

**RELATIONSHIP BETWEEN CAPITAL STRUCTURE AND AGENCY COST
FOR COMPANIES LISTED AT THE NAIROBI STOCK EXCHANGE**

BY

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DECLARATION

This research paper is my original work and has not been presented for the award of any degree in any university.

Signature.....^fcf*-

Date.....-U+./u./rfg.

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This research has been submitted with my approval as university supervisor.

Signature.....f^^^T^r^:^).J .

Date

MR.MOSES ANYANGU

DEDICATION

•mis research paper is dedicated to my husband Henry N. Ofcso and to my children Brenda. Yvonne, Geoffrey, Fenh and Derrick.

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I would like to acknowledge the invaluable guidance of my supervisor, Mr. Moses Anyangu throughout the stages of this research paper. Without his tireless efforts in guidance, this research work would not have come to its conclusion.

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Thanks also to my husband who without his tireless encouragement I would not have completed this paper. Thanks to my children too who persevered my absence during the research. To all who participated In this research, I say thank you and may God bless you all.

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ABSTRACT

This study set out to achieve the following two objectives:-

- To determine whether there exist a relationship between capital structure and agency costs for firms listed in the Nairobi Stock Exchange
- To test whether the relationship between capital structure and agency cost differ between high growth firms and low growth firms.

The study Investigates whether the use of debt In capital structure can reduce conflict between shareholders and managers'. The population of the study Included all companies listed in the Nairobi Stock Exchange registered as at 31'st December 2007.Secondary data was obtained form Nairobi Stock Exchange. The period covered was between 2000 and 2007.Data analysis was done using statistical power for Excel. Agency cost, which is the shareholders' lost value arising due to conflict between shareholders and managers was measured using efficiency ratio and asset ublization ratio and capital structure was measured using debt to equity ratio. The correlation of capital structure and agency cost was carried out for the period between 2000 and 2007.

The findings indicated mixed results .Overall, a weak relationship exist between capital structure and agency cost firms In Nairobi Stock Exchange. On the other hand high growth firms indicated a strong relationship between debt and efficiency ratios but very weak relabonship in asset utilization ratios. In low growth firms, higher correlation coefficient was indicated in utllizabon ratio than In efficient ratio. It was concluded that, the use of debt decreases expenses in high growth firms but increases asset ublization in low growth firms.

CHAPTER ONEii.O INTRODUCTION

1,1 Background

Distinguishing characteristic of public quoted companies is the separation of ownership of assets from control of the assets. While ownership of these assets is vested in the shareholders of the companies, control of these assets is in the hands of professional managers (Brealey & Myers 2003). A number of researchers have provided insights of problems, known as agency costs, which may arise as a result of this separation (Brealey & Myers 2003; Baker & Powell). Whereas shareholders have interest in increase in the firm's value, managers may want to pursue selfish goals of increasing perquisites, company size and market share. The question asked by several researchers is how can shareholders mitigate the selfish interests of managers.

More often than not, Shareholders lack time, money and experience to make full use of their rights as shareholders. Most shareholders pay little attention to corporation management as long as they receive dividends. Shareholders choose to remain inactive as individual votes may unlikely affect success or failure of a resolution. The only way to make an impact is through voting collectively. But the cost of organizing this collective action is prohibitive and would outweigh the benefits. Shareholders not satisfied by management prefer selling off their shares. The result of this is that managers can potentially pursue their own objectives.

On the other hand, Managers are employed to use their skills, judgment and experience on behalf of shareholders. In order to do so they need a

significant element of discretion and relative freedom of actions. Such freedom can often be abused if they are not called to account for their actions. Given the information asymmetry between the shareholders and managers, where managers know more about the firm, we do not expect a firm to operate as well as it would have, if all information were costlessly shared.

Berle and Means (1932) in their study of the modern corporation found that even though the state seeks to regulate the corporations, the corporations are becoming more powerful and make every effort to avoid such regulations. Jensen(1986) argues that agency problems are more likely to prevail in large companies.

Corporate literature suggests several techniques by which agency conflict can be reduced. The techniques can be distinguished between internal mechanisms, which include compensation contracts, bonding, and monitoring activities within the firm and external mechanisms include monitoring activities by the capital market and legislators. However, perfect control is extremely costly and thus out of question (Vasiliou, Eriotis, Daskalakis 2005). For this reason, agency problems can never be perfectly solved and managers may never act totally in the best interest of shareholders. As a result shareholders experience loss in wealth due to divergence behaviors of managers especially when there is free cash flows in firms with low growth opportunities.

When managers' objectives differ from those of shareholders', the presence of internally generated cash flow in excess of that required maintaining existing assets in place creates the potential for those funds to be squandered (Richardson 2005). Agency cost is more severe in low growth,

free cash flow firms and where the economic interests of shareholders and managers diverge substantially and information monitoring is costly.

Jensen (1986) argues that managers in firms with large free cash flows have incentives to waste organizational resources on negative net present value projects, and financing their perquisites rather than payout cash to shareholders through dividends or share purchase schemes. The impact of free cash flows on organizational inefficiencies is more pronounced in low growth firms because such firms have few positive net present value projects.

Berle and Means (1932) believed that not all managerial objectives are self-serving. They believed that rather than furthering their own interest, or even those of shareholders, the management may act in the interest of the society as a whole.

1.1.2 Capital structure and agency costs

Jensen and Meckling (1976) argue that the existence of debt reduces the amount of equity, and enables higher levels of insider ownership. Jensen (1986) also argues that the existence of debt in the firm's capital structure acts as a bonding mechanism for company managers. By issuing debt, rather than paying dividends, managers contractually bind themselves to pay out future cash flows in a way unachievable through dividends. Easterbrook (1984) in the study of agency cost expectation of dividends argues that external capital market monitoring brought to companies by debt financing forces managers in value maximizing strategies, rather than personal utility maximization. The bankruptcy costs of debt and the personal embarrassment arising from bankruptcy act as effective incentive mechanisms in encouraging managers to be more efficient. This function is particularly important in firms with low internal growth prospects and high free cash flows.

These give three different reasons that could lead to managerial efficiency due to use of debt in a firm. Firstly, debt decrease firms free cash flows, which should reduce manager's ability to use corporate resources for empire building purposes (Jensen 1986). Secondly, the managers increase efficiency In order to meet debt payment obligations to avoid bankruptcy .In the process managers' act in the interest of shareholders (Grossman and Hart **1882**). Thirdly, an increase of debt could increase monitoring by lenders (papa 2007).

Lenders incur monitoring cost to safeguard their loans. This make firms operate more efficiently by better utilizing and moderating perquisites consumption so as to improve performance reported to the lenders (Ang, Cole and Un 2000)

Payout of cash to shareholders creates conflict between managers and shareholders. The payout reduces resources under managers' control and thereby reducing their power. On the other hand managers have tendency to cause their firms to grow beyond the optimal size. The higher the growth of resources, the more the managers' power which, can also lead to increase in managers' compensation. Conflict between shareholders and managers over payout policies are more severe when the firm generates substantial free cash flows. With free cash flows and low payout ratios the manager is tempted to invest in project with low returns and engage in organization inefficiencies (Jensen 1986).

Large cash balances provide firms with flexibility in investment decisions while shielding them from capital market discipline imposed when issuing securities. This reduced market supervision leads agency theory to predict that cash rich firms will over Invest at the expense of shareholders (Mahar 1998)

Jensen (1986) study of the benefits of debt in disgorging these excess cash in the hands of managers and substitution of debt for dividends gives insight of how shareholder managers' conflict can be resolved. The use of debt bonds managers to repay capital and interest in future. Failure to meet the obligation, creditors can take the firm into bankruptcy court. Therefore, debt reduces agency cost by reducing cash available for spending at the discretion of managers.

Jensen (1986) emphasizes that the control of debt is more important in organizations that generate large cash flows but have low growth prospects. In these organizations the pressure to waste cash flows by investing them in uneconomic projects is most serious.

1.1.3 Definition of terms

Free cash flow is defined as the excess of cash available to a firm after it has invested in all positive net present value projects and that which is not paid out as dividend.

Over Investment is defined, as investment expenditure beyond that required to maintain an asset in place and to finance new investment in positive net present value projects.

1.2 Statement of the problem

It is widely acknowledged that managerial interests are not aligned with shareholders interest. As a result, too much cash can be a problem if monitoring is costly and managers have information that investors do not have. Financial theory maintains that firms should return excess cash back to shareholders. However, managers do not always agree with shareholders perception of returning excess cash to shareholders (Mahar 1998).

Two primary reasons why managers retain excess cash are first; It lowers the probability of financial distress. Secondly, It gives them greater discretion **over** Investment^ Mahar 1998). For example , Kenya airways earnings per **share** of 6.54 while dividends per share was 1.25 during financial year 2005. Shareholders were dissatisfied with the dividends during the annual general **meeting** and were of the opinion that management should increase dividends. **The** company managers' response was that most earnings are retained as the airline must have huge amounts of cash available at all times since the industry is very unpredictable and also for fleet expansion. Same case with Sameer Africa which having made pre-profits of 166.5 million In the year 2007, no dividends were declared. The managers promised to work hard so as to pay dividends the following year. The question is will dividend be paid the following year if the company makes profit? The questions asked by shareholders in annual general meetings have much to do with too little dividends and too much directors' fees giving an indication of general dissatisfaction among shareholders.

Most researchers have come up with evidence that, in the presence of free cash flows, managers tend to incur higher expenditure. They are highly Involved in non value maximizing activities including an increase in perquisites consumption and compensations at the expense of shareholders as well as the manipulation of accounting numbers (Gui2001; Jensen (1986). The managers, in their own self-interest, seek to accumulate perquisites and as a firm becomes larger, more opportunities exist for managers to indulge in their needs for power and prestige.

Opinion of most researchers is that choice of capital structure may help mitigate these agency cost ((Papa and Speciale 2007),(Richardson 2005), (Douglas 2002),(Mahar 1998),(Westphalen 2002),(Hongxia,Luming 2003). High leverage reduces agency cost by constraining or encouraging managers

to act more in the interests of shareholders, by reducing cash flows available **for** spending to managers. Therefore we expect high earnings where debt ratios are high due to the fact that managers will act more in the interest of shareholders. A puzzling local example is Sameer Africa which recorded pre-tax profits of Sh166.5 million in the financial year 2007, the first positive outturn since It rebranded from Firestone East Africa. During the financial year 2007, it borrowed 722 million. The question is whether the debt acquired led to management efficiency, which eventually led to the increased earnings.

To the contrary, ((Tian 2002),(Fasricant 1991),(Hortlund 2005)), results showed a positive relationship between debt ratios and managerial perks. Hortlund (2005) study reports a negative relationship between debt ratios and profitability between the period 1990 and 2001. Kinsman and Newman (1998) study of US corporations from 1987 to 1995 suggests higher levels of debt are correlated with low firm performance. Berger (1995) results show negative relationship between leverage and profitability.

In the context of the firm, another major source of conflict is information asymmetry between managers and shareholders .In this agency relationship, insiders (managers) have an information advantage. Owners therefore face moral dilemmas because they cannot accurately evaluate and determine the value of decisions made. The managers therefore take advantage of the lack of observability of shareholders actions to engage In activities to enhance their personal goals. The question is whether the use of debt can present an excellent opportunity to apply agency theory, In the sense that managers who have better access to a firms' private information can make credible and reliable communication to the market to optimize the value of the firm.

The lenders have better machinery, which make the firms disclose their investment opportunities and financing policies. Conversely, without the use of debt, managers may, because of their own interests, fail to make certain disclosure of Important Information to the market. Such practices may not be in the interests of shareholders. This may result in a higher cost of capital and, consequently, shareholders may suffer a lower value for their investments. Jensen and Meckling (1976) argued that information asymmetry might be reduced by the presence of bondholders in a firm's capital structure. To cater for this, agency theory predicts that restrictive covenants may be included in written debt contracts.

In their corporate disclosure study of Bangladesh listed companies, Ahmed (1994) argued, that in countries where financial institutions are a primary source of company funds, there is an expectation that companies, which have large sums of debt on their balance sheet disclose more Information in their annual reports. Moreover, such firms tend to prepare detailed information to enhance their chance of getting funds from financial institutions. This is similar to the Kenyan environment in which financial institutions play an active part in the provision of funds to corporate borrowers, some of which are the listed firms.

The focus of this research therefore examines whether there exist a relationship between capital structure and agency cost in Kenyan firms listed in the Nairobi Stock exchange. No empirical analysis has been conducted so far on companies listed in Nairobi Stock exchange. This study fills the gap in this area.

1.3 Objectives Of The Study

The primary objectives of the study are:-

- 1, to determine whether there is a relationship between agency cost and capital structure for firms listed in Nairobi Stock Exchange.
2. To test whether the relationship in agency cost and capital structure differs between low growth and high growth firms.

1.4 Significance Of The Study

Academician

The study contributes to the literature of the relationship between capital structure and agency cost in companies listed in the Nairobi Stock Exchange.

It is hoped that the findings of this study are valuable to the academicians who may find useful research gaps that may stimulate interest in future research in this area of capital structure and agency costs. Recommendations have been made on possible areas of future studies.

Investors

Sometimes Managers fail to make certain disclosures of important information to the market. This coupled with the separation of ownership and management, investors are not able to make fair judgments when investing. The study provides insight on the relationship between capital structure and agency costs which may help Investors gather more information as regards to their investments and therefore make better decisions. They are therefore more enlightened when it comes to voting for vital decisions, which affect them as regards to the economy of the country.

CHAPTER TWQ:2.0 LITERATURE REVIEW

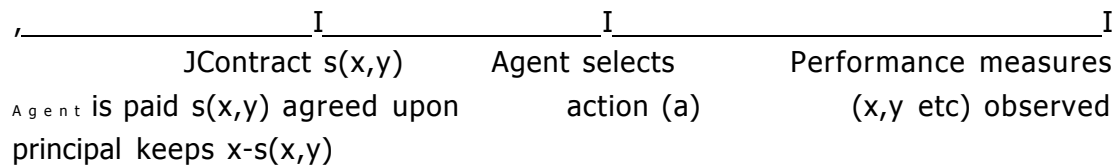
2.1 Agency Theory

Jensen and Mcckling (1976) define agency relationship as a contract under which one party (the principal) engages another party (the agent) to perform some service on their behalf. The principal delegates some decision-making authority to the agent.

This delegation of decision making by the principal and resulting division of labor are helpful in promoting an efficient and productivity. The principle hires or retains the agent because of the agent's specific talents, knowledge and capabilities to increase the value of the assets. In order to increase the value of the assets, all or some of the principle's decision rights over that asset is transferred to the agent (Moldoveanu and Martin 2001).Such delegation means the pnnclpal have to place trust In an agent. Agency theory looks at conflicts of interest, which may arise between principal, and the agent when motive of agents are questionable and trust no longer exist. The principal seeks to gain information by inspection or evaluation and designing systems to ensure agents acts in the principal interest (Berle and Mean 1932)

2.1.1 A basic principal agent model

In Hoque (2006) the simplest form of an agency model can be viewed to comprise two parties: the principal and the agent. The principle is expected to supply the capital, bear risks and to construct incentives, while the agent Is required to complete tasks, make decisions, on the principal behalf and to bear risks. The normal sequences of events over a single time period may be viewed as follows:-

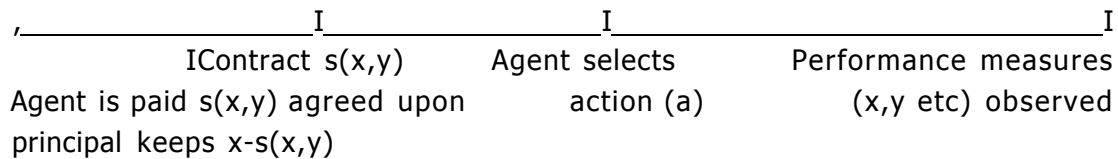


The sequence begins with a compensation contract between the principal and the agent specifying the performance measures upon which the agent's compensation will be assessed. Let the compensation function be denoted as 's' and 'x' as the outcome of the firm and V as the vector of performance measures used in the contract. The agent is then seen to, based on the terms of the contract, choose a vector of actions a, which include operating decisions, financing decisions or investment decisions. The agent's actions along with the exogenous factors (generally modeled as random variables) influence the realizations of the performance measures and the outcome of the firm as well. After the performance measures are jointly observed, the agent is paid according to the terms of the contract.

Key assumptions In the overall sequence of events are: - First, the outcome of the firm, that is x is observed and can be contracted on. Further, it is assumed x can be measured in monetary terms and relate to a single period, such as end of period cash flow or the liquidating dividend of the firm gross of the compensation paid to the agent. Another assumption is that the agent chooses an action and the principal is not able to fully observe this choice, and there is a stochastic term attached to the agent's output. Thus both the agent and the principal assume a certain amount of risk and in general, the greater the risk assumed by the agent, the higher the agent's compensation.

2.1.2 The principal-agent problem

The basic principal-agent problem is confronted with a fundamental issue. The principal and the agent are utility maximizers, whereby both parties seek to maximize their return. Secondly, not always those, the interests of the



The sequence begins with a compensation contract between the principal and the agent specifying the performance measures upon which the agent compensation will be assessed. Let the compensation function be denoted as 's' and y as the outcome of the firm and 'y' as the vector of performance measures used in the contract. The agent is then seen to, based on the terms of the contract, choose a vector of actions a, which include operating decisions, financing decisions or investment decisions. The agent's actions along with the exogenous factors (generally modeled as random variables) influence the realizations of the performance measures and the outcome of the firm as well. After the performance measures are jointly observed, the agent is paid according to the terms of the contract.

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2.1.2 The principal-agent problem

The basic principal-agent problem is confronted with a fundamental issue. The principal and the agent are utility maximizers, whereby both parties seek to maximize their return. Secondly, not always those, the interests of the

principal and agent are aligned. (Berle and Mean 1932, Jensen and Meckling 1976). The agent may not act to the best interest of the principal. For instance, the principal and the agent may differ in their risk preference resulting In the agent's action being different from that expected by the principal. Unless the risk preference are known and made clear between the parties at the outset, that is prior to contract formation and factored into the compensation, the agency problem is likely to increase.

2.1.3 Information asymmetry and agency theory

Further, the agency problem Is seen to exacerbate under conditions of information asymmetry, in that, one party has more information than the other (Jensen and Meckling 1976).It is usually the agent who is seen to possess information advantage over the principal. Information asymmetry may in turn lead to two types of agency problems: -

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- a) Moral hazards at times referred to as hidden costs. This relates to lack of effort by managers. The principal has restricted effort to assess the agent's action directly. In such situations, the managers may be tempted to consume perquisites in excess of what was agreed or take easy on the job as the principal is not able to observe managers' actions.
- b) Adverse selections- which arise even when the principal is able to observe managers' behavior but is unable to ascertain if the effort extended by the agent is the most appropriate behavior. For example the managers may choose an accounting policy that maximizes reported net income in order to gain higher bonuses. Investors may not receive full and proper disclosures of firm's prospects and managers stand to gain from non-disclosure. Another example is when the job is complex and the agent misrepresents his or her ability to complete the task. The principal is not able to verify agent's ability at the time of hiring or even when the agent is working on the project.

2,1.4 Shareholders managers' relationship

In public quoted companies, ownership of assets is separated from control of these assets. Shareholders are the principals, while managers are the agents who control the assets. The relationship centers on the issue of the separation of ownership and control, resulting in limitation of shareholders ability to observe managers action. This in turn gives risk that managers may not always act to the interest of the firm.

The shareholders will seek to resolve these concerns by putting In place mechanisms to align their interests and that of managers (Jensen and Meckling 1976). The agency theory holds that managers will not act to maximize the returns to shareholders unless appropriate governance structures are implemented in the large corporation to safeguard the interests of shareholders (Jensen and Meckling 1976).

2.2 Agency Cost of equity

Agency costs are cost that arises due to the conflict between shareholders and managers. While stockholders want managers to maximize the value of their stock, managers also tend to have personal agenda of consuming huge perks, prestigious offices and cars (Westaphalen 2002). The managers may indulge in excessive or unnecessary expenditures on luxury items such as business trips, luxury office fittings (Hoque, 2006).

According to Baker & Powell (2005), there are two types of costs, direct and indirect as agency cost. Shareholders Incur direct costs in order to reduce potential conflicts with managers. These are bonus, stock option plan, audit fees, managerial Incentives and infrastructure put in place to control the behavior of managers. Indirect costs result from managers failure to make profitable investment due their aversion of risk, managers exerting insufficient work effort, poor investment decisions, choosing inputs or outputs

that suits their own preferences, executive perquisites such as fancy office space, office furnishing, automobiles or paying themselves higher compensation at the expense of shareholders ((Ang,Cole and Lin (2000) and Berger and Patti (2003)). The value lost by shareholders arising due to divergences of interest between shareholders and corporate managers is known as agency cost (McColgan 2001).

Managers also tend to retain profits instead of distributing to shareholders. They use the retained profits in expansion of business even when the projects have low returns .In a perfect capital market, there should be no association between firm investing activity and internally generated cash flows. Free cash flow should be distributed to shareholders. If a firm needed an additional cash to finance an investment, It would simply raise that cash from external capital market. Firms with excess cash flow should distribute the free cash flow to external market. Existence of variety of capital market friction renders the inability of managers to raise capital from external market instantly. For this reason, managers prefer retaining internally generated funds rather than distributing it. (Jensen and meckling 1976).

Managers benefit from retained earnings as size growth grants a larger power base, greater prestige, and an ability to dominate the board and award themselves higher levels of remuneration, Jensen (1986). This reduces the amount of firm specific risk within the company, and therefore, strengthens executive job security. However, finance theory dictates that investors will already hold diversified portfolios. Therefore, further corporate diversification may be incompatible with their interests. Empirical evidence suggests that such a strategy is ultimately damaging to shareholder wealth. Such earnings retentions reduce the need for outside financing when managers require funds for investment projects. However, despite the potential costs of raising new capital, external markets provide a useful monitoring function in

constraining managerial investment policies. Earnings retention reduces the likelihood of this external monitoring encouraging management to undertake value maximising decisions.

Separation of ownership from management makes it costly to monitor the management. Therefore, existence of free cash flow makes management engage in self-serving projects rather than distributing the free cash flows to shareholders. Such engagement includes empire building, perquisites consumption, diversifying acquisitions, and subsidizing poor performing divisions.

Prior research has documented a positive relationship between agency costs and free cash flows. The positive relation is a manifestation of an agency problem whereby managers in these firms engage in wasteful expenditure. Traditionally, free cash flow should be distributed to shareholders. When manager's objective differs from those of shareholders, the presence of free cash flow not distributed to shareholders creates a potential for those funds to be squandered in form of increase in compensation and also expenditure on projects, which add no value to shareholders. The managers also have incentives to cause their firms to grow beyond their optimal size. Growth gives them immense power by increasing resources under their control.

Free cash balances provide firms with flexibility in investment decisions while shielding them from capital markets discipline imposed during security issuing. This reduced market supervision, which leads to organizational inefficiencies, explains agency theory prediction that cash rich firms will over invest at shareholders expense (Myer 1998). Firms with negative cash flow are forced to alternative sources to finance their projects and because the external markets are expected to serve an additional monitoring role in disciplining managerial use of funds, their agency cost are reduced.

Richardson (2005), Mahar (1998) and Jensen (1986) study of over Investment and free cash flows found evidence consistent with agency cost explanation in that, over -investment was consistence in firms with the highest cash flows and low growth firms. Excess cash Is detrimental to shareholders because managers waste it through over investment and diversifying acquisitions. The Impact of free cash flow on organizational inefficiencies are more pronounced in low growth firms because they have few positive net present value investment opportunities. A good example of inefficiencies due to presence of free cash flow, is set forth by Gui and Tsui (2001) study which examined the impact of free cash flow by studying fees charged by six audit firms in 140 Australian firms .The results showed that low growth firms with high cash flows was associated with high inherent risk. Therefore high audit effort was needed which resulted to high audit fees. This finding suggests that auditors recognize the agency risks present In low growth, high cash flow firms and adjust fees accordingly.

However, in the study carried out by Mitra (2005), showed no evidence that Increase in information technology spending was associated with free cash flow and low growth companies.

Evidence of agency cost of free cash flow is also seen in the oil industry between 1970s and 1980s.In the early 1970s the crude oil prices increased tenfold. The industry expanded rapidly with managers experiencing huge free cash flows at their disposal. But In early 1980s the consumption of fuel fell drastically. The expectations of future oil prices also fell leaving the industry with excess capacity. The oil industry started shrinking. Consistent with agency cost of free cash flow, management did not pay out the excess resources to the shareholders. Instead, the industry started spending heavily on acquisitions. The oil companies purchased firms in retailing, manufacturing, mining and office equipment. The acquisitions turned out to

be among the least successful investments partly because of lack of managerial expertise outside the oil industry. Acquisitions are one way managers spend cash instead of paying out to shareholders. The experience of oil industry gives evidence of agency cost theory, which implies that managers with unused borrowing power and large cash flows are more likely to undertake low-benefit or even value destroying mergers (Jensen 1986).

In the study of varying ownership structures, Johan (2002) examined existence of agency cost and results showed that agency cost was positively associated with the number of non-manager shareholders. Although So (2005) study of agency costs and ownership structure In small business finance found evidence that agency cost on owner managed and outsider-managed firms were not significantly different, most researchers such as Gul(2001) have supported Johan (2002) view on the existence of higher agency cost in non owner managed companies.

2.2.1 Strategies to mitigate agency problems

Agency cost can be mitigated through several strategies or courses of actions that involve monitoring of agents behavior or providing incentives that engender behavior congruent with the principal's interests. The costs that are associated with these strategies that mitigate agency problems are known as agency costs.

Monitoring costs, which are cost incurred in monitoring the agents behavior such as mandatory internal and external audits. The provision of audited financial statement is usually regarded as a cost effective control of agency cost (Deangelo 1981). The mandatory statutory audit of public listed companies serves as an example of how management actions can be scrutinized and validated by independent auditors.

Fama and Jensen (1983b), examined the role of board of directors as a monitoring device .The result of their study was that independent directors generally hold higher reputation In the business community and they view the directorship as a means of further developing their reputations as experts in decision making. Information systems and other oversight processes that curb opportunistic behavior. Such directors will be more prone to diligent in their duties.

Performance evaluations systems are largely designed to mitigate managers' actions. Budgeting for instance is viewed as an important multi-faceted activity within an organization that not only enables the setting of performance targets, but also facilitates monitoring and restricting managers' behavior. For example, through variance analysis, a principal is able to asses' managers' performance (Hoque 2006).

Performance related rewards such as bonuses, promotion, stock option plans and other organization perks, help in aligning managers' interest with those of shareholders'.

Jensen (1986) study of free cash flow theory, debt can mitigate the agency problems between managers and shareholders. The creditors monitor firms closely and require minimum financial disclosures. This ensures the firms are ran efficiently thus reducing agency cost.

2.3 Capital Structure and agency cost

Stockholders and managers have an interest with the use of free cash flows .The managers would use the cash flow on the low return projects rather than assign it to stakeholders. The use of debt can prevent managers from investing in low return projects and increase efficiency because of rigidity of the repayment of capital and interest Xu (2005). The managers who use debt

are contractual bound to repay the interest and principle. If they spend the free cash in wasteful expenditures, the probability that the repayment schedule will be met decreases. In case of default, debt holders may take the firm to bankruptcy court and get a claim over the assets. Manager will lose their decision rights and possibly their jobs. This threat prevents managers from undertaking wasteful actions and aim at utilizing assets efficiently, thus increasing firms value. Payment under debt contracts reduces free cash flows available to managers to finance non-value adding projects (Jensen 1986).

Xu (2005) studied capital structure and corporate performance in China. Data of listed companies in both Shanghai and Shczhen Stock markets in 2001 was used. The empirical study showed that there is a strong correlation between corporate performance and debt ratio. More evidence on the importance of debt in reducing shareholders managers' conflict is witnessed in the study of the relationship between Financial Leverage and managerial incentives by Papa and speciale (2007). The results showed that high levels of debt lowered pay-for-performance sensitivity. The results indicated that with financial leverage in place, the use of managerial incentives as a means of improving performance is less important.

In their paper on the effect of capital structure when expected agency cost are extreme, Harvey ,Lins and Roper(2003) indicates that incremental benefit of debt is concentrated in firms with high expected managerial agency cost. These firms are also most likely to have overinvestment problems resulting from high levels of assets in place or limited future growth opportunities. High level of assets In place generates cash flow that can that create potential for overinvestment (Jensen 1986). Debt should create value if the use of debt directly reduces ovenncstment. For instance in long term

debts, unlike short term debts, managers face frequent scrutiny by capital markets and hence make every effort to honor debt obligations.

Debt issues will not always have positive control effects on agency costs (Jensen 1986), For example, the effect of debt will not be as Important for rapidly growing organization with large and highly profitable investment projects with no free cash flows. Such organization will have to go regularly to the financial markets to obtain capital. At these times, the market has an opportunity to evaluate the company, its management, and its proposed projects. The capital market plays an important role in monitoring the organization hence agency costs are expected to go down.

Banks always require firms to report results honestly and to run business efficiently with profits. In Ang, Cole and Lin (2000) study of agency cost and ownership structure, banks compliments shareholders monitoring of managers, indirectly reducing agency cost of equity. Trie banks incur monitoring cost in order to safe guard their loans. In the process, firms are forced to operate more efficiently and moderate perquisites consumption In order to report better performances to banks. Additionally, banks have ability to acquire knowledge of their clients from various sources such as by interacting with firm's customers and suppliers, and in social gatherings. Therefore shareholders should expect lower agency cost by influencing managers to utilize debt.

Gui(2001) and Johan (2002) In their study of capital structure and agency costs pinpoints the usefulness of debt in lowering agency cost due to monitoring by banks. Similar studies by Zheng and Liang (2005), Berger and Patti (2003), Campbell Harvey and Karl Lins and Andrew Roper(2003) , Li and Cui (2002) and Westphalen (2002) had same conclusion In that as debt ratio rose, equity agency cost dropped.

Agency theory considers additional debt beneficial since the firms attempt to improve productivity of its assets as a result of additional debt acquired. Grosseman and Hart (1982) recognized bonding role of debt and argued that manager could work hard by using debt rather than equity. However increase of debt, as a means of decreasing agency cost cannot be done without limits. Trade off theory of capital structure allows financial distress cost to exist. Financial distress refers to the cost of bankruptcy or reorganization and agency cost that arise when the firm's credit worthiness is in doubt. It states that there is an advantage to financing with debt, the tax benefit of debt and there is a cost of financing with debt, the bankruptcy cost of debt.

The marginal benefit of further increases in debt declines as debt increases while marginal cost of increases, so that a firm that is optimizing will focus on this trade-off on choosing its capital structure (Jensen 1986). Therefore, in choosing their debt-equity level, firms should trade off between the agency costs of debt and agency costs of equity. By appropriately allocating finance between debt and equity, capital structure can balance the conflict between investors, management and creditors. In other words tradeoff theory justifies moderate debt ratios (Stewart Myers 2001).

However, other studies have reported negative relationship between leverage and profitability. Lehman (1979) examined leverage factor in the US oil industry of 32 companies during the year 1960. Capital structure was found to be essential in determining profitability. Oil companies with the lowest returns had largest proportion of debt. Conversely companies with large proportion of common stock earned the largest rate of return. Observation of Tian (2002) in the study Chinese listed firms showed that most banks having government shared ownership had a positive relationship between leverage and the size

of managerial perquisites. Those findings suggest that the role of debt on government-shared ownership does not function in china.

Similar results were observed In Time Warner Inc, a US incorporated company as reported by Fabricant in the New York Times newspaper dated 15'th July 1991. Despite huge debts, the firm was observed to be spending large sums of money on luxury homes, lavish lifestyle and huge bonuses were paid to the managers (Fasricant 1991). The huge debts actually increased agency costs contrary to agency cost theory.

In Hortlund (2005) study of swedish banks between 1870 and 2001, a strong linear relationship between return on equity and debt to equity ratio was postulated between 1870 and 1980 but not 1980 to 2001. While results between 1870 and 1980 reaffirms previous study of long term positive relationship between leverage and profitability, results between 1980 and 2001 showed negative relationship between leverage and profitability.

In Berger(1995), in the study of the relationship between capital and earnings on banking in the US firms during the mid to late 1980s showed a negative relationship between leverage and profitability. This result differs from those of agency theory in that debt Improves performance due to reduction of agency costs. Performance fell because in Mid 1980s, banks faced risk factors. Some banks may have had greater than optimal risk of bankruptcy and the associated heavy liquidation costs and as a result paid very high-risk premium on uninsured funds and suffered lower earnings Berger (1985).

CHAPTER THREE:3.0 RESEARCH METHODOLOGY

3.1 Research Design

This was an empirical study of capital structure on agency cost in companies listed In the Nairobi Stock Exchange. The study examined the effect of debt on agency cost.

3.2 Population

For the purpose of this study, the population was from companies quoted at the Nairobi Stock (NSE) (Appendix 1). Population of the study was made up of 45 companies listed in the main investment market segment in the Nairobi stock exchange for a period of eight years, 2000 to 2007. This study was limited to companies listed in the Nairobi stock exchange because of greater availability, accessibility and reliability of data than those of non listed companies.

3.3 Sampling

A sample of 20 companies (Appendix 11), which have been continuously quoted for eight years, 2000 to 2007 was chosen from this population. In the sample, financial institutions were left out due to their unique regulatory requirements.

3.4 Data Collection

For purposes of this study, secondary data was utilized. Data was extracted from financial annual reports of the sampled companies that fall under the sample. The financial reports were obtained from Nairobi stock exchange. The following data was extracted for each company in the sample.

- Annual sales
- Total assets at the end of each year.

- Year end market share prices
- Nominal share prices.
- Total long-term liabilities at the end of each year.
- Total expenses at the end of each year.

3.5 Hypotheses

The research focused on testing the following analysis hypotheses

HO. Null Hypothesis

There is no positive correlation between capital structure and agency cost.

HA. Alternative Hypothesis

There is positive correlation between capital structure and agency cost

3.6 Data analysis

The dependant variable was agency costs. Two agency cost measures are chosen, efficiency ratio and asset utilization ratio drawn mainly from existing literature (Li and Cui (2002);Ang , J.,Cole,R. & Lin,J (2000))

Dependant variable was capital structure also chosen from existing literature (Li and Cui (2002);Ang , J.,Cole,R. & Lin,] (2000))

Simple regression analysis is used

Agency cost = B1Capital structure + B0

B1 is the coefficient of capital structure and B0 a constant.

Agency cost

According to Baker & Powell (2005), there are two types of agency costs, direct and indirect agency cost. Shareholders incur direct costs in order to reduce potential conflicts with managers. These are bonus, stock option plan, audit fees, managerial incentives and infrastructure put in place to control the behavior of managers. Indirect costs result from manager's failure to make profitable investment due their aversion of risk, managers exerting insufficient work effort, poor investment decisions, choosing inputs or outputs that suit their own preferences, executive perquisites such as fancy office space, office furnishing, automobiles or paying themselves higher compensation at the expense of shareholders. This the risk that agents will use organizational resource for their own benefit .The paper will analyze agency cost using indirect cost, that is the value lost by shareholders due to manager's exerting insufficient effort and making decisions to suit their own selfish interests.

Indirect agency cost was measured using two ratios; that is efficiency ratio and asset utilization ratio.

Efficiency ratio

Efficiency ratio explains the efficiency of managers' in controlling costs of the organization. The higher the ratio, the higher the agency cost. Which means, managers fail to control cost in relation to sales, and also may be spending huge sums of money on perquisites, high compensations and lavish lifestyle using companies finances. Low ratio means low agency cost as managers maximize shareholders value through control of cost. Expense ratio was calculated as total expense over annual sales (Ang, Cole and Lin 2000)

Efficiency ratio= Total annual expenses/Annual sales

Asset utilization ratio

Another measure of indirect agency cost was asset turnover ratio. The turnover ratio shows the extent to which managers' utilize the asset for purpose of Increasing firm's value. The higher the turnover ratio, the lower the indirect agency cost. That means shareholders interests are aligned with managers' Interest. Lower ratio means higher agency cost. In such a case, shareholders interest of maximizing firm's wealth Is not aligned with managers' interests. It will be calculated as annual sales divided by totals assets. This ratio measures how effectively the firm's management deploys its assets. Johan (2002); So (200b) results showed that sales to total assets as a better estimator of agency cost. Li and Cui (2002) also used asset turnover ratio to measure agency costs.

The higher the ratio, the lower the agency cost. The ratio is:-

Efficiency ratio=Annual SalesfTotal Assets

3.6 Capital structure

Capital structure ratio was measured using long-term debt to equity ratio Gul (2001).

3.6.1 Growth rate

To Measure growth opportunities, ratio of market value of equity to book value of equity will be used Gui (2001).

3.6.2 Regression analysis

The first step involves using regression analysis to establish whether there exist a relationship between capital structure and agency cost .The first objective is to establish whether high debt ratio achieves low agency costs.

Second step is to establish whether the relationship between capital structure and agency cost differ between high growth firms and low growth firms. The effect of debt will not be as important for rapidly growing organization with large and highly profitable Investment projects with no free cash flows. Such organization will have to go regularly to the financial markets to obtain capital. At these times, the market has an opportunity to evaluate the company, its management, and its proposed projects. The capital market plays an Important role in monitoring the organization hence agency costs are expected to go down. Hence in the second step, regression analysis will be used to establish whether the relationship between capital structure and agency cost do differ between high growth firms and low growth firms. Growth rate was determined for each company in the sample. The companies were grouped into high growth companies and low growth companies using. Correlation analysis was carried out to find the direction of the relationship between capital structure and agency cost for high growth companies if any as well as the magnitude. The same process was repeated for low growth firms.

Growth rate market opportunities will be measured using Market value of equity to book value ratio.

Market value of equity to book value in 01'ST Jan2000 - MV1

Market value of equity to book value in 31 Th Dec 2007 -MV?

Number of Years=N

Growth rate- $((MV2/MV1)^A (N-1))-1$

CHAPTER FC)UR:4.0 DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1 Introduction

The research objective was to determine whether a relationship exists between capital structure and agency costs for firms listed in the Nairobi Stock Exchange. Appendix 1 gives a list of 20 sampled firms chosen from 45 listed firms in the Nairobi Stock Exchange in the main Investment market segment. Average capital structure for all the sampled firms (Table 11) was determined for each year. Asset utilization ratio and efficiency ratios were used as measures of agency costs (Table 12 and Table 13). Growth rate for each firm (Table 3 and Table 4) was determined by using the formula below:-

$$((MV2/MV1)^A (N-1))-1$$

Where MV2 represents market of equity to book value in 31'ST DEC 2007 and MVI represents market value of equity to book value in 31'st Dec 2000. The firms were then categorized Into high growth firms and low growth firms as shown in Table 3 and Table 4 Using growth ratios. Correlation analysis of capital structure and agency cost was done first for all 20 sampled firms, then for 10 firms with high growth rate and then lastly for 10 low growth rate firms. The correlation results are shown on Tables 5 to Table 10.

4.2 Preliminary analysis

4.2.1 Capital structure

Capital structure was measured using debt to equity ratio. (Table 11) The table 11 indicates average debt to equity for each year for the period 2000 to 2007. Table 11. gives average debt to equity ratio for each year for the 20 sampled firms, 10 high growth firms and 10 low growth firms. Year 2007 had the highest debt to equity ratio of 4.84 while year 2000 indicates the lowest debt to equity ratio of 1.54. The results indicate that the debt to equity ratio

rose consistently over the years. This shows that the usage of debt for the 10 high growth sampled firms increased consistently over the years. Year 2007 indicate the highest debt to equity ratio of 7.9 while year 2000 indicates the lowest ratio of 1.5 .The results for the 10 high growth sampled firms rose steadily between 2000 and 2007 consistent with the results of the 20 sampled firms. The Table 11 also gives average debt to equity ratio for 10 firms with low growth rates. Year 2002 Indicates the highest ratio of 2.6 while year 2005 gives lowest ratio of 1.4. The Results indicate that the use of debt in low growth firms did not rise consistently between 2000 and 2007 contrary to the results of 20 sampled firms and the 10 high growth firms.

4.2.2 Agency Cost

Agency cost signified lost value due to the conflict between shareholders and managers. The agency cost was measured using two ratios that is efficiency ratio and asset utilization ratio .Table 12 gives asset utilization ratio and efficiency ratios for all the 20 sample firms, 10 high growth firms and 10 low growth firms. Highest asset utilization ratios was Indicated in the year 2005 for the 20 sample firms with a ratio of 1.39, year 2004 for high growth firms with a ratio of 1.58 and year 2005 for low growth firms with a ratio of 1.25 .Highest efficiency ratio was indicated in the year 2000 for the 20 sample firms with a ratio 0.99, year 2003 for high growth firms with a ratio of 0.97 and year 2000 for low growth firms with a ratio of 1.05.

4.2.3 Correlation analysis

Correlation analysis of capital structure on agency cost was carried out for all 20 sampled firms, then for the high growth firms and lastly for low growth firms the results are shown on table.

4.3 Results for all sampled firms

The first objective set out to determine the relationship between capital structure and agency cost for companies listed In Nairobi Stock exchange.

Table 1.The Pearson's correlation coefficient between debt to equity ratio and efficiency ratio and utilization ratio for the 20 sampled firms

	Pearson correlation coefficient	Coefficient of determination	P-Vaiue 2-sided	t-Statistic	Critical value at 5%
Efficiency ratio	-0.392	0.153	0.337	-1.042	1.83
Utilization ratio	0.287	0.082	0.489	0.735	1.83

Source: researcher, 2008

Table 1 above illustrates the correlation between debt to equity ratio with efficiency ratio and asset utilization ratio.

Efficiency ratio results

The correlation coefficient of debt to equity ratio to efficiency ratio is negative suggesting that as debt to equity ratio rises, total expenses to annual sale ratio goes down. 15.3% of the efficiency ratio variance is explained by debt to equity ratio.84.7 % is explained by other variables. The correlation coefficient Is significant at 5 % and 10 % confidence level. Therefore the Null hypothesis is true. Therefore there is no relationship between capital structure and agency cost using efficiency ratio as a measure of agency cost

Asset utilization ratio results

In Table 1 above, correlation coefficient using utilization ratio is positive suggesting Increase In asset utilization as debt to equity ratio rises.8.2% of

asset utilization ratio variance is explained by debt to equity ratio. The correlation coefficient is significant at 5% and 10 % confidence level. Using asset utilization ratio as a measure of agency cost the effect of debt on agency cost. Therefore the Null hypothesis is true.

Results for both efficiency ratio and asset utilization ratio as a measure of agency cost shows small positive correlation between capital structure and agency cost but the results are significant at 5 % and 10 % significant level. The null hypothesis is true.

4.4 Results for high growth firms and low growth firms

The next objective was to determine whether relationship between capital structure and agency cost do differ between high growth firms and low growth firms.

Table 2. The correlation coefficient for debt to equity ratio on efficiency and asset utilization ratios for the 10 high growth firms and 10 low growth firms.

	High growth firms	Low growth firms
Efficiency ratio	Correlation Coefficient= - 0.700 Coefficient of determination=0.489 P-Value- 0.053 T-Test -2.39	Correlation Coefficient= - 0.153 Coefficient of determination=0.0233 P-Value 0.717 T-Test -0.378
Asset utilization ratio	Correlation Coefficient= 0.0214 Coefficient of determination=0.0005 P-Value 0.959 T-Test 1.5	Correlation Coefficient= .713 Coefficient of determination-0.509 P-Value 0.0468 T-Test 2.49

Source: researcher, 2008

Efficiency ratio results

In Table 2 above, using efficiency ratio as a measure of agency cost, the correlation coefficient for high growth firms is -0.700 suggesting that as debt to equity ratio rises, efficiency ratio drops. Thus, as debt rises, high growth firms tend to control their cost. Similar results are indicated in low growth firms with a negative but lower correlation coefficient of -0.153 indicating a decrease in costs as debt rises. In high growth firms 49% of the efficiency ratio is explained by debt to equity ratio, where as in low growth firms only 5% of efficiency ratio change is explained by debt. At 5% confidence level the correlation coefficient is not significant for high growth firms but

significant for low growth firms. The P-Value for high growth firms is -0.053 much lower than for low growth firms which is 0.717 suggesting that Null hypotheses is true for low growth firms but false for high growth firms.

Asset Utilization ratio results

In Table 2 above, using utilization ratio as a measure of agency cost, the correlation coefficient for high growth firms is 0.0214 suggesting that as debt to equity ratio rises, asset utilization rises. Thus, as debt rises, high growth firms tend to utilize their asset slightly more efficiently. Similar results are indicated in low growth firms with a positive but higher correlation coefficient of 0.713 indicating an increase in asset utilization as debt rises. In high growth firms .05% of the asset utilization ratio is explained by debt to equity ratio, whereas in low growth firms 51% of asset utilization ratio change is explained by debt. At 5% confidence level the correlation coefficient is significant for high growth firms but not significant for low growth firms. The P-Value for high growth firms is 0.959 much higher than for a low growth firm which is 0.0468 suggesting that Null hypotheses is true for high growth firms but false for low growth firms. Hence for low growth firms as debt rises assets are more utilized than for high growth firms.

CHAPTER FIVE:5.0 SUMMARY OF FINDINGS, CONCLUSIONS AND RECCOMENDATION

5.1 SUMMARY, FINDINGS .

The study has examined the relationship between capital structure and agency cost for firms listed in The Nairobi Stock Exchange. It has established that the correlation coefficient is significant for all sampled firms. The Null hypothesis Is accepted in the both efficiency ratio and asset utilization ratio when used as a measure of agency cost. The p values were high when using efficiency ratio and also asset utilization ratio as a measure of agency cost. This suggests that overall, there is no relationship between capital structure and agency costs for firms listed in Nairobi Stock Exchange.

However, the correlation coefficient for high growth firms was not significant at 5 % confidence level but significant at low growth firms when using efficiency ratio as a measure of agency cost. In high growth firms 49% of the efficiency ratio Is explained by debt but only 2% of low growth firm's efficiency ratio are explained by debt signifying that high growth firms control their costs significantly unlike low growth firms.

At 5% confidence level, the coefficient of correlation was significant for high growth firms, but not significant in low growth firms when using asset utilization as a measure of agency costs. Only 0.05 % of asset utilization ratio is explained by debt in high growth firms while 51 % of asset utilization ratio in low growth firms is explained by debt signifying that high growth firms do not Increase utilization of assets as debt increases but low growth firms do increase efficiency use of assets as debt increases.

5.2 Conclusions

In this research, there exist a relationship between capital structure and agency cost for high growth firms and low growth firms in the Nairobi Stock Exchange. With high debt ratios, high growth firms minimize expenses. For Low growth firms, high debt ratios lead to efficient utilization of assets but no reduction in expenses in relation to sales. High debt ratios have no effect on asset utilization ratios in high growth firms. The high growth firms minimize expenses so as to cater for increases interest charges by lenders but because the assets are already fully utilized, change of debt has little effect on asset utilization ratio. For low growth firms, increase in debt use lead to increase in asset utilization. The Increase of debt has little effect on expenses in relation to sales.

5.3 Suggestion for further research

The results of this study have raised a number of issues that could be addressed in future research. Prior studies have implied that there is a positive relationship between capital structure and agency cost for low growth firms and negative relationship for high growth firms. This Study gives mixed results in that, for high growth firms, expenses reduce as debt increase and no Increase in asset utilization. On the other hand, for low growth firms, debt increase leads to higher asset utilization but little effect on change of expenses in relation to sales. It is important that a study should be carried out to test whether the relationship between capital structure and agency cost differ between government owned companies and non-government owned companies. This is because government owned companies face different regulations, state protection and subsidies, which differ from non-government owned companies. Also past experience shows that most government owned directors lack Integrity and fail to perform their duties industriously. In such cases use of debt would have little effect on firm's

efficiency. It would also be worthwhile to test the reaction of stock prices on debt issue. It is also Important to test whether the reaction differ between high growth firms and low growth firms.

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Appendix 1 Sampled firms

1. Unilever Tea (K) Ltd.
2. Rea Vipingo Ltd.
3. Sasini Tea & Coffee Ltd.
4. Kakuzi Ltd.
5. Kenya Airways Ltd.
6. CMC Holdings Ltd.
7. Nation Media Group Ltd.
8. TPS (Serena) Ltd.
9. Standard Group Ltd.
10. Athi River Mining Ltd.
11. British American Tobacco Kenya Ltd.
12. E.A. Cables Ltd.
13. E.A. Breweries Ltd.
14. Sameer Africa Ltd.
15. Kenya Oil Ltd.
16. Unga Group Ltd.
17. Bamburi Cement Ltd.
18. Crown Berger (K) Ltd.
19. Kenya Power & Lighting Co. Ltd.
20. Total Kenya Ltd.

Table 3. Average growth rates for high growth firms for the period from 2000 to

	Growth rate between 2000 to 2007
High growth firms	
E.A. Cables Ltd.	0.73
Athi River Mining Ltd.	0.54
Kenya Airways Ltd.	0.45
Standard Group Ltd.	0.43
TPS (Serena) Ltd.	0.42
Kenya Oil Ltd.	0.37
E.A. Breweries Ltd.	0.35
CMC Holdings Ltd.	0.32
Rea Vipingo Ltd.	0.32
Bamburi Cement Ltd.	0.30

Table 4. Average growth rates between 2000 to 2007 for low growth firms

	Growth rate between 2000 to 2007
Low growth firms	
Crown berger (K) Ltd.	0.25
Nation Media Group Ltd.	0.24
Kenya Power & Lighting Co. Ltd.	0.19
British American Tobacco Kenya Ltd.	0.18
Unga Group Ltd.	0.11
Kakuzi Ltd.	-0.04
Sameer Africa Ltd.	-0.04
Unilever Tea (K) Ltd.	-0.05
Total Kenya Ltd.	-0.07
Sasni Tea & Coffee Ltd.	-0.17

Table 5. Correlation results for 20 sampled firms using efficiency ratio as a measure of agency cost.

jSummary of computational transaction	
Raw Input	'iview raw input (R code)
Raw Output	view raw output of R engine
Computing time	2 seconds
R Server	'Herman Ole Andreas Wold' @ 193.190.124.10:1001

Pearson Product Moment Correlation - Ungrouped Data		
Statistic	Variable X	[variable Y
Mean	2.5825	0.9475
Biased Variance	1.26481875	0.000543749999999999
Biased Standard Deviation	1.12464160958058	0.023318447632722
Covariance	-0.0117357142857143	
Correlation	-0.391564939384427	
Determination	0.153323101755130	
TTest	-1.04236679522249	
p-value (2 sided)	0.337408840623786	
p-value (1 sided)	0.168704420311893	
Degrees of Freedom	6	

Table 6. Correlation results for 10 high growth sampled firms using efficiency ratio a measure of agency cost.

^Summary of computational transaction	
Raw Input	raw input (Rcode)
Raw Output	view raw output of R engine
Computing time	3 seconds
R Server	- 'Herman Ole Andreas Wold' @ 193.190.124.10:1001

Pearson Product Moment Correlation - Ungrouped Data		
Statistic	Variable X	Variable Y
Mean	3.4	0.94125
Biased Variance	5.295	0.000385937499999999
Biffiffil Standard Deviation	2.30108669980077	0.0196452920568771
Covarlance	-0.0361428571428571	
Correlation	-0.699582701715714	
Determination	0.489415956539857	
T-Test	-2.39817608804834	
p-value (2 sided)	0.0534274943267276	
p-value (1 sided)	0.026/137471633638	
Degrees of Freedom	6	
Number of Observations	8	

Table 7. Correlation results for 10 low growth sampled firms using efficiency ratio as a measure of agency cost.

Summary of computational transaction	
Raw Input	view raw input (R code)
Raw Output	view raw output of R enaine
Computing time	2 seconds
R Server	'Sir Ronald Aylmer Fisher* @ 193.190.124.24

Pearson Product Moment Correlation - Ungrouped Data		
Statistic	Variable X	Variable Y
Mean	3.4	0.955
Biased Variance	5.295	0.001975
Biased Standard Deviation	2.30108669980077	0.0444409720865780
Covartence	-0.0178571428571429	
Correlation	-0.152793012566552	
Determination	0.0233457046891624	
T-Test	-0.378711668848862	
p-value (2 sided)	0.717940698796821	
p-value (1 sided)	0.358970349398410	
Degrees of Freedom	6	
Number of Observations	8	

Table 8. Correlation results for 20 sampled firms using asset utilization ratio as a measure of agency cost.

Summary of computational transaction	
Raw Input	view raw inDut (R code)
Raw Output	view raw output of R engine
Computing time	3 seconds
R Server	'Herman Ole Andreas Wold' @ 193.190.124.10:1001

Pearson Product Moment Correlation - Ungrouped Data		
Statistic	variable X	Variable v
Mean	2.5825	1.23125
3iaspd Variance	1.26481875	0.0115109375
Biased Standard Deviation	1.12464160958058	0.107289037184607
Covariance	0.0396678571428571	
Correlation	0.28765855735518	
Determination	0.0827474456196635	
T-Tesc	0.735713047900866	
p-value (2 sided)	0.489655354119615	
p-value (1 sided)	0.2448276/7059808	
Degrees of Freedom	6	
Number of Observations	8	

Table 9. Correlation results for 10 high growth sampled firms using asset utilization ratio as a measure of agency cost.

Summary of computational transaction Computing time	1 seconds	
R Server	'George Udny Yule' @ 72.249.76.132	

Pearson Product Moment Correlation - Ungrouped Data		
Statistic	Variable X	Variable Y
Mean	3.4	1.33625
Biased variance	5.295	0.02092
Biased Standard Deviation	2.3010867	0.14465
Correlation	0.021405992	
P^2	0.000458217	
Hest	0.052445776	
p-value (2 sided)	0.959876023	
p-value (1 sided)	0.479938012	
Degrees of Freedom	6	
Number of Observations	8	

Table 10. Correlation results for 10 low growth sampled firms using asset utilization ratio as a measure of agency cost.

Summary of computational transaction	
Raw Input	view raw input (R code)
Raw Output	view raw outDut of R engine
Computing time	1 seconds
R Server	'George Udny Yule' @ 72.249.76.132

r a s a s m m m m		Z correlation - Ungrouped Data	
(Statistic	variable X	Variable Y	
Mean	3.4	1.1125	
Biased Variance	5.295	0.00879375	
Biased Sta ac ^ JMfliion	2.30108669980077	0.09377499666755521	
Cpvarignce	0.176		
Correlation	0.713675324577882		
Determination	0.509332468911345		
T-TC5t	2.49564407051849		
p-value (2 sided)	0.0468032822047417		
p-value (1 sided)	0.0234016411023/09		
Degrees of Freedom	6~		
;Number of Observations	8		

Table 11. Average debt to equity ratios per year for 20 sampled firms

	ALL SAMPLED 20 FIRMS	10 HIGH GROWTH FIRMS	10 LOW GROWTH FIRMS
2000	1.54	1.5	1.5
2001	1.54	1.7	1.4
2002	2.14	1.71	2.6
2003	2.01	1.78	2.2
2004	1.78	2.55	1.6
2005	3	4.6	1.4
2006	3.81	6	1.6
2007	4.84	7.9	1.7

Table 12. Average Agency Cost per year for the sampled firms using utilization ratio

	ALL SAMPLED 20 FIRMS	10 HIGH GROWm FIRMS	10 LOW GROWTH FIRMS
YEARS			
2000	1.11	1.26	0.95
2001	1.07	1.09	1.05
2002	1.17	1.36	1.02
2003	1.25	1.36	1.12
2004	1.37	1.58	1.13
2005	1.39	1.51	1.25
2006	1.28	1.35	1.20
2007	1.21	1.24	1.18

Table 13. Average Agency cost for the sample firms using efficiency ratio as a measure of agency cost

	ALL SAMPLED 20 FIRMS	10 HIGH GROWTH FIRMS	10 LOW GROWTH FIRMS
YEARS			
2000	0.99	0.95	1.05
2001	0.92	0.95	0.97
2002	0.96	0.95	0.9
2003	0.97	0.97	0.97
2004	0.93	0.93	0.93
2005	0.94	0.93	0.96
2006	0.95	0.95	0.95
2007	0.92	0.9	0.94