"A STUDY OF GEARING LEVELS AND COMPANY SIZE OF FIRMS QUOTED AT NAIROBI STOCK EXCHANGE"

By

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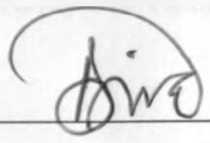
DECLARATION

I declare that this project is my original work and has not been presented for a degree in any other University.

Signed  Date 2/12/05

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This project has been submitted for examination with my approval as University Supervisor.

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DEDICATION

To my wife Pamella and my son Ryan.

LIST OF ABBREVIATIONS

MM – Modigiliani and Miller.

GDP- Gross domestic product.

NSE- Nairobi Stock Exchange.

G7 Countries – United States, Japan, Germany, France, Italy, United Kingdom and Canada.

EAC- East Africa Community.

WACC- Weighted average cost of capital.

AIMS- Alternative investment markets.

GSK- Glaxosmithklinebeecham.

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ABSTRACT

The gearing level of firms is influenced by diverse factors. However the factors vary amongst firms and industries. Different researchers, for example Kamere (1987) and Omondi (1996) obtained differing conclusions on the important determinants of gearing level of firms.

This study had the objective of determining the gearing level of companies quoted at the Nairobi Stock Exchange as well as establishing whether there is a correlation between gearing levels and company size of firms quoted at the Nairobi Stock Exchange. The factors used to measure size of firms for the study period were market capitalization, net assets and turnover.

Firms were ranked in pecking order based on their market capitalization and classified into three groups of large firms, medium firms and small firms and their respective aggregate gearing computed. The results of company size and gearing were plotted on graph and also regressed for the entire period. This was also done at industry level. A similar process was applied to all the firms using net assets and turnover as measures of size.

The study found out that size, as measured by net assets is positively correlated to gearing at both market and industry classification of firms into large, medium and small with co-efficient of determination being at 30%, 40% and 30%; and 22%, 55% and 11% respectively. The second finding was that size, as measured by turnover is positively correlated with gearing at market classification of assets into large, medium and small, with co efficient of determination being at 30%, 30% and 50% respectively.

However, at industrial classification, the correlation is insignificant. Lastly, size, as measured by market capitalization is positively, but insignificantly correlated to gearing levels both at market and industry classification.

The graphical analysis produced mixed results and is tabulated elsewhere in this text. It is also important to consider that the period under study had two interest rate regimes. The period up to 2002 had high interest rates while the period after 2002 had low interest rates. The graphical analysis depict that after stabilization of the interest rates in the year 2003, large companies recorded higher gearing at market classification irrespective of the determinant of size.

All in all, the results from the various tests indicate that there are disparities in the correlation between gearing level and size of firms. Possible explanations for this includes the different interest rates regimes and small number of firms under study, which is dictated by the number of companies listed at the Nairobi Stock Exchange.

CHAPTER ONE

INTRODUCTION

1.1 Background.

Corporate Financing problems, described by Balzac nearly 160 years ago, are just as topical now as they were then. Companies therefore need to adopt a capital structure that enables them to derive optimum value to its owners. In this regard, the gearing of a company requires to be done skillfully, so as to enhance returns to the shareholders.

Capital structure is the relationship of long-term capital, that is, out of the total capital, what ratio is debt and what ratio is equity. Debt can be in form of bank overdrafts, bank loans, debentures or loan stock. Equity includes paid up share capital, share premium, reserves and retained earnings (Scott, 1972).

Gearing is an expression of the relationship between the amount of finance provided by equity shareholders and the amount provided by lenders. Since preference shareholders receive a fixed return, they will be treated in the same way as lenders (although, in theory, preference shareholders are only entitled to their dividends out of profits, in practice, companies which do not pay preference dividends are in difficult circumstances). In this regard, gearing is computed as a ratio of long-term finance and preference shares to ordinarily shares and reserves (Delbreil et al, 1993).

Moreover, given the risk that a company may become insolvent, credit institutions will grant additional external funds only if it can offer guarantees, or it can maintain its net equity at a level sufficient to provide a safety margin (Delbreil et al, 1993).

The need to conduct the research by company size derives from the consideration that a company 's access to money and capital markets depends a great deal on its size.
It is also often asserted that, in view of institutional factors, small and medium sized enterprises are disadvantaged by the financing system and must consequently bear higher financial costs.

There are many theories that define what motivates companies to adapt a given capital structure. They include the Traditional view (net income view), Modigiliani and Miller (1958) theory, pecking order theory, and behavioral theory of capital structure. However, there is no conventional theory that claims to address the subject conclusively (Lumby, 1991). Capital structure of companies tends to be influenced by size, attitude of lenders towards the company, management strategy and company growth (Weston and Copeland, 1992).

Commercial banks and other financial institutions on the other hand grant credit facilities to companies based on; collateral offered to secure credit, the companies past present and future cash flows, size of the company, profitability of the company, quality of the management and the nature and duration of the bank relationship (Delbreil, 1993).

Companies with large number of fixed assets are in a position to grant creditors part of the assets as collateral and hence are likely to support more loans than companies with a small number of assets. A company with a large number of assets is likely to be a big company and hence we can deduce that big companies are likely to benefit all the more from higher gearing as their asset portfolio allows them to cover their commitments.
It is also argued that bigger companies are likely to diversify than smaller companies, thereby reducing the likelihood of falling into trouble (the probability of bankruptcy being smaller, it can take on more debt) (Delbreil, 1993).

Similarly, big companies with superior brands like coca-cola are likely to be granted credit facilities on favorable terms than small companies with inferior brands.

This in the affirmative with the preceding paragraph, and hence big companies can support more credit facilities than small companies, and therefore big companies are likely to be more geared than small companies (Delbreil et al, 1993).

1.2 Statement of the Problem.

As companies expand, they find themselves in need of more funds to finance increased operations and to benefit from interest on tax being deductible (MM,1958). The appetite for more funds in addition to big companies being able to negotiate for concessionary interest rates will lead to more use of debt, and hence higher gearing (Pandey, 2000). This therefore implies that big companies are likely to be more geared than small companies.

Studies undertaken elsewhere are not conclusive on the relationship between debt and company size. On the basis of sample of listed companies in the G7 countries, Rajan and Zingales (1995) found that debt of companies increases with size, except in Germany. They explained their result by the fact that the bigger the company, the more it can diversify, thereby reducing the likelihood of its finding itself in difficulty. Germany's negative relationship between size and debt is not explained by Rajan and Zingales (1995).

Studies undertaken in Kenya in different periods and using different variables to represent company size have had mixed results. Kamere (1987), who used average book value to represent company size, and covering the period 1981-1985 found that the correlation between debt and company size, was rather low. Omondi (1996), in his study covering the period 1987-1994, using turnover to represent size, found that size, is not correlated with capital structure at all, whether sectoral or combined.

It is important to note that the two studies used different variables to represent size and hence the findings may not be consistent. Use of asset book values to determine size will lead to different results, as firms procure debt based on their current state- market value, as perceived by creditors.

Similarly, some firms have high turnover but register low profitability due to operating inefficiencies. Use of turnover will therefore lead to equally different findings.

Market capitalization makes use of prices allocated to stocks at the stock exchange as perceived by investors. Where the stocks are wrongly priced, the stock market corrects itself as has been occassionally witnessed at Nairobi Stock Exchange. This phenomenon is best depicted in an efficient market. The best estimate of a firm' s size in an efficient market can therefore be determined by use of market capitalization.

This study will therefore determine the gearing levels of companies quoted at the Nairobi Stock Exchange as well as establishing the relationship between gearing levels and the size of the quoted companies.

1.3 Objectives of the Study.

1. To determine Gearing levels of companies quoted at the Nairobi Stock Exchange.

2.To determine the relationship between Gearing levels and size of companies quoted at the Nairobi Stock Exchange for the period 1998-2004.

1.4 Importance of the Study.

This study will be useful to the following:

Investors: The findings will disclose the average leverage levels of companies of similar size, probably in the same industry. This will be of interest to investors, as they will know whether or not their investments are safe. The findings of this study will provide that information as well as enable investors to know which companies to invest their funds.

Managers: Managers are bestowed with a fiduciary role by the shareholders. The findings will enable the managers know leverage levels of other companies of similar size and especially the market leaders and hence the best mix of debt and equity to finance the company's assets so as to obtain the optimum return to shareholders at acceptable risk level.

Auditors: Auditors are expected to examine the financial transactions and financial statements of companies and express their opinion on whether or not they reflect the true position of affairs of a company at a given date. The results of this study therefore provide Auditors with further information regarding leverage levels of other companies of similar size in the same industry and hence advise the management on the company ' s current and recommended leverage level.

Commercial banks: Commercial banks give companies several credit facilities such as term loans, asset financing, overdrafts, letters of credit, guarantees, and discount facilities. The banks are also interested in having an indication of leverage levels of a company especially in relation to leverage levels of other companies of similar size in the same industry.

Creditors: Creditors provide companies with goods and services on credit. They are always interested to know the leverage level of a company before providing their credit. Where a company is almost insolvent, they will withhold their credit, while where a company is highly liquid, will continue providing credit.

Academicians: The findings may motivate other researchers to do further research in other countries, undertake the same research in subsequent period or explore the topic further.

Financial Analysts: By studying the findings of this research, analysts will be able to obtain accurate information on comparability of leverage levels of companies of similar size and in the same industry and hence will be in a better position to advise investors on which companies to invest in, without the risk of recommending companies with uncertain future.

CHAPTER TWO

LITERATURE REVIEW

2.1 The Nature of Corporate Financing.

Finance managers are always faced with a situation where they have to decide how to raise capital for the firm to finance its activities. The options available are always whether to finance firms using debt or equity. The choice might also entail a mixture of debt and equity. Debt finance is cheaper because interest expense is tax deductible. However, use of too much debt might expose a firm to too much fixed charges in form of interest, which might lead to bankruptcy. On the other hand, reliance on equity finance will lead to loss of opportunity to increase the value of the firm which debt would have provided. The ultimate decision will be that mix of debt and equity that will lead to maximization of shareholders wealth (Pandey, 2000).

Financial structure is the relationship of all sources of financing in a firm, that is short, medium and long term. The following are the factors that influence financial structure of a firm (Pandey, 2000).

Growth and stability of sales- where growth rates are high, equity is likely to be cheap because of the attractiveness of the company. On the other hand, the cost of debt finance can easily be sustained and the gearing effect will maximize the gain for equity. If growth is stable; the ability to sustain high gearing levels increases.

Competitive structures of the industry- sales are only one factor in determining profits. Another is the degree of competition and the profit margins in the industry. High competition compels firms to reduce profit margins and loose some market share, which leads to lower profitability. The reverse works in their favor.

Asset structure- where the firm's asset structure largely consists of fixed assets, then there will be a tendency to use long-term finance. If there is an emphasis on short-term assets for example in retailing, then short-term financing will be used.

Management attitude – towards control and risk. For quoted companies, sale of shares is attractive, with access to capital markets, less risk, and control being irrelevant. For unquoted smaller companies, the issue of shares is often so as to preserve control and avoid dilution of equity. Risk averse decision makers will encourage more of equity while risk seekers will encourage more of debt.

Lender attitudes – the attitudes of lenders to the company and its financial structure dictate how much and at what cost the company can borrow. Where the lenders have good attitude towards a firm, they are likely to offer favorable interest rates to the borrowing firm, leading to the firm having access to long term funds in form of debt.

Company size- in general terms, large companies have easy access to both short term and long term credit facilities at a lower cost than small companies. This is due to the fact that lenders consider large firms to be more stable and less risky.

It is therefore imperative that financing decisions should be approached carefully with skill, as it determines the value of the company, its growth and its profitability among others.

2.2 Alternative Sources of Financing.

There are basically two sources of financing namely debt capital and equity capital (Butt, 1979). Debt capital includes bank loans, debentures, and loan stock. Debentures are the more common form of long term debt financing. A debenture is issued to show that a lender has advanced money to a company.

The debenture deed will show the interest rate and maturity date. They may be secured or unsecured, redeemable or perpetual and convertible or nonconvertible debentures.

Loan stock is borrowed money consolidated into one mass for the sake of convenience. An advantage of loan stock over debenture is that the former can be sold in small units while the later cannot be sold in units; one has to sell the whole amount of the debenture because it is for a specific amount (Ross, 1978).

The other source of financing is equity capital, which comprises of ordinary shares, preference shares, reserves, share premium, and retained earnings. Ordinary shares are the most common and comprise that part of capital contributed by the owners. Preference shares are more like debentures in that they entitle the owners to fixed interest payments and they have to be paid before ordinary shares are paid. Share premium arises where either ordinary shares or preference shares are sold at a price in excess of their par value. Reserves are of various forms and are created at the discretion of the management, and can be revenue, capital, redemption, capital reserves etc. They are included in the owner ` s equity (Ross, 1978).

2.3 Debt as a Form of Financing.

2.3.1 *Why Use Debt?*

The tax shield on interest makes debt a cheaper option as compared to equity finance. It therefore follows that if firms are attempting to minimize their cost of financing, it would seem on first sight that they should go for as high gearing as possible. This approach, however, ignores the effect of gearing on equity holders. As gearing increases, earnings available to equity holders become increasingly variable (risky). To compensate themselves for this risk, equity holders will ask for higher returns (Merret and Sykes, 1973). This increase in the cost of equity could well cancel the benefit of cheaper debt.

This balance between the cost of debt, equity and the weighted average cost of capital has been the subject of much academic investigations (Merret and Sykes, 1973).

When investing into a business an investor faces two types of risk. Business or operating risk, which is the variability of earnings before interest and tax associated with the industrial sector in which a business operates. For example, an oil-prospecting venture would carry more business risk than a property company. Financial risk on the other hand is the additional risk introduced by the use of gearing.

2.3.2 *Benefits of Financing a Firm Using Debt.*

Merret and Sykes (1973) observe that there are benefits associated with debt financing. If a firm maintains its gross income in real terms under inflationary conditions, the real income available to equity shareholders will adjust itself upwards as the burden of servicing debt capital necessarily declines (Merret and Sykes, 1973). Therefore, the company as a holder of debt will benefit at the expense of creditors. This will be true especially if inflation continues for a long time and then, either the interest rates will rise if additional debt is issued or the availability of debt capital.

Debt finance enables a company to invest into a project and realize returns, while debt servicing takes a longer period, and in fact the repayment arrangements may be such that there is a grace period while the principal repayments may be quarterly or semi- annually. The firm therefore enjoys the benefit of time value of money.

2.3.3 *Problems Associated With High-level Gearing.*

The M&M (1963) position implies that companies should take gearing to a maximum to obtain the largest tax shield on debt possible and therefore maximize the wealth of their investors. A brief examination of company balance sheets would reveal that this does not happen in reality. Other problems discourage companies from taking on high levels of gearing. These problems are associated with bankruptcy and agency costs. For bankruptcy costs, as firms take on high levels of gearing, the chances of default on repayment, and hence bankruptcy, increase.

Investors will be concerned over this possibility that this concern will result in a fall in the value of a company's securities, with a corresponding increase in the firm's cost of funds.

To optimize capital structure, financial managers must therefore not increase gearing beyond the point where the cost of investor fears over bankruptcy; outweigh the benefits gained from the increased tax shield on debt. It is not bankruptcy in itself that is the problem, but the costs that accompany it. These costs may be categorized as either direct costs of bankruptcy or indirect costs of bankruptcy. In the case of direct costs of bankruptcy, where a firm is liquidated, it is well known that its assets are usually sold at less than their going concern value. Liquidation costs, redundancy costs and distress prices for assets due to thin markets can all lead to assets realizing less than their economic value. These costs mean that at any point, the company's going concern value will be greater than its wind-up value. This loss in value will often be borne by the debt holders in the event of bankruptcy. To compensate for this, investors will ask for high rates of return from highly geared companies and thus drive down the prices of their securities (Pandey, 2001).

As for the indirect costs of bankruptcy, the costs can be suffered by companies that eventually go bankrupt or by those that hover close to bankruptcy for many years. They relate to the problems of operating a company under severe financial distress. In highly geared firms, managers might find that the bulk of their time and attention is spent on keeping creditors happy rather than on seeking the best course of action for the future prosperity of the firm.

Additionally, the firm may find that key employees leave rather than stay and risk being tainted by association with the bankrupt firm. Suppliers may refuse to supply trading stock and customers may refuse to buy if they perceive a risk that the after sales service will not be there. These operating problems will reduce the future cash flows of the business and hence its value (Dobbins and Pike, 1982).

In the case of agency costs, shareholder and creditor interests are often at odds regarding the acceptability of investment projects. Shareholders may be tempted to gamble on high-risk projects, and if things work out well they take all the winnings whereas if things turn out badly, the debenture holders will stand part of the losses, the shareholders only being liable up to their equity stake. Managers can act in the best interest of the shareholders rather than the debt holders in the following ways (Smith, 1986).

Dividends: Shareholders may be reluctant to put money into an ailing company. On the other hand, they are usually happy to take money out. Large cash dividends will secure part of the company 's value for the shareholders at the expense of the creditors.

Playing for time: Generally, because of the increasing effect of the indirect costs of bankruptcy, if a firm is going to fail, it is better that this happens sooner than later from the creditor's point of view. However, managers may try to hide the extent of the problem by cutting back on research, maintenance, staff development and thus make this years results better at the expense of next year 's.

Changing risks: The company may change the risk of the business without informing the lender. For example, management may negotiate a loan for a relatively safe investment project offering good security and therefore carrying only modest interest charges and then use the funds to finance a far riskier investment. Alternatively, management may arrange further loans, which increase the risks of the initial creditors by undercutting their asset backing. These actions will once again be to the advantage of the shareholders and to the cost of the creditors. It is because of the risk that managers might act in this way that most loan agreements contain restrictive covenants for protection of the lender, the costs of these covenants to the firm in terms of constraints upon managers ' freedom of action often being referred to as agency costs.

Covenants used by suppliers of debt finance may place restrictions on issuing new debt with a superior claim on assets, growth of dividends to be linked to earnings, ensure post merger asset backing of loans is maintained at a minimum prescribed level, and restriction on investment policy. Contravention of these agreements will usually result in the loan immediately being callable, thus allowing the debenture holders to restrict the size of any losses (Smith, 1986).

Tax Exhaustion: A further disincentive to high gearing is that the firm must be in a tax paying position to obtain the tax shield on debt. At certain level of gearing, companies will discover that they have no taxable income left against which to offset interest charges. After this point, firms will experience all the problems of gearing, but none of the advantages. The level of investment can also affect the point at which tax exhaustion occurs. This is because capital allowances granted on capital investments will reduce taxable profits (Foulks, 2004).

Impact of personal taxes: M&M (1963) position includes the effect of corporation taxes on the capital structure decision, but not the impact of personal taxes. In 1977, Miller corrected this omission in his now famous article Debt and Taxes, which was prompted by the fact that companies do not, in practice, follow a policy of high or even moderate gearing as proposed by their 1963 theory.

To explain this, Miller (1963) explains that personal taxes must also be considered. According to Miller (1963), in a world with no taxes and with no market imperfections, firms would be indifferent between issuing debt or equity. If taxes were to be introduced to this world, and if personal taxes on equity income are at a zero rate, this would not be outrageous if all equity income is in the form of capital gains and these gains are never realized.

On the other hand, if income received on debt investments (mainly the interest payments) is subject to income tax at normal rates, and corporation tax is assumed to operate in the normal way (Foulks, 2004), firms would begin to replace equity finance with debt finance to take advantage of the tax shield. To do this, they would need to persuade some equity holders to become debt holders so as to purchase the new debt issues that were replacing equity. Some investors will have no qualms about such a switch providing the interest rates on debt were commensurate with the risks they were taking. These would be the investors who were not subject to income taxes (the best example being pension funds), as they would simply be switching from a tax-free equity income to a tax-free debt income.

Consider, however, the position of tax paying investors. They would have to switch from a tax-free equity income to a taxable debt income. To persuade these people to switch, firms would have to increase the interest rates on debt to make it worthwhile. Firms could afford to do this by using some of the gains they were making from the tax shield on debt. As more and more debt were issued investors in higher and higher income tax brackets would have to be persuaded to switch from equity to debt and the costs of persuading them to switch would rise correspondingly.

Firms could only afford to continue upping the interest rates to persuade these investors to switch until the gain made on the tax shield exactly equaled the personal tax loss suffered by investors (Foulks, 2004). After this point, the attraction of issuing further debt would disappear as the tax shield would be eaten up by the enlarged interest payments required on debt and firms would therefore issue no more debt. In the context of overall financial system, an equilibrium ratio of debt to equity would have been reached.

2.4 Theories of Capital Structure.

Several views are taken on the effect of gearing on the weighted average cost of capital. The two main positions are the traditional view and Modigiliani and Miller theories of capital structure (Pandey, 2001).

2.4.1 *Traditional View of Gearing/ Optimum Debt Level*

As an organization introduces debt to its capital structure, the weighted average cost of capital will fall, because, initially, the benefit of cheap debt finance outweighs any increases in the cost of equity required to compensate equity holders for higher financial risk (Andrew and Kim, 1979). As gearing continues to increase, the equity holders will ask for increasingly higher returns and eventually this increase will start to outweigh the benefit of cheap debt finance, and the weighted average cost of capital will rise.

At extreme levels of gearing, the cost of debt will also start to rise (as debt holders start to get worried about the security of their loans) and this will also contribute to an increasing weighted average cost of capital. The traditional view therefore claims that there is an optimal capital structure, where weighted average cost of capital is at a minimum (Barges, 1963).

The use of weighted average cost of capital to appraise the cash flows of investment projects has been justified in situations where the gearing ratio is not expected to change in the long run. A difficult situation is encountered if a large investment project is financed by a major issue of funds, which moves the company to a new level of gearing. Can the project then be appraised simply by discounting at a WACC and if so which WACC should be used? (Foulks, 2004). If financial risk were ignored by investors, there would be no problem because the WACC would be the same at all levels of gearing. However, this is not probably the case and shareholders are likely to make a gain or loss made up of two elements that is a gain or loss caused by accepting the project and a gain or loss caused by the changed gearing.

Following the traditional view, if the company moves towards the optimal level of gearing, the shareholders will make a gain under the second element, whereas if it moves away from the optimal level, they will make a loss (Barges 1963).

As the traditional view does not follow any prescribed model, it will be difficult to assess the overall impact of a project and its finance on the shareholders.

2.4.2 The Theories of Modigiliani and Miller

Modigiliani and Miller (1958) challenged the traditional view of capital structure that companies which operate in the same type of business and which have similar operating risks must have the same total value, irrespective of their capital structure. Their view is based on the belief that the value of a company depends upon the future operating income generated by its assets. The way in which this income is split between returns to debt holders and returns to equity should make no difference to the total value of the firm (equity plus debt). Thus, the total value of the firm will not change with gearing, and therefore neither will its WACC. The essential point made by M&M (1958) is that a firm should be indifferent between all capital structures. This is at odds with the beliefs of the traditionalists.

M&M (1958) support their case by demonstrating that market pressure (arbitrage) will ensure that two companies identical in every aspect apart from their gearing level will have the same overall market value. The assumptions of M&M (1958) model do not go without critisms. First, market inefficiencies hamper the arbitrage process: Though the security markets are expected to be efficient in a technical economist sense, they are not perfect. Dealing costs do exist and will hamper the arbitrage process. However, if the arbitrage process is viewed as a long-term trend, rather than an immediate response, the market imperfections become less important. Secondly, personal borrowing is not a perfect substitute for corporate borrowing. This really breaks down to three distinct aspects. Companies can often borrow on better terms than individual investors, corporate borrowing does not expose the investor to personal liability in the way that personal borrowing does and lastly some institutional investors are prohibited from indulging in homemade gearing.

All of these issues have some validity. What is not apparent is whether they are significant enough to invalidate the M&M view, especially since some investors are themselves limited liability companies which can, therefore, borrow on equivalent terms to the investee.

Thirdly, the model assumes that the cost of equity capital actually declines at extreme leverage. This assumption is necessary to maintain a constant overall cost if it is accepted that the cost of debt rises at extreme leverage. The concept of this decline in the cost of equity is extremely improbable and no evidence has been produced to support such a view.

Fourthly, the model ignores taxation: This is the case and the effects are sufficiently important to warrant incorporation separately. In their original model, M&M (1958) ignored taxation. M&M (1963) amended their model to include corporation tax. This alteration changes the implication of their analysis significantly.

Previously, they argued that companies that differ only in their capital structure should have the same total value of debt plus equity. This was because it was the size of a firm's operating earning stream that determines its value, not the way in which it was split between returns to debt and equity holders. However the corporation tax system carries a distortion under which returns to debt holders (interest) are tax deductible to the firm, whereas returns to equity holders are not. M&M (1963) therefore, concluded that geared companies have an advantage over ungeared companies that is they pay less tax and will, therefore, have a greater market value and lower WACC.

2.4.3 *Pecking Order Theory of Capital Structure*

Modigiliani and Miller (1958) theory is an attempt to explain how companies choose their capital structure. The standard approach to analyzing capital structure is to start with the proposition of irrelevance of capital structure and then to build in the effects of taxation and the risks of bankruptcy from excessive gearing and so on,

so that a proposition emerges that a capital structure combination of debt and equity exists that minimizes the WACC, and so optimizes shareholder wealth (Pandey, 2001)

According to Foulks (2004), theories of capital structure based on this approach are known as **static trade-off models** of capital structure, referring to the idea that the optimal mix of debt and equity finance provides a trade- off between the benefits of the tax shield provided by debt capital and the increasing costs of financial distress to shareholders from higher gearing. Although the static trade-off theory provides an excellent theoretical basis for looking at capital structuring decisions by firms, a problem is that the theory is by no means always applied in practice.

In some industries, the most profitable firms appear to be those with the lowest gearing, which is the opposite of what the static trade-off model would predict. Moreover, many firms rarely raise new finance by issuing new equity, suggesting that the choice of new financing method, equity or debt, is not driven by considerations of optimal capital structure.

Pecking order theory has been developed to suggest a reason for this observed inconsistency in practice between the static trade-off model and what companies actually appear to do. Pecking order theory states that firms have a preferred hierarchy for financing decisions. Their main preference is to obtain finance from retained profits before raising funds externally. Internal funds are cheaper to obtain than external funds, and there is no requirement for public disclosures of financial information about the firm.

If a firm has to raise funds externally, its preference for financing method in descending order (i.e. pecking order) is debt followed by convertible securities, followed by preference shares and lastly equity shares. This motivation might stem from an inclination of management to act in the best interest of existing shareholders.

Whereas static trade-off model theory suggests that financing decisions will be based on a target optimal capital structure, pecking order theory suggest that financing decisions will vary according to the circumstances of the firm at the time. For example, in an industry with slow growth, profitable firms are likely to build up retained profits and have no incentive to raise new finance with debt issues. As a result, they are likely to build financial slack and have low financial gearing. In contrast, a less profitable firm in the same industry might need to raise funds externally and will do so by borrowing. As a result, their gearing ratio will be higher. Pecking order theory has its limitations. It does not explain the influence on capital structuring of taxation, security issue costs, financial distress and so on. Nor does it properly consider whether there is an ideal capital structure that a firm should target. As a result, pecking order theory is often presented as complement to static trade-off model rather than an alternative stand-alone theory.

2.4.4 *Behavioural Theory of Capital Structure.*

This is yet another theory of how firms make their capital structure decisions. As the name suggests, this theory is based on the proposition that capital structure decisions are made for psychological reasons, not necessarily connected to logical decision-making (Patel et al, 1991).

Patel, Zeckhauser and Hendricks, (1991) in their **Herd Migration theory** found that in 7 out of 10 industries studied, more than 15% of firms changed their capital structure "with the herd" (they followed what other firms in the industry were doing). Patel et al (1991) suggested, "financial players also may migrate in herds, as when firms increase their debt-equity and banks increase their Third World debt holdings." Firms must balance the benefits of seeking an optimal capital structure against the cost or risk of getting too far out of line with other firms in the industry. One example of the danger of getting out of line with the herd is the occasional tendency of banks to refuse to lend to firms whose debt/equity ratio is higher than the industry average.

Another behavioral theory of capital structure is 'follow my leader', (Foulks, 2004). This theory suggests that instead of spending a lot of time trying to work out an optimal capital structure using a static trade-off model, some firms might simply look at how the leading firm or firms in the market are structured and try to copy their capital structure. The assumption is that what is good for the market leader is presumably just as good for the other firms in the industry. However, this assumption is invalid. What is best for the market leader is not necessarily best for every other firm. A firm acting rationally should therefore not adopt a follow-my-leader approach to capital structuring decisions.

2.5 Indicators of Company Size

Among the variables that are used to determine the size of companies (Delbreil, 1993) include;

Market capitalization (a product of market price per share and number of issued outstanding shares). Big firms have many issued shares and are likely to enjoy favorable pricing at the stock exchange. Small firms generally have fewer shares and hence their capitalization is less than large firms.

Share capital: Companies with large number of issued shares derive huge amount of share capital from the issued shares and are therefore able to acquire many assets and finance big projects. Asset base is yet another factor, since firms with huge assets are able to support big businesses and are therefore big firms.

Number of employees: A large number of employees are an indicator of a firm having many branches or large operations in a central place, and hence a large firm. Most firms with huge asset base tend to have many employees. Where technology performs some of the tasks traditionally carried out by employees, a large firm may however have relatively few employees.

Turnover: This is the total sales of a firm in a given year. Bigger firms tend to sell more than small firms. In this regard, it can generally be deduced that firms with high turnover are big firms while firms with small turnover are small firms.

2.6 Relationship Between Debt and Company Size

On the basis of a sample of listed companies in the G7 countries, Rajan and Zingales (1995) studied capital structure of companies in 1991 using accounting and market indicators. Overall, the aggregate level of debt was found to be similar between countries, with the excemption of Germany and the United Kingdom, where it would appear to be lower. This conclusion tallies in part with that of the Bundesbank (1994), which shows that once the main differences in method have been resolved, the net equity of Germany, Italian, French and Spanish companies, on the basis of aggregate data, is similar. The author places considerable emphasis on the existence of bias attributable to differences in accounting practices, data collection, and statistical methods used to process the data and choice of indicators. These various difficulties may explain why Remonola (1990), working in the period 1982-1987, or Borio (1987), using aggregate accounting data and with the help of figures for liability-to-asset gearing, find a higher level of debt in France than that observed in Germany, but Kneeshaw (1995), comparing 1982 and 1992, finds the reverse on the basis of creditors-to-asset ratios, equity gearing and financial creditors-to –GDP ratios. The choice of data and indicators is also decisive for the assessment of the impact of corporate size on the level of debt. Rajan and Zingales (1995) find that debt increases with size, except in Germany. They explain their result by the fact that the bigger the company, the more it can diversify, thereby reducing the likelihood of its finding itself in difficulty (the probability of bankruptcy being smaller, it can take on more debt).

The explanation seems a pertinent one for listed companies whose investment choices are directed at maximization of the value of the firm. They can benefit all the more from higher gearing as their assets portfolio allows them to cover their commitments.

On the other hand, if both listed and unlisted companies are considered, the inverse relationship found between size and gearing in other studies (Bundesbank, 1992; Paranque, 1994a - 1994b; Cieply and Paranque, 1996) tends to indicate different financing parameters. Germany's negative relationship between size and debt is not explained by Rajan and Zingales (1995).

They are however consistent with the analyses of the Bundesbank (1992), which show that a negative correlation does exist between size and the level of debt. The main results obtained by Rajan and Zingales (1995) based on the ratio between liabilities and net equity/assets, found out that Germany is the country with the highest debt, followed by France and Italy (with medians of 0.73 and 0.71 respectively in 1991). For the ratio between creditors and assets, Germany and the United Kingdom have the lowest level of debt, with pension provisions not being included under Creditors.

As for the ratio between creditors and net assets, Japan, Canada, Italy and France have the highest level of debt (where net assets = assets - advances and payments on account - other creditors).

Finally, taking the ratio between creditors and creditors and net equity, the United Kingdom has the least debt, closely followed by Germany and the United States, whilst France, Italy and Japan have the highest levels of debt. (Delbreil et al 1993).

Studies on capital structure undertaken in Kenya have had mixed results. Mbogo (1983) did a research for the period 1972-1981 and found that public companies in Kenya were highly geared during that period. Kamere (1987) covered the period 1981-1985 to identify the factors that the management of quoted companies in Kenya consider in making their capital structure decisions. His study found that many factors might influence the capital structure of a firm. Among the most important were the stability of future cash flows, the level of interest rates in the economy, the asset structure of a firm, the need for outside capital, lenders attitude towards a firm and the attitude of management towards risk.

Analysis of the capital structure revealed that a firm 's use of debt and its age, size (measured by use of average book value), and amount of fixed assets were positively correlated, but the correlation co-efficient was rather low. Omondi (1996), covered the period 1987-1994 and came with findings that interest rates, growth in turnover, size (measured using turnover) and age are not significantly correlated with capital structure at all, whether sectoral or combined. Onsumu (2003) found out that there is no significant relationship between debt and value of firms in Kenya for the period 1993-2001.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

The research design was a survey.

3.2 Population

The population of the study constituted all companies quoted at the Nairobi Stock Exchange as at 31st December 2004 excluding those in finance and investment sector. A census was undertaken, thus no sampling was required.

3.3 Data Collection

Data necessary to conduct the research was collected from annual accounts of public companies from Nairobi Stock Exchange, Capital Markets Authority and Registrar of Companies. The data collected included market capitalization, total long term debt including preference shares, total equity, total shareholder funds and total turnover of all companies listed at the stock exchange for the entire period under research. The companies of interest were those quoted at the Nairobi Stock Exchange during the period 1998-2004.

3.4 Data Analysis

The data collected was coded on computer sheets and applied to excel to aid in analysis. The analysis comprised ratios, percentages, averages, and plotting of trends.

For each of the firms in the sample, the following ratios were computed; debt/equity ratio, debt /asset ratio, percentage of long-term debt to total capital. Company size was measured based on market capitalization of listed firms and classified into small, medium and large companies as classified by Oluoch (2004). Further analysis was done on gearing and company size, whereupon size was measured based on company net assets and turnover. An analysis for each firm was undertaken, then aggregated to obtain the industry variables. A comparative analysis was then undertaken to identify differences between gearing levels and company size across industries. The statistics for each firm were used to compute industry averages of ratios and percentages for the entire period.

A trend analysis for each of the industries for the entire period was then performed and subsequently a trend analysis for all the companies for the entire period. The results were also subjected to regression analysis using the equation

$y = a + bx$

Where
a and b are constants.
y is the gearing level
x is the company size

Each measure of debt was regressed against company size after which the aggregate debt measures was regressed against size in terms of small, medium and large giving rise to three equations.

Correlation co-efficient (r) and co-efficient of determination (r2) were obtained, which determined the strength of the relationship.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1 Company Ranking

Discussions and conclusions were based on data for 35 companies representing 64% of quoted companies. Companies in the financial sector were all omitted since their capital structure have a huge amount of debt as a result of huge deposit liabilities of financial institutions.

The size of firms in the study was determined using market capitalization, net assets and turnover. Firms were ranked according to their size determined by the above factors. Three different rankings were therefore obtained for the entire period. The rankings were thereafter divided into three sizes of large, medium and small size firms for the entire period. Gearing of each of the firms was determined and aggregated with the rest in the similar size and their average computed. Average gearing levels for each size of the firms for the entire period was plotted in graphs.

A similar analysis was applied to the sectorial data. The sectors covered were Alternative Investment Markets (AIMS), Agriculture, Commercial and Services and Industrial and Allied.

4.2 Market Analysis

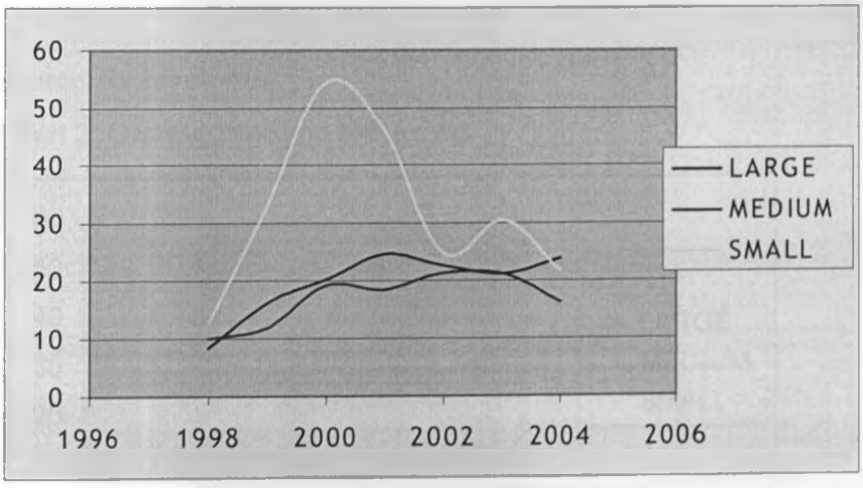
4.2.1 Gearing Levels Based on Market Capitalization

Table 1: Gearing (in %) Based on Market Capitalization

		LARGE	MEDIUM	SMALL
GEARING	2004	23.81636712	16.23821768	21.59137165
GEARING	2003	21.22297158	21.10337469	30.41622596
GEARING	2002	22.54961795	21.27531532	24.7284132
GEARING	2001	24.61154166	18.40933992	45.9601717
GEARING	2000	20.17097751	19.17231142	54.48315576
GEARING	1999	16.26100002	11.88630299	33.37515977
GEARING	1998	8.341125409	9.917006147	12.59629902

Source: Research data

Chart 1: Gearing Based on Market Capitalization



Source: Research data

Small companies registered higher gearing levels, followed by large companies and lastly medium size companies.

Large companies were the most geared in the year 2004. The possible explanation to the above scenario is that small companies quoted at the Nairobi Stock Exchange do not make as much profits as large companies. They thus, do not have the advantage of financing their operations from retained earnings, but rely extensively on debt.

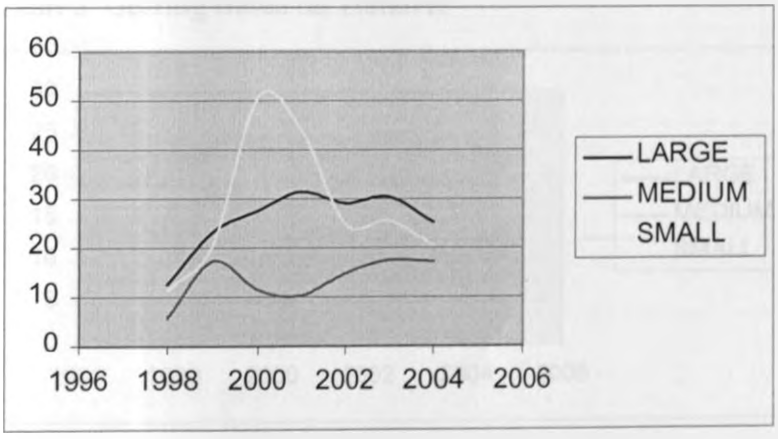
4.2.2 Gearing Levels Based on Net Assets

Table 2: Gearing (in %) Based on Net Assets

YEAR	LARGE	MEDIUM	SMALL
GEARING 2004	25.19636743	17.17408609	20.56203793
GEARING 2003	30.44596395	17.41544939	25.47421978
GEARING 2002	29.13032157	14.68369393	24.69341816
GEARING 2001	31.37507191	10.30153236	44.13011162
GEARING 2000	27.52639909	11.46762238	50.77967608
GEARING 1999	23.16928662	17.246055	20.5029652
GEARING 1998	12.62782804	5.713136334	11.35511063

Source: Research data

Chart 2: Gearing Based on Net Assets



Source: Research data

Small companies registered higher gearing levels upto the year 2002, followed by large companies and lastly medium size companies. Large companies recorded the highest gearing level as from the year 2003. Most small companies have their assets financed by creditors and report relatively lower profits than large companies, explaining the relatively high gearing levels because they are not able to retain earnings to finance their activities.

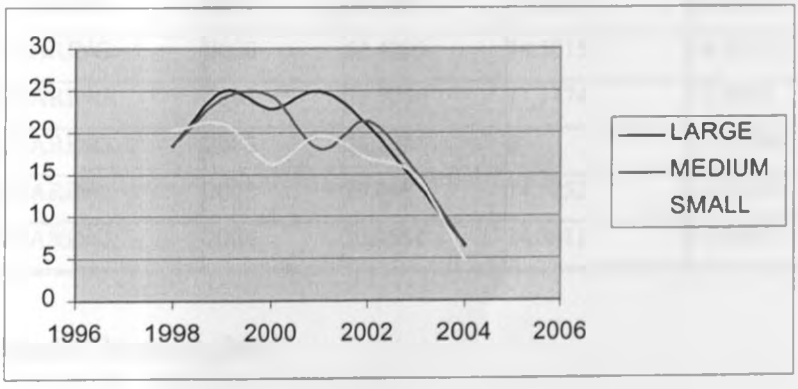
4.2.3 Gearing Levels Based on Turnover

Table 3: Gearing (in %) Based on Turnover

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING	1998	18.42358301	18.4605503	20.2871393
GEARING	1999	24.90335226	24.11265931	20.99058638
GEARING	2000	22.79279914	24.33020447	16.23926279
GEARING	2001	24.93527995	18.00220587	19.60704107
GEARING	2002	20.78021295	21.28944627	16.91996477
GEARING	2003	13.96876943	15.28163834	14.82858498
GEARING	2004	6.555106935	6.35576319	4.763679866

Source: Research data

Chart 3: Gearing Based on Turnover



Source: Research data

Large and medium companies registered higher gearing followed by small companies. Large companies emerged the most geared in the year 2004. This scenario could be explained by relatively high turnover for large companies financed using borrowed funds.

Notwithstanding the above findings, and as mentioned elsewhere, it is imperative to note that large firms registered the highest gearing levels in 2004 irrespective of determinant of size. It is also worthwhile to consider that lending interest rates in the Kenyan economy have been erratic and comparatively high for a long period, and have only stabilized at a lower level after the new government took over the management of public resources in the year 2002.

4.3 Industry Analysis

4.3.1. Commercial and Services Sector.

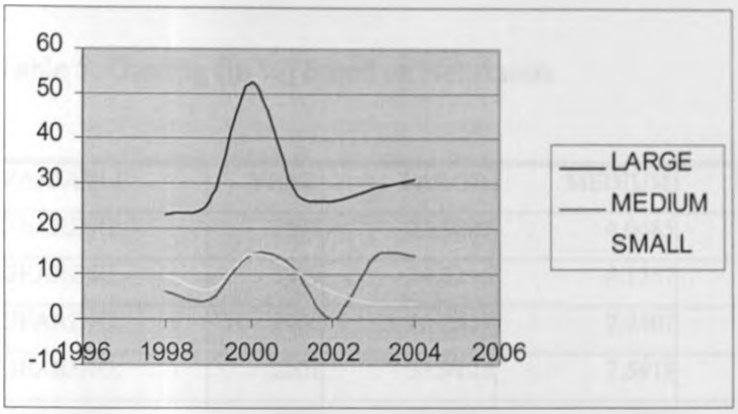
4.3.1.1 Gearing Levels Based on Market Capitalization

Table 4: Gearing (in %) Based on Market Capitalization

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING.	1998	23.1229	5.88913	9.730852
GEARING.	1999	26.1493	4.41587	6.321637
GEARING.	2000	52.4203	14.5015	14.30355
GEARING.	2001	28.7056	11.1474	10.9324
GEARING.	2002	26.254	0	6.197905
GEARING.	2003	29.068	14.1252	3.299348
GEARING.	2004	30.9551	14.0811	3.554907

Source: Research data

Chart 4: Gearing Based on Market Capitalization



Source: Research data

Large firms registered the highest gearing, followed by medium firms and lastly small firms. The gearing levels of the large firms were as high as 52%. The implication is that large companies in this sector mainly finance their activities using debt. The gearing levels followed the same pattern over the study period, being lowest in 2002, period when there was a negative economic growth, and hence most companies had minimal activities, forcing them to reduce the appetite for debt. The gearing increased from 2002 to 2004 possibly explained by lower interest rates during this period, which may have encouraged firms to borrow.

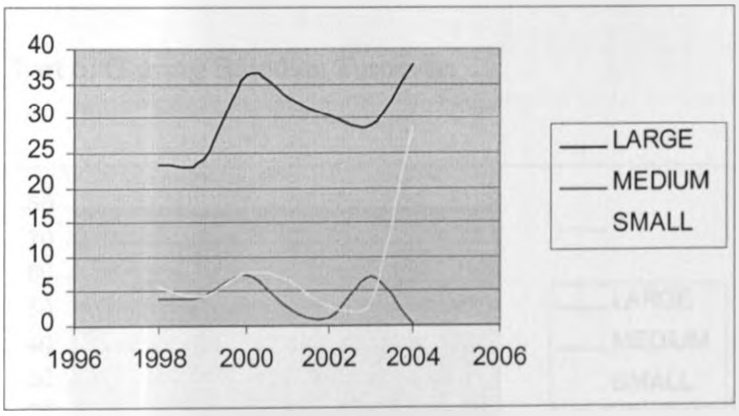
4.3.1.2 Gearing Levels Based on Net Assets

Table 5: Gearing (in %) Based on Net Assets

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING.	1998	23.1229	4.0485	5.7513
GEARING.	1999	24.2215	4.1357	4.2144
GEARING.	2000	36.2639	7.2507	7.6011
GEARING.	2001	32.9125	2.5919	6.4715
GEARING.	2002	30.3988	1.2605	2.7699
GEARING.	2003	29.068	7.0626	3.2993
GEARING.	2004	37.8108	0.1848	28.7383

Source: Research data

Chart 5: Gearing Based on Net Assets



Source: Research data

Large firms registered higher gearing followed by medium and small firms. Small firms become more geared than the medium firms in the year 2004. This implies that large firms in this sector use credit facilities to finance their activities.

Gearing was highest in the year 2004 indicating that their activities were highest in that year possibly as the economy was gaining momentum and hence there was the highest demand for goods and services.

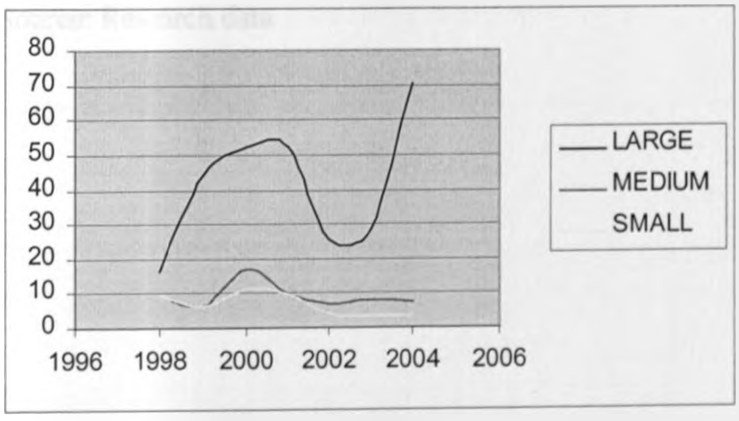
4.3.1.3 Gearing Levels Based on Turnover

Table 6: Gearing (in %) Based on Turnover

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING	1998	16.2114	9.85597	9.730852
GEARING	1999	44.0271	6.34368	6.321637
GEARING	2000	52.4203	17.3045	11.4016
GEARING	2001	52.2274	9.39076	9.707296
GEARING	2002	25.2568	6.66585	3.891508
GEARING	2003	28.468	7.66257	3.299348
GEARING	2004	70.3228	7.22537	3.554907

Source: Research data

Chart 6: Gearing Based on Turnover



Source: Research data

Large firms had higher gearing, followed by medium firms and lastly small firms. This implies that large firms require more credit facilities to finance their comparatively higher sales. Gearing was highest in the year 2004 indicating that their activities were highest in that year possibly as the economy was gaining momentum and hence there was the highest demand for goods and services.

4.3. 2 Industrial and Allied Sector

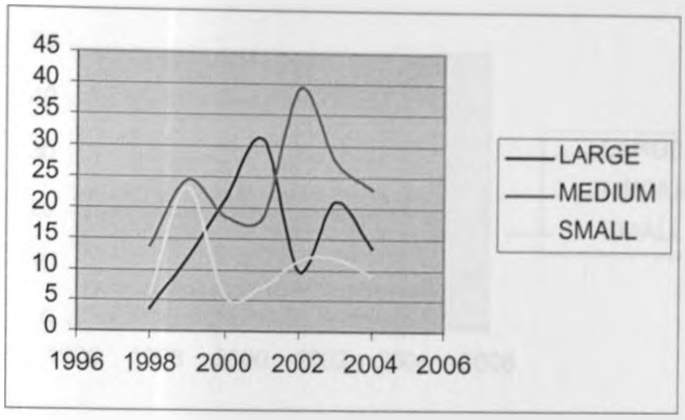
4.3.2.1 Gearing Levels Based on Market Capitalization

Table 7: Gearing Based on Market Capitalization

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING.	1998	3.58285	13.864	5.86859
GEARING.	1999	11.7308	24.447	23.3348
GEARING.	2000	21.4538	18.592	5.54451
GEARING.	2001	31.1153	18.481	7.15864
GEARING.	2002	9.8429	39.433	11.5966
GEARING.	2003	21.1596	27.623	11.9769
GEARING.	2004	13.6162	23.013	9.11836

Source: Research data

Chart 7: Gearing Based on Market Capitalization



Source: Research data

All the firms had comparatively mixed gearing levels. However, in the year 2004, medium firms were the most geared followed by large firms and lastly small firms. This implies that medium size firms had higher activities from the year 2002 and had to increase their borrowing so as to attain optimum operating level.

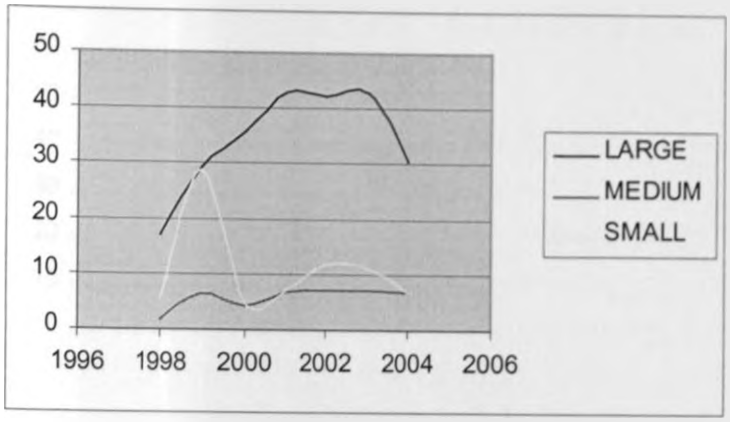
4.3.2.2 Gearing Levels Based on Net assets

Table 8: Gearing (in %) Based on Net Assets

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING.	1998	17.1008	1.7066	5.6813
GEARING.	1999	29.1108	6.32	28.7493
GEARING.	2000	35.7865	4.259	4.7681
GEARING.	2001	42.946	6.6724	7.14
GEARING.	2002	42.1477	7.0634	11.6508
GEARING.	2003	43.0467	7.084	10.8536
GEARING.	2004	30.4421	6.7096	6.6833

Source: Research data

Chart 8: Gearing Based on Net Assets



Source: Research data

Generally, large firms had higher gearing followed by small firms and lastly medium firms. However, medium firms had higher gearing than small firms in the year 2004. Large firms may possibly have been financing their assets using credit facilities throughout the entire period of study.

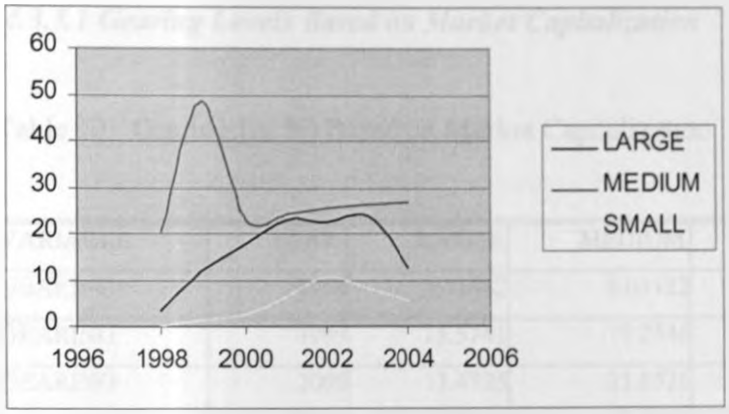
4.3.2.3 Gearing Levels Based on Turnover

Table 9: Gearing (in %) Based on Turnover

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING	1998	3.2737	20.56	0
GEARING	1999	11.9184	48.574	1.30395
GEARING	2000	17.8201	22.812	2.50317
GEARING	2001	22.9687	24.327	6.29649
GEARING	2002	22.6437	25.439	10.5802
GEARING	2003	23.7471	26.497	8.16153
GEARING	2004	12.6542	26.811	5.57595

Source: Research data

Chart 9: Gearing Based on Turnover



Source: Research data

Medium firms had higher gearing, followed by large companies and lastly small companies during the entire period. This phenomenon may be attributable to the fact that the medium size firms comprised companies that had the highest sales, which had to be financed using debt.

4.3.3 Agricultural Sector

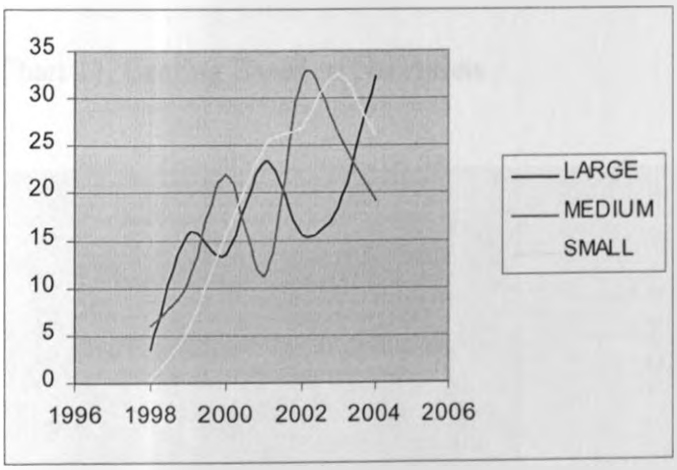
4.3.3.1 Gearing Levels Based on Market Capitalization

Table 10: Gearing (in %) Based on Market Capitalization

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING	1998	3.61442	6.01122	0.428856
GEARING	1999	15.5741	10.2546	5.402773
GEARING	2000	13.4725	21.8526	15.54689
GEARING	2001	23.3871	11.4223	25.10317
GEARING	2002	15.437	32.3381	27.0496
GEARING	2003	18.4719	26.2721	32.50704
GEARING	2004	32.3156	19.1951	26.09008

Source: Research data

Chart 10: Gearing Based on Capitalization



Source: Research data

All the firms had erratic gearing structure. Large firms emerged the most geared in the year 2004 as the economy was picking up and interest rates were low and stable, hence conducive for the large firms to operate at a higher optimum level, which called for increased use of debt.

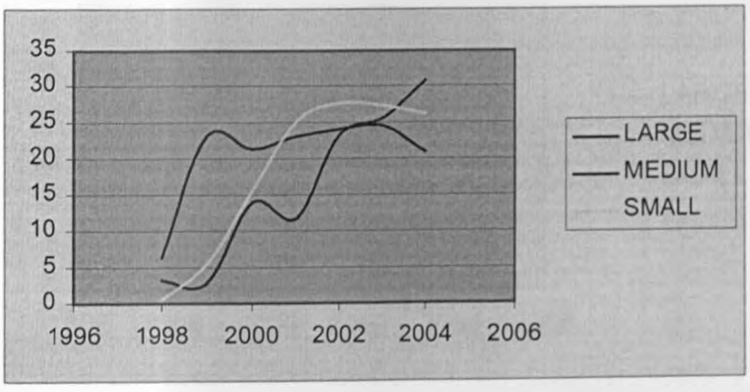
4.3.3.2 Gearing Levels Based on Net Assets

Table11: Gearing (in %) Based on Net Assets

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING.	1998	6.40713	3.21851	0.428856
GEARING.	1999	22.9993	2.82943	5.402773
GEARING.	2000	21.3357	13.9894	15.54689
GEARING.	2001	23.0643	11.7452	25.10317
GEARING.	2002	24.0397	23.2279	27.55717
GEARING.	2003	24.4619	25.5987	27.19039
GEARING.	2004	20.8297	30.6811	26.09008

Source: Research data

Chart 11: Gearing Based on Net Assets



Source research data

All the firms had erratic gearing structure. However, large firms were the most geared in 1998 while medium firms were the most geared in the year 2004. The medium firms increased their assets possibly through increased use of debt in the year 2004.

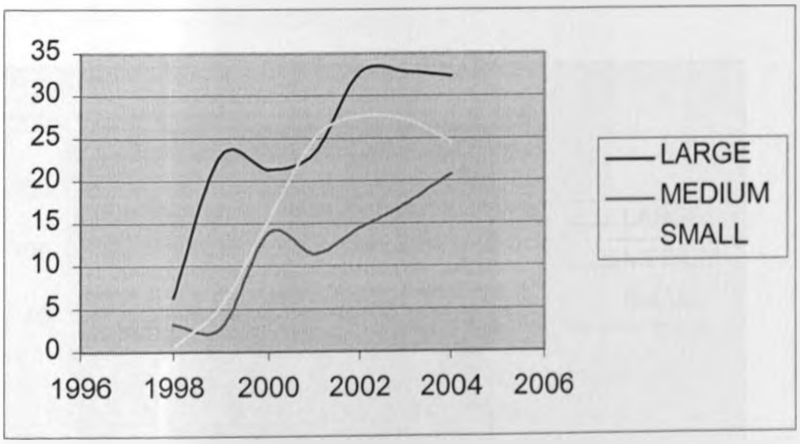
4.3.3.3 Gearing Levels Based on Turnover

Table 12: Gearing (in %) Based on Turnover

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING.	1998	6.40713	3.21851	0.428856
GEARING.	1999	22.9993	2.82943	5.402773
GEARING.	2000	21.3357	13.9894	15.54689
GEARING.	2001	23.3871	11.4223	25.10317
GEARING.	2002	32.7485	14.519	27.55717
GEARING.	2003	32.8422	17.2185	27.19039
GEARING.	2004	32.3156	20.7686	24.51659

Source: Research data

Chart 12: Gearing Based on Turnover



Source: Research data

Large firms had higher gearing, followed by medium firms and lastly small firms. The large firms in this sector may have used more borrowed funds to finance their higher turnover as compared to the other small and medium size firms.

4.3.4 Alternative Investment Markets (AIMS)

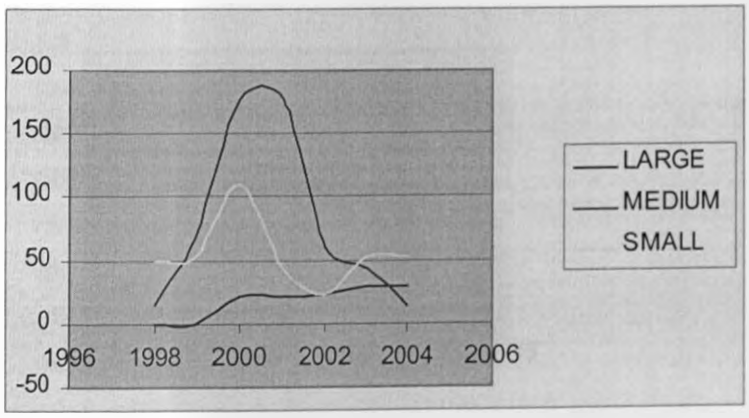
4.3.4.1 Gearing Levels Based on Market Capitalization

Table 13: Gearing (in %) Based on Capitalization

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING.	1998	0	15.502	49.2505
GEARING.	1999	0	67.8484	52.7218
GEARING.	2000	21.1822	176.027	109.493
GEARING.	2001	21.515	176.168	42.6426
GEARING.	2002	22.77594	59.5487	22.4114
GEARING.	2003	28.60749	43.9334	52.0956
GEARING.	2004	29.31374	12.9843	53.0563

Source: Research data

Chart 13: Gearing Based on Capitalization



Source: Research data

Generally, medium size firms had higher gearing, followed by small firms and lastly large firms. Small firms emerged with the highest gearing in the year 2004. The small firms appear to have started increasing their gearing as from the year 2003 to take advantage of low and stable interest rates.

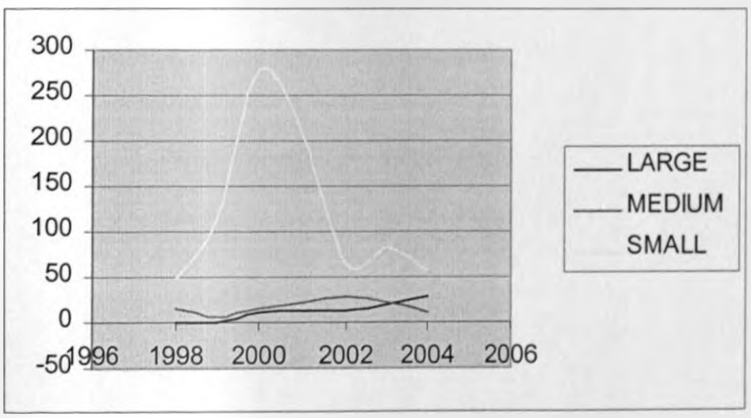
4.3.4.2 Gearing Levels Based on Net Assets

Table 14: Gearing (in %) Based on Net Assets

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING.	1998	1.008471	15.502	48.242
GEARING.	1999	0.236014	6.88345	113.451
GEARING.	2000	11.94677	16.0513	278.704
GEARING.	2001	12.3098	22.6388	205.377
GEARING.	2002	13.54405	27.9686	63.2233
GEARING.	2003	20.1807	22.397	82.0588
GEARING.	2004	29.31374	10.2091	55.8315

Source: Research data

Chart 14: Gearing Based on Net Assets



Source: Research data

Small firms had higher gearing followed by medium and small size firms for most of the period under study. However, Large size firms were more geared than medium size firms in the year 2004. The small size firms possibly continued making less profits, which could not be sufficient to finance their assets and hence had to resort to consistently operating at a higher debt level.

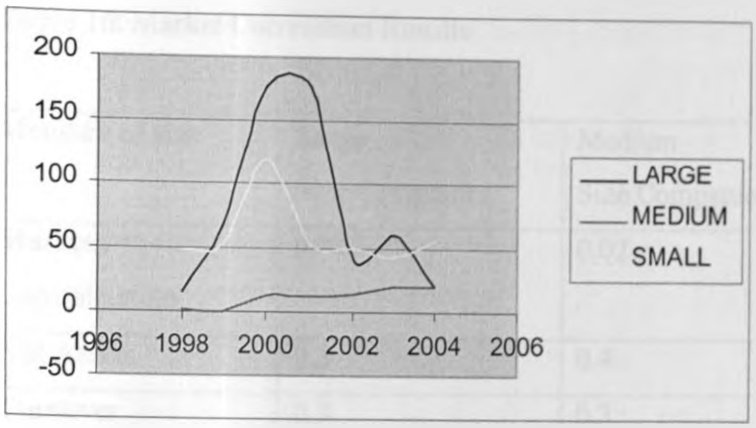
4.3.4.3 Gearing Levels Based on Turnover

Table 15: Gearing (in %) Based on Turnover

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING	1998	15.50195	1.00847	48.242
GEARING	1999	67.8484	0.23601	52.4858
GEARING	2000	176.0271	11.9468	118.728
GEARING	2001	176.1684	12.3098	51.8478
GEARING	2002	41.14809	13.544	50.0439
GEARING	2003	60.52241	20.1807	43.9334
GEARING	2004	20.11515	19.4077	55.8315

Source: Research data

Chart 15: Gearing Based on Turnover



Source: Research data

Large size firms had higher gearing, followed by small firms and lastly medium firms for most of the period under study. Small size firms emerged the most geared in the year 2004. The large firms operated at higher sales level for most of the period under study and were therefore compelled to acquire more credit facilities to support their operating level.

4.4 Regression Analysis.

The average gearing levels and average size were regressed for the entire period of study. The first regression was between gearing of all firms as classified into large size firms, medium size firms and lastly small size firms and their respective gearing. The next set of regression was at industrial level. The following tables indicate the co-efficient of determination (r2) obtained from the regression analysis, which are changes in size, that determine changes in gearing levels of firms in their respective sizes. The error term (the change in gearing that is not attributable to the change in size) for each regression analysis are attached at the appendix.

4.4.1.Regression Analysis for the Market

Table 16: Market Correlation Results

Measure of size	Large Size Companies	Medium Size Companies	Small Size Companies
Market Capitalization	0.07	0.02	0.3
Net Assets	0.3	0.4	0.03
Turnover	0.3	0.3	0.5

Source: Research data.

Classification of firms into large, medium and small by turnover resulted in the highest correlation of size and gearing levels at 30%, 30% and 50% respectively. This may be the case, since as firms expand, they require more financing to enable them produce enough goods for sale. Since retained earnings are not sufficient, firms therefore resort to increased use of debt.

Classification by net assets was second with correlation at 30%, 40% and 3% respectively. This correlation is positive, though not significant in the case of the small size firms. This is credible, since as firms grow, their assets value increase and hence they will need more debt to finance the asset increase.

Classification by market capitalization yielded positive, but insiginificant correlation of 7%, 2% and 30% respectively. This indicates that values of firms based on market capitalization have low correlation to the gearing levels. The Kenyan economy is equally in the developing world and is likely to have an inefficient stock market, where stock values reflect historical information and may not be genuine indicator of a firm 's value.

4.4.2 Regression Results for Industry Classification

4.4.2.1 Regression Analysis for Industrial and Allied Sector.

Table 17: Industrial and Allied Sector Correlation Results

Measure of size	Large Size Companies	Medium Size Companies	Small Size Companies
Market Capitalization	0.0	0.03	0.03
Net Assets	0.22	0.55	0.11
Turnover	0.05	0.1	0.64

Source: Research data.

Classification of firms into large, medium and small size in the industrial and allied sector, based on net assets resulted in the highest correlation of size and gearing levels of 22%, 55% and 11% respectively. This gives credence to the reasoning that as firms asset increase, its debt-equity ratio increases to enable it to finance the asset increase. Results from the classification based on market capitalization and turnover are positive but insignificant. The findings may equally be inconclusive since there were 15 firms in this sector. A larger number of firms in the same sector operating in an efficient market will give more accurate and credible findings.

4.4.2.2 Regression Analysis for Commercial and Services Sector.

Table 18: Commercial and Services Sector Regression Results

Measure of size	Large Size Companies	Medium Size Companies	Small Size Companies
Market Capitalization	0.06	0.09	0.01
Net Assets	0.64	0.05	0.42
Turnover	0.13	0.13	0.05

Source: Research data.

Classification of firms into large, medium and small based on net assets and turnover resulted in positive and slightly significant results of 64%, 5% and 42% and 13%, 13% and 5% respectively. This findings are slightly similar to those of Industrial and allied sector. However, this sector had even fewer firms. There were only 7 firms and hence the findings may not be representative of the industry had there been a larger number of firms.

CHAPTER FIVE

SUMMARY OF THE FINDINGS AND CONCLUSIONS, RECOMMENDATIONS, LIMITATION OF STUDY AND SUGGESTION FOR FURTHER RESEARCH.

5.1 Summary of Findings and Conclusions

5.1.1 Summary of Findings

5.1.1.1 Graphical Analysis

At market analysis, and using market capitalization to represent size, small firms were the most geared followed by large companies and lastly medium size companies. Large companies emerged the most geared in the year 2004. This could be attributed to the fact that small size companies quoted at the stock exchange did not make as much profits as large companies and hence did not have retained earnings to finance their operations and therefore had to opt for use of more debt. When analyzed using net assets as a measure of size, small firms registered the highest gearing, followed by large firms and lastly medium size firms. This can be attributed to the fact that small companies have their assets financed by creditors and report relatively lower profits than large firms and have to resort to use of more debt to finance their activities. Lastly, when analyzed using turnover as a measure of size, large and medium size firms registered higher gearing followed by small companies. This phenomenon is the case as large and medium companies generally have higher turnover than small companies. The relatively higher turnover calls for more financing using debt.

At industry analysis, commercial and services sector had large firms as the most geared followed by medium firms and lastly small firms irrespective of the factor of measure of size. This implies that large firms in this sector finance their activities using debt.

The gearing levels increased from 2002 to 2004 possibly due to lower interest rates during this period. Industrial and allied sector had large firms and medium firms being the most geared when size was determined by net assets and turnover respectively. This implies that the large and medium size firms required external financing to support their net assets and sales respectively. Gearing based on market capitalization for this industry had mixed gearing levels for the entire period of study.

Agricultural sector had large firms as the most geared when turnover is used to measure size. This implies that the large firms in this sector required more debt so as to finance their comparatively higher sales than the medium and small size firms. Gearing consistently increased for all the sizes from the year 2002 and was highest in the year 2004 possibly due to the lower and stable interest rates during this period. Gearing based on market capitalization and net assets as a measure of size was erratic during the entire period of study.

Alternative Investment Markets (AIMS) had mixed results during the entire period. The firms are relatively small in size compared to the other sectors and its gearing was distorted by Kenya Orchards which had gearing as high as 219% in the year 2000 and The standard Group with a gearing as high as 338% in the year 2000.The standard Group posted losses of 120 million and 126 million in 1999 and 2000 respectively, which led to the firm having negative shareholders funds and reserves from 1999 through 2002.

As mentioned elsewhere, large firms emerged the most geared in the year 2004. This can be attributed to the fact that the performance of the economy during the period under study was mostly dismal coupled with high interest rates. However, after the political change in the year 2002, the economy started recording positive growth while the interest rates reduced and stabilized. This therefore created demand for goods and services, which compelled large firms to acquire more financing in form of debt to enable them operate at a higher capacity so as to meet the new demand.

5.1.1.2 Regression Analysis

The findings of this study indicate that there is a positive correlation between company size and gearing levels. However, the correlation is variable and erratic depending on the nature of classification. When all firms are classified broadly into large, medium and small, using net assets and turnover as a measure of size, the correlation is slightly significant. When classified based on market capitalization, the correlation is positive, but insignificant.

When the firms are classified into their respective industries, there is no significant correlation between gearing and company size irrespective of the parameters of company size.

5.1.2. Conclusions

The foregoing analysis depicts that there is no clear and authoritative trend(s) between gearing levels and company size. This is attributable to the fact that the period under study had two different economic and political environments, with the former having high interest rates and almost stagnant economy while the later had low interest rates and a growing economy. Assuming the current economic environment of stable interest rates is sustained, a subsequent similar study in the future may lead to authoritative trend (s).

The findings of regression analysis indicate that capitalization is positively but insignificantly correlated to gearing. This can be attributed to the fact that the Nairobi Stock Exchange operates in the developing economies were the stock market is inefficient, and as such, values assigned to stocks reflect historical information which may be completely different from the current state of affairs.

Net assets are positively correlated to gearing, whether based on broad classification or industry classification.

This is logical since firms tend to incur long-term financial obligations using assets as security. This is in the affirmative with the findings of Omondi (1996) and Kamere (1987).

Turnover is positively correlated with gearing at broad classification of assets into large, medium and small, with co-efficient of determination being at 30%, 30% and 50% respectively. However, at industrial classification, the correlation is insignificant.

5.2 Limitation of the Study.

The first limitation relates to the level of interest rate regimes. The period under study covers two periods of interest rate levels. The period up to 2002 had high interest rates, where commercial banks base rates were at over 20% while the period after the year 2002 had as low base rates as 8%. This therefore implies that the capital structure as well as the term of long-term debt for firms for the two periods is different.

The industry classification had uneven number of firms. For instance, agricultural sector had 6 companies whereas industrial and allied had 12 companies and hence the sectoral analysis was not balanced.

The period under study may not have been fully representative. A longer period may have given more fair findings. Unfortunately, Kenya being a third world country, there has been several political and economic restructuring over the last 15 years. Moreover, the stock exchange has just been automated and hence only information relating to recent years is available.

Lastly, there is a lot of difficulty in getting accurate classification of debt in the Kenyan firms. This led to classification of all non-current liabilities into long-term financial obligations.

5.3 Recommendation to Policy Makers.

The importance of accurate and timely financial information will continue to be of paramount importance as far as research, planning and trading at both the money market and capital market is concerned.

Efficient operations at the said markets will ensure that firms will access adequate and affordable capital to finance their daily operations as well as expansion. The government should therefore create an enabling environment as well as support the automation of Capital Markets Authority, Registrar of Companies and the Nairobi Stock Exchange. This will enable all the stakeholders including investors and researchers get accurate information for a reasonable period to enable them make objective, reliable and accurate decisions.

The incumbent political class, who took over the political dispensation in the year 2002, and whose term expires in the year 2007, has done a commendable job to maintain low and stable interest rates. Financial institutions have made a shift from lending to the government in form of treasury bills and bonds to providing credit to the private sector including households in form of consumer loans (unsecured personal loans). This has seen a growth in most sectors of the economy to the benefit of all stakeholders. It is therefore imperative that the government should strife to maintain the prevailing interest rates and the future governments and policy makers ought to emulate and sustain the current relatively low interest rates.

The Nairobi Stock Exchange has few firms listed despite the country having many potential firms. The Co-operative Bank of Kenya has aspired for a long time to be listed at the stock exchange, but has not succeeded to date due to various hindrances. Other successful family and private businesses like Nakumatt Super Markets and Mabati Rolling, multinational oil companies like Kenya Shell, Caltex and Mobil and multinational companies like Magadi Soda, Safaricom, Unilever and Glaxosmithklinebeecham (gsk) are not listed.

The policymakers should provide conducive environment to facilitate the listing of this firms as well as encourage the multinational corporations to get listed at the Nairobi Stock Exchange. In the spirit of East Africa Co-operation, the three governments of East Africa should encourage and facilitate cross border listing so as to widen and deepen financial markets.

5.4. Suggestion for Further Research

This study focused on all firms listed at the Nairobi Stock Exchange. There are many other huge and profitable private firms e.g. Unilever, Sameer Group, Safaricom, Kenya Shell, Magadi Soda, Mabati Rollings and Kencell. A similar study could be done on these companies so as to establish their trends.

A similar study can also be done to determine the relationship between financial structure (short term debt and long term debt) and company size for listed firms and/or private firms (unlisted firms). Differences in financial structure composition by firm size should also be evaluated.

Another area that could be studied is the extent of relevance of Pecking Order Theory and Herd Migration Theory in firms quoted at Nairobi Stock Exchange.

Research can also be done to determine whether there is any correlation between industry gearing average and profitability. Do firms that conform to industry gearing average or operate close to industry gearing average post higher profitability?

Last, but not least, research is also necessary to establish the factors that influence lenders attitude towards firms. Do lenders attitude towards firms in a certain industry also change (migrate) in herds?

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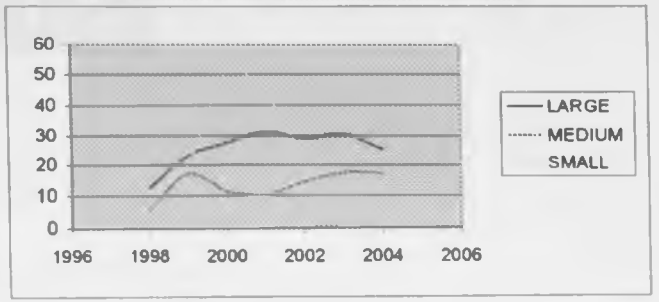
APPENDICES

GEARING BASED ON NET ASSETS

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING	2004	25.19636743	17.1740861	20.5620379
NET ASSETS	2004	9.974999	1.81190333	0.34222208
GEARING	2003	30.44596395	17.4154494	25.4742198
NET ASSETS	2003	8.759019	1.67975508	0.29923385
GEARING	2002	29.13032157	14.6836939	24.6934182
NET ASSETS	2002	8.435954	1.51507658	0.30477969
GEARING	2001	31.37507191	10.3015324	44.1301116
NET ASSETS	2001	7.190021455	1.52081192	0.29530208
GEARING	2000	27.52639909	11.4676224	50.7796761
NET ASSETS	2000	6.828843455	1.28974508	0.26182708
GEARING	1999	23.16928662	17.246055	20.5029652
NET ASSETS	1999	6.293350545	1.18018883	0.26034185
GEARING	1998	12.62782804	5.71313633	11.3551106
NET ASSETS	1998	5.722775	1.01228567	0.26890508

YEAR	LARGE	MEDIUM	SMALL
2004	25.1963674	17.17408609	20.5620379
2003	30.4459639	17.41544939	25.4742198
2002	29.1303216	14.68369393	24.6934182
2001	31.3750719	10.30153236	44.1301116
2000	27.5263991	11.46762238	50.7796761
1999	23.1692866	17.246055	20.5029652
1998	12.627828	5.713136334	11.3551106



GEARING % NET ASSETS (BILLIONS)

LARGE COMPANIES

25.19636743	9.974999
30.44596395	8.759019
29.13032157	8.435954
31.37507191	7.19002145
27.52639909	6.82884345
23.16928662	6.29335055
12.62782804	5.722775

MEDIUM COMPANIES

17.17408609	1.81190333
17.41544939	1.67975508
14.68369393	1.51507658
10.30153236	1.52081192
11.46762238	1.28974508
17.246055	1.18018883
5.713136334	1.01228567

SMALL COMPANIES

20.56203793	0.34222208
25.47421978	0.29923385
24.69341816	0.30477969
44.13011162	0.29530208
50.77967608	0.26182708
20.5029652	0.26034185
11.35511063	0.26890508

SUMMARY OUTPUT SMALL COMPANIES BY NET ASSETS

Regression Statistics	
Multiple R	0.17927901
R Square	0.03214096
Adjusted R Squ	-0.16143084
Standard Error	15.1432599
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	38.0763717	38.0763717	0.16604156	0.700513929
Residual	5	1146.591599	229.31832		
Total	6	1184.66797			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	53.1182361	61.38497559	0.8653296	0.42641846	-104.6766093	210.9130814	-104.67661	210.9130814
X Variable 1	-85.7665602	210.4793961	-0.407482	0.70051393	-626.8201885	455.287068	-626.82019	455.287068

SUMMARY OUTPUT MEDIUM COMPANIES BY NET ASSETS

Regression Statistics	
Multiple R	0.63343057
R Square	0.40123428
Adjusted R Squ	0.28148114
Standard Error	3.77855467
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	47.83684507	47.8368451	3.35051147	0.126695894
Residual	5	71.38737703	14.2774754		
Total	6	119.2242221			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-0.84246042	7.926348936	-0.1062861	0.91948802	-21.21775572	19.53283489	-21.217756	19.53283489
X Variable 1	9.98013274	5.4523128	1.83044024	0.12669589	-4.035460601	23.99572609	-4.0354606	23.99572609

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.53785992
R Square	0.28929329
Adjusted R Squ	0.14715195
Standard Error	5.9294383
Observations	7

LARGE COMPANIES BY NET ASSETS

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	71.55583531	71.5558353	2.03525086	0.213029719
Residual	5	175.7911929	35.1582386		
Total	6	247.3470282			

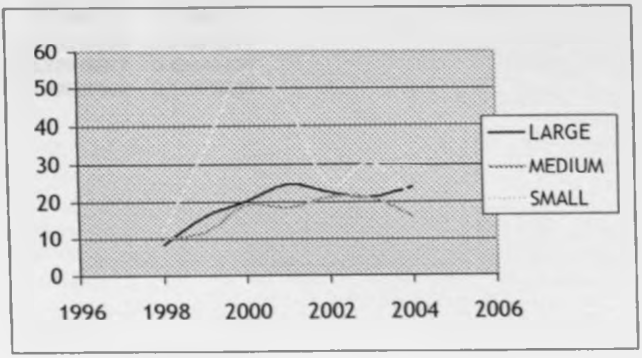
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	8.25338109	12.39074599	0.66609235	0.53484703	-23.59799342	40.10475561	-23.597993	40.10475561
X Variable 1	2.28733497	1.603322161	1.42662219	0.21302972	-1.834129123	6.408799053	-1.8341291	6.408799053

GEARING BASED ON CAPITALISATION

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING	2004	23.81636712	16.2382177	21.5913716
CAPITALISATI	2004	14.42134155	1.72962493	0.32801228
GEARING	2003	21.22297158	21.1033747	30.416226
CAPITALISATI	2003	12.13395103	1.47357982	0.23364036
GEARING	2002	22.54961795	21.2753153	24.7284132
CAPITALISATI	2002	4.581310786	0.48696286	0.1168566
GEARING	2001	24.61154166	18.4093399	45.9601717
CAPITALISATI	2001	3.71015579	0.60145686	0.13187251
GEARING	2000	20.17097751	19.1723114	54.4831558
CAPITALISATI	2000	4.504928281	0.6786607	0.12419568
GEARING	1999	16.26100002	11.886303	33.3751598
CAPITALISATI	1999	4.723728168	0.69017116	0.10849436
GEARING	1998	8.341125409	9.91700615	12.596299
CAPITALISATI	1998	5.571085066	1.16985846	0.17970939

CAPITALISATION AND GEARING CHART

	LARGE	MEDIUM	SMALL
2004	23.8163671	16.23821768	21.5913716
2003	21.2229716	21.10337469	30.416226
2002	22.5496179	21.27531532	24.7284132
2001	24.6115417	18.40933992	45.9601717
2000	20.1709775	19.17231142	54.4831558
1999	16.261	11.88630299	33.3751598
1998	8.34112541	9.917006147	12.596299



REGRESSION BASED ON CAPITALISATION

LARGE COMPANIES

GEARING%	CAPITALISATION (BILLIONS)
23.81636712	14.4213415
21.22297158	12.133951
22.54961795	4.58131079
24.61154166	3.71015579
20.17097751	4.50492828
16.26100002	4.72372817
8.341125409	5.57108507

MEDIUM COMPANIES

GEARING %	CAPITALISATION(BILLIONS)
16.23821768	1.72962493
21.10337469	1.47357982
21.27531532	0.48696286
18.40933992	0.60145686
19.17231142	0.6786607
11.88630299	0.69017116
9.917006147	1.16985846

SMALL COMPANIES

GEARING %	CAPITALISATION (BILLIONS)
21.59137165	0.32801228
30.41622596	0.23364036
24.7284132	0.1168566
45.9601717	0.13187251
54.48315576	0.84623011
33.37515977	0.10849436
12.59629902	0.17970939

SUMMARY OUTPUT

SMALL COMPANIES BY CAPITALISATION

Regression Statistics	
Multiple R	0.57964162
R Square	0.33598441
Adjusted R Squ	0.20318129
Standard Error	12.8449922
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	417.4250807	417.425081	2.52994367	0.172576716
Residual	5	824.9691206	164.993824		
Total	6	1242.394201			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	23.0466879	7.375833777	3.12462137	0.02611553	4.086534521	42.00684122	4.08653452	42.00684122
X Variable 1	31.7891227	19.98587268	1.59057966	0.17257672	-19.58611467	83.16435999	-19.586115	83.16435999

SUMMARY OUTPUT

MEDIUM COMPANIES BY CAPITALISATION

Regression Statistics	
Multiple R	0.13248329
R Square	0.01755182
Adjusted R Squ	-0.17893781
Standard Error	4.82693714
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	2.081257596	2.0812576	0.08932696	0.777057973
Residual	5	116.4966106	23.2993221		
Total	6	118.5778682			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	18.04599	4.375347754	4.12446988	0.00913404	6.798818958	29.29316112	6.79881896	29.29316112
X Variable 1	-1.21810815	4.075628337	-0.2988762	0.77705797	-11.6948272	9.258610904	-11.694827	9.258610904

SUMMARY OUTPUT LARGE COMPANIES BY CAPITALISATION

Regression Statistics	
Multiple R	0.26136724
R Square	0.06831283
Adjusted R Squ	-0.1180246
Standard Error	5.98849132
Observations	7

ANOVA

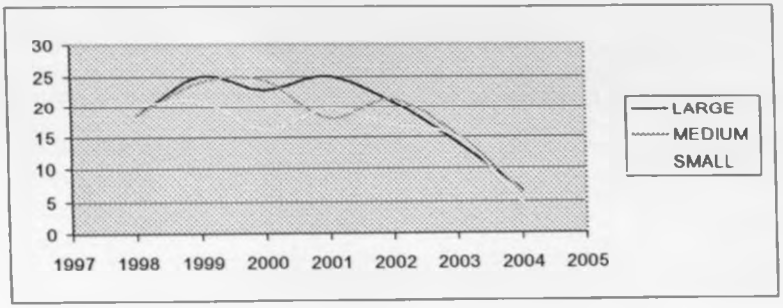
	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	13.14731378	13.1473138	0.3666082	0.571288184
Residual	5	179.3101415	35.8620283		
Total	6	192.4574552			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	17.1322035	4.615448879	3.71192574	0.01382728	5.267833836	28.99657316	5.26783384	28.99657316
X Variable 1	0.34339131	0.567137294	0.60548179	0.57128818	-1.114479138	1.801261752	-1.1144791	1.801261752

GEARING BASED ON TURNOVER

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING	1998	18.42358301	18.4605503	20.2871393
TURNOVER	1998	18.65140836	15.673053	12.9618965
GEARING	1999	24.90335226	24.1126593	20.9905864
TURNOVER	1999	14.65443891	12.4317979	10.2967866
GEARING	2000	22.79279914	24.3302045	16.2392628
TURNOVER	2000	14.10855709	11.9737031	9.86009918
GEARING	2001	24.93527995	18.0022059	19.6070411
TURNOVER	2001	13.79982973	11.6212564	9.51049436
GEARING	2002	20.78021295	21.2894463	16.9199648
TURNOVER	2002	12.46438427	10.4392867	8.57184436
GEARING	2003	13.96876943	15.2816383	14.828585
TURNOVER	2003	10.34650355	8.33508336	6.91876118
GEARING	2004	6.555106935	6.35576319	4.76367987
TURNOVER	2004	10.32781018	8.28513845	6.89909109

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING	1998	18.42358301	18.4605503	20.2871393
GEARING	1999	24.90335226	24.1126593	20.9905864
GEARING	2000	22.79279914	24.3302045	16.2392628
GEARING	2001	24.93527995	18.0022059	19.6070411
GEARING	2002	20.78021295	21.2894463	16.9199648
GEARING	2003	13.96876943	15.2816383	14.828585
GEARING	2004	6.555106935	6.35576319	4.76367987



REGRESSION ANALYSIS BASED ON TURNOVER

LARGE COMPANIES

GEARING %	TURNOVER (BILLIONS)
18.42358301	18.6514084
24.90335226	14.6544389
22.79279914	14.1085571
24.93527995	13.7998297
20.78021295	12.4643843
13.96876943	10.3465035
6.555106935	10.3278102

MEDIUM COMPANIES

18.4605503	15.673053
24.11265931	12.4317979
24.33020447	11.9737031
18.00220587	11.6212564
21.28944627	10.4392867
15.28163834	8.33508336
6.35576319	8.28513845

SMALL COMPANIES

20.2871393	12.9618965
20.99058638	10.2967866
16.23926279	9.86009918
19.60704107	9.51049436
16.91996477	8.57184436
14.82858498	6.91876118
4.763679866	6.89909109

SUMMARY OUTPUT SMALL COMPANIES BY TURNOVER

Regression Statistics	
Multiple R	0.7219
R Square	0.5211
Adjusted R Squ	0.4253
Standard Error	4.2030
Observations	7

ANOVA

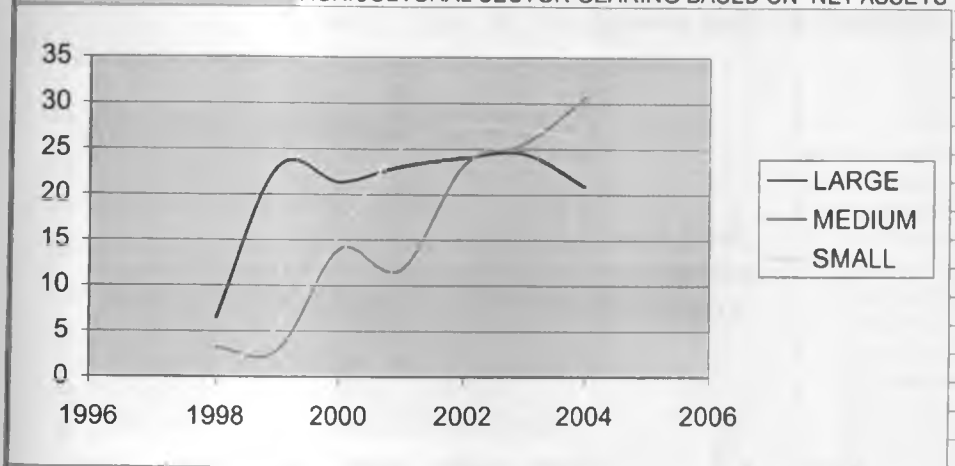
	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	96.1174	96.1174	5.4410	0.0670
Residual	5	88.3270	17.6654		
Total	6	184.4445			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-1.3813	7.7170	-0.1790	0.8650	-21.2184	18.4558	-21.2184	18.4558
X Variable 1	1.8965	0.8130	2.3326	0.0670	-0.1935	3.9864	-0.1935	3.9864

AGRICULTURAL SECTOR

VARIABLE	YEAR	LARGE	MEDIUM	SMALL	VARIABLE	YEAR	LARGE	MEDIUM	SMALL
NET ASSET	1998	4.097017	1.819361	0.272477	GEARING.	1998	6.407129	3.218508	0.428856
GEARING.	1998	6.407129	3.218508	0.428856	GEARING.	1999	22.99931	2.829433	5.402773
NET ASSET	1999	4.058746	2.160129	0.270885	GEARING.	2000	21.33566	13.98944	15.54689
GEARING.	1999	22.99931	2.829433	5.402773	GEARING.	2001	23.06431	11.74517	25.10317
NET ASSET	2000	4.214173	2.186031	0.322302	GEARING.	2002	24.03965	23.2279	27.55717
GEARING.	2000	21.33566	13.98944	15.54689	GEARING.	2003	24.46194	25.59871	27.19039
NET ASSET	2001	3.938714	2.071508	0.324047	GEARING.	2004	20.82966	30.6811	26.09008
GEARING.	2001	23.06431	11.74517	25.10317					
NET ASSET	2002	3.260567	1.847581	0.346929					
GEARING.	2002	24.03965	23.2279	27.55717					
NET ASSET	2003	3.607664	2.227131	0.359034					
GEARING.	2003	24.46194	25.59871	27.19039					
NET ASSET	2004	4.024099	2.416048	0.420113					
GEARING.	2004	20.82966	30.6811	26.09008					

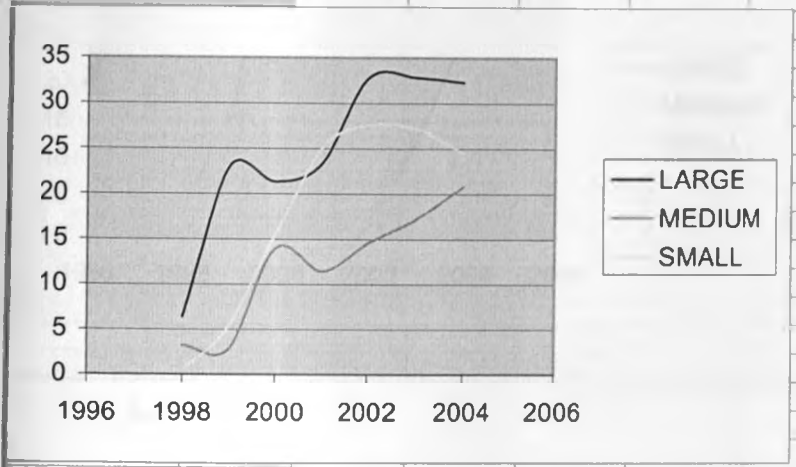
AGRICULTURAL SECTOR-GEARING BASED ON NET ASSETS



AGRICULTURAL SECTOR- GEARING BASED ON TURNOVER

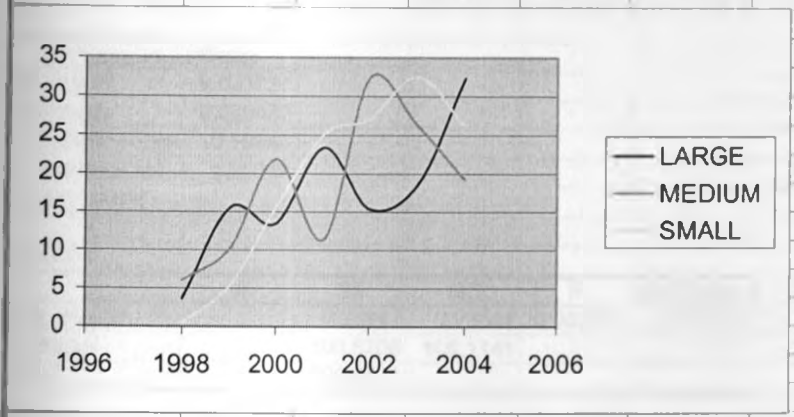
VARIABLE	YEAR	LARGE	MEDIUM	SMALL	VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING.	1998	6.407129	3.218508	0.428856	GEARING.	1998	6.407129	3.218508	0.428856
TURNOVER	1998	2.739638	1.026285	0.291929	GEARING.	1999	22.99931	2.829433	5.402773
GEARING.	1999	22.99931	2.829433	5.402773	GEARING.	2000	21.33566	13.98944	15.54689
TURNOVER	1999	2.106974	0.850166	0.292251	GEARING.	2001	23.38713	11.42234	25.10317
GEARING.	2000	21.33566	13.98944	15.54689	GEARING.	2002	32.74852	14.51903	27.55717
TURNOVER	2000	2.66497	1.031331	0.325985	GEARING.	2003	32.84216	17.21849	27.19039
GEARING.	2001	23.38713	11.42234	25.10317	GEARING.	2004	32.31563	20.76863	24.51659
TURNOVER	2001	2.813732	1.062773	0.321953					
GEARING.	2002	32.74852	14.51903	27.55717					
TURNOVER	2002	2.666738	0.929341	0.356742					
GEARING.	2003	32.84216	17.21849	27.19039					
TURNOVER	2003	2.705632	0.848065	0.388851					
GEARING.	2004	32.31563	20.76863	24.51659					
TURNOVER	2004	3.040306	0.956524	0.455944					

AGRICULTURAL SECTOR -GEARING BASED ON TURNOVER



VARIABLE	YEAR	LARGE	MEDIUM	SMALL	VARIABLE	YEAR	LARGE	MEDIUM	SMALL
CAPITALISATIC	1998	4.928048	1.977229	0.26	GEARING	1998	3.614418	6.011218	0.428856
GEARING	1998	3.614418	6.011218	0.428856	GEARING	1999	15.57415	10.25459	5.402773
CAPITALISATIC	1999	3.596257	1.465542	0.203	GEARING	2000	13.47247	21.85263	15.54689
GEARING	1999	15.57415	10.25459	5.402773	GEARING	2001	23.38713	11.42234	25.10317
CAPITALISATIC	2000	3.030848	0.9199	0.176	GEARING	2002	15.43703	32.3381	27.0496
GEARING	2000	13.47247	21.85263	15.54689	GEARING	2003	18.47191	26.2721	32.50704
CAPITALISATIC	2001	2.197316	0.729092	0.2052	GEARING	2004	32.31563	19.19513	26.09008
GEARING	2001	23.38713	11.42234	25.10317					
CAPITALISATIC	2002	1.570486	0.26177	0.099786					
GEARING	2002	15.43703	32.3381	27.0496					
CAPITALISATIC	2003	1.941655	0.460971	0.26177					
GEARING	2003	18.47191	26.2721	32.50704					
CAPITALISATIC	2004	2.603594	0.739848	0.4032					
GEARING	2004	32.31563	19.19513	26.09008					

AGRICULTURAL SECTOR- GEARING BASED ON CAPITALISTION



SUMMARY OUTPUT — IND & ALLIED MEDIUM BY CAPITALISATION

Regression Statistics	
Multiple R	0.16487
R Square	0.027182
Adjusted R Squa	-0.16738
Standard Error	8.97518
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	11.25402	11.25402	0.139708	0.7238966
Residual	5	402.7693	80.55385		
Total	6	414.0233			

	Coefficients	*Standard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	25.82331	6.763764	3.817891	0.0124	8.4365333	43.2101	8.436533	43.2101
X Variable 1	-1.20495	3.22374	-0.37378	0.723897	-9.49183	7.08192	-9.49183	7.08192

SUMMARY OUTPUT — INDUSTRIAL & ALLIED-LARGE BY CAPITALISATION

Regression Statistics	
Multiple R	0.021727
R Square	0.000472
Adjusted R Squa	-0.19943
Standard Error	10.0057
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.23641	0.23641	0.002361	0.963124
Residual	5	500.5706	100.1141		
Total	6	500.8071			

	Coefficients	*Standard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	16.34118	6.713149	2.434205	0.059074	-0.915489	33.59785	-0.91549	33.59785
X Variable 1	-0.02364	0.486411	-0.04859	0.963124	-1.273995	1.226721	-1.274	1.226721

SUMMARY OUTPUT — IND & ALLIED SMALL BY CAPITALISATION

Regression Statistics	
Multiple R	0.176855
R Square	0.031278
Adjusted R Squa	-0.16247
Standard Error	6.632097
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	7.10081	7.10081	0.161438	0.7044346
Residual	5	219.9235	43.98471		
Total	6	227.0243			

	Coefficients	*tandard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*Upper 95.0%*
Intercept	12.00069	4.179592	2.871259	0.034943	1.2567269	22.74466	1.256727	22.74466
X Variable 1	-3.3581	8.357761	-0.40179	0.704435	-24.84237	18.12618	-24.8424	18.12618

SUMMARY OUTPUT — COMMERCIAL AND SERV LARGE BY TURNOVER

Regression Statistics	
Multiple R	0.364531
R Square	0.132883
Adjusted R Squa	-0.04054
Standard Error	19.28399
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	284.9411	284.9411	0.766234	0.4214368
Residual	5	1859.361	371.8721		
Total	6	2144.302			

	Coefficients	*tandard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*Upper 95.0%*
Intercept	17.30109	28.3425	0.610429	0.568256	-55.55551	90.1577	-55.5555	90.1577
X Variable 1	1.67957	1.918746	0.875348	0.421437	-3.252715	6.611856	-3.25272	6.611856

SUMMARY OUTPUT — IND &ALLIED LARGE BY NET ASSETS

Regression Statistics	
Multiple R	0.473242
R Square	0.223958
Adjusted R Squa	0.06875
Standard Error	9.261486
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	123.7692	123.7692	1.44295	0.2834549
Residual	5	428.8756	85.77513		
Total	6	552.6448			

	Coefficients	*Standard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	14.39184	16.99474	0.84684	0.435731	-29.29448	58.07815	-29.2945	58.07815
X Variable 1	1.969457	1.639536	1.201228	0.283455	-2.245097	6.184011	-2.2451	6.184011

SUMMARY OUTPUT — IND & ALLIED MEDIUM BY NET ASSETS

Regression Statistics	
Multiple R	0.742243
R Square	0.550925
Adjusted R Squa	0.46111
Standard Error	1.47265
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	13.30278	13.30278	6.133995	0.0560681
Residual	5	10.84348	2.168697		
Total	6	24.14626			

	Coefficient	Standard E	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0	Upper 95.0%
Intercept	0.906315	2.009253	0.45107	0.670828	-4.258627	6.071256	-4.25863	6.071256
X Variable 1	1.953039	0.788568	2.47669	0.056068	-0.074036	3.980115	-0.07404	3.980115

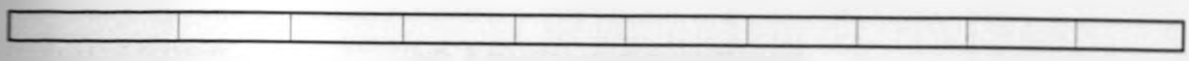
SUMMARY OUTPUT — IND & ALLIED SMALL BY NET ASSETS

Regression Statistics	
Multiple R	0.331537
R Square	0.109917
Adjusted R Squa	-0.0681
Standard Error	8.603769
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	45.70689	45.70689	0.617453	0.4675805
Residual	5	370.1242	74.02483		
Total	6	415.8311			

	Coefficients	*Standard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	25.50609	19.00883	1.341802	0.237371	-23.35759	74.36978	-23.3576	74.36978
X Variable 1	-24.5119	31.1943	-0.78578	0.46758	-104.6993	55.67544	-104.699	55.67544



SUMMARY OUTPUT — IND. & ALLIED LARGE BY TURNOVER

Regression Statistics	
Multiple R	0.227414
R Square	0.051717
Adjusted R Squa	-0.13794
Standard Error	8.08352
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	17.8184	17.8184	0.272689	0.6238349
Residual	5	326.7165	65.3433		
Total	6	344.5349			

	Coefficients	*tandard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*
Intercept	7.765695	16.87526	0.460182	0.664705	-35.61347	51.14486	-35.6135	51.14486
X Variable 1	0.502964	0.96317	0.522196	0.623835	-1.97294	2.978868	-1.97294	2.978868

SUMMARY OUTPUT — IND &ALLIED MEDIUM BY TURNOVER

Regression Statistics	
Multiple R	0.313647
R Square	0.098375
Adjusted R Squa	-0.08195
Standard Error	9.76815
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	52.05368	52.05368	0.54554	0.4933352
Residual	5	477.0838	95.41676		
Total	6	529.1375			

	Coefficients	*tandard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*
Intercept	37.1937	13.16513	2.825167	0.036884	3.3516979	71.0357	3.351698	71.0357
X Variable 1	-2.6392	3.573217	-0.73861	0.493335	-11.82444	6.54603	-11.8244	6.54603

SUMMARY OUTPUT — IND &ALLIED SMALL BY TURNOVER

Regression Statistics	
Multiple R	0.799195
R Square	0.638713
Adjusted R Squa	0.566455
Standard Error	2.521553
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	56.20294	56.20294	8.839401	0.0310454
Residual	5	31.79115	6.35823		
Total	6	87.99409			

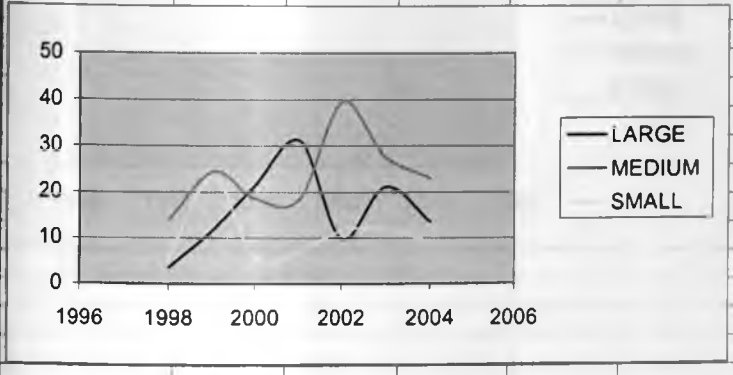
	Coefficients	*tandard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*
Intercept	-1.52956	2.368602	-0.64577	0.546894	-7.618236	4.559112	-7.61824	4.559112

X Variable 1	15.88251	5.342048	2.973113	0.031045	2.1503633	29.61466	2.150363	29.61466

GEARING LEVELS AND CAPITALISATION FOR IDUSTRIAL AND ALLIED SECTOR

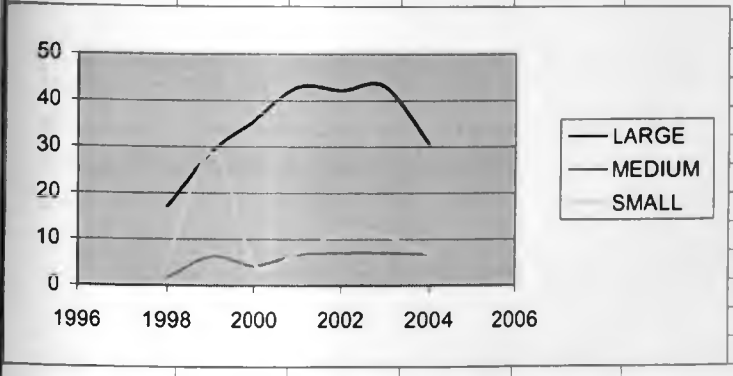
VARIABLE	YEAR	LARGE	MEDIUM	SMALL	VARIABLE	YEAR	LARGE	MEDIUM	SMALL
CAPITALISATIC	1998	7.529608	1.897367	0.282471	GEARING.	1998	3.582854	13.86354	5.86859
GEARING.	1998	3.582854	13.86354	5.86859	GEARING.	1999	11.73079	24.44746	23.33482
CAPITALISATIC	1999	6.585022	0.859208	0.097688	GEARING.	2000	21.45385	18.5916	5.544512
GEARING.	1999	11.73079	24.44746	23.33482	GEARING.	2001	31.11533	18.48067	7.158642
CAPITALISATIC	2000	6.385073	1.314734	0.201325	GEARING.	2002	9.8429	39.43332	11.59657
GEARING.	2000	21.45385	18.5916	5.544512	GEARING.	2003	21.1596	27.62311	11.97686
CAPITALISATIC	2001	4.984052	1.222102	0.248831	GEARING.	2004	13.61623	23.01331	9.118359
GEARING.	2001	31.11533	18.48067	7.158642					
CAPITALISATIC	2002	7.248651	0.88464	0.241072					
GEARING.	2002	9.8429	39.43332	11.59657					
CAPITALISATIC	2003	21.74719	2.501003	0.816533					
GEARING.	2003	21.1596	27.62311	11.97686					
CAPITALISATIC	2004	25.34159	4.026982	0.913221					
GEARING.	2004	13.61623	23.01331	9.118359					

IND. & ALLIED GEARING BASED ON CAPITALISATION



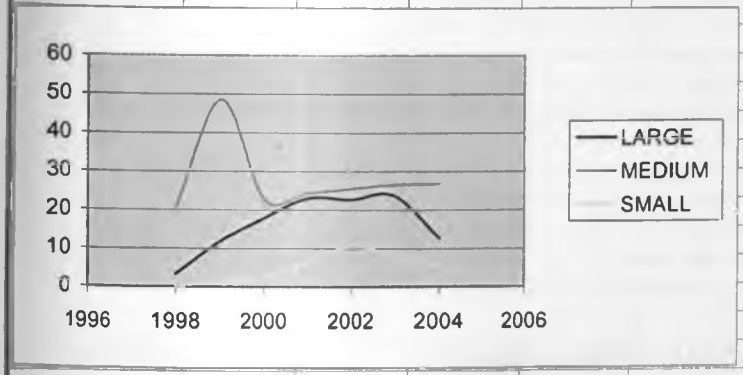
IND. & ALLIED- GEARING BASED ON NET ASSETS

VARIABLE	YEAR	LARGE	MEDIUM	SMALL	VARIABLE	YEAR	LARGE	MEDIUM	SMALL
NET ASSETS	1998	7.5699	1.6006	0.4758	GEARING.	1998	17.1008	1.7066	5.6813
GEARING.	1998	17.1008	1.7066	5.6813	GEARING	1999	29.1108	6.32	28.7493
NET ASSETS	1999	8.0068	1.7122	0.48	GEARING	2000	35.7865	4.259	4.7681
GEARING.	1999	29.1108	6.32	28.7493	GEARING.	2001	42.946	6.6724	7.14
NET ASSETS	2000	8.8588	1.6976	0.5291	GEARING.	2002	42.1477	7.0634	11.6508
GEARING.	2000	35.7865	4.259	4.7681	GEARING.	2003	43.0467	7.084	10.8536
NET ASSETS	2001	9.0767	2.6317	0.6168	GEARING.	2004	30.4421	6.7096	6.6833
GEARING.	2001	42.946	6.6724	7.14					
NET ASSETS	2002	12.001	2.9485	0.6441					
GEARING.	2002	42.1477	7.0634	11.6508					
NET ASSETS	2003	12.0572	3.1801	0.6737					
GEARING.	2003	43.0467	7.084	10.8536					
NET ASSETS	2004	13.4328	3.3671	0.7832					
GEARING.	2004	30.4421	6.7096	6.6833					



IND. &ALLIED- GEARING BASED ON TURNOVER

VARIABLE	YEAR	LARGE	MEDIUM	SMALL	VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING	1998	3.273703	20.56025	0	GEARING	1998	3.273703	20.56025	0
TURNOVER	1998	14.0027	2.185568	0.157586	GEARING	1999	11.91845	48.57395	1.303949
GEARING	1999	11.91845	48.57395	1.303949	GEARING	2000	17.82011	22.81156	2.503171
TURNOVER	1999	13.84922	2.231236	0.248248	GEARING	2001	22.96865	24.32749	6.29649
GEARING	2000	17.82011	22.81156	2.503171	GEARING	2002	22.64369	25.43944	10.58024
TURNOVER	2000	16.2674	2.818063	0.249692	GEARING	2003	23.74706	26.49694	8.161533
GEARING	2001	22.96865	24.32749	6.29649	GEARING	2004	12.65415	26.81064	5.57595
TURNOVER	2001	17.1909	4.212174	0.424204					
GEARING	2002	22.64369	25.43944	10.58024					
TURNOVER	2002	17.36541	4.083505	0.522761					
GEARING	2003	23.74706	26.49694	8.161533					
TURNOVER	2003	17.83539	4.190478	0.561592					
GEARING	2004	12.65415	26.81064	5.57595					
TURNOVER	2004	24.1059	5.034788	0.677298					



REGRESSION ANALYSIS OF IND. & ALLIED SECTOR- GEARING AND CAPITALISATION

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
CAPITALISATIC	1998	7.529608	1.897367	0.282471
GEARING.	1998	3.582854	13.86354	5.86859
CAPITALISATIC	1999	6.585022	0.859208	0.097688
GEARING.	1999	11.73079	24.44746	23.33482
CAPITALISATIC	2000	6.385073	1.314734	0.201325
GEARING.	2000	21.45385	18.5916	5.544512
CAPITALISATIC	2001	4.984052	1.222102	0.248831
GEARING.	2001	31.11533	18.48067	7.158642
CAPITALISATIC	2002	7.248651	0.88464	0.241072
GEARING.	2002	9.8429	39.43332	11.59657
CAPITALISATIC	2003	21.74719	2.501003	0.816533
GEARING.	2003	21.1596	27.62311	11.97686
CAPITALISATIC	2004	25.34159	4.026982	0.913221
GEARING.	2004	13.61623	23.01331	9.118359

LARGE

CAPITALISAT	GEARING
7.529608	3.582854
6.585022	11.73079
6.385073	21.45385
4.984052	31.11533
7.248651	9.8429
21.74719	21.1596
25.34159	13.61623

MEDIUM	
1.897367	13.86354
0.859208	24.44746
1.314734	18.5916
1.222102	18.48067
0.88464	39.43332
2.501003	27.62311
4.026982	23.01331

SMALL	
0.282471	5.86859
0.097688	23.33482
0.201325	5.544512
0.248831	7.158642
0.241072	11.59657
0.816533	11.97686
0.913221	9.118359

SUMMARY OUTPUT

COMMERCIAL &SERV LARGE BY NET ASSETS

Regression Statistics	
Multiple R	0.79947
R Square	0.639152
Adjusted R Squa	0.566982
Standard Error	3.687182
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*ignificance F*
Regression	1	120.4033	120.4033	8.856236	0.0309443
Residual	5	67.97654	13.59531		
Total	6	188.3798			

	Coefficients	*tandard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*
Intercept	10.91464	6.741179	1.6191	0.166351	-6.414079	28.24337	-6.41408	28.24337
X Variable 1	2.16512	0.727541	2.975943	0.030944	0.2949197	4.03532	0.29492	4.03532

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
NET ASSETS	1998	7.5699	1.6006	0.4758
GEARING.	1998	17.1008	1.7066	5.6813
NET ASSETS	1999	8.0068	1.7122	0.48
GEARING.	1999	29.1108	6.32	28.7493
NET ASSETS	2000	8.8588	1.6976	0.5291
GEARING.	2000	35.7865	4.259	4.7681
NET ASSETS	2001	9.0767	2.6317	0.6168
GEARING.	2001	42.946	6.6724	7.14
NET ASSETS	2002	12.001	2.9485	0.6441
GEARING.	2002	42.1477	7.0634	11.6508
NET ASSETS	2003	12.0572	3.1801	0.6737
GEARING.	2003	43.0467	7.084	10.8536
NET ASSETS	2004	13.4328	3.3671	0.7832
GEARING.	2004	30.4421	6.7096	6.6833

LARGE

NET ASSE	GEARING
7.5699	17.1008
8.0068	29.1108
8.8588	35.7865
9.0767	42.946
12.001	42.1477
12.0572	43.0467
13.4328	30.4421

MEDIUM

1.6006	1.7066
1.7122	6.32
1.6976	4.259
2.6317	6.6724
2.9485	7.0634
3.1801	7.084
3.3671	6.7096

SMALL

0.4758	5.6813
0.48	28.7493
0.5291	4.7681
0.6168	7.14
0.6441	11.6508
0.6737	10.8536
0.7832	6.6833

SUMMARY OUTPUT

COMMERCIAL &SERV MEDIUM BY NET ASSETS

Regression Statistics	
Multiple R	0.230702
R Square	0.053224
Adjusted R Squa	-0.13613
Standard Error	2.87673
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	2.326084	2.326084	0.281078	0.6186861
Residual	5	41.37788	8.275576		
Total	6	43.70396			

	Coefficients	*tandard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*
Intercept	7.760812	7.566981	1.025615	0.352107	-11.6907	27.21233	-11.6907	27.21233
X Variable 1	-2.22786	4.202175	-0.53017	0.618686	-13.02988	8.574159	-13.0299	8.574159

VARIABLE	YEAR	LARGE	MEDIUM	SMALL
GEARING	1998	3.273703	20.56025	0
TURNOVER	1998	14.0027	2.185568	0.157586
GEARING	1999	11.91845	48.57395	1.303949
TURNOVER	1999	13.84922	2.231236	0.248248
GEARING	2000	17.82011	22.81156	2.503171
TURNOVER	2000	16.2674	2.818063	0.249692
GEARING	2001	22.96865	24.32749	6.29649
TURNOVER	2001	17.1909	4.212174	0.424204
GEARING	2002	22.64369	25.43944	10.58024
TURNOVER	2002	17.36541	4.083505	0.522761
GEARING	2003	23.74706	26.49694	8.161533
TURNOVER	2003	17.83539	4.190478	0.561592
GEARING	2004	12.65415	26.81064	5.57595
TURNOVER	2004	24.1059	5.034788	0.677298

LARGE	
TURNOVE	GEARING
14.0027	3.273703
13.84922	11.91845
16.2674	17.82011
17.1909	22.96865
17.36541	22.64369
17.83539	23.74706
24.1059	12.65415
MEDIUM	
2.185568	20.56025
2.231236	48.57395
2.818063	22.81156
4.212174	24.32749
4.083505	25.43944
4.190478	26.49694
5.034788	26.81064
0.157586	0
0.248248	1.303949
0.249692	2.503171
0.424204	6.29649
0.522761	10.58024
0.561592	8.161533
0.677298	5.57595

SUMMARY OUTPUT

COMMERCIAL &SERV SMALL BY NET ASSETS

Regression Statistics	
Multiple R	0.646813
R Square	0.418368
Adjusted R Squa	0.302041
Standard Error	7.628416
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	209.2898	209.2898	3.596494	0.1163935
Residual	5	290.9637	58.19274		
Total	6	500.2535			

	Coefficients	*Standard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*
Intercept	50.06653	22.15585	2.259743	0.073375	-6.886804	107.0199	-6.8868	107.0199
X Variable 1	-80.9516	42.68601	-1.89644	0.116393	-190.6793	28.77614	-190.679	28.77614

SUMMARY OUTPUT — COMMERCIAL &SERV LARGE BY CAPITALISATION

Regression Statistics	
Multiple R	0.247719
R Square	0.061365
Adjusted R Squa	-0.12636
Standard Error	10.39782
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	35.3408	35.3408	0.326882	0.5922428
Residual	5	540.5735	108.1147		
Total	6	575.9143			

	Coefficients	*Standard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*
Intercept	37.80918	12.61843	2.996345	0.030226	5.3725206	70.24585	5.372521	70.24585
X Variable 1	-1.55191	2.71438	-0.57174	0.592243	-8.529434	5.425615	-8.52943	5.425615

SUMMARY OUTPUT — COMMERCIAL &SERV MEDIUM BY CAPITALISATION

Regression Statistics	
Multiple R	0.304269
R Square	0.092579
Adjusted R Squa	-0.0889
Standard Error	6.00147
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	18.37347	18.37347	0.510124	0.5070322
Residual	5	180.0882	36.01765		
Total	6	198.4617			

	Coefficients	*Standard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*
Intercept	4.93694	6.340419	0.778646	0.471412	-11.3616	21.23548	-11.3616	21.23548
X Variable 1	2.81654	3.943464	0.71423	0.507032	-7.320441	12.95352	-7.32044	12.95352

SUMMARY OUTPUT — COMMERCIAL &SERV SMALL BY CAPITALISATION

Regression Statistics	
Multiple R	0.073599
R Square	0.005417
Adjusted R Squa	-0.1935
Standard Error	4.434415
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.535479	0.535479	0.027231	0.875393
Residual	5	98.3202	19.66404		
Total	6	98.85567			

	Coefficients	*Standard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*
Intercept	8.37563	4.073591	2.05608	0.094905	-2.095852	18.84711	-2.09585	18.84711
X Variable 1	-1.05731	6.407169	-0.16502	0.875393	-17.52743	15.41282	-17.5274	15.41282

SUMMARY OUTPUT — COMMERCIAL &SERV MEDIUM BY TURNOVER

Regression Statistics	
Multiple R	0.366536
R Square	0.134349
Adjusted R Squa	-0.03878
Standard Error	3.88084
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	11.68722	11.68722	0.775997	0.4186923
Residual	5	75.3046	15.06092		
Total	6	86.99182			

	Coefficients	*Standard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	16.41931	8.31778	1.974001	0.105383	-4.962191	37.80081	-4.96219	37.80081
X Variable 1	-1.78458	2.02585	-0.88091	0.418692	-6.992189	3.42302	-6.99219	3.42302

SUMMARY OUTPUT — COMMERCIAL &SERV SMALL BY TURNOVER

Regression Statistics	
Multiple R	0.229117
R Square	0.052495
Adjusted R Squa	-0.13701
Standard Error	3.633709
Observations	7

ANOVA

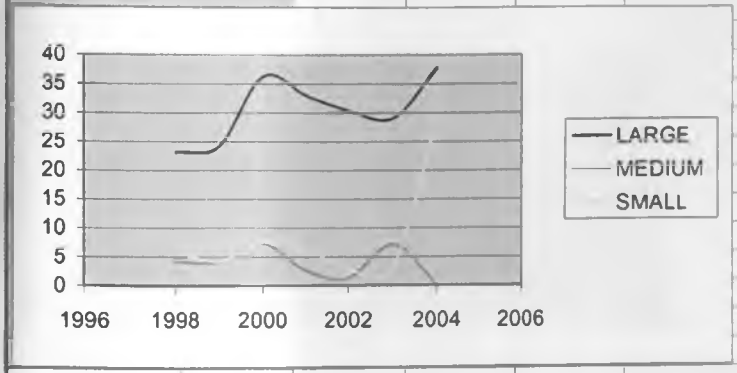
	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	3.657655	3.657655	0.277014	0.6211674
Residual	5	66.01922	13.20384		
Total	6	69.67687			

	Coefficients	*Standard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-6.07478	24.58357	-0.24711	0.814651	-69.26876	57.1192	-69.2688	57.1192
X Variable 1	11.21399	21.30634	0.526322	0.621167	-43.55561	65.98359	-43.5556	65.98359

COMMERCIAL AND SERVICES SECTOR

VARIABLE	YEAR	LARGE	MEDIUM	SMALL	VARIABLE	YEAR	LARGE	MEDIUM	SMALL
NET ASSETS	1998	5.708	1.3471	0.5737	GEARING.	1998	23.1229	4.0485	5.7513
GEARING.	1998	23.1229	4.0485	5.7513	GEARING.	1999	24.2215	4.1357	4.2144
NET ASSETS	1999	7.9952	1.518	0.5417	GEARING.	2000	36.2639	7.2507	7.6011
GEARING.	1999	24.2215	4.1357	4.2144	GEARING.	2001	32.9125	2.5919	6.4715
NET ASSETS	2000	8.8614	1.76	0.5655	GEARING.	2002	30.3988	1.2605	2.7699
GEARING.	2000	36.2639	7.2507	7.6011	GEARING.	2003	29.068	7.0626	3.2993
NET ASSETS	2001	9.4797	1.7688	0.5581	GEARING.	2004	37.8108	0.1848	28.7383
GEARING.	2001	32.9125	2.5919	6.4715					
NET ASSETS	2002	8.8934	1.9018	0.5431					
GEARING.	2002	30.3988	1.2605	2.7699					
NET ASSETS	2003	9.9592	2.0348	0.4274					
GEARING.	2003	29.068	7.0626	3.2993					
NET ASSETS	2004	12.5619	2.1438	0.3929					
GEARING.	2004	37.8108	0.1848	28.7383					

COMM & SERV SECTOR- GEARING BASED ON NET ASSETS



ALTERNATIVE INVESTMENT MARKETS

VARIABLE	YEAR	LARGE	MEDIUM	SMALL	VARIABLE	YEAR	LARGE	MEDIUM	SMALL
NET ASSET	1998	0.426535	0.274862	0.103413	GEARING.	1998	1.008471	15.50195	48.24202
GEARING.	1998	1.008471	15.50195	48.24202	GEARING.	1999	0.236014	6.883449	113.4507
NET ASSET	1999	0.482888	0.251111	0.077389	GEARING.	2000	11.94677	16.05127	278.7043
GEARING.	1999	0.236014	6.883449	113.4507	GEARING.	2001	12.3098	22.63885	205.3774
NET ASSET	2000	0.500385	0.249257	0.047547	GEARING.	2002	13.54405	27.96863	63.22334
GEARING.	2000	11.94677	16.05127	278.7043	GEARING.	2003	20.1807	22.39701	82.05877
NET ASSET	2001	0.501331	0.189373	0.051509	GEARING.	2004	29.31374	10.20909	55.83149
GEARING.	2001	12.3098	22.63885	205.3774					
NET ASSET	2002	0.4584	0.21651	0.096618					
GEARING.	2002	13.54405	27.96863	63.22334					
NET ASSET	2003	0.605455	0.211889	0.106577					
GEARING.	2003	20.1807	22.39701	82.05877					
NET ASSET	2004	0.672908	0.259623	0.132279					
GEARING.	2004	29.31374	10.20909	55.83149					

GEARING BASED ON NET ASSETS