dividends incomes are taxed Section 3 (2) (b), Income Tax Act Cap 470.

For the purpose of the Act, dividend is defined as "any distribution by a company to its shareholders with respect to their equity interest in the company", while interest means "interest payable in any manner in respect of a loan, deposit, claim or other right or obligation" Section 2(1), IT Act 470.

The Act distinguishes between the taxation treatment of interest and dividend into qualifying and non-qualifying interest/dividend. Qualifying dividend income means the dividend that is chargeable to tax at a prescribed withholding tax rate, as specified under the Third Schedule but does not include dividend paid by co-operative societies, Section 2(1), Income Tax Act

Cap 470. Qualifying interest means aggregate interest or discount received by a resident individual in any year of income from a bank, financial institution, building society or Central Bank of Kenya. The Act specifies the applicable withholding tax rates in Section 34 "Rates of Tax". Further the Act goes ahead to distinguish between resident persons and non-resident persons.

Resident individuals pay withholding tax on both qualifying or non-qualifying dividend and/or interest incomes in each case this is final tax. In respect of dividend other than qualifying dividend, the withholding tax rate for residents is 10 percent whereas the withholding tax rate in respect of qualifying dividend is 5 percent, Third Schedule, Head B, 5(a), 5(e)). In respect of qualifying interest, the withholding tax rate of 10 percent for housing bonds and 15 percent for all other cases, Third Schedule, Head B, 5(h). Interest other than qualifying interest, is charged a withholding tax at a rate of 25 percent for bearer bonds and 15 percent for all other cases. For non-resident individuals, the withholding tax rate in respect of dividends is 10 percent on the gross amount, and 15 percent in respect of gross interest income, Third Schedule, Head B, 3(d), 3(e)(i). The rates applicable for different years of income in respect of interest and dividend incomes are shown in Table IV.

Section 34, specifies the manner in which tax is deducted and remitted by the collector to the Commissioner of Income Tax. In particular interest paid to a financial institution is not subjected to withholding tax, Section 35(3)(b).

A resident company, that controls directly or indirectly 12.5 percent or more of the controlling power, the dividend income received by such firm(s) is not chargeable to tax. However, for those resident firms who control less than 12.5 percent of the controlling power, the dividend income is subjected to corporation tax, Income Tax Act Cap 470, Section 7(2). Further, dividend received as income by a financial institution is not deemed to be income chargeable to tax, but it is treated as business income, Section 7 (3) and Section 3(2)(a)(i).

For the purpose of differentiating interest income chargeable to tax, Section 10 specifies that, where interest payment is made by a resident person or a person having a permanent establishment in Kenya to any other person, such payment shall be deemed to have accrued in or derived from Kenya.

In arriving at appropriate proportions of debt and equity to invest in, individuals and firms have to consider the tax implications of the interest and/or dividend income they receive. The tax rates for individuals on interest and/or dividend incomes is fixed whereas dividend received by firms which controls less than 12.5 percent of the voting rights attract further taxation at corporate tax rate. However, where such a firm had paid withholding tax on dividend income, such tax is deducted from the total tax payable by a firm.

In summary, taxation of dividend and interest income operates on a fixed rate that is the withholding tax for both individuals and corporate persons. Also the fixed rates apply to non-resident individuals. In Kenya, the interest and dividend incomes are not subjected to graduated taxation system like other specified forms of individual income. Where an individual has other sources of income, say business income, such income is subjected to tax at rates applicable for specified sources and where applicable aggregated together for the purpose of determining total tax using appropriate rates of tax for individuals and corporates.

2.5. Impact of Financial Distress and Bankruptcy on Capital Structure of a Firm

Financial Distress occurs when promises to creditors are broken or honoured with difficulties. Sometimes financial distress leads to bankruptcy. Financial distress is costly. Investors know that a levered firm may experience financial distress and this may worry them. The worry is reflected in the value of the firm, as cost of financial distress.

Value of a Firm = value if all equity financed + PV of tax shield - PV costs of financial distress

At moderate debt levels, the probability of financial distress is trivial and so the present value of financial distress is insignificant, Brealey & Myers, (1981). With moderate level of debt the value of a firm increases with increases in debt.

The capital structure of the firm is determined by incorporating the effect of the tax benefits and the costs of financial distress. The present value of the interest tax shield increases with borrowing and so does the present value of the costs of financial distress.

In addition, managers may view the financial distress with more concern. Thus the present value of the expected earnings can be eroded by presence of financial distress. This aspect may lead to managers to be more conservative in the use of leverage. As a consequence, this phenomenon may lead to somewhat lower target capital structures than the ones, which would maximise expected stock prices.

When financial distress costs are considered, the result is the trade-off model between the financial distress and the interest tax shield. Kane, Marcus and McDonald, (1984), concluded that the tax advantage and bankruptcy costs trade-off is unlikely to play a major role in explaining observed leverage patterns.

Direct costs of bankruptcy include filing fees, trustee expenses, legal, and accounting fees, costs of re-organisation or liquidation are deducted from the NPV of the bankruptcy firm in a liquidation state.

Altman, (1984), concluded through empirical study that the direct bankruptcy costs averaged at 4.3 percent to 6.2 percent just prior to bankruptcy. On average total bankruptcy costs ranged between 12.4 percent to 16.7 percent of firm value between year 3 prior to bankruptcy and bankruptcy. For the purpose of this study, bankruptcy costs will be assumed away.

2.6. Factors that Influence Capital Structure Decisions in Kenya

Kamere, (1987), did a study to establish the principal factors that the management of quoted companies in Kenya considered in making capital structure decisions. The study also focused to establish the relative importance of these factors in the capital structure decisions. In order to carryout the study, a questionnaire was used to collect information from the financial managers of the target firms. Using a questionnaire, data was collected from the practising accountants who offer advisory services to the management of these firms. Thirty questionnaires from financial managers and eleven financial advisors were received and analysed. The capital structure of the public limited companies were also analysed with a view to ascertain whether some of the factors might be reflected in the existing capital structure. Secondary data was analysed from the annual reports of quoted companies. The period selected was 1981-1985 (a period of five years).

Kamere, (1987), found that some factors had more influence to the capital structure than others. His findings were based on the opinion from the financial advisors, who ranked the factors in order of importance as follows; (i) stability of future cash flows, (ii) the level of interest rates in the economy, (iii) the asset structure of a firm, (iv) lenders attitude towards a firm and the altitudes of the management towards risk, and (v) tax advantage of debt. About 10 percent of the financial advisors considered tax advantage of debt as very important, 50 percent as important and 40 percent as fairly important, meaning that in total, the majority considered tax advantage to be 90 percent important. Relatively, the tax advantage of debt was ranked fifth by the financial advisors.

On the other hand 33.35 percent of financial managers considered tax advantage of debt as very important, and 40.66 percent as important. The research findings also concluded that firm's debt, its age and size and amount of fixed assets were positively correlated but the correlation coefficient was rather low, suggesting that these factors were not considered very critical by firms.

He noted that not all financial managers considered tax advantage of debt as important. The research did not establish the reasons attributable to these findings. However, he noted that these results could be attributed to existence of alternative tax shields, lack of awareness of the tax advantage or other reasons.

In conclusion, findings helped to establish that among the most important factors that influenced the capital structure decisions were the stability of the future cash flows, the level of interest rates in the economy, the asset structure of a firm, the need for outside capital, lenders attitudes towards the firm and the attitudes of management towards the firm's risk. In addition financial advisors considered the tax advantage of debt to be an important consideration in capital structure decisions.

Omondi, (1996), in his study titled "A study of Capital Structure in Kenya" contributed to the understanding of the capital structures of the Kenyan firms. The objective of the study was to establish which factors significantly influenced capital structure of firms in Kenya and also to determine the typical debt/equity ratio. The factors considered were; firm's age, industrial class, growth, size, interest charges, variability in cash flows, profitability, asset structure and

ownership. Secondary data from published annual reports of the listed firms was used to compute various ratios. The selected period of the study covered firms listed in the NSE during the period January 1987, to December 1984, a period of eight years.

The study found out that the capital structure of firms was quite different on sector basis. The debt equity ratio had a significant variation between the sectors. The following were the sectoral debt equity ratios; (i) industrial and allied sector, 0.301, (ii) agricultural, 0.108 and (iii) financial and investment sector, 0.058. This perhaps indicates that there were predominant factors in each sector that influenced the debt equity ratio considerably. In addition, he found that the ownership structure influenced the debt equity ratio. For example, the government controlled enterprises had the highest debt equity ratio followed by locally owned enterprises and finally the overseas controlled enterprises had the least.

He concluded that the results from sectoral tests do indicate that there are disparities in the factors that influenced capital structures in firms. In addition, he concluded that interest rate does have a positive correlation to capital structure. However, the correlation is not significant whether at sectoral or combined level. This conclusion was a departure from the conclusion by Kamere, (1987), in that interest rate was ranked second in order of importance.

In another study by Kiogora, (2000), titled "Testing the Variations in the Capital Structure of Companies Quoted at the Nairobi Stock Exchange; An Empirical Study" also contributed to the capital structure debate in Kenya environment. Some of the objectives of the study were to establish whether the capital structures of quoted firms in the NSE in the same industry are similar and to establish evidence of optimal capital structure. Also to find out whether capital structures employed by quoted companies are consistent over a time. Secondary data for the listed firms (51 companies) was analysed by obtaining relationships between returns and capital structure. The secondary data used was the period 1991- 1998, both years included.

Kiogora, (2000), found out that capital structures of companies quoted in the NSE do not differ within their respective sectors to which they fall but the capital structure differs between the sectors. The researcher also concluded that the traditional view on capital structure holds true for firms listed in the NSE i.e. that capital structure does matter. Using regression analysis, the researcher concluded that there is a positive relationship between the returns and the level of leverage for firms listed in the NSE. The conclusion perhaps points out that the use of

debt finance is considered important by the finance managers of these companies. By extension, it is possible to infer that the interest tax shield could have a positive contribution to financing decisions.

In conclusion, it is evident that there are no consistent conclusions as to the impact interest tax shield have on the capital structure for the listed firms in Kenya. Brigham and Gapenski, (1996), also stated that studies have not consistently demonstrated whether a firms tax rate has a predictable material effect on its capital structure.

In summary, debt ratios tend to vary widely across apparently similar firms within a given industry whereas the trade-off model suggests that similar firms have similar debt levels. This inconsistency perhaps is an indication of the need for further research to explore what possible impact some of the key factors such as tax on interest and dividend incomes have on capital structure. In particular, this research attempts to explore whether there exists any relationship between tax on interest and dividend incomes and capital structure and whether there is a tax clientele effect. In addition, this is intended to contribute in determining whether interest and dividend income have any significance on capital structure of firms in Kenya.

CHAPTER 3: RESEARCH DESIGN

3.1. Population

The population considered was all the listed firms with Nairobi Stock Exchange. These included firms listed prior year 2001. The period of the study was twelve (12) years, 1990 to 2001, both years inclusive. For single period analysis, the year 2001 was selected on random basis otherwise the study could be done for any other year.

3.2. Sample Size

To be more focused, the study considered only those listed firms that have debt in their financial statements for the selected period. The firms included those that were listed prior to year 2001 and have audited financial statements for the twelve years between 1990 to 2001. For single period analysis, the year 2001 was considered. Due to the unique nature of the debt structure, lending and borrowing characteristics of banks, all financial institutions were excluded. The principal reasons for choosing the listed firms were; the financial data for these firms was readily available, financial decisions relating to capital structure are likely to be complex and well thought through. Thirdly, the ownership structures dictate higher chances of application of prudent financial decision-making processes.

3.3. Data Collection

Secondary data from audited financial statements for the selected firms was used. The audited and published financial statements were obtained from the registered offices of the respective firms or the Nairobi Stock Exchange. Also data on the composition of shareholders/ownership structure and the proportion of shares held was collected. This was obtained from the respective firm's returns, which are available at NSE. Data was extracted from relevant items from the annual financial statements for the period under study. The figures extracted included, the long-term debt, shareholders equity (paid up share capital, retained earnings and reserves), dividend proposed and interest charged. Due to difficulties for some firms to differentiate between the long-term and short-term debt, the researcher considered all debt in a firm.

3.4. Miller's Model

Miller's model was used a central model for data analysis and in particular for computing the interest tax shield. The model takes into consideration the personal tax on debt and equity incomes and corporation income tax. The gain from leverage is realised where the interest expenses were deductible in arriving at the taxable income. The gain from leverage (GFL) for the stockholders in a firm is given by the following expression (Miller's Model);

$$\text{Gain From Leverage (GFL)} = \left[\frac{1-(1-Tc)(1-Ts)}{(1-Td)}\right] \cdot D$$

Where: Tc = Corporate Tax Rate on Corporate Income

Ts = Personal Tax Rate on income from stocks

Td = Personal Tax Rate on income from debt

D = Market Value of the levered firm's debt

The model gives that gain from leverage in perpetuity. The above variables for each firm and for each sector were extracted for each year and the corresponding gain from leverage figures were computed.

3.5. Measurement of Variables

For each year of the study, the variables used in the analysis were: corporate tax rate, personal tax rate for equity and debt incomes, interest expense charged, corporate tax charged, total debt, shareholder funds (equity) and tax paid. The amounts were shown in millions of Kenya Shillings.

The variables listed above were extracted from the financial statements for the listed firms for the period 1990 to 2001.

3.6. Methods of Data Analysis

To establish the characteristics of the gain from leverage and sectoral groupings of firms in the NSE, the gain from leverage was computed for each sector for the period of the study.

The gain from leverage was computed using the Miller's model and also using the actual interest expenses (interest charged multiplied by corporate tax rate) in a given year. The gain from leverage was then compared with the nominal interest rate (NIR), the corporate tax rate (Tc), the combined effect of the corporate, and personal tax rate on debt (Td) and equity (Tc) incomes and appropriate statistical analysis obtained. The gain from leverage was treated as a dependent variable while nominal, the corporate and personal tax rates were treated as independent variables.

The computed gains from leverage rates were computed using the Miller's Model for various combinations of corporate and personal tax rates (Table VII). The computed rates (predetermined) were then paired against the corresponding sources of finance, which attract the tax rates used within the tax group. The rates were further used to determine alternative sources of equity and debt finance for each firm given the specific rate.

In testing clustering of interest tax shield to total assets, the coefficient of variation was used. The higher the coefficient of variation, the less the chances of clustering around a given mean.

Predetermined gain from leverage rate and the preferred sources of equity and debt finance were compared against the actual sources of debt and equity finance. The analysis assisted to determine whether listed firms apply consistency in value maximisation strategies and also in establishing whether firms have a certain clientele for debt and equity finance.

CHAPTER 4: DATA ANALYSIS, FINDINGS AND INTERPRETATION

Introduction

The list of firms studied is contained in Table I. The secondary data from the financial statements are contained in Appendices I – IX. The data was extracted from the published and audited financial statements for the period 1990 to 2001, a period of twelve years for all target firms. The summary of the statistics, comparisons and analysis between the various aspects of the study are contained in Appendices X – XXVI. The analysis focused on establishing the relationship that may exist between the corporate tax rate (hereafter referred to as Tc), personal tax rate on equity income (Ts), personal tax rate on debt income (Td), nominal interest rate (NIR), gain from leverage rate (GFL), figure derived using Miller's Model. In order to determine the source for the equity shareholding in a firm, the majority shareholding i.e. those with more than 50% share ownership was considered.

4.1. Testing the Clientele Effect on Equity and Debt Finance for the listed firms in the NSE.

The Tables VIII (a), VIII (b) & VIII (c) below shows the computed gain from leverage, the actual source of equity finance (derived from actual equity ownership structure) and the preferred source of equity finance (determined using predetermined gain from leverage).

For example, the results for Brooke Bond Ltd show that the firm has equity finance from foreign investor holdings and debt from non-financial institution, these sources of finance result in a gain from leverage rate of 0.256. In order to retain the same rate of gain from leverage, we note that the preferred alternative source of both equity and debt finance would be to source equity finance from resident corporations and debt finance from a combination of the following; non-resident individual, or resident individuals, or resident or non-resident corporations. The specific results for each sector are listed in the tables below.

Table VIII (a): Relationship between Gain From Leverage (GFL), Actual and the Preferred Source of Equity Finance: Agricultural Sector

Firm & Sector	GFL	Actual Sources of Equity Capital	Preferred Sources of Capital
Agricultural Sector			
Brooke Bond Ltd Ord 10.00	0.259	Foreign Investor Holdings & debt from non-financial institution	Equity from resident corporations & debt from: NR or resident Individuals, or resident/NR corporations
Eaagads Ltd Ord 1.25	0.370	Local Institutional Investors & no debt	Equity from resident corporations, Non-Resident Corporations/individuals
George Williamson Kenya Ltd Ord 5.00	0.370	Foreign Investor Holdings & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions
Kakuzi Ord.5.00	0.370	Foreign Investor Holdings & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions
Kapchorua Tea Co. Ltd Ord Ord 5.00	0.370	Foreign Investor Holdings & No debt	Equity from resident corporations, Non-Resident Corporations/individuals
Limuru Tea Co. Ltd Ord 20.00	0.335	Foreign Investor Holdings & No debt	Equity from resident corporations, Non-Resident Corporations/individuals
Ol Pejeta Ranching Ltd	0.370	Data not readily available	Equity from resident corporations, Non-Resident Corporations/individuals
Rea Vipingo Plantations Ltd Ord 5.00	0.370	Foreign Investor Holdings & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions
Sasini Tea & Coffee Ltd Ord 5.00	0.370	Foreign Investor Holdings & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions
Theta group Ltd Ord 1.00	0.370	Data not readily available	Equity from resident corporations, Non-Resident Corporations/individuals

Table VIII (b): Relationship between Gain From Leverage (GFL), Actual and the Preferred Source of Equity Finance: Commercial & Services Sector

Commercial & Services Sector	GFL	Actual Sources of Equity Capital	Preferred Sources of Capital
African Lakes Corporation PLC.Ord 5.00	0.370	Foreign Investor Holdings & No debt	Equity from resident corporations, Non-Resident Corporations/individuals
A.Baumann & Co.Ltd Ord 5.00	0.370	Foreign Investor Holdings & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions
Car & General (K) Ltd Ord 5.00	0.370	Foreign Investor Holdings & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions
CMC Holdings Ltd Ord 5.00	0.370	Foreign Investor Holdings & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions
Express Ltd Ord 5.00	0.370	Foreign Investor Holdings & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals
Hutchings Biemer Ltd Ord 5.00	0.370	Data not readily available	Equity from resident corporations, Non-Resident Corporations/individuals
Kenya Airways Ltd Ord 5.00	0.259	Local Individual & instructional investors & debt from non-financial institution	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions
Lonrho Motors EA Ltd Ord 5.00	0.370	Data not readily available	Equity from resident corporations, Non-Resident Corporations/individuals
Marshalls (E.A.) Ltd Ord 5.00	0.370	Foreign Investor Holdings & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions
Nation Media Group Ord. 5.00	0.370	Local individual & Foreign Investor Holdings & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions
Pearl Drycleaners Ltd Ord 5.00	0.370	Data not readily available	Equity from resident corporations, Non-Resident Corporations/individuals
Standard Newspapers Group Ord 5.00	0.370	Foreign Investor Holdings & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions
Tourism Promotion Services Ltd Ord. 5.00 (Serena)	0.259	Foreign Investor Holdings & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions
Uchumi Supermarket Ltd Ord. 5.00	0.370	Local institutional investors	Equity from resident corporations, Non-Resident Corporations/individuals

Table VIII (c): Relationship between Gain From Leverage (GFL), Actual and the Preferred source of Equity Finance: Average for: Industrial & Allied Sector

Industrial & Allied Sector	GFL	Actual Sources of Equity Capital	Preferred Sources of Capital
Athi River Mining Ord. 5.00	0.335	Local individual investors & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions
Bamburi Cement Ltd Ord. 5.00	0.370	Foreign Investor Holdings & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions
B.O.C Kenya Ltd Ord. 5.00	0.370	Foreign Investor Holdings & no debt	Equity from resident corporations, Non-Resident Corporations/individuals
British American Tobacco Kenya Ltd Ord. 10.00	0.370	Foreign Investor Holdings & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions
Carbacid Investments Ltd Ord. 5.00	0.335	Local individual investors & no debt	Equity from resident corporations, Non-Resident Corporations/individuals
Crown Berger Ltd 0rd. 5.00	0.259	Local Institutional Investors & debt from non- financial institution	Equity from resident corporations & debt from: NR or resident Individuals, or resident/NR corporations
Dunlop Kenya Ord. 5.00	0.370	Foreign Investor Holdings & Local institutional investors & no debt	Equity from resident corporations, Non-Resident Corporations/individuals
E. A. Cables Ltd Ord. 5.00	0.370	Local Institutional Investors with no debt	Equity from resident corporations, Non-Resident Corporations/individuals
E. A. Packaging Ltd Ord. 5.00	0.370	Foreign Investor Holdings & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions
E.A. Portland Cement Ltd Ord. 5.00	0.259	Local Institutional Investors & debt from non- financial institutions	Equity from resident corporations & debt from: NR or resident Individuals, or resident/NR corporations
East African Breweries Ltd Ord. 10.00	0.370	Foreign Investor Holdings & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals
Firestone East Africa Ltd Ord. 5.00	0.370	Local Institutional Investors & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions
Kenya National Mills Ltd. Ord. 5.00	0.370	Data not readily available	Equity from resident corporations, Non-Resident Corporations/individuals
Kenya Oil Co Ltd Ord. 5.00	0.370	Local Institutional Investors & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions
Kenya Orchards Ltd Ord. 5.00	0.370	Local Institutional Investors & no debt	Equity from resident corporations & debt from: NR or resident Individuals, or resident/NR corporations
Kenya Power & Lighting Ltd Ord. 20.00	0.259	Local Institutional Investors & debt from non financial institutions	Equity from resident corporations & debt from: NR or resident Individuals, or resident/NR corporations
Total Kenya Ltd Ord. 5.00	0.370	Foreign Investor Holdings with no debt	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions
Unga Group Ltd Ord. 5.00	0.370	Local Institutional Investors & debt from financial institution	Equity from resident corporations, Non-Resident Corporations/individuals & Debt from Financial Institutions

The results shows the gain from leverage rate and the comparison between the current and alternative preferred sources of equity finance, the details are presented in Appendix X. From the Tables VIII (a), VIII (b) and VIII (c), we note that the withholding tax rate on equity income for the resident corporate bodies, non-resident individuals and non-resident corporate bodies was 10 percent (Income Tax Act Cap 470). In this case and from a tax perspective, there will be no difference in terms of gain from leverage if a firm obtains equity finance from a local or foreign corporate institution. It is also worth to note that the maximum gain from leverage rate (where the maximum is thirty seven percent (37 percent) was attained when firms obtain debt finance from financial institutions and equity finance from a resident corporate body, or foreign individual and/or foreign corporate body. The minimum gain from leverage rate was obtained when firms obtained equity finance from resident individuals and debt finance from: non-financial institutions or non-resident individual or non-resident corporate bodies, (Table VII). To retain the same corporate capital clientele, the actual and the preferred source of capital finance have similar tax characteristics. The withholding tax rate on equity income was ten percent (10 percent) for local corporate bodies, non-resident corporate and non-individuals while debt from financial institutions is at 0%. Few of the firms have concentrated their equity ownership on individual investors and debt finance from non-financial institutions. This suggests that finance managers of listed firms consider the personal taxes on equity income in arriving at the preferred source of equity finance. In addition, thirty-three (33) of the firms had the maximum gain from leverage of thirty seven percent (37 percent). Six (6) firms had a gain from leverage of 25.9 percent while three (3) firms had the gain from leverage at 33.5 percent. Similar results are obtained when the gain from leverage was computed using the actual interest charged (Appendix XI). It is noted that seventy Nine (79) percent of the firms have the gain from leverage at 37 percent, Fourteen (14) percent had this rate at 25.9 percent and seven (7) percent had this rate at 33.5 percent. In the year 2001, the personal tax loss on interest income (Td) was significantly lower than the gain from leverage, which implies that the debt finance remains more attractive to use when viewed from the equity holders perspective.

The results suggests that finance managers of the listed firms may have acknowledged the importance of gain from leverage, arising from interest tax shield in establishing the sources of equity and debt finance.

Another critical observation was the clustering of the equity ownership structure around both local and foreign the institutional investors. Debt finance was clustered around financial institutions. It is observed that a total of thirty-five (35) firms had their large proportion of equity finance sourced from local and foreign institutional investors while no firm had an outright majority shareholding from local individual shareholders. Similarly, over twenty (20) firms had debt finance sourced from financial institutions while only four (4) had the debt finance obtained from non-financial institutions. This observation gives us an indication that there are some preferences in sourcing for equity and debt finance by finance managers or looked at differently, that lenders and equity investors prefer advancing funds to certain groups of firms. Franks, (1985), et al, noted that the fact that the investors may prefer different stocks given their marginal tax rate. This observation agrees with the findings above in that institutional investors have the same withholding tax rate on equity income while financial institutions are exempted from withholding taxes on interest income. The interest income for financial institutions is taxed once, at the prevailing corporate tax rate (Income Tax Act Cap 470).

4.2. Testing the relationship between Gain From Leverage and (i) Corporate Tax Rate and (ii) Personal tax Loss on Interest Income.

Table IX (a): Comparison between Gain From Leverage (GFL) & Personal Tax Loss on Interest Income (PTL)

The table below depicts the statistics and the relationship that exists between the gain from leverage and the personal tax loss (the withholding tax on debt income) on interest income. The details of the results are contained in Appendix XIX.

Comparison between Personal Tax Loss (or Personal Tax rate – Td) on Interest Income (PTL) and Gain From Leverage (GFL)	
Mean (PTL)	0.1208
Mean (GFL)	0.3174
Standard Deviation (PTL)	0.0257
Standard Deviation (GFL)	0.0749
Pearson Correlation Coefficient (r)	(0.908)
Coefficient of Determination (r^2)	0.824

Y Intercept (a)	0.636
Slope (b)	(2.641)
Standard Error of Estimation (r)	(0.032974)
T Value of (r)	(0.21672)
Critical Values for Two tailed test n=10 d.f, significance level 0.05	-2.228 to 2.228

Regression Line Equation GFL = 0.636 – 2.641PTL

Corporate borrowing is advantageous when (1-Tc)(1-Ts)<(1-Td) Miller (1977). From the results contained in Appendix XXV, we note that, the after tax income for the debt holders has declined marginally from 0.9 (1990) to 0.85 (2001). However, the after tax income for the equity holders has continued to increase from 0.518 (in 1990) to 0.665 (in 2001). The net movement of the tax rates shows that (1-Tc)(1-Ts) < (1-Td). This means that debt finance has remained more attractive to the corporate borrowers as a source of finance compared to equity finance. Finance managers should consider using debt finance because the gain from leverage is higher than the personal tax loss on debt holders. The net income due to equity holders after charging corporate and personal taxes has continued to increase from 51.8 percent in 1990 to 66.5 percent by 2001. This outcome supports the wealth maximisation motives for both the shareholders and the debt-holders. In Miller's model, if the term, (1-(1-Tc)(1-Tp)/(1-Td)), is positive then a firm should issue more debt and if it is negative then it should issue no debt, Miller, (1977). It is, noted that, the gain from leverage has continued to decline from 0.425 (in 1990) to 0.218 (in 2001) meaning that, if this trend continues, there will be a point at which the effective gain from leverage will be zero, Table XXV. The significant contributor of the gradual change in the gain from leverage could be attributed to changes in the corporate tax rate. Overally, we should expect that, as a result of decline in gain from leverage, firms should start migrating from the use debt finance and issue more of equity finance. However, we observe that this is not the case in that the debt equity ratio has more or less remained an average of 23.6 percent, with a high of 33.4 percent in 1990 and a low of 12.7 percent in 1992 (in this year, the interest rates shot to an average of 72 percent, which may explain why the debt-equity ratio declined considerably).

In Table IX (a), the relationship between the personal tax loss on interest income and gain from leverage is strong, with correlation coefficient of (0.908) and coefficient of determination of 82.4 percent. The regression line GFL = 0.636 – 2.641PTL, shows that

the gain from leverage increases when personal tax loss decreases by a factor of 2.641. When personal tax loss is zero, equity income residue is at a maximum of 63.6 percent other things held constant.

Table IX (b): Comparison between Gain From Leverage (GFL) & Corporate Tax Rate (Tc)

The Table IX (b) shows the relationship between the gain from leverage and the corporate tax rate. The details of the results are contained in Appendix XX.

Comparison between Gain From Leverage (GFL) & Corporate Tax Rate (Tc)	
Mean (Tc)	0.3520
Mean (GFL)	0.3174
Standard Deviation (Tc)	0.0405
Standard Deviation (GFL)	0.0749
Pearson Correlation Coefficient (r)	0.9310
Coefficient of Determination (r^2)	0.0.867
Y Intercept (a)	(0.0287)
Slope (b)	1.7200
Standard Error of Estimation*	0.0287
T Value of (r)	0.255055
Critical Values for Two tailed test n=10 d.f, significance level 0.05	-2.228 to 2.228

Regression Line Equation: GFL= 0.317+ 0.002*Tc

The correlation coefficient between the corporate tax rate and the gain from leverage is 0.931 and the coefficient of determination is 0.867 (86.7 percent), this is a strong relationship, Cooper and Schindler, (2003). The regression equation, GFL= (0.288)+ 1.72*Tc, shows that the gain from leverage moves in the same direction with the corporate tax rate. These results are in agreement with the expected outcome in that increase in tax rate should result in higher interest tax shield and hence a higher value of the firm, Modigliani and Miller, (1963).

Given the high figures for the coefficient of correlation and the coefficient of determination, it means that there exists a strong relationship between the gain from leverage, the corporate and personal taxes.

Similar results were obtained for the relationship between the combined effect of corporate, and personal tax rate and gain from leverage. The coefficient of correlation was 0.966 and coefficient of determination at 0.933 (i.e. 93.3 percent). This means that 93.3% of the changes in gain from leverage are attributable to changes in the combined effect of both the corporate and personal taxes. The detailed results are contained in Appendix XXIII.

With above results and on the basis of the analysis for coefficient of correlation and coefficient of determination, it is possible to conclude that, the personal tax on interest income and corporate tax rate have a significant contribution the gain from leverage and that a reduction or increase in the personal taxes, corporate tax rate have a corresponding effect to the gain from leverage.

4.3. Comparison between Corporate Tax Rate and the Economy Wide Debt Equity Ratio

Table X below shows the relationship and statistics between the corporate tax rate (independent variable) and the debt equity ratio (dependent variable) for selected sample of firms listed in the NSE. In Table XI, the analysis is extended to incorporate the effects of personal taxes on debt equity ratio. The analysis aims at establishing whether or not there exists a relationship between corporate tax rate and the debt equity ratio. The detailed results are contained in Appendix XII and XIII.

Table X: Comparison between Corporate Tax Rate and the Economy Wide Debt Equity Ratio (DER)

Mean (Tc)	0.3521
Mean (DER)	0.2508
Standard Deviation (Tc)	0.0405
Standard Deviation (Debt Equity Ratio)	0.07420
Pearson Correlation Coefficient (r)	(0.279)
Coefficient of Determination (r^2)	0.078
Y Intercept (a)	0.4310
Slope (b)	(0.5130)
Standard Error of Estimation (r)	0.07506
T Static	(0.919)
Critical Values for Two tailed test n=10 d.f, significance level 0.05	-2.228 to 2.228

Regression Line Equation DER = 0.431 - 0.513Tc

The regression equation shows that as the corporate tax declines, the interest tax shield arising from the use of debt increases and vice versa. A unit change in corporate tax rate results in a corresponding (0.513) change in debt equity ratio. With gradual reduction in the corporation tax from 42.5 percent in 1990 to 30 percent in 2001 and from the above results, we should expect the debt-equity ratio to increase, i.e. the debt finance should be more attractive to corporate borrowers, other things held constant.

The observed debt equity ratio is more or less constant across the twelve (12) years (the debt equity ratio range from 0.33, 0.19, 0.13, 0.20, 0.15, 0.23, 0.22, 0.20, 0.30, 0.28, 028 and 0.33 in 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000 & 2001 respectively). The correlation coefficient between the corporate tax rate and the debt-equity ratio is significantly low at (0.279), which means that the relationship between the corporate tax rate and the debt equity ratio has no significance. The coefficient of determination (r^2) of 0.078 suggests that changes in corporate tax rate have no significant influence to the changes in debt-equity ratio. A change in the corporate tax rate explains only 7.8 percent of the changes in debt-equity ratio. Given that, the computed t-statistic value of (0.919) lines between the critical values (2.228) and 2.228, we accept the null hypothesis that investors do not consider corporate tax in determining the level of debt. Table XI shows similar results, however, the combined effect of corporate and personal tax rate has a higher coefficient of correlation at (0.355) and the t value of (1.201), which implies that we accept the hypothesis that investors do not consider corporate and personal tax rates in determining the level of debt, Hypothesis II(a).

We conclude that the debt-equity ratio is not significantly affected by the changes in the corporate tax rate. This is because of the transaction cost faced by firms that consider shift from one source to another. Some of the factors that could explain the above results include transaction costs incurred when firms consider shifting from one source of finance to another, the fact firms in Kenya do not buy back their own shares and also the fact that few shares exchange hands in the NSE.

Table XI: Regression Analysis between the difference between combined tax on Equity Income less Personal Tax on Interest Income (CPTR) and Debt Equity Ratio (DER)

Mean (CPTR)	0.2808
Mean (DER)	0.2517
Standard Deviation (CPTR)	0.0732
Standard Deviation (DER)	0.0731
Pearson Correlation Coefficient (r)	(0.482)
Coefficient of Determination (r^2)	0.232
Y Intercept (a)	0.387
Slope (b)	(0.481)
Standard Error of Estimation (r)	0.0672
T Statistic	(1.739)
Critical Values for Two tailed test n=10 d.f, significance level 0.05	-2.228 to 2.228

Regression Line Equation DER= 0.387 – 0.481CPTR. NB: CPTR = Tc +(1-Tc)Ts -Td

The regression equation shows that as the combined effects of corporate, and personal tax rates and debt-equity are negatively related (Appendix XIII). A unit change in combined effect of corporate and personal tax rates results (CPTR) in a corresponding (0.481) change in debt equity ratio (DER). If the net change in the difference between the corporate, personal tax on equity and the personal tax rates on debt income increases, would suggest that the equity holders are taxed more relative to debt holders. Ideally, this should result in an decrease in the debt equity ratio.

Theoretically, the decline in both corporate and personal tax rates on equity income provides incentive to firms to use more of equity finance as a source of capital. Since the personal tax charged on the interest income increased from 10 percent in 1990 to 15 percent in 2001 and the decline in the combined tax rates (from 38.3 percent in 1990 to 18.5 percent in 2001), this should result in decline in the tax payable by equity holders, other things held constant. However, the overall rate of tax payable by equity holders (18.5 percent) is still higher than that paid by debt holders (15 percent). This essentially means that debt finance is more attractive to the lenders when tax is considered other things held constant. The movement in the opposite direction or the cancelling effect, between the tax

payable by equity holders and the tax payable by debt holders may explain the reasons why the debt equity ratio has remained more or less constant.

The nominal interest rate has, between 1990 and 2001, remained at an average of 29.1 percent (with the exception of 1992 where the nominal interest rate jumped to 72 percent giving an annual average of 32.7 percent). The increased personal tax on interest income implies that, the debt capital is less rewarding to lenders in the long run. Other things held constant, the economy as whole would embrace use of equity as source of finance. The results should show a decline in debt/equity ratio for the economy. However, the debt-equity ratio has remained more or less unchanged. This supports the view that firms find it difficult switching from one source to another unless they identify a new project.

The correlation coefficient of (0.482) depicts a mild positive relationship between the combined effect of the corporate, and personal taxes and the debt equity ratio. The coefficient of determination shows that only 23.2 percent of the variations in the debt equity ratio could be explained by changes in both the corporate and personal taxes (on equity and interest incomes). This effectively means that, other things held constant, the corporate and personal taxes have little effect on the debt-equity ratio and that changes in corporate and personal taxes do not influence significantly the changes in capital structure. The computed t-statistic value (1.739) lines between the critical values (2.228) and 2.228, we accept the null hypothesis that corporate debt does not expand as long as the corporate tax rate exceeds the personal tax rate on debt income, Hypothesis II (b). The difference between the tax paid by equity holders and the personal tax paid by debt holders on interest income has continued to decline from 0.383 (38.3 percent) in 1990 to 0.185 (18.5 percent) in 2001. The changes could be attributed to decrease in the total tax paid on equity income from a total of 48.3 percent in 1990 to 33.5% in 2001, while the tax rate on interest income increased from 10 percent to 15 percent during the same period. These changes suggest that debt finance is more attractive than equity finance when the taxation between the two is considered. We note that, the debt-equity ratio is not affected by the changes in the corporate and personal tax rates. Ideally we would expect that, a decrease in personal tax rate for equity income should result in higher returns for equity holders. Other things held constant, this should translate into a shift in the use of more equity finance and less use of debt finance.

We conclude that, changes in corporate and personal tax rates have little impact on changes in capital structure of Kenyan firms. In addition, changes in debt-equity ratio move in the opposite direction to changes in corporate tax rate and also the combined effect of the both the corporate and personal tax rates. Theoretically, we should expect that as corporate tax rate declines, the debt equity ratio should indeed decrease as a result of a corresponding decrease in interest tax shield.

Table XIX: Industry Clustering Analysis: Testing of Clustering around ratio of Interest Tax Shield and the Total Assets for the Year 2001.

The Tables XIX(a), XIX(b) and XIX(c) below show on sector basis, the ratio of interest tax shield to total assets for the year 2001. The interest tax shield is determined by multiplying the interest expense charged by the corporate tax rate applicable in the year 2001. The mean, variance, standard deviation and the corresponding coefficient of variation are computed, Table XIX(d). The detailed results are contained in Appendix XIV.

Table XIX(a): Agricultural Sector

Firm	Ratio of Interest Tax Shield to Total Assets
Brooke Bond Ltd Ord 10.00	0.0003
Eaagads Ltd Ord 1.25	-
George Williamson Kenya Ltd Ord 5.00	0.0014
Kakuzi Ord.5.00	0.0097
Kapchorua Tea Co. Ltd Ord Ord 5.00	-
Limuru Tea Co. Ltd Ord 20.00	-
Ol Pejeta Ranching Ltd	-
Rea Vipingo Plantations Ltd Ord 5.00	0.0083
Sasini Tea & Coffee Ltd Ord 5.00	0.0002
Theta group Ltd Ord 1.00	-
Agricultural Sector – Mean	**0.00199**

Table XIX(b): Commercial & Services Sector

Firm	Ratio of Interest Tax Shield to Total Assets
A.Baumann & Co.Ltd Ord 5.00	0.0030
Car & General (K) Ltd Ord 5.00	0.0168
CMC Holdings Ltd Ord 5.00	0.0117
Express Ltd Ord 5.00	-
Hutchings Biemer Ltd Ord 5.00	-
Kenya Airways Ltd Ord 5.00	0.0067
Lonrho Motors E A Ltd Ord 5.00	-
Marshalls (E.A.) Ltd Ord 5.00	0.0266
Nation Media Group Ord. 5.00	0.0030
Pearl Drycleaners Ltd Ord 5.00	-
Standard Newspapers Group Ord 5.00	0.0223
Tourism Promotion Services Ltd Ord 5.00 (Serena)	0.0031
Uchumi Supermarket Ltd Ord 5.00	-
Commercial & Services Sector - Mean	**0.007169**

Table XIX(c): Industrial & Allied Sector

Firm	Ratio of Interest Tax Shield to Total Assets
Athi River Mining Ord 5.00	0.0057
Bamburi Cement Ltd Ord 5.00	0.0046
B.O.C Kenya Ltd Ord 5.00	-
British American Tobacco Kenya Ltd Ord 10.00	0.0059
Carbacid Investments Ltd Ord 5.00	-
Crown Berger Ltd 0rd 5.00	0.0092
Dunlop Kenya Ord 5.00	-
E.A.Cables Ltd Ord 5.00	-
E.A.Packaging Ltd Ord 5.00	0.0164
E.A.Portland Cement Ltd Ord 5.00	0.0048
East African Breweries Ltd Ord 10.00	-
Firestone East Africa Ltd Ord 5.00	0.0000
Kenya National Mills Ltd. Ord. 5.00	0.0121
Kenya Oil Co Ltd Ord 5.00	0.0019
Kenya Orchards Ltd Ord 5.00	-
Kenya Power & Lighting Ltd Ord 20.00	0.0067
Total Kenya Ltd Ord 5.00	0.0244
Unga Group Ltd Ord 5.00	0.0130
Industrial & Allied Sector - Mean	**0.006159**

Table XIX (d): Statistical Analysis for Interest tax Shield for the Year 2001

Sector/Year	Mean	Variance	Standard Deviation	Coefficient of Variation
Agricultural Sector	0. 00199	0.000014	0.0037338	1.87
Commercial & Services Sector	0. 007169	0.0000856	0.0092570	1.29
Industrial & Allied Sector	0. 006159	0.0000487	0.0069801	1.13

From Table XIX (d), we note that the coefficient of variation is 187 percent for agricultural sector, 129 percent for commercial services sector and 113 percent for industrial and allied sector. The analysis tells us that the ratio of interest tax shield to total assets for agricultural sector has a higher level of variability compared to the commercial and services, and industrial and allied sectors. The above ratios show that, on average, the variability for all sectors is very high. Perhaps the variations suggest that, firms in the same sector do not cluster around a given ratio. If the variability within the sectors were low, this would be a proof of clustering around a given ratio. This implies that firms in agricultural sector experience higher level of variations in interest tax shield whenever factors such as personal and corporate tax rates change, when compared to firms in other sectors.

4.4. Relationship between Corporate Tax Rate and the Economy Wide Debt Equity Ratio

Table XII below shows that statistical relationship between the nominal interest rate (independent variable) and the debt equity ratio (dependent variable) for the selected sample. The analysis aims at establishing whether or not, there exists a relationship between nominal interest rate and the debt equity ratio. The detailed results are contained in Appendix XV.

Table XII: Comparison between the Nominal Interest Rate (NIR) and the Debt Equity Ratio (DER)

Mean (NIR)	0.3266
Mean (DER)	0.2517
Standard Deviation (NIR)	0.1297
Standard Deviation (DER)	0.0731
Pearson Correlation Coefficient (r)	(0.595)
Coefficient of Determination (r^2)	0.354
Y Intercept (a)	0.336
Slope (b)	(0.306)
Standard Error of Estimation (r)	0.0616
T Static	(2.343)
Critical Values for Two tailed test n=10 d.f, significance level 0.05	-2.228 to 2.228

Regression Line Equation DER= 0.336 – 0.306NIR

The correlation coefficient shows an average relationship between the Nominal Interest Rate and the Debt-Equity Ratio. Theoretically, we expect that an increase in the personal tax on interest income should lead to an increase in the nominal interest rates and vice versa. The increase in interest rate would compensate the debt holders for lost income due to an increase in the personal tax rate. In this case, the tax on interest income increased from 10 percent in 1990 to 15 percent in 2001, while the nominal interest rate remained at an average of 32.9 percent with the highest interest rate of 72 percent (1992) and lowest at 19.6 percent in 1999. The debt-equity ratio has remained more or less constant. In addition, it is noted that correlation coefficient of (59.5) percent is low and 35.4 percent of the variations in debt-equity ratio could be explained by the changes in the nominal interest rate. The relationship between the nominal interest rate and the debt-equity ratio is negatively related, meaning that increases in nominal interest leads to decreased debt equity ratio and vice versa. This implies that an increase in interest rate on debt finance should result in a shift from use debt to equity finance other things held constant.

Theatrically, we would expect that increases in nominal interest rates would lead to decreases in debt-equity ratio and that the two factors are positively related. The analysis

helps us to conclude that when the changes in nominal interest rates are moderate, the debt equity ratio remains unchanged.

4.5. Relationship between the Nominal Interest Rate and Corporate Tax Rate

Table XIII below shows the results of statistical relationship between the nominal interest rate (independent variable) and the corporate tax rate (dependent variable). The analysis aims at establishing whether or not, there exists a relationship between nominal interest rate and the corporate tax rate. The detailed results are contained in Appendix XVIII.

Table XIII: Relationship between the Nominal Interest Rate (NIR) and Corporate Tax Rate (Tc).

Mean (NIR)	0.3266
Mean (Tc)	0.3521
Standard Deviation (Tc)	0.0405
Standard Deviation (NIR)	0.1297
Pearson Correlation Coefficient (r)	0.223
Coefficient of Determination (r^2)	0.050
Y Intercept (a)	0.0755
Slope (b)	0.7130
Standard Error of Estimation (r)	0.1327
T Static	0.723
Critical Values for Two tailed test n=10 d.f, significance level 0.05	-2.228 to 2.228

Regression Line Equation $Tc = 0.0755 + 0.713NIR$

The correlation coefficient shows that the relationship between the nominal interest rate and corporate tax rate is weak at 22.3 percent. Further, the coefficient of determination shows that only 5.0 percent of the variations in nominal interest rate can be explained by changes in corporate tax rate. We expect that an increase in the personal tax rate on interest income should lead to an increase in the nominal interest rates and vice versa. Ideally an increase in the tax on personal income would be compensated by a corresponding increase in the interest rate. In this case, the tax on interest income increased from 10 percent in 1990 to 15 percent in 2001, while the corporate tax rate declined gradually from 42.5 percent to 30 percent. From the foregoing, the results

suggest that, changes in corporate tax rate have no material effect to the changes in the nominal interest rate. The regression equation shows that increase in nominal interest rate would result in an increase in corporate tax rate and the opposite holds true. Other things held constant, a decline in corporate tax rate would lead to an increase in interest rates as a result of low demand for debt. The low demand for debt would because of expected decline in interest tax shield from debt finance. However, this is not the case, perhaps due to imperfections in the market for debt finance.

4.6. Relationship between Gain from Leverage Rate and the Economy Wide Debt Equity Ratio

Table XX below shows that statistical relationship between the gain from leverage (independent variable) and the debt equity ratio (dependent variable) for the twelve years. The analysis aims at establishing whether or not, interest tax shield has any impact on capital structure of firms. The detailed results are contained in Appendix XXVI.

Table XX: Comparison between the gain from Leverage (GFL) and the Debt Equity Ratio (DER)

Mean (GFL)	0.31742
Mean (DER)	0.25167
Standard Deviation (GFL)	0.0749
Standard Deviation (DER)	0.00731
Pearson Correlation Coefficient (r)	(0.373)
Coefficient of Determination (r^2)	0.224
Y Intercept (a)	0.398
Slope (b)	(0.462)
Standard Error of Estimation (r)	0.06757
T Static	(1.697)
Critical Values for Two tailed test n=10 d.f, significance level 0.05	-2.228 to 2.228

Regression Line Equation DER = 0.398 – 0.462GFL

From the above analysis, we note that correlation coefficient between the gain from leverage and the debt equity ratio is (0.373), this indicates a weak relationship of the two factors. In addition, only 22.4 percent of the changes in debt equity ratio are explained by changes in gain from leverage rate. This means that changes in gain from leverage has little influence to changes in debt equity ratio. If all taxes were equal to zero, it means the debt equity ratio would be at maximum of 37.3 percent other things held constant however, if the taxes were such that the gain from leverage was one (1), the resultant debt equity ratio would be a negative, which again is not possible. The results support the theory that to much debt or no debt at all is not good, Brigham and Gapenski, (1996). Theoretically, we should expect an increase in gain from leverage should result in increase in debt equity ratio other things held constant.

We conclude that interest tax shield has average impact on debt equity ratio for Kenya firms. Analytically, this relationship is deemed more significant when compared with the relationship between the corporate tax rate and debt equity ratio, which has coefficient of correlation of (0.279). This means that the corporate finance managers consider the gain from leverage rate more important when compared with the corporate tax rate.

4.7. Multivariate Regression Analysis between Debt Equity Ratio and Corporate Tax Rate, Personal Tax Rate on Debt, Personal Tax Rate on Equity and the Nominal Interest Rate.

Table XXI below shows that statistical relationship between: Corporate Tax Rate, Personal Tax Rate on Debt, Personal Tax Rate on Equity and the Nominal Interest Rate (independent variables) and the debt equity ratio (dependent variable) for the twelve years. The analysis aims at establishing whether or not, all factors listed above have any impact on capital structure of firms. The detailed results are contained in Appendix XXIV.

Table XXI: Multivariate Regression Analysis between Debt Equity Ratio and Corporate Tax Rate, Personal Tax Rate on Debt, Personal Tax Rate on Equity and the Nominal Interest Rate.

Pearson Correlation Coefficient (r)	0.694
Coefficient of Determination (r^2)	0.482
Y Intercept (a)	0.398
Slope (b)	See the regression equation
Standard Error of Estimation (r)	0.065998
T Static	0.223, -1.341, 0.284, -0.066 &0.418
Critical Values for Two tailed test n=10 d.f, significance level 0.05	-2.228 to 2.228

Multivariate Regression Line DER = 0.13 - 0.235NIR + 0.212Tc - 0.201Ts + 1.154Td

From the above analysis, we note that correlation coefficient between the all the above factors and the debt equity ratio is 0.694, this indicates a strong relationship of the multiple factors and the debt equity ratio. In addition, only 48.2 percent of the changes in debt equity ratio are explained by changes in all the above factors. This means that changes in the above factors have a significant influence to changes to changes in debt equity ratio.

We conclude that corporate tax rate, personal tax rate on debt, personal tax rate on equity and the nominal interest rate have a significant impact on debt equity ratio for Kenya firms.

CHAPTER 5: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER RESEARCH

5.1. Summary of Findings

This research has examined the relationship that exists between the corporate tax rate and personal tax rate, nominal interest, the debt equity ratio and the gain from leverage (computed using Miller's Model). The research has established that all listed firms in the NSE have attained the maximum available gain from leverage rate given the appropriate corporate and personal tax rates on debt and equity incomes. This outcome suggests that finance managers recognise the existence of gain from leverage from debt finance. A total of thirty-three (33) firms had a gain from leverage rate at a maximum of thirty seven (37) percent while three (3) firms had the rate at 33.5 percent and six (6) firms had the rate at 25.9 percent.

The research has also revealed that the relationship between the gain from leverage and corporate tax rate is strong and the two factors are positively related. Similar results were obtained in respect of the excess of corporate tax to personal taxes (Tc - (1-Tc) Ts – Td). This suggests that, the corporate tax rate is important in determining the sources of both the equity and debt finance for firms in Kenya.

The relationship between the gain from leverage and the total tax payable by both the firm and the equity and debt holders (Tc + (1-Tc) Ts + Td) incomes is weak and negatively correlated at (0.355). This means that, when the combined tax effect on corporate and personal taxes increase, the gain from leverage reduces. However, this relationship is weak, suggesting that finance managers don't consider personal taxes on equity and debt income as important in deciding the sources of finance.

The relationship between the debt equity ratio for the whole economy and the corporate tax rate is weak and that both factors are negatively related. This means that a reduction in corporate tax rate leads to an increase in debt equity ratio suggesting more use of debt. This is contrary to theoretical expectation, in that an increase in corporate tax rate should

lead to higher interest tax savings implying more use of debt finance and subsequently higher debt equity ratio.

The results of the relationship between the nominal interest rate (NIR) and corporate tax rate show that, the two variables are positively related such that an increase in nominal interest rate should lead to an increase in corporate tax rate and vice versa. The corresponding coefficient of correlation was 0.223 and coefficient of determination of 5%.

5.2. Conclusions and Recommendations

The quantitative analysis helps us to show that, Kenyan firms consider such factors as the gain from leverage rate from debt when deciding on the sources of equity and debt finance. In addition, from a tax and gain from leverage point of view, most Kenyan firms have attained the optimal capital structure. Further, the analysis demonstrates that changes in the corporate and personal taxes have a strong influence on financing decisions for equity and debt finance. However, finance managers appear not put emphasis on nominal interest rate and debt equity ratio when deciding on the sources of finance. All these factors do not fully offer analytical explanations that provide answers on financing strategies applied by firms, Table XXI. This suggests that there are other non-tax quantitative factors, which are taken into account by finance managers when making financing decisions. We conclude that, the corporate tax and personal tax rates on debt and equity incomes when combined together under Miller's Model play a significant role in explaining the financing strategy applied by firms in Kenya.

It is recommended that;

(a). The Kenyan corporate finance managers should continue to search for and maintain maximum gain from leverage by obtaining significantly portion of their equity finance from sources other than local individuals and debt from resident financial institutions. This effectively means that, sources for capital should target those institutions and individuals whose tax due from the corresponding incomes is final tax and that the rate should be comparatively low.

(b). Given that, corporate finance managers consider gain from leverage important, policy makers should use gain from leverage as a tool to vary the use of debt in the economy. Accordingly, changes in tax rates for both corporate and personal incomes should result in the target gain from leverage rate other things held constant.

5.3. Recommendations for Further Research

From Miller's model, the gain from leverage rate is a factor of corporate tax rate, personal tax rates on debt and equity income and the market value of debt. The results of this research raise a number of issues that could be addressed through future research. The following are potential areas of further research;

(a). The results of the research indicate that the relationship between the gain from leverage and the corporate and personal tax rates, the debt equity ratio, and nominal interest is very weak. This weak relationship puts into question as what then are the most important quantitative factors that have significant relationship with, and are important in determining, the gain from leverage. From finance literature, we know that some of the other quantitative factors, which other than debt interest tax shield include: non-interest tax shields, agency costs for equity, and debt finance and financial distress costs. Therefore, a research to establish and investigate what other quantitative factors are important and to what extent are these factors considered important by finance managers. The research would therefore assist to establish and rank these quantitative factors against the corporate and personal tax rates, nominal interest rate and the debt equity ratio in order of importance for the listed firms in Kenya.

(b). In addition, this research has allowed us to conclude that firms in Kenya recognise the existence of optimal gain from leverage rate from a tax point of view. We note that, most of the firms have attained the maximum gain from leverage rate (i.e. 37 percent), given the current corporate and personal tax rates. Since the gain from leverage amount is determined by the gain from leverage rate and the market value of debt for a firm, it is important for firms to establish

the optimal debt that is suitable to them. In order to attain the maximum gain from leverage for each firm, it is proposed that a research to establish the maximum debt that individual listed firms can absorb is important. Turnbull, (1979), noted that there is a maximum debt that lenders are willing to extend to firms. The maximum gain from leverage amount for each firm is dependent on the maximum amount of debt that lenders are willing to extend to them. If the maximum amount of debt were established, then firms would therefore be in a position to attain the maximum gain from leverage amount.

(c). Replicate the same research using the market values for debt and equity finance.

(d). Lastly, a research could be carried out to establish why the relationship between the gain from leverage, debt equity ratio and nominal interest rate are significantly very low. It is to be noted that, most firms have attained the maximum gain from leverage rate yet this importance is not reflected in the relationship that exists between the gain from leverage and other factors mentioned above.

5.4. Limitations to the study

The following were the limitations of the study:

(a). The calendar year was used as time period in which the effects of the interest and tax rates on the financial transactions for a given year were based. However, we note that the financial year-end for some firms come earlier than the end of the calendar year. The study considered the end of the calendar year as the end of the year in respect of tax and interest comparisons. This means that the effect of interest and tax changes may have a delayed affect for some firms in the subsequent calendar year.

(b). The market for debt and equity finance may delay in reacting immediately to changes in corporate, personal tax rates and nominal interest rates. The delayed effects to debt and equity finance were not therefore taken into accounts

in the statistical analysis. Partly the reason for not taking account these delayed effects is the difficulty of determining when the market reacts to these changes.

(c). In determining the gain from leverage rate, Miller's model was strictly used and relied on in determining the specific gain from leverage for each firm. This therefore restricted the research to the application of this model and the prevailing corporate and personal tax rates. The researcher did not therefore exploit other models that could probably give alternative gain from leverage. It is important to note that the gain from leverage arising from debt and corporate tax rate was also computed. The market values of debt and equity are important as they reflect the perceptions of the market for stock and debt for a particular firm.

(d). In determining the gain from leverage using Miller's model, the market value of equity and debt is recommended. However, the book values were used in place of market values due to time constraints.

(e). There was no distinction between loss and profit making firms in the study. Lack of this distinction limits the interpretation of the results, as firms that are not likely to benefit from the gain from leverage may not be keen on the financing strategies that maximise on the gain from leverage.

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APPENDICES

Appendix I: Quoted Firms: Total Assets (1990-2001)

Total Assets	2001	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Company	Shares issued												
Brooke Bond Ltd Ord 10.00	48,875	6,516,599	6,592,532	6,105,882	6,090,998	6,571,044	6,991,714	7,787,986	7,229,979	7,718,436	2,121,020	1,980,334	1,847,284
Eaagads Ltd Ord 1.25	7,235	194,692	200,667	215,236	232,324	194,506	161,802	160,698	173,726	77,863	37,279	52,759	54,516
George Williamson Kenya Ltd Ord 5.00	8,756	2,467,154	2,308,161	2,280,737	1,723,819	1,395,160	1,348,854	1,357,206	1,402,981	996,814	564,760	520,860	484,856
Kakuzi Ord.5.00	19,600	3,175,616	3,313,383	3,277,951	3,034,742	2,736,241	2,005,137	1,832,013	1,738,315	1,599,177	572,757	505,001	485,817
Kapchorua Tea Co. Ltd Ord Ord 5.00			606,971	578,417	540,932	409,326	378,018	354,029	415,705	352,719	188,622	177,460	181,568
Limuru Tea Co. Ltd Ord 20.00	400	47,218	49,064	45,254	50,962	49,959	29,594	27,954	33,000	78,923	35,084	26,279	28,882
Ol Pejeta Ranching Ltd													
Rea Vipingo Plantations Ltd Ord 5.00		852,935	849,546	1,006,012	843,342	795,656	706,594	715,527					
Sasini Tea & Coffee Ltd Ord 5.00	38,009	2,470,290	2,550,915	2,455,969	2,550,650	2,482,353	2,414,278	2,379,373	725,986	769,368	418,627	426,521	397,218
Theta group Ltd Ord 1.00		**15,724,504**	**16,471,239**	**15,965,458**	**15,067,769**	**14,634,244**	**14,035,990**	**14,614,786**	**11,719,692**	**11,593,300**	**3,938,149**	**3,689,214**	**3,480,141**
Sub-Total - Agricultural Sector													
African Lakes Corporation PLC. Ord 5.00													
A.Baumann & Co.Ltd Ord 5.00	3840	487,712	527,729	657,445	572,856	487,236	481,960	458,959	496,885	294,926	232,475	212,646	164,038
Car & General (K) Ltd Ord 5.00		630,361	700,318	700,796	646,690	674,343	857,492	958,172	916,766	939,898	710,284	727,239	380,390
CMC Holdings Ltd Ord 5.00	24,280	4,351,974	4,873,499	5,073,675	4,119,900	4,171,202	3,652,195	3,044,653	2,356,707	1,530,891	1,355,596	1,505,704	1,403,663
Express Ltd Ord 5.00		902,278	862,950	872,322	860,304	863,424	838,152	1,002,790	737,705	439,695	278,053	324,688	333,460
Hutchings Biemer Ltd Ord 5.00													
Kenya Airways Ltd Ord 5.00	461,600	23,267,000	22,940,000	17,711,000	13,392,000	11,191,000	10,113,057	8,017,465					
Lonrho Motors EA Ltd Ord 5.00													
Marshalls (E.A.) Ltd Ord 5.00	14,393	1,255,280	1,238,886	1,409,101	2,434,314	2,445,897	2,489,596	1,436,868	1,289,995	1,202,600	1,106,787	746,726	742,407
Nation Media Group Ord. 5.00		2,922,100	2,919,000	2,684,400	2,202,500	2,009,900	1,814,135	1,261,335	981,769	800,813	699,140	556,138	548,250
Pearl Drycleaners Ltd Ord 5.00													
Standard Newspapers Group Ord 5.00	12810.9	627,573	551,678	573,779	490,091	295,702	248,830	271,500	174,640	205,520	165,300	183,280	197,200
Tourism Promotion Services Ltd Ord 5.00 (Serena)	38,679	2,071,577	1,885,951	1,566,306	961,138	929,732	999,206						
Uchumi Supermarket Ltd Ord 5.00	60,000	2,070,971	2,130,704	1,813,215	1,859,712	1,629,670	1,368,167	1,242,685	1,135,276	926,362			
Sub-Total - Commercial & Services Sector		**38,586,826**	**38,630,715**	**33,062,039**	**27,539,505**	**24,698,106**	**22,862,790**	**17,694,427**	**8,089,743**	**6,340,705**	**4,547,635**	**4,256,421**	**3,769,408**
Athi River Mining Ord 5.00	75000	1,273,277	1,270,612	1,233,607	1,178,328	1,045,385	904,436						
Bamburi Cement Ltd Ord 5.00	363000.00	15,597,000	14,137,000	13,765,000	11,548,000	11,268,000	10,959,000	10,974,860	4,787,780	4,841,420	4,425,980	1,955,420	1,769,660

B.O.C Kenya Ltd Ord 5.00	19,525	1,298,386	1,237,546	1,252,793	1,283,259	1,204,663	1,085,663	907,139	899,472	882,265	538,453	528,355	480,234
British American Tobacco Kenya Ltd Ord 10.00	100000.00	6,742,607	7,156,581	7,138,690	6,465,724	6,127,330	6,331,409	5,622,622	5,266,130	4,354,170	3,277,970	2,504,180	2,349,666
Carbacid Investments Ltd Ord 5.00	11,327	740,801	715,148	676,651	576,583	516,296	486,144	435,865	415,014	209,790	184,874	189,007	175,307
Crown Berger Ltd 0rd 5.00	26,963	931,280	936,132	918,635	932,055	1,075,881	1,173,024	1,051,198	773,850	719,900	710,258	240,328	
Dunlop Kenya Ord 5.00			152,725	143,141	133,255	125,896	92,791	81,695	61,091	52,550	43,276	33,546	31,349
E.A. Cables Ltd Ord 5.00	20,250	337,176	360,577	400,538	419,688	379,124	325,592	294,106	275,189	248,344	195,601	178,345	166,752
E.A.Packaging Ltd Ord 5.00	7,680	882,682	694,533	757,430	780,186	823,350	864,663	751,805	612,202	517,368	373,332	310,270	286,193
E.A. Portland Cement Ltd Ord 5.00		8,127,892	8,083,428	6,032,677	5,790,621	5,559,978	5,762,481	4,556,961	1,006,055	721,781	444,082	388,345	393,766
East African Breweries Ltd Ord 10.00	103,216	15,134,076	14,001,934	14,653,974	14,922,673	13,429,273	12,523,219	11,972,959	11,359,242	5,183,299	3,996,316	3,811,015	3,622,363
Firestone East Africa Ltd Ord 5.00		2,824,352	2,740,308	2,848,922	2,657,927	2,510,120	2,152,342	2,072,857	1,491,287	1,501,605			
Kenya National Mills Ltd. Ord. 5.00	67,236	3,791,436	4,475,708	4,417,361	5,094,610	3,442,733	3,580,538	3,106,495	3,164,833	2,232,099	2,109,449	1,450,367	1,513,028
Kenya Oil Co Ltd Ord 5.00	8,640	3,664,326	2,068,773	1,809,367	1,437,819	1,153,988	892,583	861,054	650,977	604,740	450,189	378,345	469,604
Kenya Orchards Ltd Ord 5.00													
Kenya Power & Lighting Ltd Ord 20.00	79128	28,812,360	25,501,415	21,648,786	20,984,508	20,357,702	17,792,723	15,292,361	11,199,083	8,962,365	7,583,990	7,123,382	6,094,575
Total Kenya Ltd Ord 5.00	80522.5	7,157,241	10,073,413	5,624,856	4,042,594	3,797,324	3,834,000	3,178,479	2,729,392	2,539,728	1,744,603	1,294,942	1,482,511
Unga Group Ltd Ord 5.00		3,837,229	4,501,036	5,279,703	5,906,426	4,394,409	4,494,619	3,925,857	3,719,941	2,721,328	2,703,449	1,796,437	1,868,154
Sub-Total - Industrial & Allied Sector		**101,152,121**	**98,106,869**	**88,602,131**	**84,154,256**	**77,211,452**	**73,255,227**	**65,086,312**	**48,411,539**	**36,292,753**	**28,781,823**	**22,182,283**	**20,703,162**

Appendix II: Quoted Firms: Total Borrowings (1990-2001)

Total Borrowing	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Brooke Bond Ltd Ord 10.00	24,843	-	24,379	51,591	528,543	989,720	1,577,123	807,648	352,013	119,400	-	-
Eaagads Ltd Ord 1.25	-	-	-	-	-	-	-	-	-	-	-	-
George Williamson Kenya Ltd Ord 5.00	52,269	105,258	127,142	73,018	191,603	199,302	243,515	195,236	85,577	76,460	48,900	33,459
Kakuzi Ord.5.00	782,989	847,902	684,223	363,921	166,156	220,099	162,807	97,423	114,022	49,190	22,741	-
Kapchorua Tea Co. Ltd Ord Ord 5.00	-	12,195	2,243	2,278	11,407	10,246	7,103	9,273	7,244	5,460	520	8,135
Limuru Tea Co. Ltd Ord 20.00	-	-	-	-	-	-	-	-	-	-	-	-
Ol Pejeta Ranching Ltd												
Rea Vipingo Plantations Ltd Ord 5.00	285,870	255,903	299,985	179,290	100,417	67,707	84,853					

Sasini Tea & Coffee Ltd Ord 5.00	4,527	3,680	-	193	85	6,020	-	1,260	-	338	6,476	9,530
Theta group Ltd Ord 1.00												
Sub-Tatal - Agricultural Sector												
African Lakes Corporation PLC.Ord 5.00												
A.Baumann & Co.Ltd Ord 5.00	18,139	38,253	153,093	68,953	84,568	62,962	31,982	20,346	58,027	32,306	47,989	20,462
Car & General (K) Ltd Ord 5.00	154,755	173,186	181,137	191,382	131,557	227,633	157,114	95,834	104,287	119,016	153,455	136,827
CMC Holdings Ltd Ord 5.00	781,256	1,328,331	1,051,336	959,751	679,526	173,824	165,925	170,346	308,264	20,848	235,674	229,256
Express Ltd Ord 5.00	284,185	242,069	183,172	147,826	107,140	110,885	99,564	58,130	56,695	44,087	72,145	105,717
Hutchings Biemer Ltd Ord 5.00												
Kenya Airways Ltd Ord 5.00	6,793,000	6,909,000	6,876,000	3,761,000	2,164,000	1,547,065	2,042,746					
Lonrho Motors EA Ltd Ord 5.00												
Marshalls (E.A.) Ltd Ord 5.00	459,426	576,304	597,115	624,714	460,448	523,617	120,364	319,475	260,538	274,994	246,349	257,599
Nation Media Group Ord. 5.00	11,100	387,800	449,700	220,100	282,700	399,374	73,698	38,297	62,215	34,172	16,740	68,888
Pearl Drycleaners Ltd Ord 5.00												
Standard Newspapers Group Ord 5.00	248,485	333,573	222,658	154,039	53,344	60,587	49,200	14,080	9,520	23,220	75,820	38,280
Tourism Promotion Services Ltd Ord 5.00 (Serena)	572,601	460,710	261,859	177,437	220,142	148,570						
Uchumi Supermarket Ltd Ord 5.00					9,490	15,786	3,088	72,626	4,117			
Sub-Total - Commercial * Services Sector												
Athi River Mining Ord 5.00	109,970	137,814	355,871	306,134	191,950	273,549						
Bamburi Cement Ltd Ord 5.00	1,028,000	1,861,000	935,000	7,000	-	8,000	43,340	62,940	-	57,120	33,080	55,380
B.O.C Kenya Ltd Ord 5.00	-	2,088	12,202	4,931	2,699	-	6,498	6,272	25,064	-	-	-
British American Tobacco Kenya Ltd Ord 10.00	674,259	1,079,633	287,725		627,758	1,140,580	740,011	517,684	132,457		57,609	
Carbacid Investments Ltd Ord 5.00	-	13,830	-	-	-	-	-	-	-	-	-	-
Crown Berger Ltd 0rd 5.00	97,159	185,167	100,456	199,897	266,409	341,879	409,041	206,612	123,321	66,827	36,039	
Dunlop Kenya Ord 5.00		7,382	5,967	3,730	42	64	4,429	60	58	208	805	905
E.A.Cables Ltd Ord 5.00			3,130					-	-	-	-	-
E.A.Packaging Ltd Ord 5.00	291,127	338,793	220,450	105,664	164,170	123,138	100,426	23,364	70,262	38,761	4,914	21,694
E.A.Portland Cement Ltd Ord 5.00	4,454,319	5,432,186	4,884,277	3,405,166	3,774,374	3,966,433	3,818,548	183,924	168,471	107,740	162,713	161,050
East African Breweries Ltd Ord 10.00	710,074	827,116	2,271,319	1,198,902	2,033,746	1,680,231	2,230,720	1,557,004	1,328,692	1,019,912	1,092,129	1,152,822
Firestone East Africa Ltd Ord 5.00	8,630	20,000	248,299	53,869	60,726	133,986	176,734	85,578	3,992			
Kenya National Mills Ltd. Ord. 5.00	867,513	806,044	1,258,056	1,402,440	360,275	712,264	465,996	353,362	255,926	171,693	270,427	320,558
Kenya Oil Co Ltd Ord 5.00	270,000	101,918	-	-	12,176	51,715	148,967	-	93,220	-	48,603	90,220
Kenya Orchards Ltd Ord 5.00												
Kenya Power & Lighting Ltd Ord 20.00	8,726,819	9,206,624	4,240,118	2,441,842	2,042,169	2,336,313	2,956,601	2,596,695	3,357,321	2,685,274	2,795,086	2,252,351

Total Kenya Ltd Ord 5.00	-	9,437	21,399	861,498	35,527	-	-	150,108	124,239	252,871	197,169	260,619
Unga Group Ltd Ord 5.00	867,513	886,044	1,241,229	1,381,940	378,623	739,709	501,716	417,831	354,600	310,077	419,140	473,538
Sub-Total - Industrial & Allied Sector												

Appendix III: Quoted Firms: Total Shareholders Funds (1990-2001)

Shareholders Funds	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Brooke Bond Ltd Ord 10.00	4,291,408	4,137,293	3,980,205	5,306,204	5,268,034	5,499,741	5,772,715	5,773,669	5,634,833	1,183,870	1,114,267	1,070,292
Eaagads Ltd Ord 1.25	150,512	150,877	183,391	184,101	165,901	153,623	148,990	145,293	60,861	48,345	50,180	52,547
George Williamson Kenya Ltd Ord 5.00	1,640,224	1,473,253	1,912,702	1,236,861	1,021,447	976,211	975,630	988,566	824,008	442,540	436,520	414,637
Kakuzi Ord.5.00	2,051,840	2,135,644	2,186,821	2,454,779	2,368,496	1,664,052	1,565,948	1,537,682	1,363,575	470,332	438,169	425,351
Kapchorua Tea Co. Ltd Ord Ord 5.00		415,867	524,912	390,538	345,305	332,301	330,836	341,574	295,419	165,967	156,000	160,670
Limuru Tea Co. Ltd Ord 20.00	29,858	32,842	32,018	31,728	27,966	24,299	22,142	21,293	17,285	17,166	17,141	16,937
Ol Pejeta Ranching Ltd												
Rea Vipingo Plantations Ltd Ord 5.00	436,122	445,781	479,503	508,824	478,429	439,386	315,334					
Sasini Tea & Coffee Ltd Ord 5.00	2,180,213	2,198,878	2,145,401	2,277,067	2,240,662	2,217,169	2,217,074	587,885	530,208	340,819	320,625	310,639
Theta group Ltd Ord 1.00												
Sub-Tatal - Agricultural Sector												
African Lakes Corporation PLC.Ord 5.00												
A.Baumann & Co.Ltd Ord 5.00	435,851	450,502	449,034	453,203	352,519	381,584	384,790	415,464	151,654	123,300	108,000	101,646
Car & General (K) Ltd Ord 5.00	324,937	372,530	370,208	283,025	347,518	448,746	594,382	600,430	578,182	453,382	428,786	118,146
CMC Holdings Ltd Ord 5.00	2,041,079	1,941,231	1,844,571	1,369,924	1,234,771	1,074,005	909,399	785,829	705,395	663,822	652,269	641,795
Express Ltd Ord 5.00	265,571	270,725	274,937	356,199	361,224	368,926	360,414	181,884	126,155	98,832	92,802	87,824
Hutchings Biemer Ltd Ord 5.00												
Kenya Airways Ltd Ord 5.00	7,579,000	7,264,000	7,689,000	6,507,000	5,921,000	5,609,173	3,778,422					
Lonrho Motors EA Ltd Ord 5.00												
Marshalls (E.A.) Ltd Ord 5.00	351,252	300,332	404,602	1,225,883	1,233,345	1,237,297	788,801	758,285	562,525	529,666	236,854	255,725
Nation Media Group Ord. 5.00	2,048,400	1,865,100	1,767,200	1,539,900	1,270,600	1,003,910	957,692	705,034	532,063	407,225	383,112	303,213
Pearl Drycleaners Ltd Ord 5.00												
Standard Newspapers Group Ord 5.00	(125,419)	(155,550)	(29,324)	91,247	95,226	69,622	61,142	66,840	62,460	38,820	52,600	89,500
Tourism Promotion Services Ltd Ord 5.00 (Serena)	959,231	905,072	864,567	512,582	533,861	527,227						
Uchumi Supermarket Ltd Ord 5.00	964,531	805,336	802,275	737,886	650,274	626,326	566,737	555,929	485,719			
Sub-Total - Commercial * Services Sector												
Athi River Mining Ord 5.00	843,539	837,710	622,258	724,771	711,905	453,092						
Bamburi Cement Ltd Ord 5.00	11692000	11119000	10323000	10540000	10608000	10244000	9,945,640	4,115,500	3,952,840	3,730,620	1,408,120	1,248,000
B.O.C Kenya Ltd Ord 5.00	936,616	930,881	925,481	1,040,501	956,285	885,380	727,962	704,114	686,171	425,251	408,679	381,747
British American Tobacco Kenya Ltd Ord 10.00	3,972,712	4,158,603	4,365,893	4,385,837	3,791,423	3,616,069	3,434,888	3,314,911	2,409,294	2,050,484	1,275,455	1,230,991

Carbacid Investments Ltd Ord 5.00	624,439	610,095	605,443	544,092	484,004	443,781	403,927	376,995	168,042	149,429	144,369	138,877
Crown Berger Ltd 0rd 5.00	536,927	519,561	560,459	560,643	574,174	558,851	372,352	360,527	342,469	313,931	84,580	
Dunlop Kenya Ord 5.00		99,002	109,343	105,804	103,757	63,667	55,574	45,442	36,302	25,883	18,914	15,988
E.A.Cables Ltd Ord 5.00	262,369	282,579	274,460	349,257	326,072	258,614	235,460	217,240	191,517	142,995	125,628	113,187
E.A.Packaging Ltd Ord 5.00	270,370	212,796	322,269	348,473	386,030	381,031	360,270	326,622	241,031	200,273	178,640	172,826
E.A.Portland Cement Ltd Ord 5.00	2,466,847	1,625,576	821,620	1,700,206	1,414,499	1,384,000	337,947	288,244	213,352	186,031	116,342	126,329
East African Breweries Ltd Ord 10.00	9,679,678	9,280,369	8,661,122	10232629	8,827,846	8,364,115	7,281,358	7,381,558	1,920,445	1,731,008	1,630,987	1,545,905
Firestone East Africa Ltd Ord 5.00	1,915,339	1,882,018	1,870,370	1,879,711	1,684,873	1,478,256	1,252,522	1,092,726	973,389			
Kenya National Mills Ltd. Ord. 5.00	1,965,464	2,166,469	1,683,060	2,097,563	1,923,631	1,807,038	1,831,982	1,638,838	1,589,071	1,646,660	910,577	947,248
Kenya Oil Co Ltd Ord 5.00	1,835,876	1,228,017	1,068,814	906,763	679,695	572,462	506,096	313,510	191,706	158,480	77,532	76,601
Kenya Orchards Ltd Ord 5.00												
Kenya Power & Lighting Ltd Ord 20.00	1,128,786	4,005,497	5,773,665	6,090,525	5,050,196	3,920,114	2,946,426	1,900,593	1,322,038	1,673,280	1,622,153	1,513,544
Total Kenya Ltd Ord 5.00	2,191,151	1,634,990	1,424,674	1,072,198	919,135	934,939	901,859	670,002	599,860	423,304	380,305	327,641
Unga Group Ltd Ord 5.00	2,112,489	2,208,413	2,492,964	2,985,044	2,937,251	2,741,831	2,679,126	2,194,017	2,036,655	2,100,603	1,116,600	1,180,412
Sub-Total - Industrial & Allied Sector												

Appendix IV: Quoted Firms: Profit Before Tax (1990-2001)

Profit Before Tax	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Brooke Bond Ltd Ord 10.00	328,031	664,664	343,146	473,386	236,898	32,342	30,428	614,136	1,446,580	682,436	490,373	416,815
Eaagads Ltd Ord 1.25	5,663	3,115	9,762	71,573	37,151	11,006	11,729	47,134	25,428	(1,089)	(1,175)	515
George Williamson Kenya Ltd Ord 5.00	215,539	112,461	77,005	424,429	86,798	31,328	25,039	318,847	96,585	27,380	45,840	30,980
Kakuzi Ord.5.00	(95,926)	(85,766)	(16,615)	147,174	262,766	148,590	84,805	283,052	219,723	55,106	29,223	51,520
Kapchorua Tea Co. Ltd Ord Ord 5.00		20,283	30,709	109,787	29,015	9,828	(4,855)	95,353	48,871	17,580	14,680	17,060
Limuru Tea Co. Ltd Ord 20.00	(3,991)	16,998	14,242	30,169	25,938	11,057	7,788	22,986	68,219	20,025	11,235	14,756
Ol Pejeta Ranching Ltd												
Rea Vipingo Plantations Ltd Ord 5.00	(1,729)	(46,292)	(7,723)	48,773	72,260	97,767	44,712					
Sasini Tea & Coffee Ltd Ord 5.00	34,896	161,594	49,981	209,182	170,922	104,300	106,220	197,052	415,496	107,436	96,447	60,760
Theta group Ltd Ord 1.00												
Sub-Tatal - Agricultural Sector												
African Lakes Corporation PLC.Ord 5.00												
A.Baumann & Co.Ltd Ord 5.00	1,060	5,463	16,149	5,097	(2,164)	(11,067)	25,365	71,800	44,791	18,312	9,674	7,325
Car & General (K) Ltd Ord 5.00	(11,069)	10,005	12,681	(33,697)	(119,345)	(102,867)	13,367	45,390	32,881	13,303	7,670	(3,049)
CMC Holdings Ltd Ord 5.00	141,742	183,904	249,389	246,993	303,787	314,438	237,294	167,084	54,310	49,143	52,650	62,976
Express Ltd Ord 5.00	(32,908)	(5,969)	(37,405)	21,540	22,293	45,595	80,337	61,687	74,103	24,490	26,985	22,051
Hutchings Biemer Ltd Ord 5.00												
Kenya Airways Ltd Ord 5.00	2,044,000	2,853,000	1,425,000	1,436,000	1,090,000	1,588,661	2,136,791					
Lonrho Motors EA Ltd Ord 5.00												
Marshalls (E.A.) Ltd Ord 5.00	(356,066)	(104,028)	(211,118)	56,663	112,822	144,260	129,727	20,688	14,201	13,476	25,678	44,910
Nation Media Group Ord. 5.00	390,200	296,100	340,000	497,700	417,700	262,141	296,870	251,573	105,793	83,179	69,659	60,071
Pearl Drycleaners Ltd Ord 5.00												
Standard Newspapers Group Ord 5.00	21,393	(126,226)	(120,571)	1,388	44,936	17,041	(12,300)	2,440	(17,900)	1,600	(20,960)	11,640
Tourism Promotion Services Ltd Ord 5.00 (Serena)	138,699	117,113	103,866	89,216	88,490	98,789						
Uchumi Supermarket Ltd Ord 5.00	151,082	425,152	375,097	485,354	364,085	405,777	352,386	418,997	271,064			
Sub-Total - Commercial * Services Sector												
Athi River Mining Ord 5.00	51,891	45,601	19,925	12,866	34,866	28,147						
Bamburi Cement Ltd Ord 5.00	1,340,000	487,000	890,000	569,000	1,437,000	1,453,000	1,324,820	523,360	663,360	452,340	199,440	78,320
B.O.C Kenya Ltd Ord 5.00	118,175	110,159	180,701	249,682	224,089	176,719	133,160	133,346	87,724	67,880	61,778	51,664
British American Tobacco Kenya Ltd Ord 10.00	851,343	682,970	1,874,466	1,751,790	937,995	1,005,345	824,325	819,142	1,392,005	754,703	536,514	535,978

Carbacid Investments Ltd Ord 5.00	71,310	133,511	169,801	130,678	104,576	91,166	56,611	53,099	37,412	16,129	20,311	18,414
Crown Berger Ltd 0rd 5.00	58,514	40,663	86,642	37,738	72,416	10,099	48,973	132,059	127,758	72,091	12,012	
Dunlop Kenya Ord 5.00		10,162	12,327	9,588	10,562	23,945	29,137	24,161	23,071	15,975	7,752	10,890
E.A.Cables Ltd Ord 5.00	26,674	46,698	32,842	94,860	94,603	112,585	89,831	106,400	103,252	60,727	44,030	40,992
E.A.Packaging Ltd Ord 5.00	54,597	(102,521)	(26,204)	(38,612)	11,802	71,588	98,802	134,877	118,703	83,431	52,693	42,557
E.A.Portland Cement Ltd Ord 5.00	974,384	(538,860)	(1,294,64)	499,452	111,337	105,209	92,354	127,000	47,893	21,471	(6,966)	16,622
East African Breweries Ltd Ord 10.00	2,499,117	1,798,105	1,506,962	493,858	1,157,946	934,232	506,554	1,037,091	561,396	372,089	348,754	231,613
Firestone East Africa Ltd Ord 5.00	448,879	396,412	576,945	901,241	937,557	1,022,619	978,977	789,934	963,875			
Kenya National Mills Ltd. Ord. 5.00	(291,108)	(720,508)	(392,294)	(765,383)	290,730	69,487	400,289	237,096	(71,167)	37,940	(47,145)	10,941
Kenya Oil Co Ltd Ord 5.00	595,097	250,991	316,544	255,420	233,164	173,243	131,854	235,537	81,619	34,275	9,226	4,396
Kenya Orchards Ltd Ord 5.00												
Kenya Power & Lighting Ltd Ord 20.00	(4,105,91)	(2,574,269)	1,721,924	2,005,343	2,160,099	1,512,042	1,573,750	763,136	(261,178)	162,191	157,673	82,637
Total Kenya Ltd Ord 5.00	(318,899)	333,498	856,686	515,021	213,053	276,309	443,663	212,835	827,120	241,930	263,053	237,372
Unga Group Ltd Ord 5.00	(287,015)	(778,312)	(331,055)	(708,239)	429,540	111,730	435,465	237,482	63,092	(6,816)	(86,263)	(56,409)
Sub-Total - Industrial & Allied Sector												

Appendix V: Quoted Firms: Total Tax Provisions (1990-2001)

Tax Provision	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Brooke Bond Ltd Ord 10.00	106,189	210,000	123,402	233,714	121,530	45,480	3,614	197,336	513,100	243,263	174,000	155,000
Eaagads Ltd Ord 1.25	2,611	11,649	2,434	22,824	12,009	1,871	3,530	15,171	6,803	344	790	169
George Williamson Kenya Ltd Ord 5.00	74,955	30,746	15,689	135,128	26,432	17,143	13,087	102,960	33,023	8,940	12,280	6,742
Kakuzi Ord.5.00	(41,767)	(42,135)	(54,507)	4,541	43,895	2,467	5,089	57,495	63,609	5,513	3,338	17,760
Kapchorua Tea Co. Ltd Ord Ord 5.00		5,416	7,109	35,214	10,143	4,451	1,971	30,643	16,902	5,640	4,920	6,217
Limuru Tea Co. Ltd Ord 20.00	(1,008)	5,174	4,941	9,407	9,270	2,900	2,730	8,678	24,100	7,600	4,430	6,278
Ol Pejeta Ranching Ltd												
Rea Vipingo Plantations Ltd Ord 5.00	4,959	(12,282)	(1,120)	4,689	16,635	11,507	3,530					
Sasini Tea & Coffee Ltd Ord 5.00	24,114	52,954	28,597	84,865	69,157	38,282	29,709	66,800	131,824	42,659	37,897	24,946
Theta group Ltd Ord 1.00												
Sub-Tatal - Agricultural Sector												
African Lakes Corporation PLC.Ord 5.00												
A.Baumann & Co.Ltd Ord 5.00	3,642	1,161	3,471	1,704	5,687	2,881	10,570	30,402	10,724	8,790	4,659	4,614
Car & General (K) Ltd Ord 5.00	(5,199)	14,292	(3,474)	142	1,902	3,653	12,447	15,736	13,706	4,245	1,160	994
CMC Holdings Ltd Ord 5.00	53,100	61,446	81,718	92,097	115,270	117,225	90,964	74,030	24,008	29,256	26,513	34,486
Express Ltd Ord 5.00	(1,486)	4	(24,006)	8,263	4,610	12,076	11,025	18,564	21,872	7,942	10,897	7,624
Hutchings Biemer Ltd Ord 5.00												
Kenya Airways Ltd Ord 5.00	687,000	(69,000)	218,000	122,000	239,000	169,570						
Lonrho Motors EA Ltd Ord 5.00												
Marshalls (E.A.) Ltd Ord 5.00	(47,393)	207		20,025	40,338	64,502	56,356	4,582	7,919	8,319	17,938	24,993
Nation Media Group Ord. 5.00	127,000	96,000	92,400	171,200	133,400	103,572	101,644	94,132	43,966	44,281	32,128	29,859
Pearl Drycleaners Ltd Ord 5.00												
Standard Newspapers Group Ord 5.00	(41,449)	(32,311)		4,084	10,771	-	-				940	4,580
Tourism Promotion Services Ltd Ord 5.00 (Serena)	41,993	34,061	24,530	22,854	43,176	46,116						
Uchumi Supermarket Ltd Ord 5.00												
Sub-Total - Commercial * Services Sector												
Athi River Mining Ord 5.00	16,625	15,711	(280)									
Bamburi Cement Ltd Ord 5.00	553,000	117,000	174,000	1,000	657,000	686,000	642,840	317,760	303,380	231,460	68,860	63,960
B.O.C Kenya Ltd Ord 5.00	43,125	35,444	35,444	97,127	87,774	56,161	55,387	64,164	34,756	32,094	32,461	23,249
British American Tobacco Kenya Ltd Ord 10.00	247,234	100,260	637,068	594,876	303,946	374,164	329,348	332,518	494,929	308,000	192,899	231,539

Carbacid Investments Ltd Ord 5.00	28,670	41,298	61,255	49,824	45,474	35,266	19,819	19,958	13,201	7,307	9,257	7,126
Crown Berger Ltd 0rd 5.00	35,304	21,183	43,686	15,128	27,973	4,796	18,060	55,762	50,688	25,214	5,685	
Dunlop Kenya Ord 5.00		7,011	4,755	3,541	1,851	8,672	10,615	9,421	8,452	6,406	3,626	5,106
E.A.Cables Ltd Ord 5.00	8,945	16,304	10,993	31,175	30,673	38,806	30,906	40,178	36,149	22,744	17,850	17,281
E.A.Packaging Ltd Ord 5.00	(2,977)	(2,903)	-	(1,055)	5,341	22,484	32,553	47,824	41,729	29,414	23,166	19,000
E.A.Portland Cement Ltd Ord 5.00	237,899	(119,392)	(416,057)	123,745	20,838	37,998	36,476	46,123	17,396	11,777	2,620	8,219
East African Breweries Ltd Ord 10.00	946,793	623,308	379,032	211,636	251,348	428,709	321,084	531,335	192,800	131,300	139,965	100,546
Firestone East Africa Ltd Ord 5.00	115,279	103,928	186,656	288,889	267,036	332,981	308,887	296,160	306,126			
Kenya National Mills Ltd. Ord. 5.00	(63,011)	(130,779)	(28,950)	29,683	117,521	38,340	177,180	133,995	1,113	23,431	6,373	27,550
Kenya Oil Co Ltd Ord 5.00	209,562	96,861	105,412	85,005	97,131	78,077	47,603	84,933	30,393	11,499	4,695	3,257
Kenya Orchards Ltd Ord 5.00												
Kenya Power & Lighting Ltd Ord 20.00	(1,229,204)	(966,287)	416,662	541,068	606,071	395,752	416,872	151,000	60,000	81,000	19,000	3,408
Total Kenya Ltd Ord 5.00	(96,798)	126,989	305,266	193,958	83,257	103,229	141,806	95,093	286,564	86,931	112,389	109,862
Unga Group Ltd Ord 5.00	(62,493)	(118,623)	(54,314)	50,249	135,262	54,674	190,835	136,427	49,902	29,438	10,193	31,908
Sub-Total - Industrial & Allied Sector												

Appendix VI: Quoted Firms: Total Profit After Tax (1990-2001)

Profit After Tax	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Brooke Bond Ltd Ord 10.00	221,842	454,664	219,744	239,672	(229,069)	(13,138)	26,814	416,800	933,480	439,173	316,373	261,815
Eaagads Ltd Ord 1.25	3,052	(8,534)	7,328	48,749	25,141	9,135	8,199	31,963	18,625	(1,433)	(1,965)	346
George Williamson Kenya Ltd Ord 5.00	140,584	81,715	61,316	289,301	60,366	14,185	11,952	215,887	63,562	18,440	33,560	24,239
Kakuzi Ord.5.00	(54,159)	(43,631)	37,892	142,633	218,871	146,123	79,716	225,557	156,114	49,593	25,885	33,760
Kapchorua Tea Co. Ltd Ord Ord 5.00		14,867	23,600	74,573	18,872	5,377	(6,826)	64,710	31,969	11,940	9,760	10,844
Limuru Tea Co. Ltd Ord 20.00	(2,983)	11,824	9,301	20,762	16,668	8,157	5,058	14,308	44,119	12,425	6,805	8,478
Ol Pejeta Ranching Ltd												
Rea Vipingo Plantations Ltd Ord 5.00	(6,688)	(34,010)	(6,603)	44,084	55,625	86,260	41,182					
Sasini Tea & Coffee Ltd Ord 5.00	10,782	108,640	21,384	124,317	101,765	66,018	76,511	130,252	283,672	64,776	58,550	35,814
Theta group Ltd Ord 1.00												
Sub-Tatal - Agricultural Sector												
African Lakes Corporation PLC.Ord 5.00												
A.Baumann & Co.Ltd Ord 5.00	(2,582)	4,302	12,678	3,393	(7,851)	(13,949)	14,795	41,398	34,068	9,521	5,015	2,712
Car & General (K) Ltd Ord 5.00	(5,870)	(4,287)	16,155	(33,839)	(121,247)	(106,520)	920	29,654	19,175	9,058	6,511	(4,043)
CMC Holdings Ltd Ord 5.00	88,642	122,458	167,671	154,896	188,517	197,213	146,330	93,054	30,302	19,887	26,137	28,490
Express Ltd Ord 5.00	(31,422)	(5,973)	(13,399)	13,277	17,683	33,519	69,312	43,124	52,231	16,548	16,087	14,427
Hutchings Biemer Ltd Ord 5.00												
Kenya Airways Ltd Ord 5.00	1,357,000	2,922,000	1,207,000	1,314,000	851,000	1,419,091	2,136,791					
Lonrho Motors EA Ltd Ord 5.00												
Marshalls (E.A.) Ltd Ord 5.00	(308,673)	(104,235)	(211,118)	36,638	72,484	79,758	73,371	16,106	6,282	5,157	7,740	19,917
Nation Media Group Ord. 5.00	263,200	200,100	247,600	326,500	284,300	158,569	195,226	157,441	61,827	38,898	37,531	30,213
Pearl Drycleaners Ltd Ord 5.00												
Standard Newspapers Group Ord 5.00	62,842	(93,915)	(120,571)	(2,696)	34,165	17,041	(12,300)	2,440	(17,900)	1,600	(21,900)	7,060
Tourism Promotion Services Ltd Ord 5.00 (Serena)	96,706	83,052	79,336	66,362	45,314	52,673						
Uchumi Supermarket Ltd Ord 5.00												
Sub-Total - Commercial * Services Sector												
Athi River Mining Ord 5.00	35,266	29,890	20,205	12,866	34,866	28,147						
Bamburi Cement Ltd Ord 5.00	787,000	370,000	716,000	568,000	780,000	767,000	681,980	205,600	359,980	220,880	130,580	14,360
B.O.C Kenya Ltd Ord 5.00	75,050	74,715	145,257	152,555	136,315	120,558	77,773	69,182	52,967	35,786	29,317	28,415

British American Tobacco Kenya Ltd Ord 10.00	604,109	582,710	1,237,398	1,156,914	634,049	631,181	494,977	486,624	897,076	446,703	343,615	304,439
Carbacid Investments Ltd Ord 5.00	42,640	92,213	108,546	80,854	59,102	55,900	36,792	33,141	24,211	8,821	11,054	11,288
Crown Berger Ltd 0rd 5.00	23,210	19,480	42,956	22,610	44,443	5,303	30,913	76,297	77,070	46,877	6,327	
Dunlop Kenya Ord 5.00		3,151	7,572	6,047	8,711	15,273	18,522	14,740	14,619	9,569	4,126	5,784
E.A.Cables Ltd Ord 5.00	17,729	30,394	21,849	63,685	63,930	73,779	58,925	66,222	67,103	37,982	26,180	23,711
E.A.Packaging Ltd Ord 5.00	57,574	(99,618)	(26,204)	(37,557)	6,461	49,104	66,249	87,053	76,974	54,017	29,527	23,557
E.A.Portland Cement Ltd Ord 5.00	736,485	(419,468)	(878,586)	375,707	90,499	67,211	55,878	80,877	30,496	9,694	(9,587)	8,403
East African Breweries Ltd Ord 10.00	1,552,324	1,174,797	1,127,930	282,222	906,598	505,523	185,470	505,756	368,596	240,789	208,789	131,066
Firestone East Africa Ltd Ord 5.00	333,600	292,484	390,289	612,352	670,521	689,638	670,090	493,774	657,749			
Kenya National Mills Ltd. Ord. 5.00	(228,097)	(589,729)	(363,344)	(795,066)	173,209	31,147	223,109	103,101	(72,280)	14,509	(53,518)	(16,609)
Kenya Oil Co Ltd Ord 5.00	385,535	154,130	211,132	170,415	136,033	95,166	84,251	150,604	51,226	22,776	4,531	1,139
Kenya Orchards Ltd Ord 5.00												
Kenya Power & Lighting Ltd Ord 20.00	(2,876,711)	(1,607,982)	1,305,262	1,464,275	1,554,028	1,116,290	1,156,878	612,136	(321,178)	81,191	138,673	79,229
Total Kenya Ltd Ord 5.00	(222,101)	206,509	551,420	321,063	129,796	173,080	301,857	117,742	540,556	154,999	150,664	127,510
Unga Group Ltd Ord 5.00	(224,522)	(659,689)	(276,741)	(758,488)	294,278	57,056	244,630	101,055	13,190	(36,254)	(96,456)	(88,317)
Sub-Total - Industrial & Allied Sector												

Appendix VII: Quoted Firms: Total Dividends (1990-2001)

Total Dividends	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Brooke Bond Ltd Ord 10.00	-	293,250	195,000	195,500	-	97,750	48,875	244,375	830,875	366,562	268,812	219,937
Eaagads Ltd Ord 1.25	4,020	-	8,039	30,549	12,863	4,502	4,502	18,329	6,110	402	402	402
George Williamson Kenya Ltd Ord 5.00	43,782	21,891	21,891	65,672	13,135	8,756	8,756	21,891	8,756	6,560	6,560	6,567
Kakuzi Ord.5.00	-	7,840	39,200	53,900	53,900	43,120	39,200	39,200	26,133	16,333	13,067	14,373
Kapchorua Tea Co. Ltd Ord Ord 5.00		9,780	9,780	29,340	5,868	3,912	3,912	9,780	3,912	3,912	3,912	3,912
Limuru Tea Co. Ltd Ord 20.00	-	11,000	6,000	17,000	13,000	6,000	4,210	10,300	44,000	12,400	6,600	8,200
Ol Pejeta Ranching Ltd												
Rea Vipingo Plantations Ltd Ord 5.00	-	-	-	-	22,400	43,675	12,225					
Sasini Tea & Coffee Ltd Ord 5.00	-	76,019	19,005	114,028	76,019	63,349	76,019	101,358	84,465	42,233	42,233	16,893
Theta group Ltd Ord 1.00												
Sub-Tatal - Agricultural Sector												
African Lakes Corporation PLC.Ord 5.00												
A.Baumann & Co.Ltd Ord 5.00	3,840	3,840	4,800	2,880	1,920	1,920	3,840	3,840	3,840	2,560	1,920	1,280
Car & General (K) Ltd Ord 5.00				-	-	-	2,025	15,191	10,127	5,064	4,220	4,220
CMC Holdings Ltd Ord 5.00	18,210	18,210	18,210	12,140	30,349	30,349	24,280	19,282	13,767	11,013	9,511	8,180
Express Ltd Ord 5.00	-	-	-	8,160	10,560	19,880	38,400	26,400	24,000	9,600	9,600	6,960
Hutchings Biemer Ltd Ord 5.00												
Kenya Airways Ltd Ord 5.00	577,000	577,000	-	461,000	346,000	-	-					
Lonrho Motors EA Ltd Ord 5.00												
Marshalls (E.A.) Ltd Ord 5.00	-	-	-	14,393	38,382	38,382	28,786	12,794	6,854	6,854	4,896	4,800
Nation Media Group Ord. 5.00	83,700	62,400	62,400	58,800	49,000	32,681	26,740	21,391	19,015	17,113	14,261	12,360
Pearl Drycleaners Ltd Ord 5.00												
Standard Newspapers Group Ord 5.00	-	-	-	1,283	8,561	8,561	-	-	-	-	-	2,140
Tourism Promotion Services Ltd Ord 5.00 (Serena)	42,547	42,547	38,679	38,679	38,680	104,898						
Uchumi Supermarket Ltd Ord 5.00												
Sub-Total - Commercial * Services Sector												
Athi River Mining Ord 5.00	-	-	-	-	22,500	15,600						

Bamburi Cement Ltd Ord 5.00	408,000	272,000	362,000	272,000	408,000	393,000	211,680	131,040	80,640	40,320	20,160	-
B.O.C Kenya Ltd Ord 5.00	69,315	69,315	69,315	68,339	65,410	65,410	54,623	51,972	31,089	19,215	17,080	11,102
British American Tobacco Kenya Ltd Ord 10.00	790,000	790,000	787,500	562,500	450,000	450,000	375,000	300,000	543,750	354,375	294,375	266,250
Carbacid Investments Ltd Ord 5.00	31,148	-	47,195	20,766	18,879	16,046	9,860	7,585	5,598	3,762	3,762	2,809
Crown Berger Ltd 0rd 5.00	10,785	10,785	43,140	21,570	29,120	21,570	21,570	58,239	48,532	35,000	4,900	
Dunlop Kenya Ord 5.00		4,000	4,000	4,000	4,000	7,180	8,390	5,600	4,200	2,600	1,200	1,200
E.A.Cables Ltd Ord 5.00	22,275	22,275	91,125	40,500	40,500	50,625	40,500	40,500	32,400	20,250	13,500	9,000
E.A.Packaging Ltd Ord 5.00	-	-	-	-	-	26,880	26,880	-	32,000	25,600	21,760	21,760
E.A.Portland Cement Ltd Ord 5.00		-	-	90,000	60,000	30,000	6,000	6,000	3,000	-	-	-
East African Breweries Ltd Ord 10.00	735,956	730,516	655,215	561,613	393,129	327,608	255,942	255,942	179,159	140,768	123,706	85,314
Firestone East Africa Ltd Ord 5.00	278,342	278,342	278,342	417,514	463,904	463,904	510,294	374,437	311,478			
Kenya National Mills Ltd. Ord. 5.00	-	-	-	21,507	86,062	64,546	64,546	39,333	11,094	11,094	-	11,094
Kenya Oil Co Ltd Ord 5.00	-	43,199	53,998	43,199	28,800	28,800	28,800	28,800	18,000	7,200	3,600	-
Kenya Orchards Ltd Ord 5.00												
Kenya Power & Lighting Ltd Ord 20.00	-	158,256	633,024	422,016	422,016	140,672	35,168	31,651	28,134	28,134	28,134	22,859
Total Kenya Ltd Ord 5.00	-	-	190,400	168,000	145,600	140,000	70,000	47,600	364,000	112,000	98,000	84,000
Unga Group Ltd Ord 5.00				9,372	78,098	52,065	52,065	14,578	4,165	4,165	-	4,165
Sub-Total - Industrial & Allied Sector												

Appendix VIII: Quoted Firms: Interest Expense (1990-2001)

Interest Expense	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Brooke Bond Ltd Ord 10.00	5,767	12,823	13,625	18,648	191,995	238,003	193,723	90,110	68,169	11,396	39,635	16,655
Eaagads Ltd Ord 1.25	-	-	-	-	-	-	-	-	-	-	-	-
George Williamson Kenya Ltd Ord 5.00	11,452	11,904	14,911	25,104	37,022	40,601	47,950	45,318	17,187	10,020	6,320	3,146
Kakuzi Ord.5.00	102,150	106,174	80,746	43,823	37,692	37,733	31,181	28,565	15,980			
Kapchorua Tea Co. Ltd Ord Ord 5.00		500	545	1,423	1,265	1,185	2,289	3,366	2,300	1,489	720	749
Limuru Tea Co. Ltd Ord 20.00	-	-	-	-	-	-	-	-	-	-	-	-
Ol Pejeta Ranching Ltd												
Rea Vipingo Plantations Ltd Ord 5.00	23,574	32,192	30,027	30,661	20,396	33,212	12,134					
Sasini Tea & Coffee Ltd Ord 5.00	1,852	1,546	2,334				111	79	118	59	1,021	737
Theta group Ltd Ord 1.00												
Sub-Tatal - Agricultural Sector	**144,795**	**165,139**	**142,188**	**119,659**	**288,370**	**350,734**	**287,388**	**167,438**	**103,754**	**22,964**	**47,696**	**21,287**
African Lakes Corporation PLC.Ord 5.00												
A.Baumann & Co.Ltd Ord 5.00	4,811	8,894	15,584	19,784	15,147	5,078	-	-	-	-	-	-
Car & General (K) Ltd Ord 5.00	35,362	35,061	40,608	56,298	53,046	54,385	33,455	26,455	26,922	32,202	26,078	20,698
CMC Holdings Ltd Ord 5.00	169,669	196,729	142,795	246,939	-	-	-					
Express Ltd Ord 5.00				36,061	41,705	2,708	22,724	19,034	14,327	7,687	6,095	6,289
Hutchings Biemer Ltd Ord 5.00												
Kenya Airways Ltd Ord 5.00	521,000	523,000	369,000	238,000	203,000	171,509	237,811					
Lonrho Motors EA Ltd Ord 5.00												
Marshalls (E.A.) Ltd Ord 5.00	111,220	144,852	179,611	104,938	150,504	131,852	128,151	89,860	87,466	63,354	52,658	34,443
Nation Media Group Ord. 5.00	29,000	54,900	57,700	75,500	96,100	95,298	16,694	20,918	32,718	16,306	13,338	11,191
Pearl Drycleaners Ltd Ord 5.00												
Standard Newspapers Group Ord 5.00	46,636	53,701	51,411	26,456	14,017	19,400	10,520	18,460	8,500	11,540	6,680	740
Tourism Promotion Services Ltd Ord 5.00 (Serena)	21,551	39,399	25,695	28,855	32,651	31,208						
Uchumi Supermarket Ltd Ord 5.00												
Sub-Total - Commercial * Services Sector	**939,249**	**1,056,536**	**882,404**	**832,831**	**606,170**	**511,438**	**449,355**	**174,727**	**169,933**	**131,089**	**104,848**	**73,361**
Athi River Mining Ord 5.00	24,010	46,726	59,503	43,529	54,320	32,529						
Bamburi Cement Ltd Ord 5.00	238,000	303,000	145,000	4,000			3,200	52,680	17,500	7,100	14,220	24,200
B.O.C Kenya Ltd Ord 5.00		353	310	442	359	958	1,800	2,934	-	-	-	-
British American Tobacco Kenya Ltd Ord	131,727	74,314	44,827	86,191	225,090	202,738	90,248	49,016	15,204	1,656	88	751

10.00												
Carbacid Investments Ltd Ord 5.00												
Crown Berger Ltd 0rd 5.00	28,439	27,208	27,535	77,548	73,371	86,518	73,107	50,100	31,665	17,502	12,586	
Dunlop Kenya Ord 5.00								55	81	85	227	662
E.A.Cables Ltd Ord 5.00	-	125	207	18,888	12,807	441	443	353	269	100	51	20
E.A.Packaging Ltd Ord 5.00	48,111	49,259	55,716	62,088	52,223	43,466	14,494	12,056	1,420	2,120	2,190	1,655
E.A.Portland Cement Ltd Ord 5.00	131,201	145,488	115,781	165,096	47,602	15,536	5,274	13,434	12,026	16,976	15,222	17,551
East African Breweries Ltd Ord 10.00		189,507	253,850	397,891	385,753	401,025	363,007	370,051	17,117	153,177	157,585	112,629
Firestone East Africa Ltd Ord 5.00	359	17,869	21,590	23,049	6,877	43,798	15,982	-	-			
Kenya National Mills Ltd. Ord. 5.00	152,454	306,962	298,128	310,820	181,423	105,712	69,198	147,997	47,739	46,523	65,066	48,818
Kenya Oil Co Ltd Ord 5.00	22,968	16,916	25,772	27,547	24,491	11,623	16,800	12,898			23,141	20,656
Kenya Orchards Ltd Ord 5.00												
Kenya Power & Lighting Ltd Ord 20.00	640,779	716,856	257,092	166,282	106,950	92,344	94,368	125,391	144,378	200,526	131,110	67,569
Total Kenya Ltd Ord 5.00	582,892	404,297	245,777	278,219	317,450	322,008	308,856	382,609	104,452	-	-	-
Unga Group Ltd Ord 5.00	166,778	306,014	291,834	309,664	185,275	108,618	75,113	160,934	58,637	68,067	80,765	61,279
Sub-Total - Industrial & Allied Sector	**2,167,718**	**2,604,894**	**1,842,922**	**1,971,254**	**1,673,991**	**1,467,314**	**1,131,889**	**1,380,508**	**450,487**	**513,832**	**502,251**	**355,790**

Appendix IX: Quoted Firms: Tax Paid (1990-2001)

Tax Paid	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Brooke Bond Ltd Ord 10.00	(225,512)	(136,995)	(147,921)	(267,481)	(36,333)	(13,777)	38,634	(593,366)	(372,071)	(196,827)	(178,798)	(131,071)
Eaagads Ltd Ord 1.25	(28,420)	(24,150)	(101,160)	(238,491)	(19,007)	(9,008)	(115,213)	(139,620)	(7,165)	-	(9,133)	(21,867)
George Williamson Kenya Ltd Ord 5.00	(48,047)	(8,217)	(133,618)	(24,426)	(25,841)	(8,472)	(90,619)	(50,016)	(7,860)	(12,840)	(7,120)	(1,965)
Kakuzi Ord.5.00	(726)	(7,200)	(216)	(48,890)	(10,914)	(8,281)	(13,895)	(105,944)	(24,478)	(7,402)	(19,044)	(26,290)
Kapchorua Tea Co. Ltd Ord Ord 5.00		(549)	(37,423)	(14,704)	(7,692)	(304)	(21,701)	(27,101)	(6,675)	(5,260)	(7,540)	(1,593)
Limuru Tea Co. Ltd Ord 20.00	(1,118)	(6,600,933)	(5,631,574)	(17,063,873)	(2,497,699)	(3,525,481)	(2,400,000)	(26,127,399)	(13,121,179)	(4,939,394)	(6,277,411)	(7,086,183)
Ol Pejeta Ranching Ltd		(6,601)	(5,632)	(17,064)	(2,498)	(3,525)	(2,400)	(26,127)	(13,121)	(4,939)	(6,277)	(7,086)
Rea Vipingo Plantations Ltd Ord 5.00	(5,786)	(3,590)	(13,559)	(21,398)	(6,506)	-						
Sasini Tea & Coffee Ltd Ord 5.00	(57,134)	(57,062)	(63,320)	(98,101)	(32,893)	(24,013)	(25,696)	(169,370)	(54,319)	(45,581)	(28,364)	(17,506)
Theta group Ltd Ord 1.00												
Sub-Tatal - Agricultural Sector												
African Lakes Corporation PLC.Ord 5.00												
A.Baumann & Co.Ltd Ord 5.00	(1,235)	621	(5,946)	(4,572)	(5,545)	(12,371)	(26,905)	(10,270)	(6,431)	(6,200)	(4,473)	(2,117)
Car & General (K) Ltd Ord 5.00	(1,609)	(2,288)	(2,415)	(11,323)	(11,916)	(14,694)	(8,759)	(2,880)	(508)	(70,975)	(271,478)	(435,000)
CMC Holdings Ltd Ord 5.00	(66,032)	(61,191)	(105,304)	(96,330)	(153,003)	(109,476)	(123,457)	(40,488)	(25,224)	(26,699)	(37,933)	(27,837)
Express Ltd Ord 5.00	(252)	(217)	(10,707)	(1,714)	(9,912)	(10,038)	(15,325)	(35,223)	(7,221)	(12,404)	(8,854)	(5,736)
Hutchings Biemer Ltd Ord 5.00												
Kenya Airways Ltd Ord 5.00	(78,000)	(94,000)	(358,000)	(138,000)	(329,000)	(15,050)	-					
Lonrho Motors EA Ltd Ord 5.00												
Marshalls (E.A.) Ltd Ord 5.00	3,079	12,417	(9,586)	(29,110)	(48,255)	(94,783)	(14,029)	(254,485)	(300,591)	(413,625)	(1,178,750)	(1,026,665)
Nation Media Group Ord. 5.00	(172,000)	(68,300)	(121,300)	(248,300)	(26,700)	(21,229)	(128,390)	(53,841)	(46,406)	(35,956)	(35,668)	(1,747,886)
Pearl Drycleaners Ltd Ord 5.00												
Standard Newspapers Group Ord 5.00												

	(70)	(264)	(10)	(20,000)				-	-	(400)	(2,680)	(3,500)
Tourism Promotion Services Ltd Ord 5.00 (Serena)	(17,997)	(40,835)	(7,971)	(35,588)	(49,821)	(89,858)						
Uchumi Supermarket Ltd Ord 5.00	(138,271)	(130,174)	(173,130)	(161,175)	(145,140)	(147,643)	(207,251)	(119,841)	(80,349)			
Sub-Total - Commercial * Services Sector												
Athi River Mining Ord 5.00												
Bamburi Cement Ltd Ord 5.00	(285,000)	(363,000)	(10,000)	(73,000)	(702,000)	(997,000)	(310,340)	(436,500)	(373,960)	(109,440)	(91,140)	(81,560)
B.O.C Kenya Ltd Ord 5.00	(49,354)	(34,048)	(79,131)	(120,222)	(65,679)	(54,273)	(95,354)	(46,121)	(37,530)	(38,969)	(25,895)	(21,098)
British American Tobacco Kenya Ltd Ord 10.00	(152,441)	(423,409)	(893,979)	(308,029)	(417,487)	(331,313)	(336,760)	(584,751)	(461,253)	(215,235)	(253,044)	(204,983)
Carbacid Investments Ltd Ord 5.00	(17,312)	(70,517)	(52,534)	(56,162)	(54,764)	(32,253)	(30,260)	(25,638)	(13,041)	(16,950)	(1,672)	(5,408)
Crown Berger Ltd 0rd 5.00	(8,561)	(52,125)	(23,148)	(26,282)	-	-	(45,090)	(71,542)	(45,825)	(13,753)	(6,419)	
Dunlop Kenya Ord 5.00		(5,651)	(2,415)	(4,499)	(13,245)	(9,130)	(11,815)	(10,079)	(3,624)	(6,005)	(4,089)	
E.A.Cables Ltd Ord 5.00	(13,986)	(16,916)	(10,154)	(30,882)	(36,392)	(30,792)	(35,454)	(54,322)	(35,237)	(20,391)	(18,297)	(31,661)
E.A.Packaging Ltd Ord 5.00	(75)	(69)			(17,234)	(15,031)	(53,139)	(63,676)	(36,573)	(28,345)	(20,545)	(22,037)
E.A.Portland Cement Ltd Ord 5.00	(4,415)	(9,297)	(6,434)	(10,884)	(16,237)	(33,654)	(49,254)	(32,294)	(19,460)	(2,620)	(8,219)	(12,771)
East African Breweries Ltd Ord 10.00		(712,804)	(303,290)	(185,671)	(373,657)	(343,479)	(691,799)	(316,801)	(141,239)	(162,324)	(112,393)	(7,102)
Firestone East Africa Ltd Ord 5.00	(144,251)	(132,767)	(185,384)	(272,899)	(304,669)	(343,113)	(259,627)	(471,125)	(240,297)			
Kenya National Mills Ltd. Ord. 5.00	(10,219)	(24,583)	(29,880)	(93,714)	(45,680)	(136,649)	(231,077)	(1,090)	(22,043)	(4,314)	(25,770)	(43,116)
Kenya Oil Co Ltd Ord 5.00	(136,678)	(68,219)	(126,252)	(133,854)	(53,555)	(108,996)	(102,675)	(50,419)	(17,157)	(2,185)	(65)	(900)
Kenya Orchards Ltd Ord 5.00												
Kenya Power & Lighting Ltd Ord 20.00	(12,236)	(23,477)	(323,985)	(629,356)	(477,722)	(638,049)	(244,969)	(109,685)	(113,434)	(24,878)	(5,177)	(13,686)
Total Kenya Ltd Ord 5.00	(750)	(277,362)	(319,099)	(62,652)	(109,226)	(167,652)	(77,127)	(317,230)	(101,681)	(136,257)	(133,440)	(36,840)
Unga Group Ltd Ord 5.00	(10,685)	(43,763)	(53,420)	(115,244)	(70,079)	(153,186)	(245,282)	(17,007)	(29,539)	(10,128)	(31,823)	(44,923)
Sub-Total - Industrial & Allied Sector												

Appendix X: Computed Gain From Leverage using Book Value of Debt and the Firm Specific Tax Rates for the Year 2001.

	2001	2001					Firm specific Tax Attributes					Gain From Leverage (amount)obtained using predetermined (Table VII) GFL Rate					
Company	Shares issued	Equity	Debt	Firms Book Value (Total Capital)	Debt Equity Ratio	Interest Charged	Tc	Ts	Td	Firm Specific GFL Rate	Firm specific Gain From Leverage (amount)	GFL Rate = 0.37	GFL Rate = 0.34	GFL Rate = 0.26	GFL Rate = 0.22	Actual Sources of Equity Capital	Preferred Sources of Capital
Average for: Agricultural Sector																	
Brooke Bond Ltd Ord 10.00	48,875	4,291,408.00	24,843.00	4,316,251.00	0.58%	5,767	30%	10%	15%	0.259	6,429.95	9,191.91	8,446.62	6,459.18	5,465.46	Foreign Investor Holdlings	Equity from resident corporations & debt from: NR or resident Individuals, or resident/NR corporations
Eaagads Ltd Ord 1.25	7,235	150,512.00	-	150,512.00	0.00%	-	30%	10%	0%	0.370	-	-	-	-	-	Local Institutional Investors	
George Williamson Kenya Ltd Ord 5.00	8,756	1,640,224.00	52,269.00	1,692,493.00	3.19%	11,452	30%	10%	0%	0.370	19,339.53	19,339.53	17,771.46	13,589.94	11,499.18	Foreign Investor Holdings & No debt	Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions
Kakuzi Ord.5.00	19,600	2,051,840.00	782,989.00	2,834,829.00	38.16%	102,150	30%	10%	0%	0.370	289,705.93	289,705.93	266,216.26	203,577.14	172,257.58	Foreign Investor Holdings & No debt	Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions
Kapchorua Tea Co. Ltd Ord Ord 5.00		-	-	-	0.00%	-	30%	10%	0%	0.370	-	-	-	-	-	Foreign Investor Holdings & No debt	Equity from resident corporations, Non-Resident Corporations/individuals
Limuru Tea Co. Ltd Ord 20.00	400	29,858.00	-	29,858.00	0.00%	-	30%	5%	0%	0.335	-	-	-	-	-	Foreign Investor Holdings & No debt	Equity from resident corporations, Non-Resident Corporations/individuals
Ol Pejeta Ranching Ltd		-	-	-	0.00%	-	30%	10%	0%	0.370	-	-	-	-	-		Equity from resident corporations, Non-Resident Corporations/individuals
Rea Vipingo Plantations Ltd Ord 5.00		436,122.00	285,870.00	721,992.00	65.55%	23,574	30%	10%	0%	0.370	105,771.90	105,771.90	97,195.80	74,326.20	62,891.40	Foreign Investor Holdings & No debt	Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions
Sasini Tea & Coffee Ltd Ord 5.00	38,009	2,180,213.00	4,527.00	2,184,740.00	0.21%	1,852	30%	10%	0%	0.370	1,674.99	1,674.99	1,539.18	1,177.02	995.94	Foreign Investor Holdings & No debt	Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions

Theta group Ltd Ord 1.00		-	-	-	0.00%	-	30%	10%	0%	0.370	-	-	-	-	-		Equity from resident corporations, Non-Resident Corporations/individuals
Average for: Commercial & Services Sector		-	-	-						0.507	-						
African Lakes Corporation PLC.Ord 5.00		-	-	-	0.00%	-	30%	10%	0%	0.370	-	-	-	-	-	Foreign Investor Holdings & No debt	Equity from resident corporations, Non-Resident Corporations/individuals
A.Baumann & Co.Ltd Ord 5.00	3,840	435,851.00	18,139.00	453,990.00	4.16%	4,811	30%	10%	0%	0.370	6,711.43	6,711.43	6,167.26	4,716.14	3,990.58	Foreign Investor Holdings & No debt	Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions
Car & General (K) Ltd Ord 5.00		324,937.00	154,755.00	479,692.00	47.63%	35,362	30%	10%	0%	0.370	57,259.35	57,259.35	52,616.70	40,236.30	34,046.10	Foreign Investor Holdings & No debt	Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions
CMC Holdings Ltd Ord 5.00	24,280	2,041,079.00	781,256.00	2,822,335.00	38.28%	169,669	30%	10%	0%	0.370	289,064.72	289,064.72	265,627.04	203,126.56	171,876.32	Foreign Investor Holdings & No debt	Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions
Express Ltd Ord 5.00		265,571.00	284,185.00	549,756.00	107.01%	-	30%	10%	0%	0.370	105,148.45	105,148.45	96,622.90	73,888.10	62,520.70	Foreign Investor Holdings & No debt	Equity from resident corporations, Non-Resident Corporations/individuals
Hutchings Biemer Ltd Ord 5.00		-	-	-	0.00%	-	30%	10%	0%	0.370	-	-	-	-	-		Equity from resident corporations, Non-Resident Corporations/individuals
Kenya Airways Ltd Ord 5.00	461,600	7,579,000.00	6,793,000.00	14,372,000.00	89.63%	521,000	30%	10%	0%	0.370	2,513,410.00	2,513,410.00	2,309,620.00	1,766,180.00	1,494,460.00		Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions
Lonrho Motors EA Ltd Ord 5.00		-	-	-	0.00%	-	30%	10%	0%	0.370	-	-	-	-	-		Equity from resident corporations, Non-Resident Corporations/individuals
Marshalls (E.A.) Ltd Ord 5.00	14,393	351,252.00	459,426.00	810,678.00	130.80%	111,220	30%	10%	0%	0.370	169,987.62	169,987.62	156,204.84	119,450.76	101,073.72	Foreign Investor Holdings & No debt	Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions

Nation Media Group Ord. 5.00		2,048,400.00	11,100.00	2,059,500.00	0.54%	29,000	30%	10%	0%	0.370	4,107.00	4,107.00	3,774.00	2,886.00	2,442.00		Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions
Pearl Drycleaners Ltd Ord 5.00	-	-	-	-	0.00%	-	30%	10%	0%	0.370	-	-	-	-	-		Equity from resident corporations, Non-Resident Corporations/individuals
Standard Newspapers Group Ord 5.00	12810.9	(125,419.00)	248,485.00	123,066.00	-198.12%	46,636	30%	10%	0%	0.370	91,939.45	91,939.45	84,484.90	64,606.10	54,666.70		Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions
Tourism Promotion Services Ltd Ord 5.00 (Serena)	38,679	959,231.00	572,601.00	1,531,832.00	59.69%	21,551	30%	10%	15%	0.259	148,202.61	211,862.37	194,684.34	148,876.26	125,972.22	Foreign Investor Holdings & No debt	Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions
Uchumi Supermarket Ltd Ord 5.00	60,000	964,531.00	-	964,531.00	0.00%	-	30%	10%	0%	0.370	-	-	-	-	-		Equity from resident corporations, Non-Resident Corporations/individuals
Average for: Industria & Allied Sector																	
Athi River Mining Ord 5.00	75,000	843,539.00	109,970.00	953,509.00	13.04%	24,010	30%	5%	0%	0.335	36,839.95	40,688.90	37,389.80	28,592.20	24,193.40		Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions
Bamburi Cement Ltd Ord 5.00	363,000	11,692,000.00	1,028,000.00	12,720,000.00	8.79%	238,000	30%	10%	0%	0.370	380,360.00	380,360.00	349,520.00	267,280.00	226,160.00		Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions
B.O.C Kenya Ltd Ord 5.00	19,525	936,616.00	-	936,616.00	0.00%	-	30%	10%	0%	0.370	-	-	-	-	-		Equity from resident corporations, Non-Resident Corporations/individuals
British American Tobacco Kenya Ltd Ord 10.00	100,000	3,972,712.00	674,259.00	4,646,971.00	16.97%	131,727	30%	10%	0%	0.370	249,475.83	249,475.83	229,248.06	175,307.34	148,336.98	Foreign Investor Holdings & No debt	Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions
Carbacid Investments Ltd Ord 5.00	11,327	624,439.00	-	624,439.00	0.00%	-	30%	5%	0%	0.335	-	-	-	-	-	Local individual Investors with no debt finance	Equity from resident corporations, Non-Resident Corporations/individuals
Crown Berger Ltd Ord 5.00	26,963	536,927.00	97,159.00	634,086.00	18.10%	28,439	30%	10%	15%	0.259	25,147.04	35,948.83	33,034.06	25,261.34	21,374.98	Local Institutional Investors	Equity from resident corporations & debt from: NR or resident Individuals, or resident/NR corporations

Dunlop Kenya Ord 5.00		-	-	-	0.00%	-	30%	10%	0%	0.370	-	-	-	-	-		Equity from resident corporations, Non-Resident Corporations/individuals
E.A.Cables Ltd Ord 5.00	20,250	262,369.00	-	262,369.00	0.00%	-	30%	10%	0%	0.370	-	-	-	-	-	Local Institutional Investors with no debt	Equity from resident corporations, Non-Resident Corporations/individuals
E.A.Packaging Ltd Ord 5.00	7,680	270,370.00	291,127.00	561,497.00	107.68%	48,111	30%	10%	0%	0.370	107,716.99	107,716.99	98,983.18	75,693.02	64,047.94	Foreign Investor Holdings	Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions
E.A.Portland Cement Ltd Ord 5.00		2,466,847.00	4,454,319.00	6,921,166.00	180.57%	131,201	30%	10%	15%	0.259	1,152,882.56	1,648,098.03	1,514,468.46	1,158,122.94	979,950.18	Local Institutional Investors with debt	Equity from resident corporations & debt from: NR or resident Individuals, or resident/NR corporations
East African Breweries Ltd Ord 10.00	103,216	9,679,678.00	710,074.00	10,389,752.00	7.34%	-	30%	10%	0%	0.370	262,727.38	262,727.38	241,425.16	184,619.24	156,216.28	Foreign Investor Holdings with no debt	Equity from resident corporations, Non-Resident Corporations/individuals
Firestone East Africa Ltd Ord 5.00		1,915,339.00	8,630.00	1,923,969.00	0.45%	359	30%	10%	0%	0.370	3,193.10	3,193.10	2,934.20	2,243.80	1,898.60	Local Institutional Investors with no debt	Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions
Kenya National Mills Ltd. Ord. 5.00	67,236	1,965,464.00	867,513.00	2,832,977.00	44.14%	152,454	30%	10%	0%	0.370	320,979.81	320,979.81	294,954.42	225,553.38	190,852.86		Equity from resident corporations, Non-Resident Corporations/individuals
Kenya Oil Co Ltd Ord 5.00	8,640	1,835,876.00	270,000.00	2,105,876.00	14.71%	22,968	30%	10%	0%	0.370	99,900.00	99,900.00	91,800.00	70,200.00	59,400.00	Local Institutional Investors with no debt	Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions
Kenya Orchards Ltd Ord 5.00		-	-	-	0.00%	-	30%	10%	0%	0.370	-	-	-	-	-	Local Institutional Investors	Equity from resident corporations & debt from: NR or resident Individuals, or resident/NR corporations
Kenya Power & Lighting Ltd Ord 20.00	79,128	1,128,786.00	8,726,819.00	9,855,605.00	773.12%	640,779	30%	10%	15%	0.259	2,258,706.09	3,228,923.03	2,967,118.46	2,268,972.94	1,919,900.18	Local Institutional Investors with debt	Equity from resident corporations & debt from: NR or resident Individuals, or resident/NR corporations
Total Kenya Ltd Ord 5.00	80,523	2,191,151.00	-	2,191,151.00	0.00%	582,892	30%	10%	0%	0.370	-	-	-	-	-	Foreign Investor Holdings with no debt	Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions
Unga Group Ltd Ord 5.00		2,112,489.00	867,513.00	2,980,002.00	41.07%	166,778	30%	10%	0%	0.370	320,979.81	320,979.81	294,954.42	225,553.38	190,852.86	Local Institutional Investors with no debt	Equity from resident corporations, Non-Resident Corporations/individuals & Debt From Financial Institutions

Appendix XI: Computed Gain From Leverage using Interest Charged and the Firm Specific Tax Rates for the Year 2001

	2001	2001					Firm specific Tax Attributes			
Company	Shares issued	Firm Specific Interest Tax Shield	Outstanding Debt	Ratio of Tax Shield to Outstanding Debt	Debt Equity Ratio	Interest Charged	Tc	Firm specific Gain From Leverage Computed Using Interest Expense Amount & Corporate Tax Rate	Gain From Leverage Computed Using Personal and Corporate Tax rate and Interest Charged	GFL Lost due to Personal Taxes
Agricultural Sector										
Brooke Bond Ltd Ord 10.00	48,875	6,429.95	24,843.00	0.259	0.01	5,767	30%	7,452.90	6,429.95	1,022.95
Eaagads Ltd Ord 1.25	7,235	-	-	-	-	-		-	-	-
George Williamson Kenya Ltd Ord 5.00	8,756	19,339.53	52,269.00	0.370	0.03	11,452	30%	15,680.70	19,339.53	(3,658.83)
Kakuzi Ord.5.00	19,600	289,705.93	782,989.00	0.370	0.38	102,150	30%	234,896.70	289,705.93	(54,809.23)
Kapchorua Tea Co. Ltd Ord Ord 5.00		-	-	-	-	-		-	-	-
Limuru Tea Co. Ltd Ord 20.00	400	-	-	-	-	-		-	-	-
Ol Pejeta Ranching Ltd		-	-	-	-	-	30%	-	-	-
Rea Vipingo Plantations Ltd Ord 5.00		105,771.90	285,870.00	0.370	0.66	23,574	30%	85,761.00	105,771.90	(20,010.90)
Sasini Tea & Coffee Ltd Ord 5.00	38,009	1,674.99	4,527.00	0.370	-	1,852	30%	1,358.10	1,674.99	(316.89)
Theta group Ltd Ord 1.00		-	-	-	-	-	30%	-	-	-
Commercial & Services Sector		-	-	-	0.27	144,795	30%	-	-	-
African Lakes Corporation PLC.Ord 5.00		-	-	-	-	-	30%	-	-	-
A.Baumann & Co.Ltd Ord 5.00	3,840	6,711.43	18,139.00	0.370	0.04	4,811	30%	5,441.70	6,711.43	(1,269.73)
Car & General (K) Ltd Ord 5.00		57,259.35	154,755.00	0.370	0.48	35,362	30%	46,426.50	57,259.35	(10,832.85)
CMC Holdings Ltd Ord 5.00	24,280	289,064.72	781,256.00	0.370	0.38	169,669	30%	234,376.80	289,064.72	(54,687.92)
Express Ltd Ord 5.00		105,148.45	284,185.00	0.370	-	-	30%	85,255.50	105,148.45	(19,892.95)
Hutchings Biemer Ltd Ord 5.00		-	-	-	-	-	30%	-	-	-
Kenya Airways Ltd Ord 5.00	461,600	2,513,410.00	6,793,000.00	0.370	0.90	521,000	30%	2,037,900.00	2,513,410.00	(475,510.00)
Lonrho Motors EA Ltd Ord 5.00		-	-	-	-	-	30%	-	-	-
Marshalls (E.A.) Ltd Ord 5.00	14,393	169,987.62	459,426.00	0.370	-	111,220	30%	137,827.80	169,987.62	(32,159.82)
Nation Media Group Ord. 5.00		4,107.00	11,100.00	0.370	0.01	29,000	30%	3,330.00	4,107.00	(777.00)
Pearl Drycleaners Ltd Ord 5.00		-	-	-	-	-	30%	-	-	-
Standard Newspapers Group Ord 5.00	12810.9	91,939.45	248,485.00	0.370	-	46,636	30%	74,545.50	91,939.45	(17,393.95)
Tourism Promotion Services Ltd Ord 5.00 (Serena)	38,679	148,202.61	572,601.00	0.259	0.60	21,551	30%	171,780.30	148,202.61	23,577.69

Uchumi Supermarket Ltd Ord 5.00	60,000	-	-	-	-	-	30%	-	-	-
Industria & Allied Sector		-	-	-	-	-		-	320,979.81	
Athi River Mining Ord 5.00	75,000	36,839.95	109,970.00	0.335	-	24,010	30%	32,991.00	99,900.00	(66,909.00)
Bamburi Cement Ltd Ord 5.00	363,000	380,360.00	1,028,000.00	0.370	0.09	238,000	30%	308,400.00	-	308,400.00
B.O.C Kenya Ltd Ord 5.00	19,525	-	-	-	-	-	30%	-	2,258,706.09	(2,258,706.09)
British American Tobacco Kenya Ltd Ord 10.00	100,000	249,475.83	674,259.00	0.370	0.17	131,727	30%	202,277.70	-	202,277.70
Carbacid Investments Ltd Ord 5.00	11,327	-	-	-	-	-	30%	-	320,979.81	(320,979.81)
Crown Berger Ltd 0rd 5.00	26,963	25,147.04	97,159.00	0.259	0.18	28,439	30%	29,147.70	-	29,147.70
Dunlop Kenya Ord 5.00		-	-	-	-	-	30%	-	-	-
E.A.Cables Ltd Ord 5.00	20,250	-	-	-	-	-	30%	-	-	-
E.A.Packaging Ltd Ord 5.00	7,680	107,716.99	291,127.00	0.370	-	48,111	30%	87,338.10	-	87,338.10
E.A.Portland Cement Ltd Ord 5.00		1,152,882.56	4,454,319.00	0.259	-	131,201	30%	1,336,295.70	-	1,336,295.70
East African Breweries Ltd Ord 10.00	103,216	262,727.38	710,074.00	0.370	0.07	-	30%	213,022.20	-	213,022.20
Firestone East Africa Ltd Ord 5.00		3,193.10	8,630.00	0.370	0.00	359	30%	2,589.00	-	2,589.00
Kenya National Mills Ltd. Ord. 5.00	67,236	320,979.81	867,513.00	0.370	0.44	152,454	30%	260,253.90	-	260,253.90
Kenya Oil Co Ltd Ord 5.00	8,640	99,900.00	270,000.00	0.370	0.15	22,968	30%	81,000.00	-	81,000.00
Kenya Orchards Ltd Ord 5.00		-	-	-	-	-	30%	-	-	-
Kenya Power & Lighting Ltd Ord 20.00	79,128	2,258,706.09	8,726,819.00	0.259	-	640,779	30%	2,618,045.70	-	2,618,045.70
Total Kenya Ltd Ord 5.00	80,523	-	-	-	-	582,892	30%	-	-	-
Unga Group Ltd Ord 5.00		320,979.81	867,513.00	0.370	0.41	166,778	30%	260,253.90	-	260,253.90
		-	-	-		2,167,718		-	-	-
					SUM	3,396,557				
NB: All figures in '000						26				

Appendix XII: Regression Analysis between Corporate Tax Rate and the Economy Wide Debt Equity Ratio

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Corporate Tax Rate	12	.300	.425	.35208	.040534
Debt Equity Ratio	12	.13	.35	.2508	.07452
Valid N (list wise)	12				

Regression Analysis

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	Corporate Tax Rate	.	Enter

a) All requested variables entered.
b) Dependent Variable: Debt Equity Ratio

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	-.279	.078	-.014	.07506

A Predictors: (Constant), Corporate Tax Rate

Coefficients

		Un-standardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	.431	.198		2.182	.054
	Corporate Tax Rate	-.513	.558	-.279	-.919	.380

A Dependent Variable: Debt Equity Ratio

Correlations

		Corporate Tax Rate	Debt Equity Ratio
Corporate Tax Rate	Pearson Correlation	1	-.279
	Sig. (2-tailed)	.	.380
	N	12	12
Debt Equity Ratio	Pearson Correlation	-.279	1
	Sig. (2-tailed)	.380	.
	N	12	12

Appendix XIII: **Regression Analysis between the difference between combined tax on Equity Income less Personal Tax on Interest Income (CPTR) and Debt Equity Ratio (DER)**

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Total Tax on Equity Income Less Personal Tax on Interest Income	12	.1850	.3830	.280750	.0732072
Debt Equity Ratio	12	.134	.354	.25167	.073118
Valid N (listwise)	12				

Regression Analysis

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	Total Tax on Equity Income Less Personal Tax on Interest Income	.	Enter

a All requested variables entered.
b Dependent Variable: Debt Equity Ratio

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.482	.232	.155	.067197

a Predictors: (Constant), Total Tax on Equity Income Less Personal Tax on Interest Income

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.014	1	.014	3.024	.113
	Residual	.045	10	.005		
	Total	.059	11			

a Predictors: (Constant), Total Tax on Equity Income Less Personal Tax on Interest Income: (CPTL = Tc +(1-Tc)Ts – Td). b Dependent Variable: Debt Equity Ratio

Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	.387	.080		4.830	.001
	Total Tax on Equity Income Less Personal Tax on Interest Income	-.481	.277	-.482	-1.739	.113

a Dependent Variable: Debt Equity Ratio

Correlations

		Total Tax on Equity Income Less Personal Tax on Interest Income	Debt Equity Ratio
Total Tax on Equity Income Less Personal Tax on Interest Income	Pearson Correlation	1	-.482
	Sig. (2-tailed)	.	.113
	N	12	12
Debt Equity Ratio	Pearson Correlation	-.482	1
	Sig. (2-tailed)	.113	.
	N	12	12

Appendix XIV: Testing of Clustering of Industries around Interest Tax Shield & Debt-Equity Ratio

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Agricultural Sector	10	.0000	.0097	.001990	.0037338
Commercial & Services Sector	13	.0000	.0266	.007169	.0092570
Industrial & Allied Sector	17	.0000	.0244	.006159	.0069801
Valid N (listwise)	10				

Case Summaries

		Agricultural Sector	Industrial & Allied Sector	Commercial & Services Sector
1		.0003	.0057	.0030
2		.0000	.0046	.0168
3		.0014	.0000	.0117
4		.0097	.0059	.0000
5		.0000	.0000	.0000
6		.0000	.0092	.0067
7		.0000	.0000	.0000
8		.0083	.0000	.0266
9		.0002	.0164	.0030
10		.0000	.0048	.0000
11		.	.0000	.0223
12		.	.0121	.0031
13		.	.0019	.0000
14		.	.0000	.
15		.	.0067	.
16		.	.0244	.
17		.	.0130	.
Total	Number of Firms in each Sector	10	17	13

a Limited to first 100 cases.

Appendix XV: Regression Analysis between the Nominal Interest Rate and the Debt Equity Ratio

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
NIR	12	.1960	.7200	.326583	.1297392
DER	12	.134	.354	.25167	.073118
Valid N (listwise)	12				

Regression Analysis

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	NIR	.	Enter

a All requested variables entered.
b Dependent Variable: DER

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.595	.354	.290	.061620

a Predictors: (Constant), NIR

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.021	1	.021	5.488	.041
	Residual	.038	10	.004		
	Total	.059	11			

a Predictors: (Constant), NIR
b Dependent Variable: DER

Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	.361	.050		7.219	.000
	NIR	-.335	.143	-.595	-2.343	.041

a Dependent Variable: DER

Correlations

		NIR	DER
NIR	Pearson Correlation	1	-.595
	Sig. (2-tailed)	.	.041
	N	12	12
DER	Pearson Correlation	-.595	1
	Sig. (2-tailed)	.041	.
	N	12	12

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

Appendix XVI: Gain from Leverage Rate for the Economy for the Period 2001 - 1990

Year	Tc	Ts	Td	(1-Tc)(1-Ts)	(1-Td)	(1-Tc)(1-Ts)/(1-Td)	Gain From Leverage (1-(1-Tc)(1-Ts)/(1-Td))	Comment: Use Debt or Equity Finance
2001	30.0%	5.0%	15%	0.665	0.850	0.782	0.218	Use Debt Finance
2000	30.0%	5.0%	15%	0.665	0.850	0.782	0.218	Use Debt Finance
1999	32.5%	5.0%	15%	0.641	0.850	0.754	0.246	Use Debt Finance
1998	32.5%	5.0%	15%	0.641	0.850	0.754	0.246	Use Debt Finance
1997	35.0%	5.0%	15%	0.618	0.850	0.726	0.274	Use Debt Finance
1996	35.0%	7.5%	10%	0.601	0.900	0.668	0.332	Use Debt Finance
1995	35.0%	10.0%	10%	0.585	0.900	0.650	0.350	Use Debt Finance
1994	35.0%	10.0%	10%	0.585	0.900	0.650	0.350	Use Debt Finance
1993	35.0%	10.0%	10%	0.585	0.900	0.650	0.350	Use Debt Finance
1992	37.5%	10.0%	10%	0.563	0.900	0.625	0.375	Use Debt Finance
1991	42.5%	10.0%	10%	0.518	0.900	0.575	0.425	Use Debt Finance
1990	42.5%	10.0%	10%	0.518	0.900	0.575	0.425	Use Debt Finance

Appendix XVII: Pre-determined Gains from Leverage and the corresponding Ideal Sources of Capital (Debt & Equity)

Classes of Tax Groups	Resident Corporate Tax Rate (i)	Personal Withholding Tax Rate on Equity Income (ii)	Personal Withholding Tax Rate on Debt Income (iii)	Gain From Leverage (iv)	Sources of Finance (v)
I	0.3	0.05	0	0.34	Equity from resident individuals & debt from resident Financial Institutions
II	0.3	0.05	0.15	0.22	Equity from resident individuals & debt from resident individuals
III	0.3	0.05	0.15	0.22	Equity from resident individuals & debt from resident corporations other than financial institutions.
IV	0.3	0.05	0.15	0.22	Equity from resident individuals & debt from NR Individuals
V	0.3	0.05	0.15	0.22	Equity from resident individuals & debt from NR Corporations
VI	0.3	0.1	0	0.37	Equity from resident corporations & debt from resident Financial Institutions
VII	0.3	0.1	0.15	0.26	Equity from resident corporations & debt from resident individuals?
VIII	0.3	0.1	0.15	0.26	Equity from resident corporations & debt from resident corporations other than financial institutions.
IX	0.3	0.1	0.15	0.26	Equity from resident corporations & debt from NR Individuals
X	0.3	0.1	0.15	0.26	Equity from resident corporations & debt from NR Corporations
XI	0.3	0.1	0	0.37	Equity from NR corporations or NR Individuals & debt from Financial Institutions
XII	0.3	0.1	0.15	0.26	Both Equity and Debt are from NR corporations or NR Individuals

Source: Income Tax Act Cap 470,1997 Rates

Appendix XVIII: Regression Analysis between the Nominal Interest Rate and Corporate Tax Rate

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Corporate Tax Rate	12	.300	.425	.35208	.040534
Nominal Interest Rate	12	.196	.720	.32658	.129739
Valid N (listwise)	12				

Regression Analysis

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	Corporate Tax Rate	.	Enter

a All requested variables entered.

b Dependent Variable: Nominal Interest Rate

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.223	.050	-.045	.132653

a Predictors: (Constant), Corporate Tax Rate

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.009	1	.009	.522	.487
	Residual	.176	10	.018		
	Total	.185	11			

a Predictors: (Constant), Corporate Tax Rate

b Dependent Variable: Nominal Interest Rate

Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	7.556E-02	.350		.216	.833
	Corporate Tax Rate	.713	.987	.223	.723	.487

a Dependent Variable: Nominal Interest Rate

Correlations

		Corporate Tax Rate	Nominal Interest Rate
Corporate Tax Rate	Pearson Correlation	1	.223
	Sig. (2-tailed)	.	.487
	N	12	12
Norminal Interest Rate	Pearson Correlation	.223	1
	Sig. (2-tailed)	.487	.
	N	12	12

Appendix XIX: **Comparison between the Personal Tax Loss on Interest and Gain from Leverage for the Period 2001 – 1990**

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
PTL	12	.1000	.1500	.120833	.0257464
GFL	12	.218	.425	.31742	.074903
Valid N (listwise)	12				

Regression Analysis

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	PTL	.	Enter

a All requested variables entered.
b Dependent Variable: GFL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	-.908	.824	.806	.032974

a Predictors: (Constant), PTL

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.051	1	.051	46.760	.000
	Residual	.011	10	.001		
	Total	.062	11			

a Predictors: (Constant), PTL
b Dependent Variable: GFL

Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	.636	.048		13.366	.000
	PTL	-2.641	.386	-.908	-6.838	.000

a Dependent Variable: GFL

Correlations

		PTL	GFL
PTL	Pearson Correlation	1	-.908
	Sig. (2-tailed)	.	.000
	N	12	12
GFL	Pearson Correlation	-.908	1
	Sig. (2-tailed)	.000	.
	N	12	12

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

APPENDIX XX: Comparison between the Corporate Tax Rate (Tc) and Gain From Leverage (GFL) for the Period 2001 – 1990

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
TC	12	.3000	.4250	.352083	.0405338
GFL	12	.218	.425	.31742	.074903
Valid N (listwise)	12				

Regression Analysis

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	TC	.	Enter

a All requested variables entered.
b Dependent Variable: GFL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.931	.867	.853	.028694

a Predictors: (Constant), TC

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.053	1	.053	64.954	.000
	Residual	.008	10	.001		
	Total	.062	11			

a Predictors: (Constant), TC
b Dependent Variable: GFL

Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	-.288	.076		-3.813	.003
	TC	1.720	.213	.931	8.059	.000

a Dependent Variable: GFL

Correlations

		TC	GFL
TC	Pearson Correlation	1	.931
	Sig. (2-tailed)	.	.000
	N	12	12
GFL	Pearson Correlation	.931	1
	Sig. (2-tailed)	.000	.
	N	12	12

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

APPENDIX XXI: Regression Analysis between the difference between combined tax on Equity Income less Personal Tax on Interest Income (CPTR) and Debt Equity Ratio (DERSTAGG) – Testing Delayed Effect

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CPTR	11	.1850	.3830	.289455	.0699648
DERSTAGG	11	.134	.354	.24291	.069775
Valid N (listwise)	11				

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	CPTR	.	Enter

a All requested variables entered.
b Dependent Variable: DERSTAGG

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.890	.792	.768	.033583

a Predictors: (Constant), CPTR

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.039	1	.039	34.168	.000
	Residual	.010	9	.001		
	Total	.049	10			

a Predictors: (Constant), CPTR
b Dependent Variable: DERSTAGG

Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	.500	.045		11.084	.000
	CPTR	-.887	.152	-.890	-5.845	.000

a Dependent Variable: DERSTAGG

Correlations

CPTR	Pearson Correlation	1	-.890
	Sig. (2-tailed)	.	.000
	N	11	11
DERSTAGG	Pearson Correlation	-.890	1
	Sig. (2-tailed)	.000	.
	N	11	11

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

Appendix XXII: **Regression Analysis between the Nominal Interest Rate and the Debt Equity Ratio– Testing Delayed Effect**

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
DERSTAGG	11	.134	.354	.24291	.069775
NIR	11	.1960	.7200	.329000	.1357881
Valid N (listwise)	11				

Regression Analysis

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	NIR	.	Enter

a All requested variables entered.
b Dependent Variable: DERSTAGG

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.262	.068	-.035	.070987

a Predictors: (Constant), NIR

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.003	1	.003	.661	.437
	Residual	.045	9	.005		
	Total	.049	10			

a Predictors: (Constant), NIR
b Dependent Variable: DERSTAGG

Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	.287	.058		4.913	.001
	NIR	-.134	.165	-.262	-.813	.437

a Dependent Variable: DERSTAGG

Correlations

		NIR	DERSTAGG
NIR	Pearson Correlation	1	-.262
	Sig. (2-tailed)	.	.437
	N	11	11
DERSTAGG	Pearson Correlation	-.262	1
	Sig. (2-tailed)	.437	.
	N	11	11

Appendix XXIII: **Regression Analysis Between the Combined Effect of Corporate & Personal Tax Rate (CPTR) and Gain from Leverage**

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CPTR	12	.115	.268	.18208	.051059
GFL	12	.218	.425	.31742	.074903
Valid N (listwise)	12				

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	CPTR	.	Enter

a All requested variables entered.
b Dependent Variable: GFL

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.966	.933	.927	.020262

a Predictors: (Constant), CPTR

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.058	1	.058	140.326	.000
	Residual	.004	10	.000		
	Total	.062	11			

a Predictors: (Constant), CPTR
b Dependent Variable: GFL

Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	5.934E-02	.023		2.631	.025
	CPTR	1.417	.120	.966	11.846	.000

a Dependent Variable: GFL

Correlations

		CPTR	GFL
CPTR	Pearson Correlation	1	.966
	Sig. (2-tailed)	.	.000
	N	12	12
GFL	Pearson Correlation	.966	1
	Sig. (2-tailed)	.000	.
	N	12	12

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

Appendix XXIV: **Multivariate Regression Analysis between Debt Equity Ratio, Corporate Tax Rate, Personal Tax Rate on Debt, Personal Tax Rate on Equity and the Nominal Interest Rate**

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
NIR	12	.1960	.7200	.326583	.1297392
DER	12	.134	.354	.25167	.073118
TC	12	.300	.425	.35167	.039734
TS	12	.050	.100	.07708	.024905
TD	12	.100	.150	.12083	.025746
Valid N (listwise)	12				

Regression Analysis

Correlations

		NIR	DER	TC	TS	TD
NIR	Pearson Correlation	1	-.595	.230	.457	-.427
	Sig. (2-tailed)	.	.041	.471	.135	.166
	N	12	12	12	12	12
DER	Pearson Correlation	-.595	1	-.317	-.565	.569
	Sig. (2-tailed)	.041	.	.316	.056	.053
	N	12	12	12	12	12
TC	Pearson Correlation	.230	-.317	1	.731	-.704
	Sig. (2-tailed)	.471	.316	.	.007	.011
	N	12	12	12	12	12
TS	Pearson Correlation	.457	-.565	.731	1	-.960
	Sig. (2-tailed)	.135	.056	.007	.	.000
	N	12	12	12	12	12
TD	Pearson Correlation	-.427	.569	-.704	-.960	1
	Sig. (2-tailed)	.166	.053	.011	.000	.
	N	12	12	12	12	12

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

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

Regression Analysis

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	TD, NIR, TC, TS	.	Enter

a All requested variables entered.

b Dependent Variable: DER

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.694	.482	.185	.065998

a Predictors: (Constant), TD, NIR, TC, TS

T Value = 3.048

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.028	4	.007	1.625	.269
	Residual	.030	7	.004		
	Total	.059	11			

a Predictors: (Constant), TD, NIR, TC, TS
b Dependent Variable: DER

Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	.130	.583		.223	.830
	NIR	-.235	.175	-.417	-1.341	.222
	TC	.212	.745	.115	.284	.784
	TS	-.201	3.051	-.068	-.066	.949
	TD	1.154	2.761	.406	.418	.689

a Dependent Variable: DER

The Linear Equation: DER = 0.13 - 0.235NIR + 0.212Tc - 0.201Ts + 1.154Td

APPENDIX XXVI: Regression Analysis between the Gain from Leverage and the Debt Equity Ratio.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Gain From Leverage Rate (GFL)	12	.2180	.4250	.317417	.0749029
Debt Equity Ratio	12	.134	.354	.25167	.073118
Valid N (listwise)	12				

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	Gain From Leverage Rate (GFL)	.	Enter

a All requested variables entered.
b Dependent Variable: Debt Equity Ratio

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.473	.224	.146	.067573

a Predictors: (Constant), Gain From Leverage Rate (GFL)

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.013	1	.013	2.879	.121
	Residual	.046	10	.005		
	Total	.059	11			

a Predictors: (Constant), Gain From Leverage Rate (GFL)
b Dependent Variable: Debt Equity Ratio

Coefficients

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	.398	.089		4.498	.001
	Gain From Leverage Rate (GFL)	-.462	.272	-.473	-1.697	.121

a Dependent Variable: Debt Equity Ratio

Correlations

		Debt Equity Ratio	Gain From Leverage Rate (GFL)
Debt Equity Ratio	Pearson Correlation	1	-.473
	Sig. (2-tailed)	.	.121
	N	12	12
Gain From Leverage Rate (GFL)	Pearson Correlation	-.473	1
	Sig. (2-tailed)	.121	.
	N	12	12

Appendix XXV: **Data on Corporate Tax Rate, Personal Tax Rates on Equity and Interest Income, Nominal Interest Rates, Debt Equity Ratios, Gain From Leverage Rate (Computed using Miller's Model), after Income for Equity ((1-Tc)(1-Ts)) for the Period 2001 - 1990.**

Year	Debt Equity Ratio	Nominal Interest Rates (NIR)	Corporate Tax Rate (Tc)	Personal Tax rate (Ts)	Personal Tax Rate (personal Tax Loss-PTL) on Debt Income (Td)	Residue due to Equity Holders (1-Tc)(1-Ts)	After Tax Income to Debt Holders (1-Td)	Gain From Leverage-GFL (1-(1-Tc)(1-Ts)/(1-Td))
2001	0.35	0.300	0.300	0.05	0.15	0.665	0.850	0.218
2000	0.30	0.300	0.300	0.05	0.15	0.665	0.850	0.218
1999	0.30	0.196	0.325	0.05	0.15	0.641	0.850	0.246
1998	0.33	0.252	0.325	0.05	0.15	0.641	0.850	0.246
1997	0.21	0.271	0.350	0.05	0.15	0.618	0.850	0.274
1996	0.23	0.304	0.350	0.08	0.10	0.601	0.900	0.332
1995	0.24	0.346	0.350	0.10	0.10	0.585	0.900	0.350
1994	0.15	0.331	0.350	0.10	0.10	0.585	0.900	0.350
1993	0.21	0.309	0.350	0.10	0.10	0.585	0.900	0.350
1992	0.13	0.720	0.375	0.10	0.10	0.563	0.900	0.375
1991	0.21	0.300	0.425	0.10	0.10	0.518	0.900	0.425
1990	0.35	0.290	0.425	0.10	0.10	0.518	0.900	0.425
Sum	**3.02**	**3.92**	**4.23**	**0.93**	**1.45**	**7.18**	**10.55**	**3.81**
Mean	**0.25**	**0.33**	**0.35**	**0.08**	**0.12**	**0.60**	**0.88**	**0.32**

TABLES

Table I: List of the Companies Studied:
NSE Index Constituent Companies and Structure of Data Collected

(Figures in Kshs)

Name/Sector	Equity (Kshs)	Debt (Kshs)	Debt Equity Ratio	Interest charged (LT)	Corporate Tax Paid	Corporate Tax Proposed	Dividend Paid
GRICULTURE							
BROOKE BOND LTD							
KAKUZI							
REA VIPINGO PLANTATIONS LTD							
SASINI TEA & COFFE LTD							
OMMERCIAL & SERVICES							
AFRICAN LAKES CORPORATION PLC							
CAR & GENERAL (K) LTD							
CMC HOLDINGS LTD							
HUTCHINGS BIEMER LTD							
KENYA AIRWAYS LTD							
MARSHALLS (E.A) LTD							
NATION MEDIA GROUPPD							
TOURISM PROMOTION SERVICES LTD							
UCHUMI SUPERMARKETS LTD							
NANCE & INVESTMENT	Not Considered due their peculiar lending & borrowing characteristics						
IDUSTRIAL & ALLIED							
ATHI RIVER MINING							
B.O.C KENYA LTD							
BAMBURI CEMENT LTD							
BRITISH AMERICAN TOBACCO KENYA LTD.							
CARBACID INVESTMENTS LTD							
CROWN BERGER LTD							
DUNLOP KENYA LTD							
E.A. CABLES LTD							
E.A PORTLAND CEMENT LTD							
EAST AFRICAN BEWERIES LTD							
FIRESTONE EAST AFRICA LTD							
KENYA OIL COMPANY LTD							
MUMIAS SUGAR COMPANY LTD							
KENYA POWER & LIGHTING LTD							
TOTAL KENYA LTD							
UNGA GROUP LTD.							

LTERNATIVE INVESTMENT ARKET SEGMENT							
A. BAUMANN & COMPANY LTD							
CITY TRUST LTD							
E.A. PACKAGING LTD							
EAAGADS LTD							
EXPRESS LTD							
WILLIAMSON TEA KENYA LTD							
KAPCHORUA TEA COMPANY LTD							
KENYA ORCHARDS LTD							
LIMURU TEA COMPANY LTD							
STANDARD NEWSPAPER GROUP							

Period of Study Ten (10) years: 2001,2000,1999,1998,1997,1996,1995,1994,1993,1992.

Interest and Tax Rates

Table II: Commercial Banks: Nominal Interest Rates on Loan and Advances (for Loans less than Three Years).

	Year	Nominal Rate (%).	Inflation Rate (%).	Real Rate (%).
1.	1990			
2.	1991	29.00	19.6	9.4
3.	1992	30.00	27.5	2.5
4.	1993	72.00	46.0	26.0
5.	1994	30.93	28.8	2.1
6.	1995	33.14		
7.	1996	34.60		
8.	1997	30.43	11.2	19.2
9.	1998	27.13	6.6	20.50
10.	1999	25.20	3.5	21.7
11.	2000	19.60	6.2	13.40
12.	2001			

Source: Economic Survey; 1992,1995, 2001.
NB: Interest rates considered are for Loans and advances that are for less than 3 years.

Table III: Corporate Tax Rates for Resident and Non- Resident Firms (1987-2002).

	Year	Corporate Tax Rate (%).			Year	Corporate Tax Rate (%).	
		Resident	Non- Resident			Resident	Non- Resident
1	1987	45.0	52.5	9	1995*	**35**	42.5
2	1988	45.0	52.5	10	1996	35	42.5
3	1989	45.0	52.5	11	1997	35	42.5
4	1990	42.5	50.0	12	1998	32.5	40.0
5	1991	42.5	50.0	13	1999	32.5	40.0
6	1992	37.5	45.0	14	2000	30.0	37.5
7	1993	35.0	42.5	15	2001	30.0	37.5
8	1994	35.0	42.5	16	2002	30.0	37.5

Source: Income Tax Department
The rates do not incorporate the draught levy of 2.5 percent introduced for the year (1995).

Table IV: **Personal Tax Rates on Interest & Dividends: Withholding Tax Rates (1987-2001).**

	Year	Interest							Dividend		Comments
		Qualifying (%)				Interest Other than Qualifying (%)			Qualifying (%)	Dividend other than Qualifying (%)	
		Bearer Instrume	Govt. Bearer Bonds	Housing Bonds	General	Bearer Instrume	Housing Bonds	General			
1	1987										
2	1988										
3	1989										
4	1990										
5	1991										
6	1992										
7	1993										
8	1994										
9	1995								10		
10	1996	10				10		10	7.5		
11	1997	20		10	15	20		15	5	10	Qualifying interest for general rate took effect from 1-07-1996
12	1998	25	15*	10	15	20		15	5	10	Govt. bond tax rate is 15%. This rate is applicable to bonds that are of least 2 yrs. Effective date 11-06-1998.
13	1999	25*	15*	10	15	20		15	5	10	-do-
14	2000	25*	15*	10	15	20		15	5	10	-do-
15	2001	25*	15*	10	15	20		15	5	10	-do-

Source: Income Tax Department
Income Tax Act for the respective years (also Finance Acts for the respective Years)
NB: The rates include the standard withholding tax rates for each category of investors.

Table V: Classes of Taxpayers and Rates of Withholding Tax
(This is to be completed)

	Interest & Dividend	Classes of Taxpayer Who Qualifies	Sources of Income	Rates Applied			
				Bearer Instruments		Housing Bonds	General
				Govt	Non-Govt		
	Qualifying Interest	Resident Individual	Applicable to interest payable by banks, financial institutions, building societies or CBK	*15*	*25*	*10*	*15*
	Other Interest	Non-Resident Individuals	Payable from other sources other than those listed above	15	25	25*	15
		Corporate	Payable from other sources other than those listed above	15	25	25*	15
	Qualifying Dividend	Resident Individuals					5
	Dividend other than Qualifying dividend	Residents					10
		Non-Resident					10

Source: Income Tax Department Income Tax Act for the year of Income 1997

Table VI: Grouping of Equity Holders by Company for the Month of December 2002.

(i) Equity Ownership

	Company	Period End	Due Date	Receipt date	Foreign Investors holding	%	Local Individual Investors holding	%	Local Institutional Investors holding	%	East Africa Individual Investors holding	%	East Africa Institutional Investors holding	% Holding	Total holding
1	A.Baumann & Co.Ltd Ord. 5.00	31-Jan-03	13-Feb-03	7-Feb-03	2,040,559.00	53.14	826,439.00	21.52	966,518.00	25.17	6,550.00	0.17	0.00	0.000	**3,840,066.00**
2	African Lakes Corporation PLC. Ord. 5.00	31-Jan-03	13-Feb-03	12-Feb-03	498,359.00	18.77	316,771.00	11.93	1,839,856.00	69.30	2,727.00	0.00	68,259.00		**2,725,972.00**
3	Athi River Mining Ord. 5.00	31-Jan-03	13-Feb-03	5-Feb-03	3,861,200.00	4.15	60,280,534.00	64.82	0.00	0.00	0.00	0.00	0.00	0.000	**64,141,734.00**
4	B.O.C Kenya Ltd Ord. 5.00	31-Jan-03	13-Feb-03	5-Feb-03	12,912,170.00	66.13	2,517,210.00	12.88	4,087,059.00	20.93	9,007.00	0.04	0.00	0.000	**19,525,446.00**
5	Bamburi Cement Ltd Ord 5.00	31-Jan-03	13-Feb-03	5-Feb-03	266,068,861.00	73.31	17,526,957.00	4.83	79,357,805.00	21.86	5,652.00	0.00	0.00	0.000	**362,959,275.00**
6	Barclays Bank Ltd Ord. 10.00	31-Jan-03	13-Feb-03	5-Feb-03	127,372,139.00	68.78	41,135,462.00	22.22	16,658,399.00	9.00	0.00	0.00	0.00	0.000	**185,166,000.00**
7	British American Tobacco Kenya Ltd Ord. 10.00	31-Jan-03	13-Feb-03	5-Feb-03	60,036,110.00	60.03	9,274,101.00	9.28	30,638,591.00	30.63	34,554.00	0.03	16,644.00	0.010	**100,000,000.00**
8	Brooke Bond Ltd Ord. 10.00	31-Jan-03	13-Feb-03	5-Feb-03	43,136,171.00	88.26	1,728,545.00	3.54	0.00	0.00	0.00	0.00	0.00	0.000	**44,864,716.00**
9	C.F.C Bank Ltd ord.5.00	31-Jan-03	13-Feb-03	3-Feb-03	477,402.00	0.40	9,271,741.00	7.73	110,155,767.00	91.80	95,040.00	0.08	50.00	0.000	**120,000,000.00**
10	Car & General (K) Ltd Ord. 5.00	31-Jan-03	13-Feb-03	13-Feb-03	361,010.00	1.62	2,653,673.00	11.91	19,185,381.00	86.11	49,064.00	0.22	30,488.00	0.136	**22,279,616.00**
11	Carbacid Investments Ltd Ord. 5.0	31-Jan-03	13-Feb-03	5-Feb-03	517,273.00	4.56	6,471,892.00	57.13	4,334,323.00	38.24	3,267.00	0.03	0.00	0.000	**11,326,755.00**
12	City Trust Ltd Ord 5.00	31-Jan-03	13-Feb-03	12-Feb-03	276,213.00		971,335.00	23.32	2,891,939.00	69.42	23,253.00		3,306.00		**4,166,046.00**
13	CMC Holdings Ltd Ord. 5.00	31-Jan-03	13-Feb-03	14-Feb-03	397,962.00	1.61	6,543,899.00	26.95	17,059,555.00	70.28	273,144.00	1.14	0.00	0.000	**24,274,560.00**
14	Crown Berger Ltd Ord. 5.00	31-Jan-03	13-Feb-03	5-Feb-03	2,940,500.00	13.63	6,641,181.00	30.79	11,988,319.00	55.58	0.00	0.00	0.00	0.000	**21,570,000.00**
15	Diamond Trust Bank Kenya Ltd Ord. 4.00	31-Jan-03	13-Feb-03	10-Feb-03	38,815,971.00	48.83	19,992,695.00	25.15	12,385,321.00	15.58	8,194,525.00	10.31	111,488.00	0.140	**79,500,000.00**
16	Dunlop Kenya Ord. 5.00	31-Jan-03	13-Feb-03	5-Feb-03	3,800,900.00	38.01	2,255,315.00	22.55	3,938,785.00	39.41	5,000.00	0.05	0.00	0.000	**10,000,000.00**

17	E.A.Cables Ltd Ord 5.00	31-Jan-03	13-Feb-03	5-Feb-03	7,196.00	0.05	3,125,161.00	15.44	17,116,378.00	84.53	1,265.00	0.01	0.00	0.000	**20,250,000.00**
18	E. A. Packaging Ltd Ord. 5.00	31-Jan-03	13-Feb-03	5-Feb-03	5,764,385.00	75.06	769,925.00	10.03	1,144,276.00	14.90	1,394.00	0.02	0.00	0.000	7,679,980.00
19	E. A. Portland Cement Ltd Ord. 5.00	31-Jan-03	13-Feb-03												**0.00**
20	Eaagads Ltd Ord. 1.25	31-Jan-03	13-Feb-03	12-Feb-03	1,782,000.00	22.17	634,751.00	7.90	5,622,499.00	69.94	0.00	0.00	0.00	0.000	**8,039,250.00**
21	East African Breweries Ltd Ord. 10.00	31-Jan-03	13-Feb-03	5-Feb-03	65,277,799.00	59.88	16,971,457.00	15.55	25,822,450.00	23.70	667,255.00	0.62	291,291.00	0.240	**109,030,252.00**
22	Express Ltd Ord 5.00	31-Jan-03	13-Feb-03	5-Feb-03	3,000.00	0.06	1,665,684.00	34.71	3,131,116.00	65.24	200.00	0.00	0.00	0.000	**4,800,000.00**
23	Firestone East Africa Ltd Ord. 5.00	31-Jan-03	13-Feb-03	5-Feb-03	48,147,456.00	17.30	12,348,503.00	4.44	217,829,934.00	78.27	16,500.00	0.01			**278,342,393.00**
24	Williamson Tea Kenya Ltd Ord. 5.00	31-Jan-03	13-Feb-03												**0.00**
25	Housing Finance Co Ltd Ord. 5.00	31-Jan-03	13-Feb-03	5-Jan-03	35,069,041.00	30.49	40,102,232.00	34.87	39,819,227.00	34.60	9,500.00	0.01	0.00	0.000	**115,000,000.00**
26	Hutchings Biemer Ltd Ord. 5.00	31-Jan-03	13-Feb-03												**0.00**
27	I.C.D.C Investments Co Ltd Ord. 5.00	31-Jan-03	13-Feb-03												**0.00**
28	Jubilee Insurance Co. Ltd Ord. 5.00	31-Jan-03	13-Feb-03												**0.00**
29	Kakuzi Ord.5.00	31-Jan-03	13-Feb-03	5-Feb-03	6,238,040.00	31.82	3,075,281.00	15.69	10,188,668.00	51.99	95,919.00	0.49	2,091.00	0.010	**19,599,999.00**
30	Kapchorua Tea Co. Ltd Ord. 5.00	31-Jan-03	13-Feb-03												**0.00**
31	Kenya Airways Ltd Ord. 5.00	31-Jan-03	13-Feb-03	5-Feb-03	137,257,958.00	29.74	143,481,835.00	31.09	180,173,528.00	39.03	120,414.00	0.02	581,748.00	0.012	**461,615,483.00**
32	Kenya Commercial Bank Ltd Ord. 10.00	31-Jan-03	13-Feb-03	19-Feb-03	4,598,577.00	3.07	59,644,830.00	39.87	85,353,927.00	57.06	2,666.00	0.00	0.00	0.000	**149,600,000.00**
33	Kenya Oil Co Ltd Ord. 5.00	31-Jan-03	13-Feb-03	5-Feb-03	98,570.00	0.98	1,155,596.00	11.46	8,812,274.00	87.43	8,716.00	0.09	4,456.00	0.040	**10,079,612.00**
34	Kenya Orchards Ltd Ord. 5.00	31-Jan-03	13-Feb-03	5-Feb-03	4,143.00	0.06	352,457.00	5.32	6,270,421.00	94.60	1,200.00	0.02	0.00	0.000	**6,628,221.00**
35	Kenya Power & Lighting Ltd Ord. 20.00	31-Jan-03	13-Feb-03	6-Feb-03	2,376,341.00	3.00	12,419,893.00	15.70	64,126,836.00	81.04	149,058.00	0.19	55,872.00	0.070	**79,128,000.00**
36	Limuru Tea Co. Ltd Ord. 20.00	31-Jan-03	13-Feb-03	5-Feb-03	4,023.00	0.67	475,086.00	79.18	0.00	0.00	0.00	0.00	0.00	0.000	**479,109.00**
37	Marshalls (E.A.) Ltd Ord. 5.00	31-Jan-03	13-Feb-03	5-Feb-03	497,110.00	3.47	1,519,909.00	10.57	12,338,719.00	85.71	1,575.00	0.00	35,793.00	0.250	**14,393,106.00**
38	Nation Media Group	31-Jan-03	13-Feb-03												**0.00**

	Ord. 5.00														
39	National Bank of Kenya Ltd Ord. 5.00	31-Jan-03	13-Feb-03												0.00
40	National Industrial Credit Ltd Ord. 5.00	31-Jan-03	13-Feb-03	5-Feb-03	576,155.00	0.70	27,320,590.00	33.14	54,473,196.00	66.09	44,610.00	0.05	0.00	0.000	**82,414,551.00**
41	Pan Africa Insurance Ltd Ord. 5.00	31-Jan-03	13-Feb-03	6-Mar-03	320,615.00	0.67	4,775,471.00	9.95	35,282,244.00	73.50	186,555.00	0.39	1,608.00	0.003	**40,566,493.00**
42	Rea Vipingo Plantations Ltd Ord. 5.00	31-Jan-03	13-Feb-03	5-Feb-03	34,819,149.00	58.03	13,954,881.00	23.27	8,306,868.00	13.84	79,816.00	0.13	2,839,286.00	4.730	**60,000,000.00**
43	Sasini Tea & Coffee Ltd Ord 5.00	31-Jan-03	13-Feb-03	14-Feb-03	187,801.00	0.50	4,041,861.00	10.63	33,773,963.00	88.86	5,625.00	0.01	0.00	0.000	**38,009,250.00**
44	Mumias Sugar Company Ltd.	31-Jan-03	13-Feb-03	7-Feb-03	103,057,600.00	20.21	167,770,008.00	32.90	225,642,979.00	44.24	29,413.00	0.01	13,500,000.00	2.650	**510,000,000.00**
45	Standard Chartered Bank Ltd Ord. 5.00	31-Jan-03	13-Feb-03	5-Feb-03	183,764,989.00	74.32	42,225,013.00	17.07	21,253,462.00	8.60	0.00	0.00	0.00	0.000	**247,243,464.00**
46	Standard Newspapers Group Ord. 5.00	31-Jan-03	13-Feb-03												**0.00**
47	Total Kenya Ltd Ord. 5.00	31-Jan-03	13-Feb-03	12-Feb-03	137,060,020.00	78.29	11,014,653.00	6.29	26,990,033.00	15.42	0.00	0.00	0.00	0.000	**175,064,706.00**
48	Tourism Promotion Services Ltd Ord. 5.00	31-Jan-03	13-Feb-03	5-Feb-03	42,473.00	0.11	7,875,870.00	20.36	30,752,514.00	79.51	8,143.00	0.02	0.00	0.000	**38,679,000.00**
49	Uchumi Supermarket Ltd Ord. 5.0	31-Jan-03	13-Feb-03												**0.00**
50	Unga Group Ltd Ord. 5.00	31-Jan-03	13-Feb-03	4-Feb-03	1,101,250.00	1.75	20,551,727.00	32.57	41,255,180.00	65.39	97,304.00	0.15	85,267.00	0.140	**63,090,728000**

Source: Nairobi Stock Exchange

Table VII: Computed Gain from Leverage and the Preferred Sources of Capital (Debt or Equity).

Classes of Tax Groups	Resident Corporate Tax Rate (i)	Personal Tax Rate on Equity Income (ii)	Personal WT Rate Debt Income (iii)	Gain From Leverage (iv)	Sources of Finance (v)
I	0.30	0.05	-	0.34	Equity from resident individuals & debt from resident Financial Institutions
II	0.30	0.05	0.15	0.22	Equity from resident individuals & debt from resident individuals
III	0.30	0.05	0.15	0.22	Equity from resident individuals & debt from resident corporations other than financial institutions.
IV	0.30	0.05	0.15	0.22	Equity from resident individuals & debt from NR Individuals
V	0.30	0.05	0.15	0.22	Equity from resident individuals & debt from NR Corporations
VI	0.30	0.10	-	0.37	Equity from resident corporations & debt from resident Financial Institutions
VII	0.30	0.10	0.15	0.26	Equity from resident corporations & debt from resident individuals?
VIII	0.30	0.10	0.15	0.26	Equity from resident corporations & debt from resident corporations other than financial institutions.
IX	0.30	0.10	0.15	0.26	Equity from resident corporations & debt from NR Individuals
X	0.30	0.10	0.15	0.26	Equity from resident corporations & debt from NR Corporations
XI	0.30	0.10	-	0.37	Equity from NR corporations or NR Individuals & debt from Financial Institutions
XII	0.30	0.10	15	0.26	Equity and Debt from NR corporations or NR Individuals

Source: Income Tax Act Cap 470: 1997 (Corporate and Withholding Tax Rates on applicable to the Year of Income 1997 to Interest & Equity Incomes)

Charts

Chart I:	Corporate Tax Rate & Debt Equity Ratio
Chart II:	Relationship Between Combined Effect of Corporate & Personal Tax Rate and Debt-Equity Ratio
Chart III:	Relationship Between Nominal Interest Rate and Debt-Equity Ratio
Chart IV:	Nominal Interest Rate & Corporate Tax Rate

Chart I: Corporate Tax Rate & Debt Equity Ratio

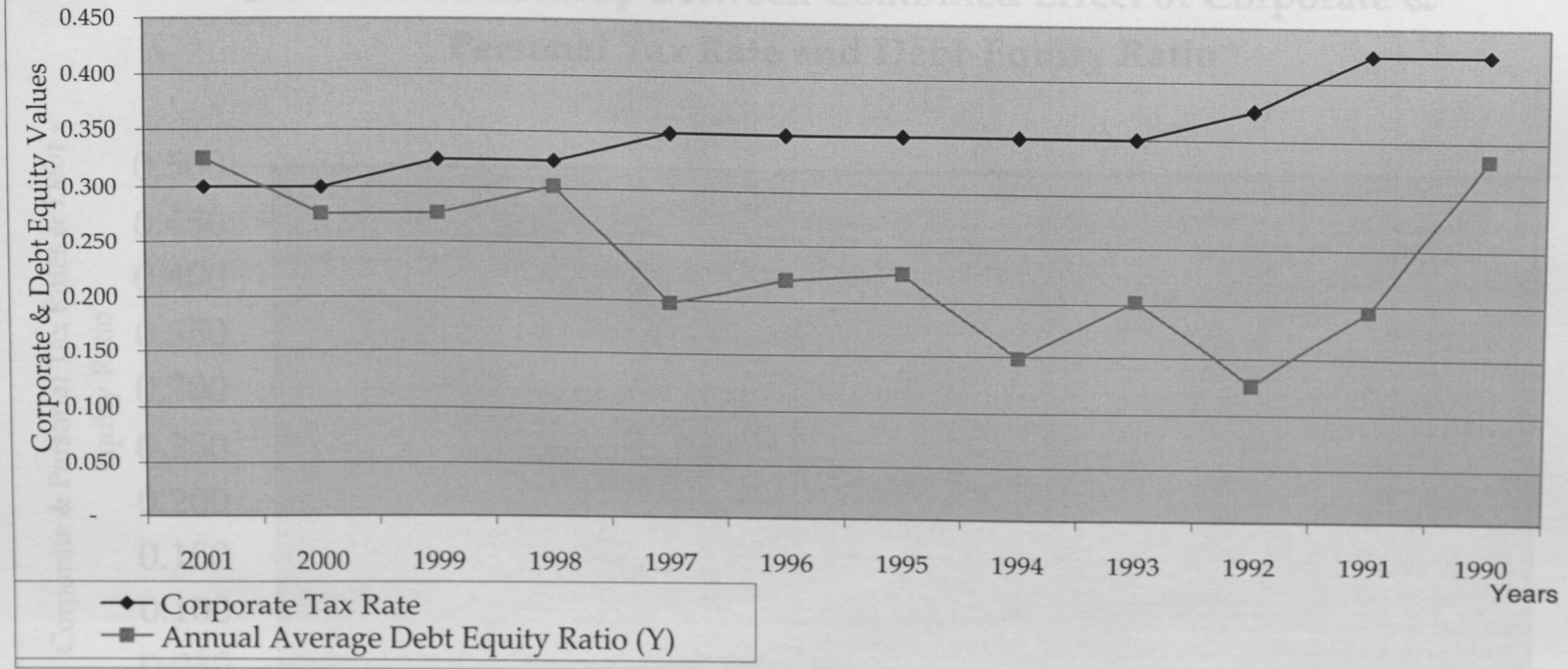


Chart II: Relationship Between Combined Effect of Corporate & Personal Tax Rate and Debt-Equity Ratio

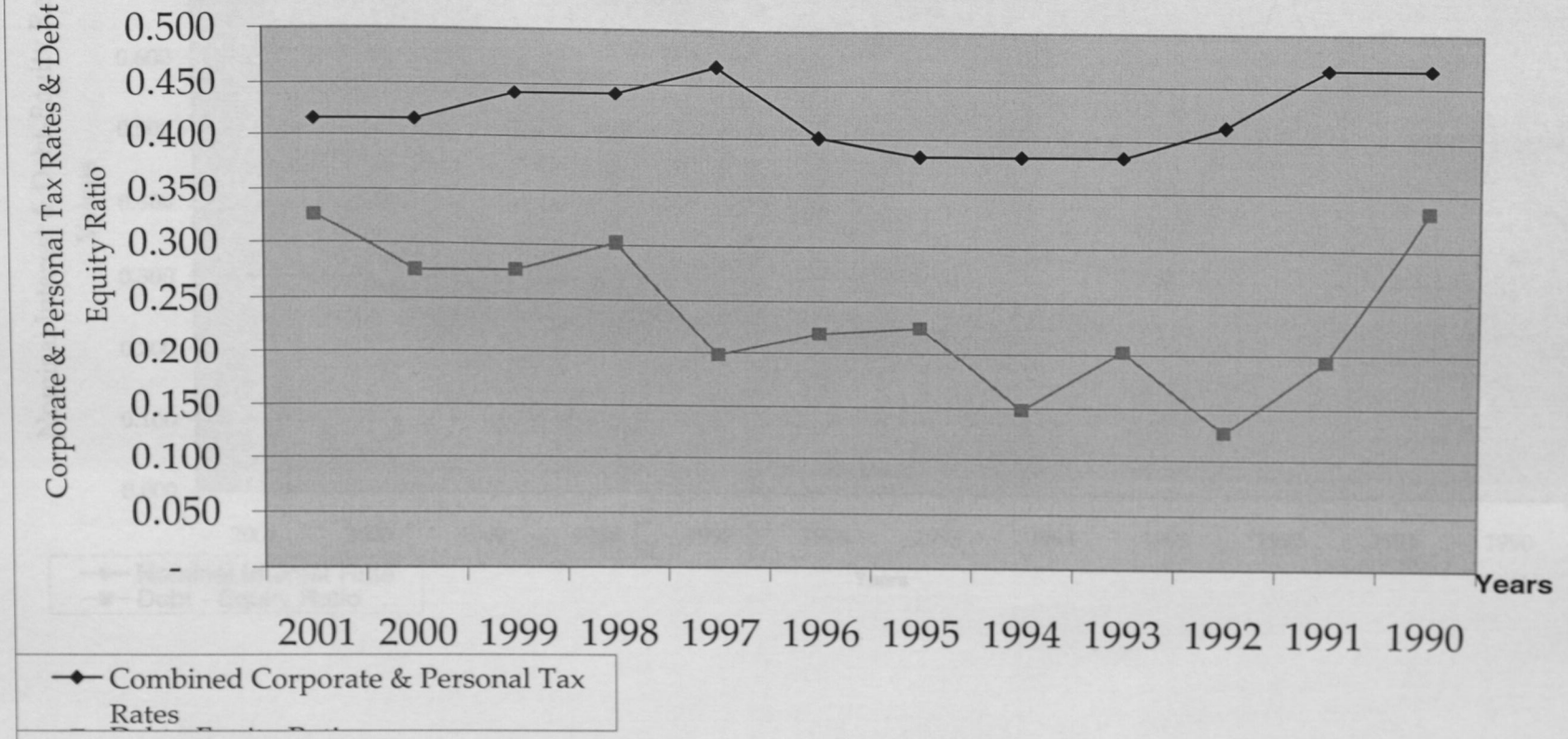


Chart III: Relationship Between Nominal Interest Rate and Debt-Equity Ratio

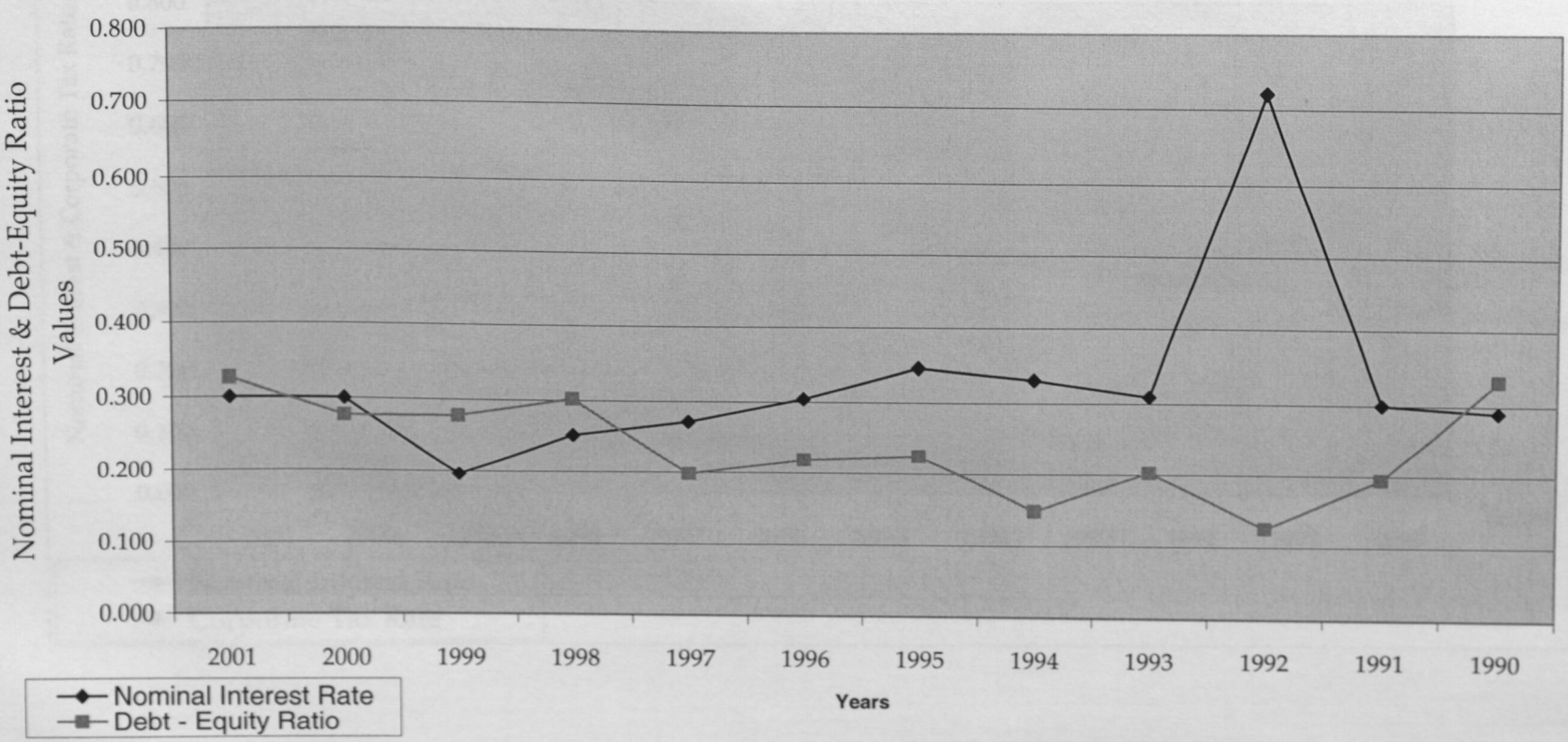


Chart IV: Nominal Interest Rate and Corporate Tax Rate

