THE EFFECT OF LEVERAGE ON AGENCY COST OF FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE.

BY

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DECLARATION

This research project is my original work and has not been submitted for an award of diploma or a degree in this or any other university.

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

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DEDICATION

I dedicate my research work to my family and friends. A special feeling of gratitude to my loving and wonderful parents, whose words of encouragement and push for determination ring in my ears.

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LIST OF ABBREVIATIONS

AIMS	Alternative Investments segment
ANOVA	Analysis of Variances
CMA	Capital Markets Authority
CBK	Central Bank of Kenya
FIMS	Fixed Income Securities Segment
FOMS	Futures and Options Market segment
MIMS	Main Investments Segment
NPV	Net Present Value
NSE	Nairobi Securities exchange
SACCO	Savings and credit Co-operative
SEO	Seasonal Equity Offerings
SPSS	Statistical Package for Social Sciences
TOT	Trade-off Theory

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ABSTRACT

This research was undertaken with the aim of finding out the effect of financial leverage on agency cost of firms listed at the Nairobi Securities Exchange. The data of 48 companies was collected using secondary data from published audited reports and analyzed during the period of 2010 - 2014. This excluded the banking and insurance companies as they have restricted financial leverages levels. These were mainly obtained from Nairobi Securities Exchange webpage and the Capital Markets Authority databases. The financial data was selected from the face of the Statement of Final Position, Statement of Comprehensive Income and Statement of cash flow to calculate and analyze agency costs, firm size, growth in sales and return on assets. The study then described the information and a regression model, ANOVA and F test to obtain the p-value for which the regression analysis produced the effect of financial leverage on agency cost while controlling for firm size, growth in sales and return on assets. The F test was then used to determine the fitness of the regression model in analyzing the effect. The results of the research found the p-value of the F test to be less than alpha ($0 < .05$) hence denoting that there was a significant effect of financial leverage on agency cost of firms listed at the NSE. The results of the study corresponds to the various theoretical reviews. Ultimately, concluding on the findings, the study recommends that because of the significant effect of financial leverage on agency cost, the financial leverage level should be carefully decided upon so as to reduce the agency costs.

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

In a firm which is owner managed by a single person, no agency problem exists because there is no conflict of interests. In such firms, managers will make decisions that maximize firm value because the manager himself is the entitled to the value generated by the business. On the other hand, when business is not totally owned by its managers, like publicly held large corporation, there exists agency problem due to separation of control and ownership. The managers of a company act as agent of shareholders. The Shareholders of a company appoint managers to run business on their behalf. Managers have their own incentive such enjoying perquisites and maximizing their wealth (Grossman and Hart, 1982) even at the expense of shareholders' value. As manager's ownership claim falls, his incentive to create value of firm decreases (Jensen and Meckling 1976; Ang, J. S., Cole, R. A. and Lin, J. W., 2000), which gives rise to the agency conflict as the goals of owners and managers become divergent.

Agency costs manifest in various forms such as executive perks, drops in productivity, free cash flow inefficiencies, loss of firm value, among others. Conflicts of interest between shareholders and managers over payout policies are especially severe when the organization generates substantial free cash flow. The literature has indicated that leverage provides an effective mechanism to mitigate this agency cost (Lingling, 2004; Li and Cui, 2003; Zhang and Li, 2008; Zhang, 2009; McKnight, 2009). Ward and Price (2006) defined financial leverage as the proportion of capital which is financed by debt as opposed to equity. Therefore the higher the leverage, the higher the amount of debt in the capital structure of a firm.

The question then is, what should shareholders do to make managers act in their best interests? Various theoretical frameworks have attempted to explain the effect of leverage on agency costs in the literature. The social and private costs of an agent's action due to incomplete alignment of the agent's and owner's interests were brought to attention by the seminal contributions of Jensen and Meckling (1976) on agency costs. The agency theory recognizes that the separation of ownership and control in firms creates conflicts of interest between the firm's shareholders and managers (Jensen and Meckling, 1976). Freeman (1984) is generally credited with introducing stakeholder theory in. Freeman argued that the firm exists primarily for the purpose of serving and coordinating stakeholder interests. Meanwhile, Modigliani and Miller (1963) in their trade off theory demonstrated that optimal leverage minimizes agency costs and maximizes firm value; among others.

1.1.1 Financial Leverage

Financial leverage as defined by Ward and Price (2006) is the proportion of capital which is financed by debt as opposed to equity. In a given firm, the higher the leverage, the higher the amount of debt in the capital structure of a firm. Debt reduces the free cash flows available to managers (Jensen, 1986, Stulz, 1990). Financial leverage comes in various forms and has different maturity and priority structures. When a firm decides to borrows, it must decide not only on the amount but also on the type of debt finance, on the maturity and on the priority of the debt (Harris and Raviv, 1991). Many a times, companies have to decide on whether debt should be in the form of leases, convertible loans, loan capital, bank loans and overdraft, notes and bills; should be short or long-term and whether debt should be secured, unsecured or subordinated.

Moreover, the use of debt can increase the monitoring of managers by debt holders like banks which will put pressure on the managers of the firm to run the business profitable (Ang et al., 2000). A decrease in free cash flow also helps in restricting overinvestment problem (Harvey et al., 2004; D' Mello and Miranda, 2010). Secondly, the increasing threat of bankruptcy forces managers to optimize decision making as they are confronted by the prospect of losing their benefits in the event the firm is liquidated (Grossman and Hart, 1982; Williams, 1987).

In the various international studies conducted and the literature, different measurement techniques have been used to calculate the leverage level of a firm. Jensen et al., (1992) used debt to equity ratio to measure the debt policy. Byrd (2010) in his study to see the relationship between the debt and free cash flow took the value of each firms' long term obligations. Fatma et al., (2010) used debt ratio to measure firm level of debt in her study on the interaction between her debt policies and free cash flow. Zhang (2009) studied the effect of debt in reducing the free cash flow and formulated leverage as a firm's net debt issuance minus the net equity issuance.

1.1.2 Agency Costs

Agency as defined by Jensen and Meckling (1976) is the sum of the monitoring expenditures by the principal, the bonding expenditures by the agent and the residual loss. Monitoring costs are expenditures paid by the principal to measure, observe and control the agents' behavior. These costs may include: audits; writing executive compensation contracts and ultimately the cost of hiring and firing top managers. Bonding costs refers to the structures that management ultimately sets up to compel them to act in shareholders' best interests and includes compensating shareholders in the event of failure to act as such. Residual loss refers to residual agency losses

that arise from conflicts of interest after both monitoring and bonding measures have been effected (Baker and Anderson, 2010). Baker and Powell (2005) mentioned that there are two types of agency costs, direct and indirect agency cost. Shareholder incur direct costs in order to reduce potential conflicts with managers (bonus, stock option plan, audit fees, managerial incentives and infrastructure) put in place to control the behavior of managers. Indirect agency cost is as a result of manager's failure to make profitable investment (free cash flow mismanagement, etc).

Many attempts have been made in demonstrating empirically the role of agency costs in financial decisions such as in explaining the choices of capital structure, maturity structure, dividend policy and executive compensation. However, according to Ang et. al, (2000) the actual measurement of the principal variable of interest, agency costs, in both absolute and relative terms, has lagged behind. The Jensen and Meckling's (1976) zero agency-cost firm model approach has continued to dominate empirical measurements of agency costs in the literature. To measure absolute agency costs, a zero agency-cost base case must be observed to serve as the reference point of comparison for all other cases of ownership and management structures. For the purposes of our study, this may not be feasible as it may not be possible for companies listed in the stock market to have no leverage. In the original Jensen and Meckling agency theory, the zero agency-cost base case is, by definition, the firm owned solely by a single owner-manager. When management owns less than 100 percent of the firm's equity, shareholders incur agency costs resulting from management's shirking and perquisite consumption. Because of limitations imposed by personal wealth constraints, exchange regulations on the minimum numbers of shareholders, and other considerations, no publicly traded firm is entirely owned by management.

Thus, Jensen and Meckling's zero agency cost base case cannot be found among the usual sample of publicly traded firms for which information is readily available.

No-agency-cost base case firms, however, can be found among non-publicly traded firms. Two alternative measures of agency costs are frequently used. The first measure of agency costs is a proxy for the loss in revenues attributable to incompetent asset utilization, which can result from poor investment decisions such as investing in negative net-present-value projects. The second is direct agency costs, calculated as the difference in dollar expenses between a firm with a certain ownership and management structure and the no-agency-cost base case firm. This measure captures excessive expenses including perk consumption. In order to carry out cross-sectional comparisons, expenses are standardized by annual sales. This first measure of agency costs is calculated as the efficiency ratio i.e. the ratio of annual sales to total. Agency costs can then be measured as the difference in the efficiency ratio, or, equivalently, the dollar revenues lost, between a firm whose manager is the sole equity owner and a firm whose manager owns less than 100 percent of equity (Ang et al., 2000).

To enable measure agency costs of the firm, there are two alternative efficiency ratios that are usually used appear in the accounting and financial economics literature: the expense ratio, which is operating expense scaled by annual sales, and the asset utilization ratio, which is annual sales divided by total assets. The first ratio is a measure of how effectively the firm's management controls operating costs. More precisely, the difference in the ratios of a firm with a certain ownership and management structure and the no-agency-cost base case firm, multiplied by the assets of the former, gives the excess agency cost related expense in dollars. The second ratio is a

measure of how effectively the firm's management deploys its assets. In dissimilarity to the expense ratio, agency costs are inversely related to the sales-to-asset ratio. A firm whose sales-to-asset ratio is lower than the base case firm experiences positive agency cost. These costs arise because the manager acts in some or all of the following ways: makes poor investment decisions, exerts insufficient effort, resulting in lower revenues; consumes executive perquisites, so that the firm purchases unproductive assets, such as excessively fancy office space, office furnishing, automobiles, and resort properties (Ang et al., 2000).

1.1.3 Effect of Leverage on Agency costs

In the free cash flow theory of Easterbrook (1984) and Jensen (1986) they stated that companies with substantial free cash flow tend to face conflicts of interest between stock holders and borrowers. Free cash flow represents the excess cash that a firm generates after laying out the money required to finance its asset base (Jensen 1986). Jensen & Meckling argued that agency costs are high in the firms with excess free cash flow. High leverage reduces the amount of free cash flow available for use by managers and hence reduces agency costs between owner and managers. The use of debt impacts on agency cost in several ways: Use of debt reduces the free cash flow available to managers (Jensen, 1986, Stulz, 1990). Interest payments to debt holders also decrease free cash flow available for investments. The decrease in free cash flow also helps in curtailing the over-investment problem which results from managers channeling funds to negative NPV projects (D'Mello and Miranda, 2010, Harvey et al., 2004). Using debt enables institutions such as banks to monitor managers of firms so that they have to run profitable businesses in order to meet maturing obligations (Ang et al., 2000).

In addition, another noteworthy effect of leverage is the threat of bankruptcy. Bankruptcy forces managers to run business in profitable manner. If a firm fails to honor the claims of creditors, the creditors have a legal right to take a firm to court, thus creating threat for managers of losing their jobs in the event the firm is liquidated. The threat of losing jobs put pressure on managers to run business profitably and stops them from exploiting the resources of business (Jensen 1986). The use of debt limits the tendency of managers to use firm's resources inefficiently. Therefore, financial leverage helps in disciplining managers and forces them to pursue business value maximizing goals for the shareholders. Furthermore, managers would not want the firm to go bankrupt since they would lose out on final benefits (Grossman and Hart, 1982; Williams, 1987). Ultimately, the use of debt helps in reducing agency cost in many ways and this reduction on agency cost leads to overall higher firm value (Grossman and Hart 1982; Ang et al., 2000).

1.1.4 Nairobi Securities Exchange

The market was started in the 1920's by the British as an informal market for Europeans only. In 1954 the market was formalized through incorporation into a company. In 1963 Africans were allowed to join and trade in the market. For many years, the market operated through the telephone with a weekly meeting at the Stanley Hotel (NSE, 2013). In 1954, it was registered under the Societies Act as voluntary of organization stock brokers. The NSE deals in both fixed income securities and the variable income securities. It is currently divided into four segments; the Main Investments Segment (MIMS), the Alternative Investments segment (AIMS), the Fixed Income Securities Segment (FIMS) and later Futures and Options Market segment (FOMS).

The NSE has both a primary and secondary market. It has acted as an important avenue through which the government has carried out the divestiture programme and for firms seeking additional capital. It deals with both the fixed income securities such as Treasury and corporate bonds, debenture stocks and preference shares and variable income securities such as ordinary share (NSE, 2013).

There are quite a number of firms at the NSE which have failed to continue in operation due to the increase of leverage which has led to increasing cost and mismanagement of the funds which ultimately leads to the fall of a firm. Many firms such as the Uchumi chain of supermarkets. The debt levels were significantly high that the firm went into huge losses. Management was unable to bring the firm back to profitability and it has to be suspended from the stock market. It is therefore important to study the effect of the leverage on agency cost, so as to understand if changes in leverage make a company fail or grow.

1.2 Research Problem

Managerial interest is not aligned with shareholders interest. As a result, excess free cash flows can be a problem if monitoring is compromised and excess cash is not returned to shareholder (Jensen and Mackling, 1976). Once the managers have satisfied all the obligations contracted by the company they can use the remaining flows from the treasury for their own benefit instead of the interest of shareholder. Shareholder value maximization stresses that managers invest cash in the projects that maximize their stock value; however, the managers' personal interests may overshadow shareholder value with free cash flows' in hand and therein arises the conflict (Meckling, 1976). In Kenya, many of the borrowings from banks are regulated and restrictions

imposed such as debt to equity ratios. As a remedy debt decreases the agency cost through the need to honor binding leverage commitments and the deterrents of financial distress and bankruptcy necessitates more efficient use of available cash flows (Zhang and Li, 2008).

Locally, there are several examples of NSE listed companies that have previously either been delisted; suspended, liquidated or placed under receivership on account of the agency. Among them: Uchumi supermarket chain and CMC Motors among others (NSE, 2013). In the context of a market where a number of de-listings, receiverships and wind-ups have occurred on account of agency conflicts, it is worthy to investigate the effect of leverage and agency costs.

There have been many international studies that have been conducted at that focused on the effect of leverage on agency costs of free cash flows: Khan et al., (2012) investigated the impact of leverage on agency costs of manufacturing firms in Pakistan found that leverage has a disciplinary role in reducing free cash flow problem.; Zhang (2009) investigated the role of capital structure and managerial incentive compensation in controlling the free cash flow agency problem and found that there was a negative relationship between the leverage and free cash flow; among others. This study, though, is less aware of any local study on the effects of leverage on agency costs. The literature has argued that companies with substantial free cash flow always tend to face conflicts of interest between stockholders and management (Easterbrook, 1984; Jensen, 1986). The literature has equally recommended that leverage presents an effective mechanism to mitigate this agency cost (Lingling, 2004; Li and Cui, 2003; Zhang and Li, 2008). The study will seek to answer the following questions; what is the effect of leverage on agency costs?

1.3 Objective of the study

To establish the effect of financial leverage on agency costs of firms listed at the NSE.

1.4 Value of the Study

The study is helpful and beneficial to investors and other stakeholders in a firm as it will lead to a better understanding of how the leverage influences management of agency costs in a firm. This will help the shareholders and stakeholders in coming up with policies or strategies that favor or safeguard their interests. It will help Kenyan companies to institute appropriate mechanisms to mitigate agency conflict.

The result will be resourceful in capital structure policy formulation of firms. It will seek to provide the CMA with critical information that reduces unethical practices and information asymmetry in the market. It shall also provide policymakers with important information that helps in formulation and decision making of leverage vis-à-vis agency costs' best practices.

The study is expected to contribute significantly in the corporate finance literature in general and for Kenya is particular. Likewise, it is also expected to provide some rich course of action for debt financers as well as policy makers of capital markets in Kenya to look into the role of debt for long term value creation of firms by having an optimal level of debt in aggregate financing of Kenyan firms.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter focuses on a review of the various literatures on the effect of leverage on agency cost. Theories that explain the effect of leverage on agency cost are first discussed. In addition to the above, the determinants of agency costs are then discussed. Empirical evidence of the effect of leverage on agency cost. Measurement approach of agency cost is then discussed. Finally, a summary of the literature is discussed.

2.2 Theoretical Review

Various theoretical frameworks have attempted to explain the effect of leverage on agency cost in the literature. Five have stood out: Agency theory; stakeholders' theory; bondholders' theory; free cash flow theory and trade-off theory (Jensen, 1986; Freeman, 1988; Donaldson and Preston, 1965; Modigliani and Miller, 1963).

2.2.1 Agency Theory

An agency problem appears when agents' goals differ from the principals' and it is difficult or expensive to verify whether agents have appropriately performed the delegated work (i.e. moral hazard). This problem also arises when it is difficult or expensive to verify that agents have the expertise to perform the delegated work (i.e. adverse selection) that they claim to have. A risk-sharing problem arises when principals and agents have different attitudes towards risk that cause disagreements about actions to be taken (Eisenhardt, 1989; Jensen and Meckling, 1976; Ross, 1973; Rungtusanatham et al., 2007).

The agency theory recognizes that the separation of ownership and control in firms creates conflicts of interest between the firm's shareholders and managers. The reason is that managers are often in the position to use the firm's resources to their advantage thus, negatively affecting shareholders' wealth maximization (Jensen, 1986). The social and private costs of an agent's action due to incomplete alignment of the agent's and owner's interests were brought to attention by the seminal contributions of Jensen and Meckling (1976) on agency costs. Agency theory has also brought the roles of managerial decision rights and various external and internal monitoring and bonding mechanisms to the forefront of theoretical discussions and empirical research (Ang et al., 2000).

To assist in being able to curb agency and risk-sharing problems in principal-agent relationships, agency theory prescribes two formal (and ideal) types of management mechanisms to govern these relationships (Rungtusanatham et al., 2007). The first is outcome-based management mechanism - with this mechanism both principals and agents can observe outcomes, and the principals reward agents based on measured performance outcomes (Ekanayake, 2004). The outcome-based management mechanism emphasizes results regardless of how the agents achieve them (Choi and Liker, 1995). The second management mechanism is behavior-based. When this approach is used principals can use behavior controls to monitor agents' behaviors and efforts which otherwise are unknown to the principals. The behavior-based management mechanism emphasizes tasks and activities in agents' processes that lead to the outcomes of the agents (Eisenhardt, 1989; Ekanayake, 2004).

2.2.2 Stakeholders Theory

Freeman is the pioneer who is credited with introducing stakeholder theory in 1984, with his book, "Strategic Management: A Stakeholder Approach". Freeman argued that the firm exists primarily for the purpose of serving and coordinating stakeholder interests (Schilling, 2000). Stakeholders with more power and legitimacy require more attention (Caroll, 1993). However, according to Donaldson and Preston (1965), most stakeholder analysts argue that all persons or groups with legitimate interests participating in a firm do so to obtain benefits and that there is no prima facie priority of one set of interests/ benefits over the other. More generally though, stakeholder theory highlights the necessity to serve all the stakeholders regardless of the amount of their legal interests in an organization and deals with the relationships with the stakeholders both in terms of the process and the outcome (Gilbert and Rasche, 2008).

Stakeholder theory suggests that the needs of shareholders cannot be met before the needs of stakeholders are met. In the same way, it claims that developing strategies by considering a broader stakeholder network and interaction will produce more successful results than focusing merely on direct profit maximization attempts (Jamali, 2008). Long-term sustainability of enterprises requires a management approach more sensitive towards the interests and the benefits of all stakeholders (Sarikaya, 2009). Steadman et al., (1996) state that stakeholder theory also asserts that stakeholders do not have the incentives to become as well informed as investors in the company. Investors, as a group, are more sophisticated than other stakeholders and thus are more likely to monitor the firm's activities which may affect their financial interest. Non-investor stakeholders, being a more diversified collection of groups, are not as inclined to

monitor the day-to-day activities of the firm.

2.2.3 Bondholders Theory

According to Jensen (1986) free cash flow is the excess of cash that is required to fund all positive NPV projects. The agency conflict arises as managers have discretion to use free cash flow. Managers can use free cash flow for enjoying perquisites or invest this free cash flow to increase resources under their control for perquisite consumption and overinvestment (Jensen, 1986; Stulz, 1990). This conflict created by free cash flow can be controlled by using debt. By raising financial leverage, the managers of firm are obliged to make periodic payments of interests and principal. These periodic payments reduce amount of free cash flow available for use by managers and hence reduces agency conflict between owner and managers. The use of debt also increases monitoring of managers' activities. As creditors have incentive to monitor to performance of the enterprise (Jensen and Meckling 1976) to ensure the payment of interest and principal. Banks, which are the major source of financing, play very important role in optimizing the monitoring of managers. Large debt holders also have contractual right to monitor activities of manager.

2.2.4 Trade-off Theory

According to the traditional (or static) trade-off theory (TOT), firms select optimal capital structure by comparing the tax benefits of the debt, the costs of bankruptcy and the costs of agency of debt and equity, that is to say the disciplinary role of debt and the fact that debt suffers less from informational costs than outside equity (Modigliani and Miller, 1963; Stiglitz, 1972;

Jensen and Meckling, 1976; Myers, 1977; Titman, 1984). So optimal leverage minimizes cost of capital and maximizes firm value.

The theory asserts that firms set a target debt to value ratio and gradually move towards it. According to this theory, any increase in the level of debt causes an increase in bankruptcy, financial distress and agency costs, and hence decreases firm value. Thus, an optimal capital structure may be reached by establishing equilibrium between advantages (tax advantages) and disadvantages (financial distress and bankruptcy costs) of debt. In order to establish this equilibrium firms should seek debt levels at which the costs of possible financial distress offset the tax advantages of additional debt (Karadeniz et al., 2009).

2.2.5 Free Cash Flow Theory

Jensen (1986) argued that there is a difference in interests between managers and shareholders regarding excess cash flows. Managers would often want to retain the excess cash flow and invest it in value reducing projects, such as negative net present value projects. Capital structure is one of the means of controlling managerial behavior. A major problem for shareholders is how to force managers to pay out cash flows rather than retain them. Using debt reduces cash flow available to managers for spending and forces them to pay out future cash flows. However, shareholders cannot force the payment of dividends and therefore the theory predicts that announcements of SEOs has a negative effect on stock returns and performance since it increases the free cash flow available for poor spending. An empirical prediction of the free cash flow theory is that the change in performance following the equity issue is negatively related to the existing free cash flow. The theory also predicts that as long as the number of positive-NPV

opportunities is limited, these firms will experience a decline in operating performance subsequent to issuing equity (Jensen, 1986).

2.3 Determinants of Agency Costs

The determinants that are widely recognized to influence the degree of agency costs of a firm are: ownership and control structure; bank monitoring ability; age of the firm; among others (Ang et al., 2000). The ownership and control structure of a firm is a key determinant. When the management owns less than 100 percent of the firm's equity, the shareholders incur agency costs due to management's avoidance and perquisite consumption. Because of limitations imposed by the CMA, personal wealth constraints, exchange regulations on the minimum numbers of shareholders, and other considerations, no publicly traded firm is entirely owned by management. Agency costs are indeed higher among firms that are not 100 percent owned by their managers, and these costs increase as the equity share of the owner-manager declines. Hence, agency costs increase with a reduction in managerial ownership, as predicted by Jensen and Meckling (1976).

Banks monitoring right and ability equally plays a critical discipline role. Banks play an essential role in small business financing because they are the major source of external funds for such firms. Cole et al., (1996) found that more than 60 percent of the dollar amount of small business credit outstanding takes the form of bank loans. Banks generally require a firm's management to report results honestly and to run the business efficiently with profit, bank monitoring complements shareholder monitoring of managers, indirectly reducing owner-manager agency costs. That is, by incurring monitoring costs to safeguard their loans, banks tend to make firms to

operate more efficiently by better utilizing assets and moderating perquisite consumption in order to improve the firm's reported financial performance to the bank. Thus, lower priority claimants, such as outside shareholders, should realize a positive externality from bank monitoring, in the form of lower agency costs (Ang et al., 2000).

2.4 Empirical Review

Leverage policy can be used as a mechanism of reducing free cash flow agency problem. A handful of international studies have been conducted on the relationship between the level of debt in the capital structure and agency cost of free cash flows (Lingling, 2004; Mc Night and Weir, 2009; Zhang and Li, 2008; Fatma et al., 2011; among others). There is, however, a scarcity of local studies on the effect of leverage on agency costs.

2.4.1 International Evidence

Khan et al., (2012) examined how manufacturing sector of Pakistan mitigate the agency cost of free cash flow by using leverage. The data was collected from 54 manufacturing firms, that were on the Karachi 100 stock index from the period 2006 – 2010. The study used generalized least swuare to examine the effect of leverage on agency cost of free cash flow. The results revealed that the leverage reduces the agency cost of free cash flows that is under the control of the manager.

Al Taleb (2012) studied the measurement of impact agency cost level of firms on dividend and leverage policy. The paper examined the dividend of industrial firms listed on Amman Stock Exchange from 2007 – 2011. Al Taleb used the regression analysis which showed a negative and

statistically significant effect of free cash flow on dividend while a positive and significant effect of free cash flow on leverage. The study proved that free cash flows have a negative effect but leverage and profitability variables appear to have positive influences on dividend payouts of Jordan firms.

Nawaz (2012) examined how leverage affects agency cost. The study tests the use of debt decreases agency cost. He examined the 265 non-financial companies listed on the Karachi stock exchange during the period of 2004 – 2009. The study used the pooled and panel regression models and this showed that general and admin expense ratio is negatively related to all four leverage ratios. The results showed that total debt reduces agency costs. The regression results give some evidence that further increase in leverage increases total agency cost. The study also provides implication for the debt holders as well as policy makers on the use of debt in total financing of a firm.

Saita et al., (2013) tested the hypothesis that the leverage reduces agency cost. He used the 265 non financial companies listed in the Karachi stock exchange from the period of 2004 – 2009. The non-linear regression model has been used to test the relationship between leverage and agency cost. The results of the study revealed that general & admin expense ratio is negatively related to leverage ratios. Thus, he concluded that giving evidence in support of the hypothesis that the use of debt in capital structure reduces agency cost.

According to the study by Mostaghimi et al., (2014) on effect of financial leverage on agency cost resulting from free cash flow of manufacturing companies accepted in the Tehran stock

exchange. The study was conducted on the Tehran Stock Exchange data of 80 companies in the period 2007 – 2012. They used panel analysis method to test the hypothesis. The indices of financial leverage in the research are the ratio of debt to shareholders equity and ration of long term debt. The results showed negative and significant relationships between ratio of debt to shareholders' equity and ratio of long term debts with agency costs from free cash flow.

2.4.2 Local Evidence

Maina & Ishmail (2014) studied capital structure and financial performance in Kenya: Evidence from firms listed in the Nairobi Securities Exchange. They studied the firms that were quoted in the Nairobi Stock Exchange from the year 2002 – 2011. They used the causal research design and Gretl statistical software to perform the panel regression analysis. The study found out that there was a negative and significant relationship between capital structure and performance i.e the more debt a firm uses they would experience low performance.

Gweyi and Karanja (2014) studied the effect of financial leverage on financial performance of deposit taking savings and credit co-operative in Kenya. The data was obtained from 40 SACCOs registered by the Sacco Society Regulatory Authority (SASRA) from the period 2010 – 2012. The study used correlation analysis to find out the relationship between financial leverage and financial performance. The results showed perfect positive correlation between debt equity ratio with return on equity and profit after tax at 99% confidence level.

In a study for the influence of capital structure on leverage on SME in Kenya, it was sought to investigate whether the mortality of SMEs in Kenya is caused by capital structure on the leverage

of the firm. The study was conducted on the stratified groups of SMEs in Nairobi. Kyule and Ngugi (2014) used multiple regression analysis so as to investigate the influence of capital structure on leverage of SMEs in Kenya. The study proves that there is a positive relationship between a firm leverage and its size i.e when the value of the firm increases the ratio of direct bankruptcy costs to the firm value would decrease. This study was carried out by Kyule & Ngugi (2014).

According to the study carried out Kodongo et al., (2014) on capital structure, profitability and firm value: panel evidence listed in the firms in Kenya, they undertook the study to investigate the relationship between leverage and the financial performance of listed firms in Kenya. The data was collected in the period of 2002 – 2011 of the listed firms in Kenya. The data was analysed by panel root tests using the augmented Dickey-Fuller method. The findings suggest that asset tangibility, sales growth and firm size are important determinants of profitability.

Kirui et al., (2014) carried out a study on the impact of corporate governance on agency cost: empirical analysis of quoted services firms in Kenya. The study seeks to investigate the role of corporate governance in mitigating agency cost in a sample of 9 service firms selected based on market capitalization during the period of 2008 – 2012. This study used the multivariate fixed effect regression to anaylse the data. The results showed that higher director and institutional ownership reduces the level of agency cost. Smaller sized boards also resulted in lowering agency costs.

2.5 Summary of the Literature Review

From the theoretical review it is evident that leverage has an impact on the firm in overall. The following determinants are widely recognised to influence the degree of agency costs of a firm: ownership and control structure; bank monitoring ability; age of the firm; among others (Ang et al., 2000). Financial leverage determinants include: size, asset structure, profitability, risk and growth among others (Viviani, 2008). A handful of international studies have been conducted on the effects of leverage on agency costs (Saita, 2013; Taleb, 2012) among others. From these studies it is evident that leverage reduces the agency costs. There is, however, a lack of local studies on the effect of leverage on agency costs in Kenya. Many of the studies carried out consider the effect of leverage on firm performance (Gweyi and Karanja, 2014), corporate governance on ageny cost (Kirui et al., 2014) among others. This study therefore, aims to study the effect of leverage on agency costs for firms listed at the NSE.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter discussed the research design, population, data collection, data analysis and analytical model. It further showed the data collection methods used to carry out the study. In order to carry out the study data analysis, techniques and instruments was undertaken.

3.2 Research Design

Descriptive design was applied in the study. Kothari (2004) defined descriptive research design as those studies which are concerned with describing the characteristics of a particular individual or group. The descriptive research design involves the description of state of affairs as it exists at present. The design is appropriate because the study will aim at exploring whether a relationship between the variables exists (Bickman and Rog, 1998). The design was appropriate because the study intended to find out the effect of leverage on agency cost and international studies conducted on this area use descriptive design such as Saita (2012) and Khan et al., (2012)

3.3 Population of the Study

The target population is all the 62 firms listed at the NSE as at 31 December 2014 (list is attached in appendix i). The sample for the study is all firms listed at the NSE as at 31 December 2014 excluding banking and insurance firms, as they have regulated leverage levels by the CBK, which makes the sample total to 48 firms (list is attached in appendix ii). A census was used for the companies that use external finances and traded continuously within the period of study.

3.4 Data Collection

The study was facilitated by use of secondary data from the NSE. Quoted companies are required by law to make public their financial reports. Thus, the secondary data was obtained for the period 2010-2014. This period was used as most of the international studies carried out as noted in the empirical studies reveal a commendable study period of 5 years such as Saita (2013) and Khan et al., (2012) among others.

3.5 Data Analysis

Multiple regression analysis was used to determine the effect of leverage on agency at the NSE. Statistical Package for Social Sciences (SPSS) version 21 will be used to aid in the data analysis.

3.5.1 Analytical Model

The study used regression model to establish the effect of leverage on agency cost. The model used is similar to one used by Zhang (2009).The model is as stated below;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon_i$$

Where,

Y = agency cost as measured by asset utilization ratio of firm i. (as measured by Ang et al., 2000)

X_1 = Leverage of the firm as measured by the percentage of debt to total assets of firm i.

X_2 = size of firm i measured by the average logarithm of assets

X_3 = growth in sales for firm i measured by the average ratio of change in sales in a year

X_4 = return on assets for firm i measured by averages ratio of profit to total assets

ε_i = error term.

B_i is a coefficient of variable i.

3.5.2 Operationalization of the Variables

Variable	Operational Definition	Measurement
1. Agency cost	This is the dependent variable. It will be measured the total sales to assets. This will be averaged over the year of study.	$X_1 = \sum_i^n \frac{SALES_i}{TA_i}$, Where; Sales = sales for the year TA = Total assets for the year
2. Leverage	This is the percentage of debt to total assets. This will be averaged over the year of study.	$Y = \sum_i^n \frac{D_i}{DE_i}$ Where; D_i = total debt for year i DE_i = total debt plus equity for year i
3. Size of the firm	It will be calculated as the logarithm of total assets for each year. This will be averaged over the period of	$X_2 = \text{In}\ [\sum_i^n\ TA_i\ ]$ Where;TA=Total assets for year i n= number of years.

	study. Size of the firm will determine the agency cost and leverage as the bigger the firm size the higher the agency cost.	
4. Growth in sales	This is the ratio of change in sales in a year. This will be averaged over the period of study.	$X_3 = \sum_i^n \frac{\Delta SALES_i / SALES_i}{n}$ Where; $SALES_i$= sales for year i TA_i = Total assets for year i n= number of years.
5. Return on assets	This is the ratio of net profit to total assets. This will be averaged over the period of study.	$X_3 = \sum_i^n \frac{\Delta SALES_i / SALES_i}{n}$ Where; NI_i = net profit for year i TA_i = total assets for year i n = number of years

3.5.3 Test of Significance

Multiple regression analysis was used to test the effect of leverage on agency cost. To test for significance of the difference between the variables, t-test at 95% confidence level (p=0.05) was conducted.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND INTERPRETATION

4.1 Introduction

This chapter presents the results of the data analysis. The secondary data used was in the form of published financial statements of the forty eight non-financial firms listed at the NSE. This data was then converted to the desired form and entered into the SPSS version 21. Data analysis was then conducted to generate the descriptive and correlation output. The results from the analysis are shown below.

4.2 Descriptive Statistics

Descriptive statistics is the term given to the analysis of data that helps describe, show and summarize data in a meaningful way.

Table 4.1 Descriptive statistics

	N	Minimum	Maximum	Mean	Std. deviation
Asset utilization	48	4.67	685.43	74.57	143.77
Leverage	48	5.13	578.67	68.46	132.76
Size of firm	48	0.34	20.85	10.43	4.15
Sales growth	48	-10.54	16.25	5.35	5.15
Return on assets	48	0.49	23.61	12.62	5.40

Source: Research findings

From above table 4.1 above statistical analysis of financial leverage and agency cost is shown. The maximum value on asset utilization is 685.43 while the minimum value is 4.67 with an average of 74.57 and standard deviation of 143.77. The maximum value on leverage is 578.67 while the minimum value is 5.13 with an average of 68.46 and standard deviation of 132.76. The maximum value on size of firm is 20.85 while the minimum value is 0.34 with an average of 10.43 and standard deviation of 4.15. The maximum value on sales growth is 5.35 while the minimum value is -10.54 with an average of 5.35 and standard deviation of 5.15. The maximum value of return on assets is 23.61 while the minimum value is 0.49 with an average of 12.62 and standard deviation of 5.40.

4.3 Inferential Statistics

Inferential statistics is a technique that uses samples to generalize about the population from which the samples are drawn. Below is the analysis of the statistics.

Table 4.2: Model Summary

Regression statistics	Multiple R	R square	Adjusted R Square	Standard error
	0.8345	0.69536	0.6124	0.1583

Source: Research findings

From table 4.2 it is clear that variations in leverage influence 61.24% of the predictor variables. This shows that the model used is suitable for explaining the firm's effect of leverage on the agency cost, since is it slightly more than the threshold of about 60% - 100% for a good line of fit.

4.3.1 Regression Analysis

A regression analysis was conducted on the financial leverage against agency cost, which was proxy of asset utilization and the control variables: firm size, sales growth and return on assets. The regression equation was as follows: $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon_i$

Data for the above variables was generated for 48 companies listed in the NSE as at 31 December 2014 that spanned the years 2010 to 2014 (Refer appendix ii). The data was subjected to regression analysis and the findings of which are discussed below:

Table 4.3: Coefficients of the Model

	Coefficients	**Standard error**	**t-statistics**	**P-value**
Intercept	-0.245796	0.157537667	-1.6798	0.135223
Asset utilization	-0.022578	0.007406787	-3.5006	0.003049
Size of firm	0.037844	0.009467881	4.0145	0.000315
Sales growth	0.067891	0.054167844	1.5672	0.193451
Return on assets	-0.70631	0.094322114	-5.9614	0.000033

Source: Research findings

Table 4.3 shows the numerical relationship between financial leverage and agency cost. It also shows the relationship between other control variables and agency cost.

From the above information the below resultant equation can be derived:

$$Leverage = -0.245795 - 0.022578X_1 + 0.037844X_2 + 0.067891X_3 - 0.70631X_4$$

The above equation shows that when the agency cost (asset utilization) increases by one unit, leverage decreases by 0.0226 units. When the size of the firm increases by one unit leverage

increases by 0.0378 units. If the sales growth increases by one unit the leverage increases by 0.0679 units and ultimately when the return on assets increases by one unit leverage reduced by 0.7063 units.

From table 4.3 as well we can be see that the asset utilization at a confidence level of 95% is less than 0.05 at a figure of 0.003049. This shows that there is a significant relationship between the leverage and the agency cost. Thus we can be able to conclude that leverage does have an impact on the agency cost such that leverage does aid in reducing the agency cost. We can also draw that the size of the firm and the return on the assets both yield a p-value of less than 0.05. This also demonstrates a strong relationship between leverage and size of firm and return on assets.

4.3.2 Analysis of Variance

The F-ratio in the Analysis of Variance (ANOVA) table as shown below tests whether the overall regression is a good fit for data.

Table 4.4: Analysis of Variances (ANOVA)

	Sum of squares	Df	Mean Square	F	Significance
Regression	8	4	1.59	14.673	0.000
Residual	120	320	0.139		
Total	128	324			

Source: Research findings

The significant value is 0.000 which is less than 0.05. Thus the model is statistically significant in predicting (size of firm, growth in sales and return on assets) the F critical at 5% significance level which was 3.45. Since F calculated is greater than the F critical (value 14.673), this shows that the overall model was significant. The significance is less than 0.05; this indicates that the predictor variables explain the variation of the dependent variable which is effect of leverage on agency cost of firms listed at the NSE. However, if the significance value of F was greater than 0.05 then the independent variables would not explain the variation in the dependent variable.

4.4 Interpretation of the findings

From table 4.2 the study shows a change in the level of the financial leverage does have an effect on the other variables. It is clear that financial leverage does have an impact on the agency cost. From this table it reveals that the model being used is suitable in identifying the effect of financial leverage on agency cost for firms listed at the NSE as it shows a 61.24% of variations to the other predictor variables.

From table 4.3 and the equation that has been derived it indicates that when the agency cost increases by one unit, leverage decreases by 0.0226 units. From table 4.3 as well, it is clear that that the asset utilization at a confidence level of 95% is less than 0.05 at a figure of 0.003049. This shows that there is a significant relationship between the leverage and the agency cost. Thus we can be able to conclude that leverage does have an impact on the agency cost such that leverage does aid in reducing the agency cost. We can also draw that the size of the firm and the return on the assets both yield a p-value of less than 0.05. This also demonstrates a strong relationship between leverage and size of firm and return on assets.

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The findings are consistent with the research of Mostaghimi et al., (2014) and Nawaz (2012).

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarized the analysis in chapter four and underlined the key findings. The findings concluded that there is a strong relationship between the leverage and the agency cost. This is also in line with the theoretical review and also the international empirical review. It also drew conclusions and implications from the finding. Limitations of the study, recommendations and suggestions for further studies were outlined.

5.2 Summary

Financial leverage and agency cost are significantly related to one another. Many firms use financial leverage to be able to generate more revenue or for investing in other profitable businesses where they require more cash. Agency cost on the other hand is the costs incurred when management are contracted by the shareholders to carry out the business and run the operations of the organisation on their behalf.

The study sought to investigate the effect of leverage on agency costs for the firms listed at the Nairobi Securities Exchange. This study was conducted with the aim of establishing the effect of financial leverage on agency cost for non-financial companies listed at the Nairobi Securities Exchange. A model similar to one which was used by Zhang (2009) was adopted for this study. The study used descriptive analysis, multiple regression analysis and ANOVA to analyse the date. In the study, asset utilization was used as a proxy. To achieve the above objective, a descriptive analysis and regression analysis was conducted whereby leverage was regressed

against the predictor variables: asset utility, firm size, sales growth and ROA for a period spanning 2010-2014. Data for both the dependent and predictor variables were obtained from the NSE. The data was then subjected to a regression analysis. The study found that in the model financial leverage had a significant effect on agency cost and such that if the financial leverage was increased it would ultimately reduce the agency costs.

5.3 Conclusion

The results of the study conclude that financial leverage can significantly influence agency cost of firms listed in the NSE, such that if the financial leverage of a firm is increased, it reduced the fee cash flow that is available to the managers and thus reduces the misappropriation of the assets of the firm.

The effect of the increase in the financial leverage results in more of the cash flow being used to make repayments of the liability be it short term or long term. The non-payment of such liability calls in for bankruptcy as the firm is unable to pay up for these liabilities. One of the main reasons that large firms would not undergo bankruptcy is that they have other sources of income which means that their businesses are diversified. For e.g a hospitality industry one may not offer such services of hotels only but would also have lodges and other additional facilities such as a spa.

On the other hand, it is difficult for smaller non-listed firms to be able to obtain large finance from financial institutions. This is because they do not meet most of the requirements to be able to obtain the funds. Moral hazard and adverse selection problems are decreased reasonably in

more so large companies. Consequently using debt as an external funding is much better in listed companies than more smaller and private firms. In using the leverage, many of the firms have to abide by restrictions of the lenders and monitoring by the lenders is inadvertently increased. Hence there is a positive relationship between the level of leverage and agency costs.

5.4 Recommendation for Policy and Practice

This study found that financial leverage does indeed assist in reducing the agency costs. This is because of the reduction in the subsequent free cash flow that has helped management curtail the use of the additional cash flow which would have been used for other non value adding projects. On the basis of the findings, the study recommended that since financial leverage did reduce the agency costs, financial leverage level variability decisions should take into account implications of agency costs for listed firms.

There are also some recommendations for the government, stakeholders and also the shareholders to control the agency costs. The principals of the agents need to limit the management decisions on investments such as undertaking restrictions on the investment of firms free cash flows in negative NPV projects. Hence, financial leverage aids in being able to reduce such free cash flows. The principals can also have complex contracts with the principals and the management of the firms so that management do not only attain their objectives but that of the firm as well.

In addition to the above, investors and managers of a company are suggested to control the agency cost, first by having organized and determined meetings or sessions between the

managers and the shareholders for limiting the management's decision on the investment of free cash flows of the company for projects that would yield profits for the shareholders. One of the other ways of reducing the agency cost is by instilling strict rules as these rules would prevent managers' behaviour that is against that of shareholders.

5.5 Limitations of the Study

There are a few limitations to the study. Agency cost may be dependent on other various factors including ownership concentration, managerial ownership and the size of the board of the organisation. The study was unable to control these variables, as these variables may have potential effect on the agency cost, due to lack of time availability.

The study has only considered the listed firms at the NSE. However, there are other private firms whose revenue and borrowings are in a similar capacity to that of the listed entities. A comparison or a mix of both the types of firms i.e. listed and non-listed firms would have yielded a more better understanding of the

The study has only been able to use one proxy for the agency cost i.e asset utilization. Other proxies could have also been used and tested for the same purpose such as expenses to sales ratios. Investing other proxies for agency cost may have yielded a comprehensive result to the study or would have suggested other results and conclusions.

5.6 Suggestions for Further Studies

The further studies that would be able to be done in the future is being able to use data from private firms and make similar comparisons. It would then be interesting to find out what kind of ways private firms mitigate agency costs. Other studies could use the other proxies including cash flow, firm discounting cash flow to identify the impact of leverage on agency cost.

Alternative researches could be carried out using different variables and also carrying out the study for different sectors of the market. A different location or segment of the same market can be used to carry out the study. Segmenting the market would mean that a particular sector would be chosen as this sector has specific regulations or characteristics that differentiates it from other segments.

Other searches that could be carried out would be to find out other possible ways of reducing the agency cost such as the profitability of the firm, stock option plans and other methods of reducing agency cost. It would be important to also find out the effect of these variables in controlling the agency costs that firms would face.

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APPENDICES

Appendix I: Firms listed at the NSE as at 31 December 2014

MANUFACTURING AND ALLIED

1. B.O.C Kenya Ltd
2. British American Tobacco Kenya Ltd
3. Carbacid Investment Ltd
4. East Africa Breweries Ltd
5. Mumias Sugar Co. Ltd
6. Unga Group Ltd
7. Eveready East Africa Company Ltd
8. Kenya Orchards Ltd
9. A.Baumann Co. Ltd

CONSTRUCTION AND ALLIED

10. Athi River Mining
11. Bamburi Cement Ltd
12. Crown Berger Ltd
13. E.A.Cables Ltd
14. E.A.Portland Cement Ltd

ENERGY AND PETROLEUM

15. KenolKobil Ltd
16. Total Kenya Ltd
17. KenGEN Ltd

COMMERCIAL AND SERVICES

34. Express Ltd
35. Kenya Airways Ltd
36. Nation Media Group
37. Standard Group Ltd
38. TPS Eastern Africa (Serena) Ltd
39. Scangroup Ltd
40. Uchumi Supermarket Ltd
41. Hutchings Biemer Ltd
42. Longhorn Kenya Ltd

TELECOMMUNICATION AND TECHNOLOGY

43. Safaricom Ltd
44. Access Kenya Group Ltd

BANKING

45. Barclays Kenya Ltd
46. CFC Stanbic Holdings Ltd
47. I & M Holdings Ltd
48. Diamond Trust Bank Kenya Ltd
49. Housing Finance Co. Ltd
50. Kenya Commercial Bank Ltd

18. Kenya Power and Lighting Co. Ltd

19. Umeme Ltd

GROWTH ENTEPRISE MARKET SEGMENT

20. Home Africa Ltd

AGRICULTURAL

21. Eaagads Ltd

22. Kapchorua Tea Co. Ltd

23. Kakuzi

24. Limuru Tea Co. Ltd

25. Rea Vipingo Plantations Ltd

26. Sasini Ltd

27. Williamson Tea Kenya Ltd

INSURANCE

28. Jubilee Holdings Ltd

29. Liberty Kenya Holdings Ltd

30. British-American Investments Company Ltd

31. Kenya Re-insurance Corporation Ltd

32. Pan African Insurance Holdings Ltd

33. CIC Insurance Group Ltd

Source: www.nse.co.ke

51. National Bank of Kenya Ltd

52. NIC Bank Ltd

53. Standard Chartered Bank Ltd

54. Equity Bank Ltd

55. The Co-operative Bank of Kenya Ltd

INVESTMENT

56. Olympia Capital Holdings Ltd

57. Centum Investment Co. Ltd

58. Trans-Century Ltd

AUTOMOBILES AND ACCESSORIES

59. Car and General (K) Ltd

60. CMC Holdings Ltd

61. Sameer Africa Ltd

62. Marshalls (E.A.) Ltd

Appendix II: Firms listed at the NSE as at 31 December 2014 excluding banking and insurance firms

Industry	Company
1. Agricultural	1. Eaagads ltd
	2. Kapchorua tea co ltd
	3. Kakuzi ltd
	4. Limuru tea co. ltd
	5. Rea vipingo plantations ltd
	6. Sasini ltd
	7. Williamson tea Kenya ltd
2. Commercial and services	8. Express Ltd
	9. Kenya Airways Ltd
	10. Nation Media Group
	11. TPS Eastern Africa (Serena) Ltd
	12. Scangroup Ltd
	13. Uchumi Supermarket Ltd
	14. Hutchings Biemer Ltd
	15. Longhorn Kenya ltd
	16. Standard group ltd
3. Telecommunications and technology	17. Safaricom Ltd
	18. Access Kenya Group Limited
4. Automobiles and accessories	19. Sameer Africa ltd

	20. Marshalls (EA) ltd
	21. Car and General (K) Ltd
5. Investment	22. Olympia Capital Holdings ltd
	23. Centum Investment Co Ltd
	24. Trans-Century Ltd
6. Manufacturing and allied	25. B.O.C Kenya Ltd
	26. British American Tobacco Kenya Ltd
	27. Carbacid Investments Ltd
	28. East African Breweries Ltd
	29. Mumias Sugar Co. Ltd
	30. Unga Group ltd
	31. Eveready East Africa Ltd
	32. Kenya Orchards Ltd
	33. A.Baumann CO Ltd
7. Construction and allied	34. Athi River Mining
	35. Bamburi Cement Ltd
	36. Crown Berger Ltd
	37. E.A.Cables Ltd
	38. E.A.Portland Cement Ltd
8. Energy and Petroleum	39. KenolKobil Ltd
	40. Total Kenya Ltd
	41. Kenya Power & Lighting Co ltd
	42. Kengen ltd

	43. Umeme Ltd
9. Growth Enterprise Market Segment	44. Home Afrika Ltd
	45. Flame Tree Group Holdings Ltd
	46. Kurwitu Ventures
	47. Atlas Development and support services
10. Investment services	48. Nairobi Securities Exchange

Source: www.nse.co.ke