

"Corporate Performance and Management Compensation: An Empirical Investigation of Public Companies in Kenya."

By

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A Research Paper Submitted to the Department of Accounting and Finance, University of Nairobi in Partial Fulfillment of the Requirements for the Degree of Masters in Business Administration

Declaration

THIS MANAGEMENT PROJECT IS MY OWN ORIGINAL WORK AND HAS NOT BEEN PRESENTED FOR A DEGREE IN ANY OTHER UNIVERSITY

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List of Abbreviations

CMA:	Capital Markets Authority
NSE:	Nairobi Stock Exchange
EPS:	Earnings Per Share
Ksh.	Kenya Shillings
ROA:	Return on Assets
ROE:	Return on Equity
EVA:	Economic Value Added
IAS:	International Accounting Standards
ANOVA:	Analysis of Variance
NPV:	Net Present Value
PV:	Present Value
UK:	United Kingdom
USA:	United States of America

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Abstract

Agency theory regards management compensation as the main means of aligning the interest of shareholders and management to ensure sustained value creation to shareholders.

To explore this argument, this study examined the components of management compensation and the associated proportions as well as the relationship between management compensation, performance and sales using a sample of 41 public companies for the period 1994 - 1998. Return on Assets and Return on Equity were used to proxy performance.

Salary was found to be the main element of management compensation accounting for 70% of total management compensation. Allowances, pensions and loans accounted for 14%, 7% and 6% respectively.

The relationship between management compensation and performance was found to be negative and statistically insignificant. The negative relationship indicated that management compensation had not contributed to the reduction of agency costs for public companies in Kenya. Sales were found to be positively and significantly related to management compensation.

Chapter One

Introduction

A firm is an entity that owns and controls resources (Ronald Coase (1937)) with a view to maximising value to its owners (shareholders). Due to managerial skill deficiency and/or time constraint, shareholders hire managers to control their firms. The resultant separation of ownership and control generates potential conflicts between owners and management¹ since both are utility maximisers.

The shareholders, referred to as the principals, delegate decision-making authority to the management, referred to as the agents, on the understanding that the latter make decisions that create value to them. However, the agents may pursue their own interests rather than the principals' resulting in agency conflicts.

1.1 Agency Conflict

Agency conflict refers to divergence of interest between shareholders and management and may arise in the following situations:

1.1.1 Firm Performance and Management Compensation

Management remuneration is expected to be commensurate with performance² for the benefit of shareholders. In this respect, management is rewarded with a pay increase for superior performance that translates to higher share prices. In case of poor performance the management is penalised through sacking, reduced perks³ etc. However, in many cases, management compensations may not be aligned to performance. The management may enjoy perks even when the companies under their control perform poorly.

Rewarding management for value added requires that their performance be accurately measured. However, this is not easy since the separation of ownership from control does

¹Management refers to board of directors who formulates policies and strategies to realise investment objectives of shareholders.

² NPV refers to benefits net of cost both discounted at the opportunity cost of capital. Performance refers to investment decisions that lead to positive NPV thereby resulting in sustained benefits to shareholders in the long term.

³ Perks are expenditures with higher value to management than to owners.

not allow shareholders to directly observe management action. Shareholders may also be ignorant of the operations of the firm thus disabling them from making inferences on observed management actions. Consequently, they rely on the published results, affected by macro-economic factors such as inflation, interest rate changes that are beyond the control of management.

1.1.2 Attitude to Risk

The shareholders can diversify their investment portfolio over different assets and lower their exposure to risk. The management, on the other hand, is more risk averse than the shareholders as their wealth such as human capital, pay and return on stock options are tied to the fortunes of the company. Their risk aversion increases with age (Eaton and Rosen (1983)). Excessive risk aversion may make management to be conservative in their investment decisions. They may thus ignore risky projects with potential benefits to shareholders and pursue those with stable but lower returns.

1.1.3 Decision Making Horizon

Companies set up compensation committees to advice on compensation of management. The mandate of such committees is to develop management compensation policy and levels that are competitive enough to attract and retain quality management and to link its structure to corporate performance.

Compensation committees may evaluate management investment decisions on a shorter time period than shareholders would in assessing the impact of the same investment decisions. This is to ensure immediate payoffs of such decisions.

Foreshortened decision making may make management to appraise investments on the basis of their immediate gains rather than on the present value of their future cashflows. Hence, management may reject long-term investments that may have huge benefits to shareholders.

For instance, management whose pay is pegged on annual accounting earnings may turn down an investment expected to post negative earnings in the early years and positive cash inflows later. This is because of adverse impact of such an investment on their short-

term earnings. They may only accept such an investment if its consideration in their pay is deferred to the time it starts to earn positive cash inflows.

1.1.4 Corporate Restructuring

Companies pursue corporate restructuring primarily to create wealth to their shareholders. Merger may be one way of corporate restructuring to enhance value to shareholders and refers to a combination of two or more firms to operate as one legal entity. Merger can be horizontal, vertical or conglomerate. A horizontal merger involves companies in the same line of business. A vertical merger involves companies at different stages of production while a conglomerate merger involves companies in unrelated businesses.

Sources of value in mergers are synergy, tax savings, efficiency improvement, cheap replacement of assets etc. Synergy occurs when the present value (PV) of say companies X and Y combined is more than the sum of their individual present values i.e. $PV_{xy} > PV_x + PV_y$.

This is attributed to economies of scale. Economies of scale are benefits that accrue to a company due to large-scale operation. Such benefits including inter alia, large discounts on procurements of goods and services, low distribution costs and low finance costs may reduce the cost of operation and raise profitability. Thus merger of companies increases the potential for growth and profitability.

Tax savings occur when a profitable company in a high corporate tax bracket acquires a loss making company with accumulated tax losses to benefit from tax refunds. Efficiency improvement occurs when an inept management is replaced with a competent one. Some assets can only be replaced cheaply through a merger e.g. buying an established oil company instead of engaging in expensive exploration drilling.

Management may turn down a merger arrangement with potential benefits to shareholders but which threaten their status, fail to bargain for the highest price or approve one purposely to enhance their power and influence.

1.1.5 Entrenching Investments

Entrenching investments refer to projects that reward skills and experience of incumbent management. Such investments are associated with negative expected net present values. Management of a firm with excess liquidity, in the face of limited lucrative investment opportunities, may undertake such investments purposely for empire building in the form of social prominence, public prestige and political power etc. Jensen (1986) refers to this scenario as a free cash flow problem. The concern here is how to prevent management from investing in projects that destroy value.

1.1.6 Dividends Payments

Dividends are periodic payments, in the form of cash, scrip or stock, firms make to their shareholders. Cash dividends are cash payments to shareholders. Scrip dividends refer to issuance of additional shares, instead of cash, to shareholders. Such dividends retain cash within a company and also increase the share capital base. A shareholder can easily convert scrip dividend to cash. Issuance of scrip dividends involves some transaction costs.

For stock dividends commonly known as stock repurchase, a company buys back its shares. This may be to give back surplus cash to its shareholders, increase the earnings per share, remove rebellious shareholders and to attain desired capital structure. It involves transfer of cash from retained earnings to equity capital. Cash dividends are preferred to scrip and stock dividends due to their ready liquidity.

Preferred shareholders are those who own stocks with fixed dividend payments while ordinary shareholders are those who own common stocks with flexible dividend payments. Payments to preferred shareholders are set by terms and conditions agreed upon during the issue of shares and not subject to management decision. Payment to ordinary shareholders, on the other hand, is a policy matter determined by the management.

Management may use their discretion to withhold a substantial portion of their company's profit instead of paying them out as dividends to ordinary shareholders. On the other hand, management may pay out generous dividends and then issue additional shares to

offset the financing gap of company investment activities. Issuance of additional shares is costly to shareholders, as they have to meet the associated transaction costs.

1.1.7 Information Asymmetry

Information asymmetry refers to unequal access to and distribution of information. Managers have more superior information on firms they control than the shareholders. This unequal access to material⁴ information leads to adverse selection and moral hazard problems. Due to this information asymmetry, managers may withhold material information from shareholders, which may be costly to the latter in the long run. e.g. information on the bankruptcy status of the firm that may lead to ultimate liquidation.

1.2 Aligning Incentives

The preceding conflicts lead to a residual loss to owners when returns fall below what they could have been had the latter been in direct control. The attendant agency⁵ costs erode value to shareholders and hence the need to alleviate them. The concern of the principal is to develop a cost-effective contractual arrangement that induces the agent to take actions of value to the former. The contract chosen has to trade-off incentive and information problems. Behavioral-based contract and result-based contract may be considered.

Behavior-based contract is pegged on command and control. Issues of interest here are salaries, budgeting systems, reporting procedures, hierarchical governance and, contracting to alleviate information asymmetry. This contractual arrangement is associated with greater principal information, greater result uncertainty, greater agent risk aversion and high costs of measuring the output. In summary, behavior based contract is costly to both the principal and the agent with regard to the respective monitoring and bonding activities and the associated expenses.

Result-based contract looks at incentives pegged on performance. This contract considers, inter alia, commissions, stock options, market governance and transfer of property rights. In this contract, each of the parties must get utility that exceeds their

⁴ Information is material if it can assist a reasonable investor make an investment decision.

individual reservation utility levels to deliver. The agent must enhance value to the principal and be a partial residual claimant of the incremental value. The compensation should be commensurate with the additional risk to the agent and consider both past and future performance. This contractual arrangement confines the agents to the expectations of the principal.

Eisenhardt, K. M. (1989) argues that agency conflict may be resolved by coaligning the incentives of the parties to the contract. Agency theory suggests the adoption of performance-related management compensation policy to coalign the incentives. Jensen and Meckling (1976) argue that management requires appropriate performance-allied incentives to create value for the shareholders. Such incentives include performance tied bonuses, share options and share ownership schemes.

Baker (1992) and Kaplan (1994) advocate for performance related compensation to compel management maximise shareholders' wealth. Baker, Jensen and Murphy (1988) argue that the level of compensation determines where the management works while the compensation structure determines the effort they put.

Mehran (1995) argues that well-diversified and risk neutral principals may go for corporate performance tied compensation policy with maximum variability while risk averse agents may select a compensation policy with maximum assurance. Thus, developing performance-aligned compensation requires matching the interest of the principals and the agents.

Compliance with best corporate governance⁶ practices is necessary to enhance disclosure of corporate information and protect the principal from any rogue behavior of the agents. NSE, founded in 1954, currently has 51 listed companies in different sectors, detailed in Appendix I. CMA has issued corporate governance guidelines, detailed in Appendix 2, that protect investors in these companies. Amongst other requirements, these guidelines require management pay to be competitive to attract and retain quality management and tied to performance.

⁵Agency costs are costs involved in writing and enforcing contracts, limiting management decisions, auditing financial statements and in some cases discontented shareholders may initiate proxy fight to oust incumbent management

⁶ Corporate governance refers to the way a company is directed and controlled to create wealth for its shareholders

1.2 Importance of the Study

From the preceding, there appears to be a consensus that in the interest of shareholder wealth enhancement, management compensation must be competitive and tied to performance. Over and above corporate performance and governance, economic theory links management compensation to a firm's operating characteristics and leverage etc. Operating characteristics include a firm's growth opportunities, operating risk and size of operation. Leverage looks at a firm's covenants with its debtholders that affect its leverage level.

1.3 Statement of the Problem

The agents are ordinarily expected to make investment decisions that enhance value to the principal. The agents, like the principal, are wealth maximisers as demonstrated by cases of self interest, bounded rationality, risk aversion, information asymmetry and overall goal conflict. These managerial actions lead to sub-optimal investment decisions and subsequent principal-agent conflict.

Resolving this conflict is tied to balancing the diverging interests to facilitate value enhancing investment decisions. Behavior based contractual arrangement is costly to enforce. Performance based compensation policy is one of the main cost effective means of mitigating the agency problem between the agents and the principal.

This study examined to what extent the compensation of management of public companies in Kenya is aligned to performance⁷ and hence provide value increasing incentives. The study also investigated the role of operating characteristics and leverage in the compensation of management.

1.4 Objectives of the Study

The objectives of the study were to:

- a) determine the components and the associated proportion of compensations of management of public firms in Kenya;
- b) determine the role of performance in compensation of management of public firms in Kenya and;
- c) examine the role of factors other than performance in compensation of management. ;

1.5 Importance of the Study

The findings of the study were to:

- a) provide a better understanding of the compensation of management of public firms in Kenya;
- b) enable the CMA to assess the efficacy of the corporate governance guidelines and;
- c) provide a body of knowledge to the academic community.

1.6 Organisation of the Remainder of the Study

The remainder of the study was organised as follows: Chapter 2 reviewed the pertinent literature. Chapter 3 presented the research methodology used, the population and sample of analysis and the data type and sources. Chapter 4 presented the analysis of the primary and secondary data. Chapter 5 described the findings of the study including the policy recommendations thereof, limitations of the study and suggestions for further research.

⁷ Pricewaterhouse coopers conducts annual salary survey of management and other professionals. However, it is not known how these numbers relate to performance.

Chapter Two

Literature Review

2.1 Management Compensation

Compensation refers to rewards employees receive in respect of their employment relationships. Robert Elliot (1991)) argues that compensation reduces the disutility most people associate with work. Michael Porter (1985) argues that competitive advantage, premised on innovation, quality and cost leadership, is important for growth and prosperity of a firm. These attributes need skilled and well-compensated staff to realise in the delivery of value to customers and ultimately to owners.

A generic compensation policy needs to attract, motivate and retain valued staff, be performance sensitive, balance short term and long term financial objectives, build shareholder wealth, promote individual, team and corporate performance. The compensation should be designed in the form of fixed and variable performance-related components.

Management compensations may take the form of financial rewards and non-financial rewards. Financial rewards include basic salary, bonus schemes, stock options, share ownership, contribution to pension, provident fund or gratuity, car loan, mileage allowance, tuition allowance in respect of education for the children, allowance to entertain business visitors, low cost housing mortgage, subsidised rent, housing allowance or owner-occupier allowance, cost of purchasing or renting furniture, company transport, airfare for overseas leave.

Others are annual leave pay, personal allowances, paid club membership, cost of providing electricity, water, telephone, domestic help, security guards, security alarm, mobile phone air time and personal insurance coverage etc.

2.1.1 Basic Salary

This is a regular fixed payment determined by job analysis, negotiation, company remuneration policy, salary survey etc and mostly paid to the executive management. It is meant to cover living expenses and may be adjusted to reflect changes in the cost of

living index or to be at par or better than what peer companies offer. The level of the basic salary is important. This is because other financial rewards may be determined as a proportion or multiple of the basic salary. However, basic salary is mostly tied to seniority rather than performance and therefore may not motivate management to increase shareholders wealth, as they may not benefit from profits earned.

2.1.2 Bonus Scheme

A bonus is an annual premium payment that fluctuates with performance, meant to make the total pay competitive enough to motivate management to act in the interest of shareholders. It is intended to align compensation with short-term performance and is based on the achievement of predetermined performance targets. Such targets may be based on growth in net income, return on investment and sales etc.

Kohn (1988), however, dismisses bonus payments on the grounds that they make management focus on narrow tasks and take few risks. For instance the management may turn down a project with potential gains in the long-term because of the impact of its negative earnings in the early years on their bonus payments. They may also defer recognition of revenue but accelerate expenses when profits exceed the target to earn successive bonus payments. Conversely, when profits fall below the threshold, they hasten revenue recognition but defer expenses.

Deci (1972) argues that bonuses lower motivation by reducing the intrinsic rewards management receive from their jobs. Bonuses are also not tax efficient since they are taxed heavily.

2.1.3 Stock Options

A stock option is a call option that gives the management the right to purchase some shares of the company at some future date at a price below the market price. It is a long-term compensation strategy intended to make the management take profitable long term investment decisions that generate capital gains for their benefit as well as shareholders'. The management exercises their option when the share price exceeds the strike price and leaves them to expire worthless when the share price falls below the strike price.

A good stock option plan should be easy to implement and monitor, prevent excessive perquisites to management, give management incentives to increase shareholders' wealth by linking compensation to performance, encourage managers to pursue risky projects thereby matching the risk profiles of managers and shareholders and tax efficient.

Tehrani and Waagelein (1985) and DeFusco et al. (1990) documented a positive link between announcement of stock option plans and shareholder wealth. This is because stock options motivate managers to make decisions that benefit shareholders. Managers also have superior information on prospects of their firms and hence the announcement may precede good news. The payoff of salary plus stock option plan is more tax efficient compared to salary plus bonus plan.

However, companies incur costs in issuing new shares in a stock option offers. Issuance of additional shares also dilutes the value of existing shares. Moreover, share price appreciation devoid of management contribution may offer the management windfall gains. Issuing guidelines that outlaw management claim on windfall gains may alleviate the problem. Tying compensation to stock price movements expose management to increased market risks and may demand higher compensation. Management may also increase the firm's financial leverage.

2.1.4 Share Ownership Scheme

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Share ownership scheme is also a long-term compensation method that allows management to buy shares in a company under their control. This direct ownership is believed to make management align their interest with the shareholders' since they are exposed to the same risk. Share ownership schemes, unlike stock options incentives, require management to meet the initial costs. Unlike in stock options scheme, the management can lose in share ownership schemes.

Non financial rewards of management include achievement, recognition, influence, personal growth, and responsibility.

Achievement involves empowerment to make decisions, to be proactive, and to seek opportunities etc. Job design, performance management and skill-based processes can enhance achievement. Recognition looks at appreciation of achievement. It may come in

the form of achievement bonus, treats, overseas trips, long service awards, authority to oversee a high profile project, job enlargement etc. Responsibility refers to the authority to decide how to do work, mobilise resources required and monitor the output, and its quality. Theory Y of McGregor (1960) argues that given a favorable environment, persons accept and seek out responsibility.

Influence looks at ability to use power to direct decision making. Personal growth, as Alderfer (1972) argued, involves people pursuing ambition and upgrading their skills in search of career development. The non-financial measures are not easy to quantify and measure and to some extent satisfied indirectly by money.

Traditional compensation policy of the early 1960s and 1970s was based on fixed annual increments regardless of performance and hence suffered free rider problems (Armstrong (1999)). Financial press in the USA also claimed that management compensation was not justified by performance since executives of non-performing firms continued to earn big salaries thereby impoverishing shareholders. In the 1980s, organisations adopted performance related pay policy in place of incremental pay policy (Armstrong (1999)).

With the adoption of a new pay policy, an impact survey done in the United States of America (USA) for the period 1980 to 1994 reported an increase of 250% with respect to management compensation. The large increase in management pay was questioned by shareholders. Of concern was whether the performance of management had improved greatly to warrant such an increase.

Elsewhere, the Monks Partnership (1995) survey of earnings of management of companies valued at £50 million and above in 14 countries reported the pay estimated at £52,000 in the United Kingdom (UK) to be the lowest in the survey. The findings of the survey raised concerns on the impact of such rewards on long term corporate performance.

Committees set up in the UK and USA to look at concerns raised on management compensation concurred that the pay should be competitive and performance based to align the interest of both shareholders and management and that the basis of measuring performance should also be disclosed.

2.2 Corporate Performance and Management Compensation

Performance refers to real financial returns that lead to growth and long term economic value. In evaluating performance of a company, it may be prudent to balance the desire for short-term profitability with the long-term drivers of growth and sustained financial performance such as quality service, customer satisfaction and future value creation.

Balanced scorecard technique, developed by Kaplan and Norton in 1992, may be applied in balancing the short term and long term corporate performance goals. The technique looks at corporate performance from financial, customer, internal process and learning and growth perspectives.

Financial perspective looks at long term financial success of a company. The strategies to accomplish this may include revenue growth through customer service and productivity through efficient management of existing assets to create wealth. **Customer perspective** looks at what customers value and how to deliver that value to them. **Internal process perspective** considers activities that impact on both customer and shareholder satisfaction. **Learning and growth perspective** considers the requisite infrastructure to effect change. Such requirements include skills of the workforce, tools and technology to be used and the necessary incentives and employee empowerment.

Performance can be measured using either accounting based indicators or market-based indicators. Accounting based indicators include, inter alia, earnings per share, earnings before interest and taxes, return on assets, return on equity and Tobin's q ratio. Market based performance indicators include increase in share prices, market value added etc.

2.2.1 Accounting Measures of Performance

2.2.1.1 Earnings per Share

Earnings per Share (EPS) measure net earnings per unit of outstanding ordinary stock, i.e. net profit or loss due to shareholders/weighted average number of ordinary shares outstanding in a period. The weighting is done to incorporate changes in outstanding shares due to new issues or buy backs. Investment analysts, managers and shareholders use EPS to estimate the earnings per share invested. It is also used to determine price earnings ratio given by market price of share/EPS.

EPS is easy to understand but ignores both the time value of money and risks inherent in the earnings. It also declines with payment of dividends and hence a firm with the objective of maximising EPS can never pay dividends to its shareholders but rather invest its retained earnings profitably. Bonus payment to management may be benchmarked on growth in EPS.

2.2.1.2 Earnings before Interest and Taxes

Earnings before Interest and Taxes (EBIT) assess the excess of revenue over operating expenses. Companies use EBIT to determine the break-even point of operation below, which a firm starts to experience losses. Algebraically, $EBIT = Q(P-V)-FC$ where Q = units produced and sold, P = price per unit, V = variable cost per unit, $P-V$ = unit contribution margin and FC = fixed costs.

At break-even point, $EBIT = Q(P-V)-FC = 0$, implying $Q = FC/(P-V)$. Thus a company should produce and sell Q units to break-even. Management may only secure upward adjustment of their remuneration by producing and selling more than Q units.

2.2.1.3 Return on Assets

Return on Assets (ROA) is the ratio of net income to total assets and indicates the efficacy with which a company utilizes its assets i.e. the value added by the management which in turn influences their compensation. Thus ROA measures operating efficiency. Specifically $ROA = \text{Earnings after interest and taxes} / \text{Total assets}$. Companies acquire new assets in the course of their operations, which are then incorporated in the production process. To reflect their contribution in the overall performance, the total assets are determined as the average of assets at the beginning and at the end of the year.

Alternatively, ROA can be expressed as $ROA = [\text{Net Income} + \text{Interest Expense} (1 - \text{tax rate})] / \text{Total Assets}$ to separate the financing effect from operating effect thereby enabling a company to measure the true value of its assets. Even though ROA is based on book value of assets, a project with a positive net present value (NPV) should have an ROA greater than its cost of capital.

ROA can also be decomposed as: $EBIT (1 - \text{tax rate}) / \text{Sales} \times \text{Sales} / \text{Total Assets}$
 $= \text{Pretax Operating Margin} (1 - \text{tax rate}) \times \text{Asset Turnover Ratio}$ to assist in strategic decisions. For instance since both profit margins and sales determine ROA, a firm may

adopt a low profit margin strategy to generate more sales i.e. higher asset turnover and vice versa. ROA may vary across industries due differences in both the risk profiles and competitive pressures associated with the profit margins and asset turnover ratios of different industries.

Abowd (1990), Mehran (1995), Kern and Kerr (1997), and Core et al. (1999)) argue that management has to pursue decisions that enhance ROA for the benefit of shareholders.

2.2.1.4 Return on Equity

Return on Equity (ROE) is given by net income per unit of shareholders' equity or $(\text{closing share price} + \text{dividends} - \text{opening share price}) / \text{opening share price}$. ROE measures the book return to shareholders and shows how agents meet the economic needs of the principal. Whereas ROA measures the profitability of the overall firm, ROE relates profits to the equity investor only. Like assets in ROA, shareholders' equity is the average of equity at the beginning and at the end of the year. A firm that requires a high ROE must invest prudently and also embrace cost efficiency.

ROE may be written as $\text{ROE} = \text{ROA} + D/E (\text{ROA} - i[1-t])$ where $\text{ROA} = \text{EBIT}(1-t)/(\text{BV of Debt} + \text{BV of Equity})$

$D/E = \text{BV of Debt}/\text{BV of Equity}$

$i = \text{Interest on Debt}/\text{BV of Debt}$

$t = \text{tax rate on ordinary income}$

$\text{BV} = \text{Book Value}$

Thus ROA and financial leverage determine ROE, with the latter increasing with increase in ROA and financial leverage. Abowd (1990), Lewellen, et al. (1993), Gregg et al. (1993), Conyon and Gregg (1994), Main et al.(1996), Kern and Kerr (1997) and Core et al. (1999) used ROE to proxy performance.

2.2.1.5 Tobin's q ratio

Tobin's q ratio is the ratio of market value of common stocks to the book value of total assets and measures the efficiency of management in utilizing economic resources under their control. Tobin's q ratio greater than 1 is associated with firms with high growth opportunities and strong competitive advantage. The capital equipment of such firms is worth more than their replacement cost thereby giving them incentives to invest.

Such firms are associated with information asymmetry which management may exploit to pursue personal interest. Averting this may require that the management be compensated adequately. Tobin's q ratio below 1, on the other hand, is common with firms operating in shrinking industries. The assets of such industries are worth below their replacement cost, making economic replacement be realised through mergers and takeovers.

Smith and Watts (1992), Gaver J. and Gaver K. (1993) and Firth et al. (2001) reported high pay for management of firms with high growth opportunities. Chung and Pruitt (1996) justified theoretical claims that compensation and managerial stock ownership are jointly determined with the firm's Tobins q ratio. Their study also established that managerial stock ownership was popular with executives who had been at the corporate leadership for long.

2.2.1.6 Economic Value Added

Economic Value Added (EVA) measures net income less return required by investors i.e. $EVA = \text{net income} - \text{income required}$, where $\text{income required} = \text{cost of capital} \times \text{investment}$. Consider a firm with a net income of Ksh. 120 million at the close of the fiscal year 2001/2002. In the same period the firm invested Ksh. 1000 million at a cost of 10%. The corresponding $EVA = 120 - (1000 \times 10\%) = \text{Ksh. } 10 \text{ million}$. The Ksh. 10 million is the additional EVA by management to the wealth of shareholders. There is a link between EVA and Net Present value (NPV). For instance, high NPV projects lead to high EVA that motivates investors to bid up stocks for a firm.

EVA tracks stock prices closely and also determines whether a firm earns in excess of its true cost of capital and hence reflects its real performance. Thus compensation plans linked to EVA motivate management to select investments that benefit shareholders. However, EVA is not based on present values and may therefore reward projects with shorter pay back periods while penalising those that take time to pay back.

Costigen and Lovatta (1999) examined firms that adopted EVA based compensation plans and found a negative relationship between managerial stock ownership and EVA adoption.

2.2.2 Market Measures of Performance

2.2.2.1 Share Price

Share price refers to the market price of stocks. Stock prices impound certain private information that influence management compensation. The prices convey information to shareholders about the performance of management. Jensen and Murphy (1990a,b) reported a weak link between stock prices and management compensation.

DeLong, Shleifer, Summers and Waldmann (1990) justified the weak link on the grounds that noise traders inferred prices from economic fundamentals while according to Paul (1992), informed investors believed that the prices communicated little information on the value added by management. Jensen and Murphy (1990a,b) underscored the valuable information content of stock prices that could guide in management compensation but weakly applied in the reward policy due to fear of adverse publicity or political costs. Political costs include job loss. The consequences notwithstanding, stock prices that conveyed quality and accurate information were widely applied in incentive contracts.

2.2.2.2 Market Value Added

Market Value Added (MVA) is given by market value of equity net of equity capital supplied. i.e. $MVA = \text{Firm Value} - \text{Invested Capital}$. Firm value = market value of the outstanding debt and equity of a firm. Invested capital = the sum total of the funds invested in the firm. For instance, consider a firm with a market value of Ksh. 61 billion and investor equity of Ksh. 20 billion, then $MVA = \text{Ksh. 61 billion} - \text{Ksh. 20 billion} = \text{Ksh. 41 billion}$. MVA measures managerial activities in raising shareholder wealth since the inception of a company. Like in EVA, high NPV projects lead to high MVA.

Accounting indicators measure absolute performance. However, they are historical and also prone to professional abuse by the management in pursuit of short-term profitability at the expense of long term viability. For instance, management may defer critical maintenance or staff training to realise short-term profits. Market based indicators are preferred to accounting based performance indicators being forward-looking and also not easy to manipulate.

Lambert and Larcker (1987), Jensen and Murphy (1990), Mehran (1995) and Lewellen, et al. (1992) argued that both methods are, however, sensitive to external factors like inflation, interest rates and exchange rates etc, which are beyond the control of management. For instance, ROE changes with economic conditions increasing during boom and declining during recession. Thus, there is no ideal measure of performance. However, accounting measures of performance such as ROA, ROE and Tobin's q ratio relative to market based indicators have been widely applied in the previous studies on pay for performance link.

Lewellen and Huntsman (1970) on their study of fifty USA companies between 1942 – 1963 found a significant correlation between performance and management pay and that long term elements of remuneration had negligible effect on the pay for performance link. Murphy (1985) studied 461 executives in 72 USA companies for the period 1964–1981 and reported a positive relationship between management pay and shareholders' returns.

Coughlan and Schmidt (1985) documented similar results between executive pay and share price performance, in their survey of 597 executives in 249 USA corporations for the period 1977 – 1980. Abowd (1990) studied 1600 executives in 250 USA companies over the period 1981 – 1986. He found the sensitivity of executive compensation to corporate performance in year t to be positively related to corporate performance in year $t+1$. This relationship was more pronounced for market indicators of performance than for accounting indicators of performance.

Mehran (1995) analysed 153 USA manufacturing companies for the period 1979 - 1980 and found a positive relationship between performance and the proportion of equity based pay executives received. Main, Bruce and Buck (1996) considered share options for executives in 60 of the largest companies in UK between 1981–1989 and reported a significant pay-performance link.

McKnight and TomKins (1999) documented a significant relationship between changes in executive share options and shareholder returns based on a study of 109 UK companies over the period 1991–1995. Though the preceding studies documented positive link between management pay and corporate performance, the following studies reported opposite findings.

Jensen and Murphy (1990) determined the relationship between the pay of 1688 executives of 1049 USA companies between 1974 – 1986. They found that the executive pay changed by US\$ 0.003 for a US\$ 1 change in shareholders' wealth, indicating a weak link between performance and remuneration. Leonard (1990) determined the impact of executive compensation policy on the performance of 20,000 executives in 439 large companies in the USA over the period 1981-1985 and found accounting indicators of performance to be weakly related to the level of equity in executive pay.

Gregg, Machin and Szymanski (1993) examined the relationship between executive compensation and corporate performance, estimated by ROE, on 288 UK companies between 1983-1991 and reported a weak pay-performance relationship. Conyon and Gregg (1994) determined the relationship between the compensation of 170 directors of UK companies and the performance of their companies over the period 1985-1990 and reported similar findings. In their study, ROE and operating profit were used to proxy performance.

2.3 Corporate Governance and Management Compensation

Corporate governance refers to the manner in which the assets and resources of a company are managed (CMA (2002)). It spells out decision making and reporting mechanisms meant to facilitate efficient use of scarce resources with a view to promoting corporate performance for the benefit of shareholders and the economy. Shareholders benefit through addition of wealth while the economy benefits through increased local and foreign investments that create jobs and generate additional tax revenue.

Corporate governance addresses, amongst other issues, the ownership structure, shareholding by foreign investors and government, management composition and size, consolidation of the role of executive and chair and incentive alignment.

2.3.1 Ownership Structure

Ownership structure may be dispersed in which case the shares are widely held by individual investors or concentrated where some investors hold substantial shares. Ownership concentration is estimated by the proportion of shares held by three top shareholders. Firth et al. (1999), Berle and Means (1932), Baumol (1959), Jensen and Meckling (1976) and Grossman and Hart (1980) argue that dispersed ownership leads to

weak supervision thereby enabling management to award themselves a hefty pay that lowers market value of a firm to its shareholders.

Firth et al. (2001) document a negative relationship between management compensation and concentrated ownership. This is because owners establish tight supervision that disables management from overcompensating themselves.

2.3.2 Foreign Shareholding

Foreign shareholding refers to the portion of shares foreign investors own. The participation of foreign investors in Kenya improved following the repeal of Exchange Control Act in December 1995 that earlier restricted foreign ownership in locally controlled firms to 20% in aggregate and 2.5% for an individual investor. Due to information asymmetry foreign investors buy shares in firms that adopt incentive-based compensation (Pasternack (2002)). Firth et al. (2001) report positive relationship between foreign share ownership and management compensation in China. This study also expects a positive relationship between foreign share ownership and management compensation in Kenya.

2.3.3 Government Shareholding

Government shareholding refers to the portion of shares owned by a government. The Government of Kenya holds substantial shares that give it controlling interest, in a number of public companies on the NSE. Such companies include inter alia National Bank of Kenya, Kenya Commercial Bank Limited, Kenya Power and Lighting Company Limited, Housing Finance Company of Kenya.

Globally, governments are believed to restrict management compensation in pursuit of equality. Cragg and Dyck (2000) report that in UK, management of unquoted companies earn half the pay of those of quoted ones. The pay rises to the latter levels as soon as these companies get quoted. Firth et al. (2001) report lower management compensation in public listed firms where the government of China has majority shareholding. A similar finding is anticipated in the case of Kenya.

2.3.4 Management Composition

Management composition refers to the distribution of executive and non-executive management in the board. Chebet C. (2001) underscores the role of management in meeting shareholders interests. The CMA rules require companies to have effective management to control their operations in the interest of shareholders. The non-executive management should possess critical skills to ensure balanced decisions.

Fama and Jensen (1983) argue that corporate performance is impressive in companies where ⁸non-executive management form the majority on the board. This is because their independence and impartiality reinforce their role of monitoring the executive. Rosenstein and Wyatt (1990), Byrd and Hickmann (1992), Byrd et al. (1998), Fox (1998), Lambert et al. (1993) and Boyd (1994) support this argument.

Finkelstein and Hambrick (1989), Bruce and Buck (1997), Hossain and Cahan (1998) question the independence of non-executive directors in pursuing interest of shareholders considering that the executive management appoints majority of the board members. These directors also lack time and expertise to perform their monitoring role and hence rely on information executive management submits to them on company operations.

Crystal (1991) and Lambert (1993) document high management compensation in firms where the executive management appoints majority of the board members. These members have to act in the interest of executive management to avoid sacking. Non-executive directors who happen to be executives in other firms may also quote the high compensation of other executive directors in negotiating their remuneration.

Agrawal and Knoeber (1996) report lower corporate performance proxied by Tobin's q ratio, in firms where non-executive directors dominate. Hallock (1997) reports high management compensation in firms with interlocked⁹ non-executive management while Baysinger and Buttler (1985), Hermalin and Weisbach (1991), and Bhagat and Black (1997) report negligible association between management composition and management compensation.

⁸ Non executive management are those not involved in the administrative operations of the company.

⁹ A manager is interlocked if an officer of the firm serves on the board of the manager's company.

2.3.5 Management Size

Management size is the total number of directors in the board. CMA rules require companies to have an optimal management size that is neither too large to impair active board discussions nor too small to exclude directors of critical skills and expertise. Jensen (1993), Lipton and Lorsch (1992), Yermack (1996) Core et al. (1999) document a negative relationship between management compensation and management size. This is due to ability of smaller management to effectively control management compensation.

2.3.6 Compensation Committee

Compensation committee sets up the remuneration for the board of directors. CMA requires management of public companies to appoint a remuneration committee comprising independent¹⁰ and non-executive management to recommend a compensation package for management and its structure. Greenbury (1995) supports the formation of such a committee to optimise management compensations and peg them to performance. Conyon and Peck (1988) report that the benefits of such committees are yet to be realised.

2.3.7 Consolidation of the Role of Executive and Chair

CMA stresses the separation of the roles and responsibilities of the chairman and chief executive for the benefit of checks and balances in decision making. The chairman must be a non-executive director. Companies combining such roles and responsibilities must seek the approval of their shareholders. Like the CMA, Cadbury Committee set up in 1995 to examine the financial aspects of corporate governance in UK supported the separation of the roles of the chair and the office of chief executive.

Jensen (1993), Sridharan (1996), Brickley et al. (1997), Core et al. (1999) argue that management compensation is high in firms where such roles are combined. This is because the executive chair sets the agenda and controls information given to the rest of management and therefore has enough power to pursue personal interest (Jensen (1993) and Boyd (1994).

Duality impairs internal controls, as the management cannot perform its main control functions conscientiously. Firth et al. (2001) report negative relationship between management compensation and duality in China.

2.3.8 Incentive Alignment

Incentive alignment is where management holds some equity in the company. It is considered as one of the ways of minimising agency problems arising from separation of ownership and control. Allen (1981) and Lambert et al. (1993) find management compensation to be negatively related to equity held by management. Shleifer and Vishny (1986) argue that management with large shareholding in a firm will perform without any compensation motivation since they obtain additional gains through dividends and share price appreciation. Mehran (1995) documents a positive relationship between firm performance and percentage of equity owned by managers.

Oswald and Jahera (1991) find a positive link between share ownership by directors and performance. Firth et al. (2001) report insignificant relationship between management compensation and their shareholding in China.

2.4 Operating Characteristics and Management Compensation

2.4.1 Firm Size

The size of a firm may surrogate marginal revenue product, the span of control, job complexity and level of responsibility. Jensen (1986) points out that size determines management pay. Jensen and Meckling (1976) argue that control of large firms is demanding in which case requires handsomely remunerated management to oversee their affairs for the benefit of shareholders. Book value of a firm or sales of a firm may be used to proxy its size. An asset is any resource with the potential to generate future cash inflows or minimise future cash outflows. An asset may be fixed, lasting more than a year or current, lasting for one year.

Book value of an asset is its cost net of accumulated depreciation while the book value of a firm is its total assets less the associated liabilities and preferred stock. Book value of a

¹⁰ An independent manager is one who has not been employed by a company in an executive capacity within the last five years.

firm is used instead of market value as it is readily available. Moreover there may be no active secondary market for most assets. Sales, on the other hand, refer to turnover.

Lambert and Larker (1987) report a positive relationship between management compensation and firm size. Coughlan and Schmidt (1985), Jensen and Murphy (1990) report a positive relationship between management compensation and sales.

Rosen (1990) reviewed a number of previous studies on the link between executive compensation against sales and assets and documented consistent elasticities in the range of 0.2 to 0.25. Conyon and Gregg (1994) found sales growth to be a better determinant of pay than performance.

2.4.2 Equity Risk

Risk refers to variability of returns from the expected. Equity risk therefore refers to variability of equity returns from the expected and may be surrogated by the standard deviation of returns of common stocks. Equity risk has both diversifiable and non-diversifiable components. Diversifiable risk is specific to a company while non-diversifiable risk originates from the market factors and hence beyond the control of a company e.g. risk due to inflation, interest rate changes etc. A firm is compensated for market risk only since firm specific risk can be minimised through diversification.

Aggarwal and Samwich (1999) argue that the risk of a firm reflects its information and operating environment and hence affects the compensation of its management. Lippert and Moore (1994) and Lippert and Porter (1997) document high management compensation in firms where stock returns are volatile. Firth et al. (2001) find risk-compensation link to be insignificant in China.

2.5 Leverage and Management Compensation

Leverage refers to the use of fixed costs to lever up profitability and is estimated by debt/equity. Managers may issue either equity when company shares are overvalued or debt when the shares are undervalued. Thus issuance of debt may be viewed as good news. In a perfect market, shareholders fund the agency costs of debt and equity. Minimising these costs raises the value of a firm. Management compensation and capital structure are used to minimise the respective agency costs of equity and debt.

Leverage exposes shareholders to variability of returns with probable default in debt service. The default in debt service may reduce the market value of a company below the claim of creditors. Creditors establish operational covenants with their loan beneficiaries to protect their interests. These covenants focus on profitable operation to fund debt service and growth. Profitability requires regulation of management compensation alongside other staff costs.

Mehran (1992) reports that highly leveraged firms also used stock options to remunerate management. This is because stock options encourage the latter to increase firm risk. Firth et al. (2001) document negative relation between management compensation and leverage.

2.6 Control Factors and Management Compensation

Control factors are variables that may be employed to minimise agency costs by ensuring pay performance link. They include direct intervention by shareholders, management audit, bonding arrangement, threat of firing, threat of takeover, market for corporate control etc. In direct intervention, shareholders talk with management on the need to operate profitably. Management audit is where shareholders incur audit costs to evaluate management performance. Bonding arrangement involves underwriting the risk of loss to a firm attributable to dishonesty by managers.

Threat of firing is where stockholders remove inept management. It is possible where concentrated ownership prevails. Threat of takeover is probable where stocks are undervalued compared to its potential as a result of poor management. In a hostile takeover the management are removed and those who remain are demoted.

The labor market for corporate control may force executives to act in the interest of their shareholders. Firstly, the labor market sets the minimum retainer for the management and secondly, presence of executives of comparable experience and ability at the minimum retainer limits managerial pay demands. Executives who take decisions that ultimately impoverish shareholders get penalised by the labor market through lowered opportunity pay. Thus these control factors impact on the pay management may demand since they have to justify it by creating value to their employers.

Leonard (1990) and Lewellen et al. (1992) argue that industry of operation may also influence management compensation. Jensen (1986) argues that debt serves as a control mechanism to reduce agency costs.

The preceding literature outlines the empirical findings on the relationships between management compensation, performance, corporate governance and other economic factors. The findings, however, remain inconclusive.

The study used the following research methodology. The dependent variable was management compensation, measured in dollars. The independent variables were performance, corporate governance, and other economic factors. The study used the following research methodology. The dependent variable was management compensation, measured in dollars. The independent variables were performance, corporate governance, and other economic factors.

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Model Specification

The estimated model was specified as $Y = f(\text{ROA}, \text{ROE}, \text{Tohn's q ratio}, \text{LnSales}, \text{Equity Ratio})$ where Y = natural logarithm of the total compensation to the board of directors. It was estimated by dividing the total annual compensation by the number of directors. The resultant annual figure was then converted to natural logarithm.

ROA = Return on Assets estimated by Net Earnings and Losses after Taxes/Book Value Total Assets. The annual ROA was determined by dividing the total net earnings and losses after tax by the corresponding average total assets. Total assets were averaged in successive years to smoothen any anomalies.

ROE = Return on Equity was estimated by Net Earnings and Losses after Taxes/Total Shareholders' Equity. The annual ROE was determined by dividing the total net earnings and losses after tax by the corresponding average total equity.

Chapter Three

Research Methodology

This study examined the extent to which the compensation of management of public companies in Kenya was linked to performance, corporate governance, operating characteristics and leverage. Management compensation was expressed in natural logarithm form. This is because guide charts human resource consultants use to determine indicative management pay use logarithmic transformed management compensation (Amacom, 1975). The logarithmic transformation also enables the determination of the relative effect of explanatory variables on compensation as opposed to the absolute effect.

ROA, ROE and Tobin's q ratio were used to proxy corporate performance and hence provided a base for comparison. The study used each measure of performance independently in the analysis. With respect to operating characteristics, natural logarithm of sales was used instead of book value of assets to proxy firm size. This is because some assets within a company's operation portfolio may be unproductive. Equity risk and variables under corporate governance were excluded from the analysis for future studies while debt equity ratio was used to estimate the impact of leverage on management compensation.

3.1 Model Specification

Thus the estimated model was specified as $Y = f(\text{ROA, ROE, Tobin's } q \text{ ratio, LnSales, Debt-Equity Ratio})$ where: Y = natural logarithm of the total remuneration to the board of directors. It was estimated by dividing the total annual compensation by the number of companies. The resultant annual figure was then converted to natural logarithm equivalent.

ROA = Return on Assets estimated by Net Earnings and Losses after Taxes/Book Value of Total Assets. The annual ROA was determined by dividing the total net earnings and losses after tax by the corresponding average total assets. Total assets were averaged in the successive years to smoothen any anomalies.

ROE = Return on Equity was estimated by Net Earnings and Losses after Taxes/Total Shareholders' Equity. The annual ROE was determined by dividing the total net earnings

and losses after tax by the corresponding average total shareholders' equity. Shareholders' equity was averaged in the successive years to smoothen any abnormal fluctuations.

Tobin's q ratio was proxied by Market Capitalisation/Book Value of Total Assets. Market capitalisation was determined by multiplying the number of ordinary shares outstanding by the share price. The ratio for each year was computed by dividing the total market capitalisation by the average total assets.

LnSales = Natural logarithm of sales. Sales were measured by annual turnover. The turnovers were added up and divided by the number of companies to obtain annual sales. The annual sales were then converted to natural logarithm equivalent.

Debt-equity ratio = Book value of long-term and bonds/Book value of shareholders' equity. The annual ratio was computed by dividing the total long-term debt of the companies by the average book value of shareholders' equity.

Though the findings of the previous studies on the relationship between management compensation and the preceding explanatory variables remain inconclusive, this study adopted the typical agency theory to test the associated hypotheses. In this respect, the study assumed a positive relationship between compensation and performance, compensation and sales. A negative relationship was assumed between compensation and debt-equity ratio.

3.2 The Population and Sample

The study was based on the fifty-one public companies detailed in Appendix I and covered the period 1994 – 1998. However, among these companies, the asterisked ones were excluded from the analysis due to data gaps attributable to omissions, and listings inside of and outside of the study period. British Oxygen Company Kenya Limited, East African Packaging Limited, Eaagads Limited and Hutchings Biemer Limited had incomplete data on crucial variables such as management compensation for some years, which the study made futile attempts to secure.

Rea Vipingo Limited, Kenya Airways Limited, Tourism Promotion Serena Limited and Athi River Mining Limited were listed inside the study period in 1995, 1996, 1997 and

1997 respectively while African Lakes Corporation Limited and Mumias Sugar Company Limited were listed outside the study period in 2000 and 2001 respectively. Consequently, the study based its analysis on the remaining forty-one companies.

The five-year period was considered adequate to derive conclusive results. 1994 was taken as the base year because of enhanced listing of companies commenced this time following privatisation of state corporations in line with ongoing macroeconomic reforms in Kenya. 1998 was chosen as the end year to avoid the impact of International Accounting Standards (IAS), adopted in Kenya on the 1st of January 1999.

IAS introduced more disclosure requirements on the published reports and accounts of companies. Such disclosures include, but not limited to, deferred taxation and wages, annual leave pay.

3.3 Data Type and Source

Both primary data and secondary data were used in the study. The questionnaire in Appendix V was used to collect primary data on the structure of management compensation and the associated proportions. Forty-one questionnaires were hand delivered to the respective companies with a request to fill in.

Follow ups through telephone calls and minimal visits were made. 50% of the firms responded to the questionnaire. The Financial and Investment sector accounted for 50% of the responses. Industrial and allied, Commercial and Services and Agricultural sectors accounted for 20%, 20% and 10% respectively. Company secretaries endorsed all the questionnaires on behalf of their chief executives.

With respect to secondary data, published reports of the public companies provided data on management compensation, sales as well as data on net earnings and losses, total assets, shareholders' equity and leverage used to determine return on assets, return on equity and debt-equity ratio.

The Nairobi Stock Exchange monthly updates provided data on market capitalisation used to compute Tobin's q ratio.

3.4 Data Analysis

Descriptive statistics describe data on variables with single numbers while analysis of variance (ANOVA) tests for any significant difference between mean values of variables. Arithmetic mean, median, maximum, minimum and the standard deviation are some of the main descriptive statistics applied in data analysis. The arithmetic mean, the average of values in an observation, is used to represent the entire data by a single value. The median is the middlemost value of a variable when arranged in order of magnitude and is used to measure the positional average.

The minimum and maximum statistics describe the respective lower and upper values of a variable. The standard deviation is a measure of variation and is used to determine how the mean is a representative of the observations.

ANOVA compares variances in the analysis of data and hence the name. A null hypothesis is the statistical hypothesis tested. It is not accepted when the computed value exceeds the critical value from the table. The rejection implies that the observed results are merely due to chance factors.

These statistics were applied to analyse the primary and the secondary data. The primary data, on the structure of management compensation and the associated proportions, was examined. This was followed by the analysis of the secondary data.

3.4.1 Multiple Regression Model

The secondary data was analysed using a multiple regression model. A multiple regression model is one with at least two decision variables and generally expressed as $X = \alpha + \beta_0 X_1 + \beta_1 X_2 + \dots + \beta_n X_n + \epsilon$ where X is the dependent variable to be predicted. α is the constant term, X_i , $i = 1, 2, \dots, n$ are the decision variables, $\beta_0, \beta_1, \dots, \beta_n$ are the parameters to be estimated and indicate the specific effect of the corresponding variables.

These parameters must be best, linear and unbiased estimates. An unbiased estimate of a sample parameter is one whose expected value replicates the corresponding parameter of the source population. A parameter is considered best if it has the least variance in a class of

unbiased estimates. ε is the error term that accommodates explanatory variables not included in the analysis. The thrust of multiple regression is to minimise ε .

Multiple regression was selected due to its suitability in examining the joint effect of several variables through the use of student-t, Fisher F, and R^2 , multiple correlation coefficient, confidence intervals, standard errors and p-level statistics.

Student-t statistic measures the significance of each decision variable with a variable considered significant if it has a t-statistic of at least 2 in magnitude. Fisher F- statistic measures the overall significance of the model. A model is significant if F computed exceeds F critical.

R^2 indicates how well the model fits the data and ranges between 0 and 1. A value close to 1 implies that almost all variations in the dependent variable are accounted for by the decision variables specified in the model.

Multiple correlation coefficient measures the association between the dependent variable and the decision variables and ranges between -1 and 1. -1 implies perfect negative correlation while 1 implies perfect positive correlation. 0 implies no relationship.

Confidence interval statistic measures the lower and upper bound of an estimate at a level of significance. Standard error assesses the precision of the model and helps in constructing confidence intervals. The smaller the standard error, the better the model.

P-value is an index of reliability that measures the degree to which an estimate of the sample is representative of the population. It represents the probability of error involved in accepting the observed results as representative of the population. The higher it is, the less reliable the sample parameter estimates as indicators of the population parameters.

3.4.2 Multiple Regression Assumptions

A well specified multiple regression model generates accurate interrelations between variables. Such a model must pass diagnostic tests with respect to certain basic assumptions for stability of the resultant parameter estimates and efficacy of the inherent policy prescriptions. The assumptions include linearity between the dependent variable

and each decision variable, constant variance of the residuals¹¹, independence of the residuals, normal distribution of the residuals, and the independence of the decision variables.

3.4.2.1 Linearity Assumption

This assumption states that there is a linear relationship between the dependent variable and each independent variable. This means a straight line is the best way to describe the relationship. Linearity assumption is important since it allows the computation of the parameter estimates.

A simple check of linearity assumption is to compare the standard deviation of the dependent variable with that of the residuals. Linearity assumption holds when the standard deviation of the residuals is less than that of the dependent variable. Where functional relationships are nonlinear, ordinary least square regression collapses.

3.4.2.2 Constant Variance of the Residuals

This assumption states that the residuals of the regression remain constant over the entire range of observations. Violation of this assumption leads to heteroscedasticity, the non-homogeneity of residual variances.

The Spearman Rank Correlation test is a simple method of assessing the degree of homogeneity of the residual variances. The test makes no prior assumption about the limiting distribution of the population parameters but regresses the dependent variable on the decision variables. The resultant equation is then used to generate residuals that are ranked in magnitude.

The ranks are in turn used to estimate the Spearman Rank Correlation defined as $r = 1 - ((6\sum d^2)/(n^3 - n))$ where $\sum d^2$ = sum of squares of differences between the pairs of ranks; and n = the number of pairs of variables. The Spearman Rank Correlation of below 0.7 in magnitude implies homogeneity.

¹¹ Once a regression equation is fitted, say to determine equitable compensation, there are observations that will lie above or below the regression line, reflecting overpaid or underpaid positions. These outliers are the residuals.

The presence of heteroscedasticity leads to unbiased but inefficient parameter estimates. The standard errors and the t-statistic being incorrect lead to both spurious parameter estimates and conclusions. Heteroscedasticity may be addressed in two ways. Where the variance is known, weighted least squares may be appropriate and for unknown variances, the error variance may be taken as a function of observable variable.

3.4.2.3 Residuals are Independent

According to this assumption, each residual value is independent of the values before and after it. The violation of this assumption leads to autocorrelation, a situation where the residual value in period t is correlated to the residual value in period $t-1$. It may arise when an important decision variable is omitted or where a nonlinear relation exists among the regression variables.

Durbin Watson (D-W) statistics, developed by J. Durbin and G. Watson in 1951 is one of the diagnostic tests for autocorrelation. D- W denoted by d is defined as $\sum(e_t - e_{t-1})^2 / \sum e_t^2$ where e_t and e_{t-1} are the error terms in period t and $t-1$. D-W statistics between 1 and 3 implies absence of autocorrelation.

Autocorrelation makes the parameter estimates unbiased but inefficient and underestimates the standard errors and overestimates the t-statistics. Overall, the test of significance becomes invalid and R^2 erroneous. Predictions made from the regression will be more unstable than is always the case and in principle nonlinear functional form may be used. Remedial measures include incorporating the omitted critical decision variables as well as using appropriate functional form.

3.4.2.4 Residuals are Normally Distributed

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This assumption states that residual values should be approximately normally distributed. The residuals reflect the effect of factors with insignificant individual effect on the dependent variable. In a well-specified model, the influence of such factors cancels out.

Normality assumption is tested by plotting residuals against their frequencies to determine whether the resultant curve is normal (bell shaped). Violation of normality assumption makes the tests of significance and confidence intervals developed from them

invalid. Residuals may not be normally distributed when the sample size is small. Raising the sample size may alleviate the problem.

3.4.2.5 Explanatory Variables are Independent

According to this assumption, the decision variables are independent of each other. The presence of a linear relation between explanatory variables in a regression model leads to multicollinearity. Multicollinearity may arise when variables move together over time and is common with economic variables normally influenced by changes in similar factors.

Tabachnik and Fidell (1996) argued that Pearson correlation is a simple diagnostic test of the presence of multicollinearity. For two variables x and y , Pearson correlation denoted by $r = (\sum xy - n\sum x\sum y) / (\sum (x - \text{mean}_x)^2 (\sum (y - \text{mean}_y)^2)^{1/2}$

Where mean_x is mean of x and mean_y is mean of y .

The ratio ranges between -1 to 1 , with -1 , 0 and 1 indicating perfect negative correlation, no correlation, and perfect positive correlation respectively. Pearson correlation ratio of 0.7 and below in magnitude implies absence of multicollinearity.

Multicollinearity does not affect the unbiasedness and efficiency of the parameter estimates but is associated with large standard errors that may lead to erroneous rejection of an otherwise statistically significant parameter estimate. Multicollinearity may be caused by several factors including small sample size and hence may be resolved by getting more and better data or excluding the variable that is highly correlated with the others.

3.4.3 Primary Data Analysis

The primary data was arranged into various elements of management compensation and the associated percentages. The elements were in turn grouped into four major categories. The arithmetic mean, median, minimum, maximum and standard deviation were then applied to analyse each category of management compensation.

3.4.4 Secondary Data Analysis

The analysis of the secondary data commenced with the application of Pearson correlation to examine the decision variables for multicollinearity. Pearson correlation analysis was not applied between ROA, ROE and Tobin's q ratio since these measures of

performance were mutually exclusive in the regression analysis. The linearly related variables were dropped from further analysis. The descriptive statistics and ANOVA were applied to analyse the retained variables. Finally, two regression runs were carried out. The resultant regression equations were used to determine the corresponding residuals. The residuals were then applied to test for conformity with linearity, homogeneity, independence and normality assumptions.

The management compensation was found to comprise salary, bonuses, company housing, owner-occupied utility (water, electricity, telephone), medical, mileage, annual leave, entertainment allowances.

Other rewards included retirement benefits, car loans, housing mortgages, land loans and educational benefits. Share ownership schemes were about 0.05% of the management pay package while stock options were non-existent. Chief executives and chairmen who held other directorships had average non-executive director fees of 100,000 shillings. The other board members were mostly salaried to foot loans, allowances towards utility expenses and annual housing allowance.

The preceding rewards were grouped into salary, allowances, pensions and loans. Salary incorporated board fees. Company housing, owner-occupied utility expenses, medical, mileage, annual leave, entertainment and expenses on children's education were consolidated under allowances. Car loans, housing mortgages and land loans were put under loans.

Salary accounted for 70% of the total management compensation with minimum and maximum proportions of 40% and 90% respectively. The median salary was 77% of the total compensation while the variation from the average salary was 18%.

Bonuses averaged 3% of the total management remuneration and fluctuated between 0% and 8%. The median bonus was 1.5% of the total pay while the variation in the average bonus payment was 3%.

Allowances, pensions and loans averaged 14%, 7% and 6% of the total remuneration respectively. The corresponding median estimates were 164%, 7.33% and 2.57%. Allowances ranged between 2% and 15% of the total pay. Pensions ranged between 4% and 10% with car loans fluctuating between 0% and 15%. The variation from the

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Chapter Four

Empirical Results

4.1 Primary Data

The management compensation was found to comprise salary, bonuses, company housing, owner-occupier, utility (water, electricity, telephone), medical, mileage, annual leave and entertainment allowances.

Other rewards included retirement benefits, car loans, housing mortgages, land loans and educational benefits. Share ownership schemes were about 0.05% of the management pay package while stock options were non-existent. Chief executives and chairmen who held executive positions received most of these rewards. The other board members were mostly entitled to fees, loans, allowances towards utility expenses and, annual bonuses when performance was good.

The preceding rewards were grouped into salary, allowances, pensions and loans. Salary incorporated board fees. Company housing, owner-occupier, utility expenses, medical, mileage, annual leave, entertainment and expenses on children education were consolidated under allowances. Car loans, housing mortgage, and land loans were put under loans.

Salary accounted for 70% of the total management compensation with minimum and maximum proportions of 40% and 90% respectively. The median salary was 75% of the total remuneration while the variation from the average salary was 18%.

Bonus averaged 3% of the total management remuneration and fluctuated between 0% and 8%. The median bonus was 3.5% of the total pay while the variation in the average bonus payments was 3%.

Allowances, pensions and loans averaged 14%, 7% and 6% of the total remuneration respectively. The corresponding median estimates were 10.4%, 7.25% and 2.57%. Allowances ranged between 2% and 18% of the total pay. Pensions ranged between 4% and 10% with the loans fluctuating between 0% and 15%. The variations from the

respective average estimates of the allowances, pensions and loans were 10%, 2% and 7%. Table 1 summarises the descriptive statistics analysis of the primary data.

Table 1: Descriptive Statistics Analysis of the primary Data

	Mean	Minimum	Maximum	Std. Dev.	Median
Salary	70%	40%	90%	18%	75%
Bonus	3%	0%	8%	3%	3.5%
Allowances	14%	2%	18%	10%	10.4%
Pensions	7%	4%	10%	2%	7.25%
Loans	6%	0%	15%	7%	2.57%

4.2 Secondary Data

4.2.1 Analysis of Multicollinearity

Table 2 summarises the results of Pearson correlation analysis of the decision variables for multicollinearity.

Table 2: Pearson Correlation Analysis of the Decision Variables

	ROA	ROE	Tobin's q ratio	LnSales	Debt-Equity ratio
ROA	-	-	-	-0.56	-0.33
ROE	-	-	-	-0.7	-0.51
Tobin's q ratio	-	-	-	-0.91	-0.94
LnSales	-0.56	-0.7	-0.91	1	0.93
Debt-Equity ratio	-0.33	-0.51	-0.94	0.93	1

The results indicate that Tobin's q ratio was linearly related to LnSales and Debt-Equity ratio and was therefore dropped from the regression analysis.

Debt-Equity ratio was linearly related to LnSales. Any of them could be excluded from the further analysis. However, LnSales was preferred to Debt-Equity ratio since leverage was mostly used by companies in the Agricultural, Commercial and Services, and Industrial and Allied Sectors. Consequently, ROA, ROE and LnSales were the only decision variables used in further analysis.

4.2.2 Descriptive Statistics Analysis of the Variables

Table 3 summarises descriptive statistics analysis of management compensation, ROA, ROE and sales.

Table 3: Descriptive Statistics Analysis of the Secondary Data

	Mean	Minimum	Maximum	Std. Dev.	Median
Compensation (Ksh) Million	14	0.05	73	15	9
Return on Assets	7%	-25%	55%	10%	4%
Return on Equity	15%	-162%	70%	26%	15%
Sales in (Ksh) Billion	3.7	0.02	26	5	2

The mean compensation was Ksh. 14 million with median pay of Ksh. 9 million. The respective minimum and maximum pay were Ksh. 0.046 million and Ksh. 72 million. The variation in the pay was Ksh. 15 million. ROA ranged between a low of -25% to a high of 55%. The mean ROA was 7% while the median ROA was 4%. The variation in ROA was 10%.

The mean (median) ROE was 15% (15%) while the range was between -162% to 70%. The variation in ROE was 26%. The mean (median) sales was Ksh. 3.7 billion (Ksh. 1.6 billion). The sales ranged between a low of Ksh. .015 billion to a high of Ksh. 25 billion with a spread of Ksh. 5 billion.

4.2.3 Sectoral Analysis of the Mean Values of the Variables

Table 4 summarises the results of the analysis of variance of the mean values of Management Compensation, ROA, ROE and Sales across the sectors.

Table 4: Summary of Analysis of the Mean Values of the Variables by Sector

	Compensation Ksh. Million	ROA	ROE	Sales Ksh. Billion
Agriculture	9.5	0.08	0.04	1
Commercial	13.9	0.06	0.12	2
Financial	16	0.06	0.20	4
Industrial	15	0.09	0.17	6
Computed $F_{5\%, (3,16)}$	2.58	2.30	6.69	44.97
Critical $F_{5\%, (3,16)} =$	3.24			

The Management Compensation was highest in Financial Sector at Ksh. 16 million followed by Industrial (Ksh.15 million), Commercial (Ksh.13.9 million) and Agricultural (Ksh.9.5 million) sectors in that order.

The Industrial sector had the highest ROA of 9%. Agricultural Sector had 8% while Commercial and Financial sectors each had 6%. ROE was highest in Financial sector at 20% and was 17%, 12% and 4% for the Industrial, Commercial and Agricultural sectors respectively. Industrial sector had the highest Sales of Ksh. 6 billion. Financial sector had Ksh. 4 billion with Commercial Sector, Ksh. 2 billion and Agricultural sector, Ksh. 1 billion.

4.2.4 Regression Results

Two regression runs at 5% level of significance were made to cater for the individual impacts of performance measures ROA and ROE with the results summarised in Table 5 and Table 6 below.

Table 5: Regression Results with Return on Assets as a Measure of Performance

	Constant	ROA	LnSales
Coefficients	-10.25	-5.85	1.20
t-value	-1.65	-0.88	4.83
P-value	0.24	0.47	0.04
Confidence Intervals	[-37, 17]	[-34, 23]	[0.13, 2.3]
Multiple Correlation Coefficient, R	= 0.98		
Coefficient of Determination, R ²	= 0.95		
Standard Error, S _e	= 0.086		
F-statistic	= 21.13		
Fcritical (5%, (2,12))	= 3.88		

Table 6: Regression Results with Return on Equity as a Measure of Performance

	Constant	ROE	LnSales
Coefficients	-8.56	-0.44	1.13
t-values	-1.23	-0.99	4.07
P-value	0.34	0.43	0.06
Confidence Intervals	[-39, 21]	[-2.4, 1.5]	[-0.1, 2.3]
Multiple Correlation Coefficient, R	= 0.98		
Coefficient of Determination, R ²	= 0.96		
Standard Error, S _e	= 0.083		
F-statistic	= 22.63		
Fcritical (5%, (2,12))	= 3.88		

Diagnostic test started with the estimated regression equation with ROA as a measure of performance, the standard deviation of the natural logarithm transformed management compensation was 0.28655 compared to the residual standard deviation of 0.06914. Thus there was a linear relationship between natural logarithm transformed management compensation and, ROA and LnSales. The Spearman Rank Correlation was -0.3 implying the residuals of the regression remained constant over the observed range of management compensation.

The Durbin – Watson statistic was 3 indicating that each residual value was independent of the values before and after it. The graph between the residuals and their frequencies was bell shaped implying that the residuals were normally distributed.

As for the estimated regression equation with ROE as a proxy of performance, the standard deviation of the natural logarithm transformed management compensation was 0.28655 relative to the residual standard deviation of 0.05894. Thus logarithm transformed management compensation was linearly related to ROE and LnSales. The Spearman Rank Correlation was -0.1 indicating homogeneity of the variances of the residuals of the regression over the observed range of management compensation.

The Durbin – Watson statistic was 3.4 implying some negligible autocorrelation among the residuals. The residuals were, however, normally distributed since the graph between them and their frequencies was bell shaped. Thus the estimated parameters passed the requisite diagnostic tests.

Chapter Five

Summary and Conclusions

The analysis of the primary data on management compensation identified salary, bonuses, allowances, pensions and loans as the main elements of management rewards. Salary accounted for the largest portion of management remuneration with 70%. Bonus, allowances, pensions and loans comprised 3%, 14%, 7%, and 6% of the total management remuneration.

Stock options and share ownership schemes meant to make the overall pay competitive were non-existent. The minimal role of bonuses and absence of share ownership schemes and stock options pointed to the difficulty in aligning management pay to performance as well as entering into long term pay and performance contracts.

With respect to the descriptive statistics analysis of secondary data, the mean management pay of Ksh. 14 million relative to the median pay of Ksh. 9 million implied that some management earned more than the market rate inferred from the median pay.

Pay imbalances across companies were evident given a variation in excess of Ksh. 71 million between the minimum and maximum pay. Despite the variation in pay of Ksh. 15 million the annual mean pay per director was very close across sectors. The average number of directors was 6, 8, 11 and 7 for Agriculture, Commercial, Financial and Industrial sectors with the corresponding mean pay per director of Ksh. 1.6 million, Ksh. 1.7 million, Ksh. 1.5 million and Ksh. 2.1.

The mean Return on Assets of 7% compared to the median Return on Assets of 4% showed that some companies outperformed the market. The imbalance in Return on Assets of 80% showed that some management impoverished the shareholders. The variation in Return on Assets of 10% indicated wide fluctuations in performance.

The equality of the mean Return on Equity and the median Return on Equity of 15% showed that many companies were meeting the market performance expectations. Extreme poor performance by some companies was evident from a minimum Return on Equity of -162%.

Return on Equity had a variability of 26% compared to Return on Assets' 10%. This was attributed to sensitivity of equity to market fundamentals relative to assets.

As for the Sales, the mean Sales of Ksh. 3.7 billion compared to the median Sales of Ksh. 1.6 billion indicated that some companies performed better than the market. There was a variation in Sales in excess of Ksh. 24 billion. The variation in Sales of Ksh. 5 billion indicated wide fluctuations in revenue inflows.

A null hypothesis of no significant difference in Management Compensation, Return on Assets, Return on Equity and Sales across sectors was used in the Analysis of Variance. The decision criterion was to reject the null hypothesis when the computed F statistic exceeded the F critical at 5% level of significance.

The respective computed F statistics were 2.58, 2.30, 6.69 and 44.97. F critical value was 3.24. The results showed that there was no significant difference in Management Compensation and Return on Assets across the Sectors. However, Return on Equity and Sales varied significantly across the Sectors.

Regarding the regression results, the Management secured pay increase even with a decline in performance. A decline in Return on Assets by 5.85 units and Return on Equity by 0.44 units led to an increase in Management Compensation by Ksh. 1 apiece and hence contradicted agency theory. Both measures of performance were insignificant determinants of compensation since their individual t-values were far below the benchmark of 2.

Sales were positively and significantly related to Management Compensation in both models. The t-values of Sales were above 4 in both models. In the model where performance was proxied by Return on Assets, Management required an increase in Sales by 1.2 units to earn an additional Ksh. 1. In the model where performance was estimated by Return on Equity, earning an extra Ksh. 1 required Sales increase of 1.13 units.

Analysis of confidence interval at 95%, indicated that the Return on Assets could vary from -34% to 23%. Return on Equity could vary from -2.4% to 1.5% while Sales could vary from -0.1% to 2.3%. With respect to reliability, the probability values of 47% for Return on Assets and 43% for Return on Equity indicated that their real values were

closer to 0. The probability values of between 4% and 6% for the Sales implied that the real value of Sales could never be 0.

There was a strong association of 98% between Compensation and, Return on Assets and Sales. Return on Equity and Sales also had an association of 98% with Compensation. Return on Assets and Sales accounted for 95% of variations in the Management Compensation. Return on Equity and Sales accounted for 96% of variations in the Management Compensation. The unaccounted variations of 5% and 4% were attributed to decision variables excluded from the respective models.

The standard errors of 0.086 and 0.083 showed that the estimated models were on average significantly different from 0. As for the overall significance of the model, the computed F Statistics of 21.13 and 22.63 relative to a critical value of 3.88 showed that the observed relationships between Management Compensations and the applied decision variables were not attributable to chance.

In summary, the study found Salary to be the main component of the remuneration of the management. Performance was found to play insignificant role in the determination of these remunerations and contrary to the tents of agency theory was negatively related to management rewards. The negative relationship indicated that management compensation had not contributed to the reduction of agency costs for public companies in Kenya. The finding was similar to the findings of Jensen and Murphy (1990), Gregg, Machin and Szymanski (1993). Sales were found to be the main determinant of management compensation. The finding was similar to the findings of Jensen and Murphy (1990), Coughlan and Schmidt (1985), and Conyon and Gregg (1994).

5.1 Policy Recommendations

Pursuant to the preceding findings, the study recommended that the Capital Markets Authority persuade public companies to restructure their pay structure to give prominence to long term compensation methods such as share ownership schemes and stock options. This would make management pay competitive as the pay would have no limit. The new pay methods would align pay to performance since management would have to perform to secure any pay increase. The new structure would thus make management act in the interest of shareholders.

5.2 Limitations of the Study

- i. No control of variations arising from accounting methods the companies could have adopted with respect to depreciation of assets and valuation of stocks.
- ii. Measures of performance and firm size were not exhaustive. Performance measures such as Earnings per Share, Economic Value Added, Share Prices and assets value as a measure of firm size were not considered in the model of analysis.
- iii. No regression analysis was done for each of the forty one companies on stand alone to evaluate whether at company level there were companies whose management pay policy were performance driven.

5.3 Suggestions for further Research

In view of the preceding limitations, the study suggested the extension of the analysis to:

- i. undertake analysis of company on stand alone to determine the relationship between Performance and Sales, and Management Compensation.
- ii. include variables identified in the literature but not applied in the regression model.

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Commercial and Services Sector

10. *African Lakes Corporation PLC Ord. 5.00
11. Car & General (K) Ltd. Ord. 5.00
12. Express Ltd. Ord. 5.00
13. CMC Holdings Ltd. Ord. 5.00
14. *Hutchings Biener Ltd. Ord. 5.00
15. *Kenya Airways Ltd. Ord. 5.00
16. Marshalls (E.A) Ltd. Ord. 5.00
17. Standard Newspapers Group Ltd. Ord. 5.00
18. Nation Media Group Ltd. Ord. 5.00
19. *Tourism Promotion Services Ltd. Ord. 5.00 (Seron)
20. Uchumi Supermarket Ltd. Ord. 5.00
21. A. Baumann & Co. Ltd. Ord. 5.00

Finance and Investment Sector

22. Barclays Bank Ltd. Ord. 10.00
23. C.F.C Bank Ltd. Ord. 5.00
24. Diamond Trust Bank Kenya Ltd. Ord. 4.00
25. Housing Finance Co. Ltd. Ord. 5.00
26. ICDG Investment Co. Ltd. Ord. 5.00
27. Jubilee Insurance Co. Ltd. Ord. 5.00
28. Kenya Commercial Bank Ltd. Ord. 10.00

Appendix I: Companies Listed on the Nairobi Stock Exchange

Agricultural Sector

1. Brooke Bond Ltd. Ord. 10.00
2. Kakuzi Ltd. Ord. 5.00
3. *Rea Vipingo Plantations Ltd. Ord.5.00
4. Sasini Tea & Coffee Ltd. Ord. 5.00
5. Williamson Tea Kenya Ltd. Ord. 5.00
6. Kapchorua Tea Com. Ltd Ord. 5.00
7. Kenya Orchards Ltd. Ord. 5.00
8. Limuru Tea Com. Ltd. Ord. 20.00
9. *Eaagads Ltd. Ord. 1.25

Commercial and Services Sector

10. *African Lakes Corporation PLC Ord. 5.00
11. Car &General (K) Ltd. Ord. 5.00
12. Express Ltd. Ord. 5.00
13. CMC Holdings Ltd. Ord. 5.00
14. *Hutchings Biemer Ltd. Ord. 5.00
15. *Kenya Airways Ltd. Ord. 5.00
16. Marshalls (E.A) Ltd. Ord. 5.00
17. Standard Newspapers Group Ltd. Ord. 5.00
18. Nation Media Group Ltd. Ord. 5.00
19. *Tourism Promotion Services Ltd. Ord. 5.00 (Serena)
20. Uchumi Supermarket Ltd. Ord. 5.00
21. A. Baumann & Co. Ltd. Ord. 5.00

Finance and Investment Sector

22. Barclays Bank Ltd. Ord. 10.00
23. C.F.C Bank Ltd. Ord. 5.00
24. Diamond Trust Bank Kenya Ltd. Ord. 4.00
25. Housing Finance Co. Ltd. Ord. 5.00
26. ICDC Investment Co.Ltd. Ord. 5.00
27. Jubilee Insurance Co. Ltd. Ord. 5.00
28. Kenya Commercial Bank Ltd. Ord. 10.00

29. National Bank of Kenya Ltd. Ord. 5.00
30. NIC Bank Ltd. Ord. 5.00
31. Pan Africa Insurance Ltd. Ord. 5.00
32. Standard Chartered Bank Ltd. Ord. 5.00
33. City Trust Ltd. Ord. 5.00

Industrial and Allied Sector

34. *Athi River Mining Ltd. Ord. 5.00
35. *B.O.C Kenya Ltd. Ord. 5.00
36. Bamburi Cement Ltd. Ord. 5.00
37. British American Tobacco Kenya Co. Ltd. Ord. 10.00
38. Carbacid Investment Ltd. Ord. 5.00
39. Crown Berger Ltd. Ord. 5.00
40. Dunlop Kenya Ord. 5.00
41. E.A Cables Ltd. Ord. 5.00
42. E.A Portland Cement Ltd. Ord. 5.00
43. East Africa Breweries Ltd. Ord. 10.00
44. Firestone East Africa Ltd. Ord. 5.00
45. Kenya National Mills Ltd. Ord. 5.00
46. Kenya Oil Co. Ltd. Ord. 5.00
47. *Mumias Sugar Co. Ltd. Ord. 2.00
48. Kenya Power and Lighting Co. Ltd. Ord. 20.00
49. Total Kenya Co. Ltd. Ord. 5.00
50. Unga Group Ltd. Ord. 5.00
51. *E.A Packaging Ltd. Ord. 5.00

Source: NSE

**Excluded from the analysis because of data gaps partly due to listing beyond the study period.*

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Appendix II: CMA Corporate Governance Guidelines, 2002

- a) Every listed company must have an effective board of directors to control its operations and act in the interest of its shareholders.
- b) The board must set an audit and nominating committee. The audit committee oversees audit functions. The nominating committee, dominated by non-executive directors, proposes new nominees for the board.
- c) The directors should be adequately remunerated to attract the best in the market. The pay is subject to approval of shareholders.
- d) The executive director's remuneration should be competitive and pegged to performance.
- e) The non-executive directors should also be competitively remunerated comparable to directors in competing sectors.
- f) The board shall disclose in its annual report, its policies for remuneration including fees and emoluments for executive directors and non-executive directors' emoluments.
- g) The board shall also disclose a list of ten major shareholders of the company, share options and other forms of executive compensation made or planned for action and directors' loans.
- h) The board shall have executive directors and non-executive directors (with at least one third of the latter being independent) of diverse skills or expertise to ensure balanced board decisions
- i) Directors to declare potential area of interest that may undermine their service as directors.
- j) Executive directors shall have a fixed term of five years with the renewal based on performance and shareholders approval.
- k) No person shall hold more than two chairmanships in any public listed company at any one time.
- l) The chairman should have a separate role from that of the chief executive.
- m) Where the chairman is also the chief executive officer (CEO), the dual role should be justified.
- n) The chairman of a public listed company should be an independent or non-executive director.

Source: CMA

Appendix III: Summary of Empirical Studies on Relationship between Management Compensation, Performance, Corporate Governance, Operating Characteristics and Leverage.

Performance

Study (ies)	Empirical Findings
Murphy (1985, 1998), Coughlan & Schmidt (1985) Mehran (1985), Conyon and Murphy (2000) et al. Firth (2001) et al., Abowd (1990), Lewellen et al.(1970)	Positive
Jensen and Murphy (1990), Leonard (1990), Gregg et al. (1993), Conyon et al. (1995) & Zhou (1999)	Negative

Corporate Governance

Foreign Shareholding

Firth et al. (2001)	Positive
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Government Shareholding

Cragg and Dyck (2000) & Firth et al. (2001)	Negative
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Concentration of Ownership

Firth et al. (2001)	Negative
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Duality

Jensen (1993), Sridharan (1996), Brickley et al. (1997) Core et al. (1999) and Boyd (1994)	Positive
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Firth et al. (2001)	Negative
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Board Composition

Rosenstein and Wyatt (1990), Byrd and Hickmann (1992) Lambert et al. (1993), and Boyd (1994)	Positive
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Baysinger and Buttler (1985) FinKelstein and Hambrick (1989), Hermalin and Weisbach (1991), and Bhagat and Black (1997)	Negligible Relation
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Board Size

Jensen (1993), Lipton and Lorsch (1992), Yermack (1996), Core et al. (1999) and Firth et al. (2001)	Negative
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Compensation Committee Greenbury (1985)

Conyon and Peck (1988)	No Relation
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Incentive Alignment		
Allen (1981) and Lambert et al. (1993),		
Shleifer and Vishny (1986), Firth et al (2001)		Negative

Operating Characteristics	Ksh. Billion	NSI 20-Share Index
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Firm Size	72	2514	
Canyon (1997), Firth et al. (1996,1999, 2001)	77	4599	Positive

Equity Risk	113	3469	
Lippert and Moore (1994), Lippert and Porter (1997)			
Firth et al. (2001)	100	3114	Positive

Growth Opportunities	114	3113	
Smith and Watts (1992), Gaver L. and Gaver K. (1993)		2962	
Firth et al. (2001)			Positive

Leverage		
Firth et al. (2001)		Negative

**Appendix IV: Market Capitalisation in Ksh. billions and NSE 20 Share Index
between 1993 – 1998**

Year Ending 30 th June	Ksh. Billion	NSE 20-Share Index
1993	72	2514
1994	137	4559
1995	113	3469
1996	100	3114
1997	114	3115
1998	129	2962

Source: NSE

Appendix V: Questionnaire on the Structure of Management Compensation

Information Requested: Please kindly assist with the following information.

a) Name of the Company.....

b) Industry of Operation as per NSE listing.....

Agriculture 1

Commercial and Services 2

Financial and Investment 3

Industrial and Allied 4

c) Indicate the incentives you are entitled as management and their individual proportion in your total package:

1. Salary.....

2. Bonuses.....

3. Housing Allowance.....

4. Company Housing.....

5. Owner Occupier.....

6. Utilities (electricity, water etc).....

7. Leave Travel Allowance.....

8. Medical Allowance.....

9. Car Loan.....

10. Mileage Allowance.....

11. House Loan.....

12. Educational Benefits.....

13. Retirement Benefits.....

14. Land Loan.....

15. Stock Options.....

16. Entertainment Allowance

17. Others (specify).....

Thanks for your cooperation.