EXECUTIVE COMPENSATION AND FIRM FINANCIAL PERFORMANCE: A CRITICAL LITERATURE REVIEW

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An independent study paper submitted in partial fulfillment of the requirements for the award of Doctor of philosophy (Ph.D - Finance), School of Business, University of Nairobi.

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<tr>
<td>AMEX</td>
<td>American Exchange</td>
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<tr>
<td>BOD</td>
<td>Board of Directors</td>
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<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
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<tr>
<td>EBIT</td>
<td>Earnings before interest and Taxes</td>
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<td>DCF</td>
<td>Discounted cash flows</td>
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<td>DY</td>
<td>Dividend yield</td>
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<td>EMU</td>
<td>European Monetary Union</td>
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<td>EVA</td>
<td>Economic value added</td>
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<td>GFC</td>
<td>Global financial crisis</td>
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<td>IV</td>
<td>Instrumental Variables</td>
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<tr>
<td>MVA</td>
<td>Market value added</td>
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<td>NSE</td>
<td>Nairobi Stock Exchange</td>
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<td>NYSE</td>
<td>New York Stock Exchange</td>
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<tr>
<td>ROA</td>
<td>Return on assets</td>
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<tr>
<td>ROE</td>
<td>Return on equity</td>
</tr>
<tr>
<td>ROI</td>
<td>Return on Investments</td>
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<tr>
<td>SMEs</td>
<td>Small and medium enterprises</td>
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<td>SWM</td>
<td>Shareholder wealth maximization</td>
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<tr>
<td>TMT</td>
<td>Top Management Team</td>
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<td>TSE</td>
<td>Toronto Stock Exchange</td>
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<td>US</td>
<td>United states of America</td>
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ABSTRACT

There has been growing academic interest in the compensation of senior management in corporate enterprises. This interest stems from a concern about the motivation of management as well as concerns about equity and fairness coupled with the importance of corporate governance in enterprises. Shareholders as principals in entities desire maximization of stock returns for a given level of risk and they naturally wish that their firms design compensation systems that motivate senior executives as their agents to pursue policies that meet the principal objective of shareholder wealth maximization.

This desk review of relevant theoretical and empirical literature investigates whether the executive compensation – performance link meets an optimality test ex ante or ex post under the agency based models as well as other alternative paradigms that explain managerial actions. From the review findings, a confusing debate rages among academics about the relationship between executive compensation and firm financial performance. This confusion manifests itself in a number of ways: in the range of empirical specifications for pay to performance regressions in the literature; in the wide discrepancy in estimates of pay performance sensitivities and in controversy over the appropriate level of executive holdings of stock and stock options.

Differences in research methodology explain some of the inconsistent conclusions notwithstanding that there is even a lack of consensus among some studies that use identical or very similar research designs. Foremost, the measurement of firm success is in itself controversial regarding adoption of performance measures. Also controversial is treatment of the components of compensation. The diverse set of disciplines involved in the study area and the wide variety of methods used to investigate the main questions complicates the way to consensus especially on incorporation of organizational contextual settings and other contingency factors for executive compensation.

Research gaps emerging in the literature review include; wide variations of pay performance sensitivities derived within agency models, minimal evaluation of explanatory values of alternative paradigms to the agency models, undefined relationships between pay performance sensitivity and the performance metric applied, undefined relationship between executive
compensation components and past and future organizational performance levels, inexplained sensitivity of the pay performance link to organizational contextual effects of ownership and internationalization, unspecified possibility of dual causality between executive compensation and firm performance and the information content of executive compensation plan adopted by a public enterprise.

The study recommends future research effort for bridging the knowledge gaps using alternative paradigms while addressing the methodological issues of empirical specifications, causality, fixed-effects, first-differencing, and instrumental variables. On the empirical specifications, the studies need to reconsider the causality relationships, operationalization of research variables, use of panel data and incorporation of control variables like demographic characteristics, corporate governance mechanisms, regulation, firm ownership and globalization.
1.0 Introduction

1.1 Background to the Study

The concepts of executive compensation and firm performance have been major subjects of academic discourse for some time now. Copeland, et al. (2005) contends that there are some questions in managerial finance to be answered. These questions include; “how do firms handle compensation and incentive design for executives?”; “What factors determine the equilibrium wage necessary to attract and retain the desired quality of executives?” and “how should the bonus system be designed – especially in a multi-period context?” This paper reviews the literature on executive compensation, firm performance nexus. This section discusses the concepts of executive compensation and firm performance in sub-sections 1.1, articulates the research problem in sub-section 1.2, derives the objectives in sub-section 1.3 and propounds the value of the study in sub-section 1.4.

1.1.1 Executive Compensation

Corporate governance scholars have long attempted to understand a myriad of factors that underpin executive compensation. The most popular stream of research based on agency theory suggests that the board of directors and performance based incentives are among the critical governance mechanisms that allow reducing opportunistic behavior of executives and aligning their interests with those of shareholders (Tosi, et al., 2000).

Faulkender, et al. (2010) contextualize that over the last decade, we have witnessed two landmark events that have profoundly changed the perception of the role of finance in the public domain. The bursting of the dotcom bubble in 2000 and the ensuing corporate scandals triggered a collapse of well-known companies resulting in massive destruction of shareholder wealth as well as damage to other stakeholders. More recently, the end of the housing bubble and the subprime debacle led to a shutdown of the credit markets and the failures of vulnerable financial institutions.

These landmark episodes have drawn attention to the high levels of executive compensation and to the possibility that the structure of executive compensation plans may have contributed to the post-1990s bubbles, the recent financial crisis and other forms of corporate fraud. This new
attention is informed by two different views adopted when evaluating executive compensation; the rent extraction approach that attributes executive compensation to power rather than inputs and the efficiency approach that attributes executive compensation to inputs that the executive officer brings to the organization.

The interest in the compensation of senior management in corporate enterprises stems from a concern about the motivation of management as well as concerns about equity and fairness. Stockholders in private enterprises desire maximization of stock returns for a given level of risk and they naturally wish that their firms design compensation systems that motivate senior executives to pursue policies that meet this objective (Firth, et al. 1996).

CEO compensation typically consists of three components: a base salary, an annual cash bonus plan (short-term incentive), and a stock-based plan (long-term incentive). While salary is based on an annual fixed dollar amount and long-term incentive typically links CEO compensation to the firm’s share price at some future date, short-term incentive payoffs usually stem from more immediate, operational performance drivers. The CEO cash bonus plan therefore depends on the board’s ex-ante choices among the many performance measures available to assess CEO performance. Moreover, performance measures for the cash bonus plan should take into account risk-incentive tradeoffs. That is, they should motivate without either rewarding inadequate performance or discouraging reasonable risk taking (Eduardo, 2009).

1.1.2 Performance Based Compensation Plans

Performance based compensation refers to compensation plans that compensate management on the basis of proven performance. Gitman (1997) gives the examples of performance based compensation plans as: cash bonus, stock options, stock appreciation rights, and performance shares. Cash bonus is cash paid to management for achieving certain performance goals. Performance shares are shares given to management on meeting stated performance goals. However, McMenamin (1999) gives the following classifications for the performance based compensation plans: executive share option schemes and performance incentive plans. The latter may either be equity shares granted to management as a result of their performance related to realization of specific targets or cash bonuses.
Jensen and Murphy (1990) observe that there are many mechanisms through which compensation policy can provide value increasing incentives, including performance-based bonuses and salary revisions, stock options, and performance-based dismissal decisions. Abstracting from the effects of CEO risk aversion, compensation policy that ties the CEO's welfare to shareholder wealth helps align the private and social costs and benefits of alternative actions and thus provides incentives for CEOs to take appropriate actions.

Murphy and Oyer (2001) elucidate that the primary constraint on performance-related pay is that it imposes additional risk on the agent. Thus, optimal incentive depends on the incremental compensation that awards the agent’s additional efforts, the precision with which the desired efforts are assessed the agent’s risk tolerance, and the agent’s responsiveness to incentives. Such tradeoffs make the task of designing effective incentive contracts one of the most critical components of the governance process. Multiple-performance-measures agency models developed by Holmstrom (1979), Banker and Datar (1989), and Feltham and Xie (1994), propose that a particular performance measure should be included in a performance measure portfolio if, and only if, it provides incremental information about managerial actions over and above other, less costly measures. This theory has motivated much of the empirical research on performance measure choices in incentive contracting. Thus, it has been widely suggested that performance measures are chosen for their precision as well as their ability to provide incremental information on managerial efforts (the informativeness principle). The more precise or sensitive to managerial effort the measure, the more it reduces information asymmetry as well as risk to the agent. Since the optimal contract trades off risks and incentives at the margin, performance measures that provide lower-risk incentives are favored.

Previous studies have proposed that optimal executive compensation contracts perfectly align the interests of the executives with those of the firm's shareholders (Grossman and Hart, 1983). In theory, such contracts act as incentive mechanisms for executives to engage in behaviors that maximize the firm's value and reward executives for such behavior (Fama, 1980). A question on whether executive compensation contracts meets this test of optimality, ex ante or ex post, is an empirical question subject to ongoing investigation (Tosi, et al., 2000).
1.1.3 Bonus Plans

Bonuses are awards given to managers if a given benchmark is achieved. The most common measures for bonuses are based on accounting data. Ittner, et al. (1997) opine that bonus plans have a minimum threshold and a maximum payout. Various authors have discussed a number of limitations attributed to use of bonuses as major component of a firm’s performance based management compensation scheme. Holthausen, et al. (1995), Baker, et al. (1998) and Armstrong (2001) opine foremost that bonus plans based on earnings or earnings growth distort investment decisions. For example, many positive projects lose money during the gestation period. Managers who typically are myopically pursuing short-term goals may milk through the firm in order to get better bonuses. Second, bonus plans are inferior from the tax point of view because they are taxable just like any other income. Third, bonus plans have a risk dimension to them in that a bonus is only earned when a minimum threshold is exceeded and there is no maximum threshold. Fourth, bonus plans also suffer from a ratcheting effect. That is, if management does not reach their target for two years consecutively, then no bonus is paid for that period. This creates a high risk of turnover. To discourage turnover and thus maintain managers, firms are forced to lower the performance standards.

1.1.4 Executive Share Option Plans (ESOPS)

An executive share option is a call option that gives a manager the right to purchase a given number of shares at a specified period and specified price. Stewart (1998) underscore that there are three forms of stock based compensations namely non-qualified stock options, incentive stock options (ISOs) and stock appreciation rights. Moran (2002) indicate that the three widely used option arrangements are non-statutory stock options, incentive stock options and employee stock purchase plans (ESPPs).

Advantages associated with stock option plans include: stock options, align the risk profiles of the manager to the risk profiles of the shareholder: they broaden the decision-making time horizon for the management as they have a future time span: stock options have a direct connection to shareholders wealth. Lambert (2001) opine that pay for performance sensitivity has increased since 1990 due to an increase in stock based pay: stock options compensation is taxed at a lower rate or at a tax free thus its tax efficient: stock options are not subject to
accounting manipulations. Greater stock compensation is used when accounting measures are noisy and when the firm is in the early stages of stock value in the companies with noisy accounting data or in companies facing cash constraints and less sensitive in regulated companies.

In the same vein there are various disadvantages of using stock option plans. The main ones as highlighted by Garen (1994) are: tying management compensation to share price movements exposes management to more market risk hence management asks for more pay as compensation for the added risk management may become reckless, taking risks that are not justified in a bid to increase the stock price: the noise in the stock price movement may not be attributed to management actions: there is accounting disclosure problem of such items as they are treated as non balance sheet items: Options do suffer from the ratcheting effect, that is, if a company is under-performing year after year, the top management will be rewarded for their substandard work by granting them a new set of stock options with lower exercise price: Stock options dilute the earnings and voting powers of shareholders. Bowie (2002) note that every time you issue stock, you dilute the voting power as well as the earnings and assets per share of the current shareholders. You slice the pie into thinner pieces and that’s bound to cause concern among those sitting at the table.

1.1.5 Firm Performance
Firms are in business to succeed. Success is measured in several ways. The level of success is measured in terms of business performance (Waweru, 2008). Letting (2009) underscore that firm performance relates to the efficiency and effectiveness of the organization. To measure the extent of success, firms measure among others profitability using traditional performance measures. The measures that have been used may either be historical or comparative. Stakeholders influence how firm performance is measured and presented. The stakeholders include the employees, shareholders, government, customers, competitors and the general publics.

Lusthaus, et al. (2000) prescribe effectiveness, efficiency, relevance and financial viability as the cardinal tenets of performance assessment. Moseng and Bedrup (1993) provides three broad dimensions for assessing a company’s performance namely; efficiency, effectiveness and
adaptability. Sink and Tuttle (1989) provide a seven criteria model of measuring firm performance consisting of effectiveness, efficiency, quality of products, productivity, quality of work life, innovation and profitability. Mjos (2002) note that creation of new products, reduction in organizational costs, increase in overall revenue, improvement of customer service and improvement of work productivity are some of the objective measures to assess performance.

Munyoki (2007) adopts Lusthaus (2000) discussion of performance by splitting it into four main indicators namely; Efficiency, Effectiveness, Relevance and Financial Viability. Effectiveness is measured by number of clients served, quality of products, collaborative arrangements; Efficiency is measured by the frequency of machine breakdowns, timeliness of service delivery, employee turnover rates, employee absenteeism; Relevance is measured in stakeholder satisfaction and number of new products developed and Financial viability is measured as ratio of total assets to total liabilities, ratio of current assets to current liabilities, changes in sales and profit levels.

1.1.6 Financial Performance Measures

Various researchers have used different measures to capture organizational performance including net income, Sales (Dollinger, 1984), Return on Investments (ROI), Return on sales (ROS), and a combination of ROI and ROS (Pegels and Yang, 2000), return on assets (ROA) (Birley and Wiersema, 2002) and market to book value of the equity as well as profitability and market share/growth (Entrialgo, et al. 2000).

Gill (1990) measures a firms’ financial performance by its liquidity which is the amount of cash a company can put its hands on quickly to settle its debts. Liquidity funds consist of cash, short term investment for which there is a ready market, short term fixed deposits, trade debtors and bills of exchange receivable. Everingham and Hopkins (1984) consider operating cash flow ratio as indicators of performance. They determine the extent to which a company has generated sufficient funds to repay loans, maintain operating capabilities, pay dividends and make new investments without using external financing. Palepu, et al. (2000) concur that cash flow ratios can be used to answer questions on firms’ performance since debt obligations are met with cash. Such an analysis will result in adequate lines of credit, unrestricted cash availability, debt
maturity schedules with respect to financing requirement and the willingness to issue common equity. It allows the analyst to examine a company’s financial health and how the company is managing it’s operating, investment and financing cash flows.

1.1.7 Ex ante and Ex post Firm Performance

Nzomo (2002) note on the accounting postulate of periodicity that the impact of transactions is measured for a specified time period known as the financial year of the entity, the continuous life time of the entity is therefore broken down into specific time periods and the results of operations for each time period is measured. The oxford dictionary of finance and banking define ex ante as a description of desired or forecast level for a variable and ex post as a description of the outcome value of a variable which may be different from its ex ante level. The performance of any preceding accounting period in the continuous life time of the entity is therefore ex ante performance while performance of its succeeding accounting period is the ex post performance.

Kaoru and Peng (2002) while testing the information production effect and the information monopoly effect obtain strong evidences suggesting that ex ante information relates to the firm’s ex post profitability. Boschen and Smith (1995) advance an ex post settling up model where a firm’s outcomes are assumed to depend on the executive’s talent, work effort and other exogenous factors imperfectly known to potential employers. With incomplete information about the executive, the key assumption is that observed performance carries noisy information that can be used to condition estimates of the agent's choices and characteristics. As a result, rational employers in the executive labor market use past performance to revise expectations about the executive's talent, which in turn affects the path of the executive's compensation.

1.2 Statement of the Problem

On one extreme, the relationship between CEO compensation and firm performance is significant and positive in studies notably by Murphy (1985); Coughlan and Schmidt (1985); Lambert and Larcker (1987); Jensen and Murphy (1990); Firth, et al. (1996). Interestingly, for these studies that supply evidence of a relationship, the magnitude of incentives provided by compensation plans is relatively small thereby making it difficult to infer that CEO
compensation plans actually influence the performance of CEOs and thereby firm performance. On the other extreme, study results by O’Reilly, et al. (1988); Dillard and Fisher (1990); Izan, Sidhu and Taylor (1998); Fosberg (1999); Lishega (2011); Aduda and Musyoka (2011) indicate that no significant relationship exists between compensation and performance.

Rent extraction is a form of agency problem addressed by the increased acceptance of performance based compensation in organizations. The aim is to compensate management in accordance with their contribution towards the success of the organization. A resultant challenge is how to ascertain each executive’s contribution to the success of the organization. If this contribution is correctly determined, then a compensation system targeting to reward or penalize performance can be acceptable practice. However, where management feels that their compensation is based on one or more noisy measures of performance, then a proper incentive system may be lacking. Interestingly, Yermack (1997) conclude that the noisier the accounting data, the more likely it is that a board of directors would provide incentives from stock options to monitor executive performance.

In Kenya, studies on executive compensation and firm performance by Aduda and Musyoka (2011), Mang’unyi (2011), Ongore and Kobonyo (2011), Lishega (2011) test agency based models. These developments occasion the need to investigate the explanatory value of alternative paradigms to these agency based models while also incorporating the effects of organizational contexts and contingency factors that include the going market rate, interlocking board membership, inside board membership, founder member powers and culture. Aduda and Musyoka (2011) advocate for accounting based performance measures while investigating the relationship between executive compensation and firm performance among nine commercial banks listed at the Nairobi securities exchange. The study findings suggest a negative non significant relationship between executive compensation and bank performance. Lishega (2011) while investigating how corporate governance structures and practices of firms listed at the NSE change as a remedial reaction to persistent fall to a company value find that CEO remuneration appears insensitive to firm performance. Ongore and Kobonyo (2011) investigate the effects of corporate governance characteristics on firm performance and infer that there is a positive relationship between insider ownership actualized through executive share options and firm
performance. Though the study does not establish a critical level of shareholding beyond which there would be accelerated firm performance arising from the commitment of managers, it contrasts the proposition by Mang’unyi (2011) that there is no significant difference between ownership structure, corporate governance practices and firm financial performance.

The inconclusive debate on the relationship between executive compensation and firm performance is attributed to two research challenges namely; lack of a proper operational definition of the nature cum components of executive compensation and lack of a universally acceptable measure of firm performance. On operational definition of executive compensation, studies should evaluate distinct components of executive compensation separately and make different attributions depending upon which component is being evaluated. For the components that are contingent on company performance, the evaluation should incorporate the performance time horizon of focus. For example, it is expected that bonus and stock options relate to performance differently as they are both a reward and an incentive respectively. Considering this, the compensation performance sensitivity should be viewed ex post for the rewards and ex ante for the incentives that are inbuilt in organizational compensation systems.

Performance measurement for executive compensation remains a contentious discourse as divergent views are advanced on adoption of accounting based, market based or integrated measures of firm performance. The emphasis on financial indicators is positioned by critics as leading to a promotion of short - term thinking, misrepresentation and manipulation of short term accounting profits at the expense of long term investments, being unduly influenced by external reporting rules and ignoring cost of capital. These criticisms requires a reconsideration of various performance metrics while taking into account the benefits of accounting based performance measures of efficiency, cost effectiveness and shielding of executive compensation from market wide fluctuations in equity values. The changes in share prices are also considered not a good indicator of a manager’s own performance especially where a company’s stock price can increase for reasons unrelated to a manager’s own efforts and decision making.

The compensation performance nexus should also be informed by the dual causality phenomenon. Sanders and Carpenter (1998) and Finkelstein and Boyd (1998) posit that firm
performance may be a consequence rather than a determinant of executive compensation. The studies suggest that firm performance is only one of many variables that impact executive compensation amongst other complex factors. Although firm performance can be perceived as a determinant of executive compensation, or vice versa, the shape of an executive compensation package may also influence firm performance. Studies on this realm should therefore be eloquent on the possibility of dual causality relationships.

While furthering the efficiency attribution view, this study examines the literature on the relationship between executive compensation and firm performance. The study seeks to: control for various firm-related factors that affect firm performance; and simultaneously consider the effects of various components of CEO compensation (long-term vs. short-term, accounting-based vs. market-based, and stock options vs. restricted stock compensation) on this performance. This should provide a better understanding of the “CEO compensation - firm performance” relationship while also controlling for the contextual effects and contingency factors on executive compensation. The study attempts to resolve the following research questions: How sensitive are the various components of executive compensation package to the ex ante cum ex post performance metric adopted? What is the nature of the relationship between the executive compensation package components and the ex post firm performance? What is the nature of the relationship between the executive compensation package components and the ex ante cum ex post firm performance under alternative paradigms to agency based models?

1.3 Objectives of the Study

This study examines the literature on testing of the optimality of the relationship between CEO compensation and firm performance with the following specific objectives:

(i) To identify the relationship between long-term CEO incentive plans and ex post cum ex ante firm accounting based performance.

(ii) To establish the relationship between short-term CEO compensation plans and ex post cum ex ante firm accounting based performance.

(iii) To examine the relationship between long-term CEO incentive plans and ex post cum ex ante firm market based performance.
(iv) To derive the relationship between short-term CEO compensation plans and ex post cum ex ante firm market based performance.
(v) To investigate the informativeness of accounting based, market based and integrated firm performance metrics on managerial activities.
(vi) To identify the explanatory value of alternative paradigms to agency based models on the compensation performance nexus.

1.4 Value of the Study

The role of executive officers in organizations as stewards coupled with their input towards organizational success is of significance to corporate practice and research. The pay performance nexus is an attempt towards distinguishing the efficient organizational figure head resources from the rent extracters. For efficiency, the success of an organization is periodically measured using diverse performance measures upon which the executives are rewarded cum incentivised in the hope that the measures adopted on their contributions to the success of the organization are not noisy. Where the measures of their performance are noisy and less informative, then certain executive compensation components may be inequitable and hence non value maximizing for the firm ownership.

Research attempts to establish an appropriate level of executive compensation that accelerates desirable firm performance levels are based on emperically testing various agency based models. With conflicting research findings and numerous instances of coporate malpractices that are pointed towards high levels of executive compensation, alternative contemporary explanatory theories on executive behavior are explained in the study. The study aims at developing a conceptual understanding of the executive compensation performance link in unique organizational contexts using alternative paradigms to the agency theory.
2.0 Theoretical Framework
Interest on relating firm performance to compensation require a revisit of various behavioral theories that may be used to explain executive and employee behavior in the decision making processes. This section discusses the agency theory in sub-section 2.1, stakeholder theory in sub-section 2.2, equity theory in sub-section 2.3, tournament theory in sub-section 2.4, social comparison theory in sub-section 2.5 and upper echelons theory in sub-section 2.6.

2.1 The Agency Theory
Agency theory has been fruitfully applied in examining the nature of the relationship in a firm that exists between the principal and the agent (Denise, 2001). The firm is viewed as a “nexus of contracts between different stakeholders of the organization” (Jensen and Meckling, 1976). Jensen and Meckling (1976) provide a formal analysis of the agency problem by defining the agency relationship as a contract under which one party (the principal) engages another party (the agent) to perform some service on their behalf. As part of this arrangement, the principal will delegate some or all of the decision-making authority to the agent. In practice, shareholders from most corporations delegate the decision-making authority to the board of directors (BOD). In turn, the BOD delegates power to the chief executive officers (CEO). The agency problems arise because of the impossibility of perfectly contracting for every possible action of an agent whose decisions affect both his own welfare and the welfare of the principal.

Adam Smith (1776) as cited by Chandra (2008) had recognized, very perceptively, the agency problem in a classical work titled the Wealth of Nations by contextualizing that like the stewards of a rich man, the managers are apt to consider attention to small matters as not their master’s honor, and very easily give themselves a dispensation from having it. Negligence and profusion, therefore, must always prevail, in the management of the public limited company which is owned by a number of shareholders protected with limited liability. This school of thought has further been exposted by Alchian and Demsetz (1972), Ross (1973) and Jensen and Meckling (1976) within the agency theory frame work.

Moldoveanu and Martin (2001) note that agency problems exist in two different forms: the failure of managerial competence and the failure of managerial integrity. Failure of managerial
competence refers to unwitting mistakes made in executing managerial responsibilities. These can stem from adverse selection in a situation where the principal cannot ascertain if the agent accurately represents his ability to do the work for which he is hired and paid for. The failure of managerial integrity refers to willful behaviour on the part of managers that reduces the value of the firm’s assets. This arises from moral hazards and reflects the traditional incentive problem.

Clark (1998) posits that agency theory is premised on the classical liberalist Lockean notion of private property and reflects a Hobbesian view of self-interested human nature: the deceitful, untrustworthy and indolent individual. Jensen and Meckling (1976) base the theory on assumptions of goal incongruence between the principal and the agent. Alchian and Demsetz (1972) concur that agency theory focuses on the relationships that are masked by the basic structure of the principal and the agents who are engaged in a cooperative effort, but have differing goals and differing attitudes toward risk. When an agent pursues risky projects, although they may lead to an increased value of the asset, such a move threatens the job security of the agent. He is therefore not interested in such projects because they are seen as risky.

Jensen and Meckling (1976) opine that when both parties to an agency relationship are utility maximizers, there is good reason to believe that the agent will not always act in the best interests of the principal. The principal can limit divergences from his interest by establishing appropriate incentives for the agent and by incurring monitoring costs designed to limit the aberrant activities of the agent. In addition, in some situations it will pay the agent to expend resources (bonding costs) to guarantee that he will not take certain actions which would harm the principal or to ensure that the principal will be compensated if he does take such actions. However, it is generally impossible for the principal or the agent at zero cost to ensure that the agent will make optimal decisions from the principal’s viewpoint.

Jensen (1993) contends that there are two valuable, but largely separate, agency sets of literature both of which have the contract between the principal and the agent as the focus and share assumptions about human nature and information. The principal agent literature is generally mathematical and non-empirical and the other, the positive theory of agency, is less mathematical and more empirically-oriented. Eggertsson (1990) underscore that the principal-
agent literature generally focuses on modeling the effects of three factors on contracts between parties linked in the hierarchical form suggested by the term principal-agent: the structure of the preferences of the parties to the contract, the nature of uncertainty and the information structure in the environment. The positive theory of agency generally concentrates on modeling the effects of additional aspects of the contracting environment, and the technology of monitoring and bonding. It is concerned with designing governance mechanisms that address the agency problem that stems from the goal conflict between the principal and the agent.

The role of markets in corporate governance is also discussed under the agency theory. Competitive markets play a significant role in disciplining poor managerial performance. These markets cover products, labour and capital (Jensen and Meckling, 1976). The monitoring solutions by shareholders, especially major ones, constitute an important mechanism for encouraging managers not to deviate from shareholder interests. Where ownership is fragmented, the board of directors is viewed as an alternative mechanism (Jensen, 1993; Denise, 2001). This indicates that monitoring by shareholders depends on the ownership structure. Debt is also a source of monitoring. Lenders can be effective monitors and help reduce the conflicts of interest between debt providers and management.

Incentives can also be applied to reduce agency costs. They are used to align the interests of shareholders with those of management. Eisenhardt (1989) advocate for and specify mechanisms which reduce agency loss which include incentive schemes for managers which reward them financially for shareholder interests. Such schemes typically include plans whereby senior executives obtain shares, perhaps at a reduced price, thus aligning financial interests of executives with those of shareholders.

Criticisms on agency theory is pinned on the works of Brennan (1994). As cited by Jensen (1994), Brennan discredit the use of incentives for executive compensation and for use in society in general. In this argument, economics view rational behavior as self–interested but this proposition is wrong both in a positive sense (that is, people don’t behave that way) and in a normative sense (because if they did behave in a self–interested way, the world would be a more brutish and undesirable place). Jensen (1994) concur that Brennan (1994) is correct that
people do not always act in their self interest but this provides no support for the call for suppression of incentives. Lane, et al. (1998) suggest that the predictions of agency theory are unsupported in instances when managerial interests do not clearly conflict with those of stakeholders. Similarly, Lee and O’Neill (2001) argue that the differences between the ownership structures of relationship-oriented Japanese firms and market-based U.S. firms may also limit the generalizability of agency theory. Boyd (1995) concludes that recent research has demonstrated that agency assumptions only fit particular contexts and may be contingent on competitive factors.

2.2 Stakeholder Theory
Unlike agency theory in which the managers are working and serving for the stakeholders, stakeholder theorists suggest that managers in organizations have a network of relationships to serve — this include the suppliers, employees and business partners. This group of network is important other than owner-manager-employee relationship as in agency theory (Freeman, 1999).

Sundaram and Inkpen (2004) contend that stakeholder theory attempts to address the group of stakeholder deserving and requiring management’s attention. Donaldson and Preston (1995) claimed that all groups participate in a business to obtain benefits. Clarkson (1995) suggested that the firm is a system, where there are stakeholders and the purpose of the organization is to create wealth for its stakeholders. Freeman (1984) contends that the network of relationships with many groups can affect decision making processes as stakeholder theory is concerned with the nature of these relationships in terms of both processes and outcomes for the firm and its stakeholders. Donaldson and Preston (1995) argued that Stakeholder theory focuses on managerial decision making and interests of all stakeholders have intrinsic value as no sets of interests is assumed to dominate the others.

Critics of stakeholder theory build on the assumption of non dominance of interests and the lack of tradeoffs among competing interests. The arguments on non dominance of interests for the various groups or individuals who can affect or is affected by the achievement of the organization’s objectives seem impractical in real practice. Critics of stakeholder theory further
posit that since the advocates of stakeholder theory refuse to specify how to make the necessary tradeoffs among these competing interests, they leave managers with a theory that makes it impossible for them to make purposeful decisions. With no way to keep score, stakeholder theory makes managers unaccountable for their actions and such a theory can be attractive to the self interest of managers and directors.

2.3 Equity Theory

According to equity theory, individuals make subjective assessments of the ratio of their inputs (effort) and outcomes (compensation) to those of their contemporaries (referent others). A perceived imbalance is said to create dissonance, and may lead the perceivers to take actions such as decreasing their inputs, trying to negotiate higher pay, or ultimately leaving the organization. On the other hand, if the difference in pay is seen as justified based on the ‘other’s’ greater inputs or outcomes, it is accepted as being fair. Wallace and Fay (1983) argued that the critical theme that exists at the center of all compensation theory and practice is equity.

Empirical evidence in social psychology indicates that individuals routinely overestimate their abilities and contributions relative to those of others (Moore and Small, 2007). Referred to as ‘self-enhancement,’ this human tendency has been shown to be particularly strong when there is ambiguity regarding individuals’ contributions and performance (Fiske and Taylor, 2008), and is pronounced among top executives (Chatterjee and Hambrick, 2007; Hayward and Hambrick, 1997). Such executives typically have generally experienced a lot of success during their careers, which often makes them the targets of ingratiating behaviors (Westphal, 1998). As a result, their dispositions and personalities leave these individuals prone to making self-enhancing comparisons with other top executives (Hayward and Hambrick, 1997).

The Self enhancement human tendency can be a hindrance to the applicability of equity theory in compensation. However, equity theory seems to be in concurrence with Labor economics theory contribution where it is posited that those who make greater contributions should receive greater pay and the CEO’s arguably make greater contributions within the organizations. The traditional labor economics theory would attribute differences in pay between individuals in an organization to differences in their marginal products. Those who make greater contributions should receive
greater pay. This concept is applicable to all employees in an organization; executives are supposed to be compensated in the same way. CEOs are argued to have greater impact on firms’ value due to the quality and importance of the decisions they made (Ang, et al., 1998).

2.4 Tournament Theory
Tournament theory advance that pay dispersion has positive effects because it promotes intra-team competition and provides an economic incentive that encourages the ‘cream to rise to the top’ of the rank-order tournament. The tournament model advances the idea that pay gap between workers (players) in one rank and the next higher rank would be large and greater than their marginal products, thus, providing the incentives for the contestants to do their best. The pay gap is the prize of the tournament, which is expected to increase the higher the level of the tournament (Rosen, 1986).

Unlike the position held by proponents of Tournament theory that pay dispersion promotes intra-team competition and provides an economic incentive that encourages the competition, Social comparison theory hold that individuals routinely compare themselves with referent others and hence pay dispersion will negatively affect decision making and teamwork. In essence, these theories seem to attach differing connotations to the effects of pay dispersion of the executive teams.

The Tournament model has been criticized by researchers. Its shortcomings when applied to executive compensation is cited by Dye (1984) and McLaughlin (1988) as; it is difficult to motivate the losers and the effect could be demoralizing, even ranking executives could be difficult if their performances are multidimensional, promotion may not be the appropriate incentive device because there may not be a matching of the skills in one job and the next promoted Job. Milgrom and Roberts (1988) cite collusion and sabotage by the contenders as a problem. Tournament model encourages non – cooperative behaviors such as overinvestment in self promotion through office politics by the executives. Lazear (1989) opine that the tournament model may encourage destructive behavior including sabotage of rivals.
2.5 Social Comparison Theory
Social comparison theory argues that individuals routinely compare themselves with referent others whom they see as being similar on attributes such as demographic characteristics, ability, or position (Festinger, 1954). Top team members typically have much in common, which makes them likely referents for one another (Finkelstein and Hambrick, 1996; Hills, 1980; O’Reilly, et al., 1988; Wade, et al., 2006). They are also likely to be highly motivated, achievement-oriented, power-seeking, and status-driven (Finkelstein and Hambrick, 1996). In addition, top executives in a given firm have generally been subjected to similar organizational filters (selection and promotion processes), so they, more than members of society at large, are likely to be quite similar in their work experiences, education, perspective, and temperament (March and March, 1977). Moreover, top executives have succeeded in getting to that level, in part, because they are highly competitive, which makes them particularly prone to make social comparisons of pay (Lazear, 1989).

Pay dispersion will negatively affect decision making and teamwork. Studies supporting that logic have reported that top team pay dispersion is associated with increased executive turnover, higher acquisition premiums, and decreased firm performance (Carpenter and Sanders, 2002; Siegel and Hambrick, 2005). Within the group of highly motivated, achievement-oriented, and status-driven individuals that comprise a CEO’s top team, large differences in pay will likely lead to perceptions of inequity among those who are less well compensated, and the feeling that they are being deprived of what they too deserve (Cowherd and Levine, 1992). Such feelings can cause impaired social relations among team members and reduced behavioral integration within the team (Siegel and Hambrick, 2005). Moreover, feelings of deprivation can even lead to political behavior (Milgrom and Roberts, 1988) and attempts to undermine the efforts of other team members (Lazear, 1989).

2.6 Upper Echelon’s Theory
Upper echelon’s theory suggests that the demographic characteristics of top management influence decision – making processes which, in turn, affect organizational outcomes. Corporate ideology is expected to mediate the relationship between top management demographics and firm performance (Goll, et al., 2001). Upper Echelons theory suggests that the characteristics of
an organization’s key decision makers influence strategy and subsequent performance and that managers bring a cognitive base and values to the decision making process that restrict their field of vision (Hambrick and Mason, 1984). Thus, the characteristics of top management team as age or education have been found to influence strategy formulation and implementation by either promoting or inhibiting it (Bantel, 1993).

The argument that the top management team characteristics promote or inhibit strategy implementation and formulation opens investigations on how manager specific characteristics like age, marital status, number of dependants, religion or level of education may affect firm performance. This theory further leads to the question on how remuneration, incentives and incentive dispersion of top management team influence firm performance.

2.7 Expectancy Theory

It predicts that an individual will act in a certain way based on the expectation that the act will be followed by a given outcome and on the attractiveness of that outcome to the individual. The theory states that the actions of an individual are driven by expected consequences. Deciding among behavioral options, an individual is likely to select an option with the greatest motivation forces (MF), which Vroom (1964) expressed by the following equation:

\[ MF = (\text{Expectancy}) \times (\text{Instrumentality}) \times (\text{Valence}) \]

In the equation, expectancy is the probability (belief) that one’s effort will result in the attainment of desired goals and it is based on the individual’s past experiences, communication, feedback, or information from other people. A person must believe that exerting a given amount of effort can result in the achievement of a particular level of performance (the effort–performance relationship). However, even if expectancies change based on direct and indirect experience or other beliefs, those changes may not be followed by corresponding changes in actual behavior, like effort or performance (Gatewood, et al. 2002).
3.0 Empirical Literature Review

Early studies of executive compensation, such as Ciscel and Carroll (1980) and Lewellen and Huntsman (1970), focused primarily on the linkages between executive compensation, firm size and profits. Subsequent research has confirmed the positive relation between firm size and executive compensation. In the more recent past, stimulated in part by theoretical developments in agency theory, the emphasis has shifted to the investigation of the direct linkages between executive compensation and firm performance. This section therefore presents an analytical review of empirical discourse on compensation performance sensitivity in sub-section 3.1, Management compensation plans and stock market reaction in sub-section 3.2 and a summary in sub-section 3.3.

3.1 Compensation Performance Sensitivity

Jensen and Murphy (1990) define pay–performance sensitivity as the change in chief executive officer (CEO) wealth associated with a one-dollar change in shareholder wealth. Some strand of studies have examined the relationships between measures of firm performance and top manager pay. Dalton, et al. (2003) conducts a meta-analysis of 229 studies in economics, finance, and management, and concludes that the empirical evidence of the studies provide no consensus. It is remarkable that, although hundreds of papers have been written on pay – performance sensitivity, there is no real consensus on the relationship between executive pay and firm performance. This is due, in part, to the wide variety of methods/models used to investigate the main questions, the multidisciplinary nature of the study area and the diversity in knowledge about the institutions that matter in this area.

Early studies by Lewellen and Huntsman (1970); Masson (1971); Ciscel and Carroll (1980) focus on whether or not executive pay is positively related to corporate performance but obtain mixed results. Since the late 1980s, most studies have used longitudinal data and a positive relationship between corporate performance and managerial pay has been elucidated by Murphy (1985), Jensen and Murphy (1990), Joskow and Rose (1994), Schaefer (1997), Zhou (2000) and Fatemi, Desai and Katz (2003). Other studies conducted by Firth, et.al (1996), Lishenga (2011), Aduda and Musyoka (2011) find no statistical association for CEO pay and measures of corporate performance.
Aduda and Musyoka (2011) apply an empirical cross-sectional design to measure the relationship between executive compensation and firm performance using the agency based models. This causal census survey selects ten large commercial banks that comprise 71.8% of the total industry deposit base and net asset value base. This population excludes medium sized and small sized commercial banks which are not listed at the securities exchange and some of which still remain family controlled businesses. In this respect, the study leaves a research gap on compensation performance sensitivities amongst small and medium sized commercial banks, compensation performance sensitivities amongst family owned commercial banks especially where the executives are founder members and compensation performance link for executives in the purely government owned banks. Choice of the banking industry raises questions on the effect of industry regulation on compensation performance nexus and a study should further articulate or control for this effect together with the possibility of dual causality and levels of organizational internationalization. The negative non-significant relationship between executive compensation and commercial bank ex ante accounting performance in Kenya is inferred to suggest capping of executive compensation to ensure maximization of returns to shareholders. The executive compensation should also be related to the ex ante commercial bank accounting performance to relate the past and the present organizational success while also testing alternative paradigms to the agency theory. The study operationalizes executive compensation as the board remuneration since the financial reports do not give specific amounts due to executive and non-executive directors. There are remuneration components that reward past performance while there are also components that provide correct incentive for future performance.

Ongore and K’obonyo (2011) in a census study examine the interrelations among ownership structure and firm performance measured using accounting based measures amongst all firms listed at the NSE. The study is informed by the proposition that insider ownership is actualized through executive share options. The findings suggest a positive relationship between insider ownership and firm performance thereby affirming the proposition that when managers own shares, they become more committed to the organization since they have a stake in the residual income of the firm and they are likely to bear the costs of mismanagement. The study however falls short of establishing a critical level of shareholding beyond which there would be
accelerated firm performance arising from the managerial commitment. Since the research sample excludes the firms not listed at the exchange, there is need for further studies on diverse organizational contexts that include non-public ownership structures. Considering that the sample is constituted of listed companies, further attempts should incorporate the market-based and the integrated measures of firm performance. In a related study, Mang’unyi (2011) explore ownership structure, corporate governance and its effects on performance of banks in Kenya. The study finds no significant difference between type of ownership and financial performance.

Lishenga (2011) applies a comparative study to investigate the sensitivity of corporate governance structures and practices to performance declines amongst companies quoted on the NSE for the period of eight years from the beginning of 1998 through 2005. Several components of corporate governance including CEO compensation measured as salaries and bonuses, board composition, CEO and insider equity holdings, and frequency of board meetings are studied with reference to the financial performance of the firms classified in cohorts of losers, winners and mixed. The study employs the Tobin’s Q as proxy for financial performance and concludes that insider ownership falls with falling firm performance as CEO remuneration is insensitive to firm performance. The study sample excludes other non-listed family, groups of persons or government owned firms and further research effort should consider such organizational contexts.

Ashley and Yang (2004) examine the outcome of earnings persistence on the style and nature of executive compensation using a first difference approach in an agency theory framework. The study determines that accounting earnings obtain more weight in executive compensation contracts for firms with high earnings persistence than those with low earnings persistence. The authors extend prior studies on the assessment of the stewardship role of management and of pay-performance relationship by considering that some firms exhibit strong earnings over a sustained period of time (high earnings persistence), and other firms exhibit weak even negative earnings over time (low earnings persistence). It therefore elucidates that relying primarily on accounting earnings becomes problematic when the accounting data are noisy as earnings or perception of earnings can be managed. The dependent variable in this study is cash compensation as equity based compensation is predominantly determined by stock returns. The
compensation performance sensitivity derived in this study is therefore not generalizable to total compensation.

Fatemī, Desai and Katz (2003) applies a multivariate regression model to examine the relationship between executive compensation and risk adjusted measures of firm performance that capture economic profits earned by the firm (EVA and MVA) as well as the causal direction between the wealth creation activities of the firm and the compensation of its top managers. The decision to use the performance metrics is informed by the fact that MVA and EVA do not suffer from any industry-specific bias. The study based on 1,965 firm-years finds that executive compensation is positively correlated to the level of risk borne by the firm and MVA is a significant determinant of executive compensation while the relationship between EVA and compensation is weaker. In the sample, there are also firms at various levels of internationalization, however, overseas sales data are only available for 119 firms, and only for one year (1995) thereby making the tests of the pay-for-performance hypotheses that account for the global nature of the firm's operations limited.

Schaefer (1998) reviews the properties of pay–performance sensitivity for four best paid teams of executives working for the same firm using an agency based model. One of the central themes of this agency model is that it is the marginal sensitivity of pay to performance that provides incentives for effort. The study applies a broader measure of compensation as the change in CEO–pay–related wealth in a year. This measure includes salary, bonus, payouts from long-term incentive plans, other forms of annual compensation, the value of restricted stock grants, the Black–Scholes value of any stock options granted in the year, and the change in the value of any stock held by the executive at the beginning of the fiscal year. Using industry fixed effects and data on changes in CEO wealth for 3041 CEO–years, the study infers that pay–performance sensitivity is approximately inversely proportional to the square root of firm size and the properties of pay performance sensitivity for teams of executives working for the same firm have similar properties as CEO pay - performance sensitivity. This study measures performance using ex post market based performance measures which are often noisy and are affected by other factors other than executive effort.
Jensen and Murphy (1990) apply 7,750 yearly "first-differences" in compensation and includes 1,688 executives from 1,049 corporations to find a positive and statistically significant relationship between the CEOs compensation and firm performance as measured by shareholder wealth. The agency based models infer a lack of strong pay – for - performance incentives for CEOs which is puzzling but leads to a line of reason that political forces operating in both the public sector and inside organizations limit large payoffs for exceptional performance. Ely (1991) reports significant inter industry differences in the relationship between CEO compensation and four performance variables that were examined. He also finds that including sales revenue and net interest income significantly increases the explanatory power of the statistical relationship between CEO compensation and firm performance.

Gometz-Mejia et al. (1988) find that in firms with a dominant external shareholder (defined as an individual or organization holding at least five percent of a firm’s stock), performance was a significant predictor of CEO’s compensation. Similarly, Park and Song (1995) use financial and accounting - based measures of firm performance. They reported that for firms with large - block outside shareholders, performance increased significantly when stock option plans were introduced.

Antle and Smith (1986) find a positive association between total management compensation and return on assets as a performance measure. However. They do not find a positive relationships between total management compensation and return on common stock. Lambert and Larcker (1987) report a strong positive time-series relationship between CEO cash compensation and return on equity, as compared to a modest positive relationship with security market return. They also find that the degrees of above respective relationships are inversely related to the degrees of noise in the two performance measures. Riahi-Belkaoui (1992) concludes that accounting-based measures (i.e. sales to assets, and profits to assets) are significantly related to executive compensation. He suggests that partially linking such compensation to accounting - based measures insulates executives from uncontrollable market price movements.

Sloan (1993) similarly suggests that earnings - based measures are useful in protecting executives from general market effects on stock prices. Janakiraman et al. (1992) examine the
cash compensation of CEOs and find evidence that conflict with the standard agency theory model. Their empirical results indicate that cash compensation packages are structured with the view that firm performance comparisons with the market (or industry) are included in the evaluation of CEO performance. In contrast, Garen (1994) does not find any strong evidence of the use of relative performance pay in CEO compensation packages. Executive compensation was found to be a trade-off between incentives and insurance.

More recent studies continue to find an association between CEO compensation and firm performance. Callahan and Rutledge (1995) report that the CEO compensation is most significantly related to firm size and short-term profit divided by sales (performance). They interpret these results as an indication that CEO compensation is not directed toward long-term maximization of shareholder wealth. Mehran (1995) finds a positive relationship between firm performance and equity-based compensation. He concludes, it is the form of compensation that motivates executives to increase firm value. Baber et al. (1996) find that firms with more investment opportunities have a stronger relationship between CEO compensation and firm performance. Such firms also have greater use of market-based (as opposed to accounting-based) performance measures for CEO compensation. Vafeas and Afxentious (1998) find an increase in the relationship between performance measures (accounting and market based) and CEO pay subsequent to the SEC’s adoption of a new compensation disclose rule in 1992.

3.2 Management Compensation Plans and Stock Market Reaction

The introduction of performance-based compensation plans has generally been shown to be associated with a positive stock market reaction. Larcker (1983) finds a significant positive stock market reaction when an adoption of a performance plan is disclosed. Tehranian and Waegelein (1985) report that the announcement of short-term compensation plan adoption is associated with positive abnormal returns, and argue that the returns subsequent to the announcement are associated with positive unexpected earnings change, Brickley et al. (1985) show that the introduction of long-term compensation plans increased shareholder wealth. Waegelein (1988) also finds that there is a significantly positive stock market reaction for companies which adopted the short-term compensation plans. Kumar and Sopariwala (1992) report significant positive excess returns around the announcement of performance plans adoption. Gaver et al.
(1992) find that significant positive cumulative abnormal returns for all companies where stockholders voted on a performance plan (whether the plan was adopted or not). The time period included the period beginning two days after the SEC stamp date and ending after the shareholders’ meeting date.

It is problematic to directly attribute the above results to the incentive effects of management compensation plans. After examining samples employed in other studies (Larcker, 1983; Tehranian and Waegelein, 1985; Brickley et al., 1985), Warner (1985) determines that there is a possibility that firms adopt management compensation plans after a period of favorable firm performance. Ducy et al. (1997) also find that in years prior to the adoption of stock compensation plans, firms experienced either a favorable change or no change in firm performance. These compensation plans may be adopted in expectation of future stock price increases based on inside information about the firm’s future prospects. Thus, a positive stock market reaction to the introduction of new management compensation plans does not necessarily imply that the plan will provide incentives for CEOs that benefit shareholders’ interests.

Murphy (1985) reports that changes in management compensation are positively related to firm performance as measured by shareholder returns. In addition to shareholder returns, Murphy’s study also finds that sales growth is an important determinant of management compensation. The regression results of Coughlan and Schmidt (1985) show a statistically significant relationship between CEO compensation and stock price performance. They find that sales growth is positively related to changes in CEO compensation. Using logit analysis they conclude that stock price performance and the probability of a change in CEO are negatively correlated. These results indicate that poor performance increases the probability that CEOs may lose their positions. Veliyah (1999) finds a relationship between changes in compensation (cash and stock option grants) and lagged market returns. However, he did not find a significant relationship between market returns and the level of both components of compensation.
4.0 Methodology Gaps

One of the reasons that there is such diversity in the “answer” to the pay–performance problem is the diversity of empirical methods that consider the issues of causality, operationalization of compensation and performance and use of panel data.

4.1 Causality

Attempts to consider causal relationships in a simple cross section using ordinary least squares (OLS) specifications is clearly inadequate. A simple empirical research model intended to find the true causal effect of some independent variable (performance) on an outcome (CEO compensation) is never estimated because the model view performance as endogenous. In a statistical sense, this means that performance is correlated with an error term in the basic research model. A common way to address this causal effect issue is to add to the research model a vector of control variables along with their associated coefficients.

Most studies in the executive pay literature address potential endogeneity concerns. They consider performance as an exogeneous variable in which case the results obtained are causal rather than correlational. This is an important distinction because it is possible to have a strong correlation between performance and pay, yet there is no causal link. Establishing a causal link is not an easy task, and many will argue it is impossible without a randomized experiment. There are statistical approaches, however, which can greatly improve the accuracy of the basic regression estimates. These include; fixed effects, first – difference methods and instrumental variables (IV).

4.1.1 Fixed Effects Method

The significance of the fixed effects method is to exploit the panel nature of certain data sets by the fact that we may observe the same firm or executive different times and there is some fixed but unobserved fact that is correlated with both executive compensation and firm performance. In the fixed effect method, the researcher includes a dummy variable for each CEO/firm in the sample to improve the accuracy of the basic regression model. Murphy’s (1985) study is an example on application of the fixed effects method. The researcher studies 461 executives in 72 firms over an 18-year period and finds that executive compensation, including salary and bonus,
and stock options, stock holdings, and deferred compensation, is strongly and positively related to both shareholder returns and sales growth. Unlike earlier studies, Murphy does not focus solely upon salary and bonus but also controls for omitted variables, such as firm size. This improved methodology of introducing “fixed effects” models enables Murphy to observe performance-based pay where previous studies found no relation between pay changes and firm performance.

4.1.2 First – difference Method

In the first difference method, the researcher develops a third model as the difference between two periods regression models that include the fixed covariates. Jensen and Murphy (1990) uses first-difference methods and finds that for every $1,000 increase in shareholder value - measured as a change in the market value of equity- CEO pay goes up by $3.25. The offered interpretation of this is that, although there is a relationship between pay and performance, the relationship is weak and can be strengthened. Hall and Liebman (1998) collects data on stock and stock options and find a stronger relationship between pay and performance than earlier found by Jensen and Murphy(1990), on the order of $5.29 for every $1,000 increase in shareholder wealth. This study also uses the first difference approach and introduces the conclusion that while this is still a weak relationship, even small changes in performance can have very large effects on the life time wealth of an executive.

4.1.3 Instrumental Variables

The intention of instrumental Variables (IV) is to find an exogenous variable that do not belong in the compensation equation correlated with the potentially endogenous variable of interest (performance), and further identify the sensitivity from this exogenous variation. Bertrand and Mullainathan (2001) apply the instrumental variables approach. In their study of oil companies, they use exogenous shocks to the price of oil to instrument for performance. Such shocks clearly do not belong in the compensation equation, but are highly correlated with performance indicators, making them an ideal instrument. In their conclusion, Bertrand and Mullainathan (2001) document that CEOs are rewarded for luck and pay for luck is as large as general pay for performance. Pay for luck appear on the discretionary components of compensation, salary and bonus and is strongest among the poorly governed firms.
4.2 Operationalization of Compensation

The most popular definition is to use ‘‘total compensation’’ as the dependent variable. Some studies focus on basic cash compensation as applied by Comprix and Muller (2006), options as applied by Almazan, Hartzell, and Starks (2005), and bonus as applied by Fattorusso, et.al. (2007). One desirable trend in the studies is the analysis of several models, defining executive compensation differently each time, and demonstrating their results are robust to multiple forms of compensation. Clearly, it is natural to expect certain forms of compensation to be more strongly related to certain measures of firm performance than others. An organizational compensation system is inbuilt with short term and long term compensation packages. These compensation components relate differently with the market based, accounting based and integrated firm performance metrics.

4.2.1 Functional Form of Compensation

Though there seem a consensus on the studies by Murphy (1985), Jensen and Murphy (1990) and Hall and Liebman (1998) that the relationship between pay and performance is weak, an inherent challenge for the researchers in linking pay to performance is the non standardization of the elements of compensation and the time period for reporting. The natural log transformation, which is used to deal with skewed data, is commonly applied to the dependent and many independent variables and it is especially important for valid statistical inference when dealing with variables with a very skewed distribution such as compensation and sales data. Hallock (1997) provide evidence that the log-transformation is important in executive compensation settings and the omission of the log-transformation on the dependent variable has the potential to seriously alter the magnitude and the interpretation of results.

Florin, et al. (2010) cite that studies on executive pay estimates the equation of the form:

$$Y_{it} = \beta \times (\text{Perf}_{it}) + \gamma_i + \chi_t + \alpha_x \times (X_{it}) + \epsilon_{it}$$

Where $Y_{it}$ is CEO compensation in firm $i$ at time $t$, $\text{Perf}_{it}$ is a performance measure, $\gamma_i$ are firm fixed effects, $\chi_t$ are time fixed effects, $X_{it}$ are firm- and CEO-specific variables such as firm size and tenure, and $\epsilon_{it}$ is an error term. The coefficient $\beta$, captures the strength of the pay for performance relationship. Table one below classifies empirical studies on pay performance
relationships based on application of log transformation on the skewed data of executive compensation, application of fixed effects and lagged term or difference of difference approach to improve the accuracy of the estimates.

4.3 Panel Data on Compensation
While using panel data in research, including industry fixed-effects is good practice. Studies with firms in different industries should either include industry indicators or run separate regressions for different industries to control for industry specific effects on firm performance and compensation performance sensitivities. Aduda and Musyoka (2011) incorporate industry return in their study on the financial services sector in Kenya. Boschen and Smith (1995); Becker (2006) takes the first-difference approach to address the efficacy of use of panel data. Aggarwal and Samwick (2003) use a firm/executive fixed-effect strategy.

4.4 Control Variables on Executive Compensation
Gomez-Mejia and Balkin (1992) note that various studies examine the fit between employee’s or general manager’s compensation and firm or environmental characteristics but the effects of contingency or contextual factors on CEO pay remain unexplored.

4.4.1 Importance of Context
Sanders and Carpenter (1998) consider the influence of contextual factors on design and level of executive pay and report that the degree of a firm’s internationalization is positively associated with the level of its CEO’s pay and greater emphasis on long-term incentives in the CEO’s pay mix. Further, internationalization also leads to larger top management teams and separation of chairperson and CEO positions. Finkelstein and Boyd (1998) also indicate that the greater the latitude of options top managers have in making strategic choices, the higher the pay with a set of empirical measures that proxy for discretion that include market growth, demand instability, capital intensity, industry structure and regulation.
### Table One: Classification on Empirical Research on Executive Compensation

#### Studies that use a log – transformation on the executive compensation as dependent variable

<table>
<thead>
<tr>
<th>No fixed effects</th>
<th>Industry fixed effects</th>
<th>Firm fixed effects</th>
<th>Lagged term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kato &amp; Kubo (2006)</td>
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</table>

#### Studies that do not use a log – transformation on the executive compensation as dependent variable

<table>
<thead>
<tr>
<th>No fixed effects</th>
<th>Industry fixed effects</th>
<th>Firm fixed effects</th>
<th>CEO fixed effects</th>
<th>Lagged term</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Girma, et al. (2007)</td>
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<td></td>
<td></td>
<td></td>
<td>Jensen &amp; Murphy (1990)</td>
<td></td>
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<td>Lippert &amp; Moore (1994)</td>
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<td></td>
<td></td>
<td></td>
<td>Rajgopal, et al. (2006)</td>
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<td></td>
<td></td>
<td></td>
<td>Aggarwal &amp; Samwick (1999)</td>
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*Summarized by Author, 2012*
4.4.2 Contingency Factors
Finkelstein and Boyd (1998) demonstrate that CEO pay depends on the information requirements of a position and the amount of discretion enjoyed by the incumbent and further, that firm performance may be consequence rather than a determinant of CEO pay. Barkema and Gomez – Mejia (1998) summarize that executive pay can be analyzed in terms of three major aspects; pay level, long – term orientation and strength of the connection between CEO pay and performance as demonstrated in figure one. Gomez – Mejia and Barkema (1998) also demonstrate that the determinants of executive pay can be grouped in terms of criteria, governance mechanisms, and contingencies.

Figure One: A General Framework for Understanding Executive Compensation

Firm Size: a common aspect in the empirical literature is the need to control for a firm’s size when estimating executive pay performance relationships. The two most common ways to control for firm size are to use a measure of sales (revenue) or assets held by a firm. Another popular measure is the total number of employees. These three variables (Sales, Assets and Employees) are commonly highly correlated, except in banks and other financial institutions, where assets are obviously substantially higher than sales and employees, relative to many other industries.
**Firm characteristics:** Matolcsy and Wright (2010) motivated by the theoretical literature predictions that differences in firm characteristics could lead to differences in the CEO compensation structure estimates a model of ‘efficient’ compensation structure based on firm characteristics and test the performance consequences of deviation from the efficient compensation structure using both accounting and market-based performance measures. The results suggest that firms whose CEOs receive compensation inconsistent with their firm characteristics have a lower performance compared to those firms whose CEOs’ compensation is consistent with their firms’ characteristics.

**Corporate governance mechanisms:** Increased empirical evidence suggests that the strength of a firm’s corporate governance is positively related to the association between pay and performance. An important feature of studies on pay performance relationships without firm fixed-effects is the inclusion of some measure of corporate governance as undertaken by Core, Holthausen and Larcker (1999); Cornett, Marcus and Tehranian (2008).

**Demographic statistics of the executives:** One class of variables conspicuously absent from the majority of empirical models explaining pay performance relationship is demographic information about the executive. Hallock (1997); Bertrand and Mullainathan (2001) and Bertrand and Hallock (2001) are notable studies that include standard control variables of age, CEO tenure and gender in their order. Age and tenure and their squared terms are important variables to include in any sort of wage equation having been a standard practice traceable to the original Mincerian wage equations.

4.5 **Operationalization of Performance**

Copeland, et al. (2005) in summarizing unresolved issues, undiscovered territory and the future of finance posit that the decisions that managers confront as “top of mind” issues are not the stuff of which textbooks are made. Corporate finance textbooks are seemingly silent about how to measure performance. Letting (2009) posit that firm performance relates to the efficiency and effectiveness of the organization. In the face of business environment changes and dynamism, strategies formulated and different leadership styles, firms have to continuously monitor their performance.
Several studies examining the sensitivity of CEO pay to firm-level performance outcomes operationalize performance through accounting return measures. Shiely (1996) observe that most of the studies exploring the nature of the relationship between managerial pay and performance use accounting-based performance measures. Such measures may bear little resemblance with the economic return earned by the firm since accounting-based measures do not account for the risk incurred by the firm's managers in their search for growth and profitability. Lambert and Larcker (1987) argue that accounting returns which are short-term focused are relatively less sensitive to executive effort in high-growth firms and thus less informative of the executive’s actions. Hence they predict that growth firms place less weight on accounting returns relative to stock returns and they find some support for this prediction. Gaver and Gaver (1993) suggest that growth is a proxy for the difficulty of managing the firm. Uncertainty regarding the production function linking CEO actions to performance measures themselves (e.g. variance correlation, and growth in accounting and stock returns) rather than the nature of agents work and attributes of the agent.

Other studies find evidence that executive compensation responds more to market-based performance measures than accounting-based performance measures. Coughlan and Schmidt (1985), find significant empirical evidence that connects executive compensation to market-based returns. Boschen et al. (2003) present evidence that indicates that firms give less emphasis to accounting-based measures and increasingly rely on market-based measures. Capezio, Shields and O’Donnell (2010) indicate that research investigating the compensation–performance link in publicly listed companies has certainly shown a predilection for market-based or stock return performance metrics.
5.0 Research Gaps from the Literature

The general objective of this study is to test the optimality of the relationship between components of executive compensation and firm performance both ex ante and ex post. While furthering the agency theory model and the efficiency attribution view, the review necessitates additional studies that examine the relationship between CEO compensation and firm performance while decomposing executive compensation between rewards and incentives while at the same time applying various performance metrics namely; accounting based, market based and integrated performance measures. Table two below, summarizes the key studies reviewed and the empirical gaps thereon.

Performance measures play a key role in translating an organization’s strategy into desired behaviors and results (Van der Stede, et al. 2001). They also help to communicate these expectations, monitor progress, provide feedback and motivate employees through performance based reward systems. However, various researchers advance that traditional financial performance measures are no longer adequate for these measures (Lambert and Larcker, 1987; Holthausen, et al., 1995). A wide variety of innovative measures are proposed that range from improved accounting based measures like economic value added (EVA) to integrated performance measure systems like the balanced score card. With the inconclusive debate about the limitations of traditional financial performance measures and the superiority of the contemporary performance measure systems, these propositions are yet to be systematically tested.

Given that shareholders prefer efficiency and not rent extraction when rewarding or incentivising the management, a suitable performance measure should attempt to gauge the level of CEO efficiency when aligning compensation to inputs brought by the CEO into the organization rather than power of the CEO. It remains inconclusive on what classification of performance measure would be acceptable in measuring this efficiency while at the same time is not deemed as noisy and influenced by factors outside managerial control.
<table>
<thead>
<tr>
<th>Researcher &amp; Focus of the study</th>
<th>Research findings</th>
<th>Research gaps</th>
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| **Aduda and Musyoka (2011).**  
The study applies a multivariate regression model to consider the functional form relationship between the level of executive cash compensation and accounting performance measures. | The accounting measures of performance are not key considerations in determining executive compensation and firm size is a key criteria in determining executive compensation. | Since the study is correlational, it should be further explored using a first difference approach to estimate the pay performance sensitivities amongst small and medium sized banks, family owned banks and commercial banks for a generalization of the findings in the whole industry. A causal study controlling for organizational contexts of level of internationalization, regulation and executive discretion would suffice given that the banks in Kenya considered in the sample have different levels of internationalization and executive discretion. The study should further explain the components of compensation that are deemed as rewards and the others that are deemed as incentives. Several models for rewards or incentives cum performance measures should be analyzed using market based, accounting based and integrated performance measures while controlling for the skewness of compensation data. |
| **Ongore and K’obonyo (2011).**  
The study applies a multivariate regression model to investigate the effects of selected corporate governance characteristics on firm performance. | The paper presents evidence of significant positive relationship between insider ownership actualized through executive share ownership plans and firm financial performance. | Since the study uses a panel data on executive compensation for listed firms for a period, there should be a robust approach to treatment of the skewness of the compensation data. Further, alternative paradigms to agency theory should be investigated taking cognizance of organizational contexts that include differences in ownership structure as there are family owned firms, group owned firms and government owned firms with diverse levels of internationalization, regulation and managerial discretion. There should also be proper treatment of the industry effect on insider ownership or firm performance as the sample is drawn from various industries in the economy. Of importance is to derive a critical level of shareholding beyond which there is accelerated firm performance arising from managerial construction. This critical level should also incorporate market measures of performance as the sample are publicly quoted companies. |
<table>
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<tr>
<th><strong>Lishenga (2011).</strong></th>
<th>The study applies a multivariate regression model to investigate how the corporate governance structures and practices of firms at the NSE change as a remedial reaction to persistent fall to a company value.</th>
<th>The study concludes that insider ownership falls with falling firm performance and CEO remuneration is insensitive to firm performance.</th>
<th>The study does not address the skewness of executive compensation data. The derivation of a cohort of firms into losers, winners and mixed performers opens avenues to investigation of the differences in pay performance sensitivities amongst these various cohorts and within industries. The researcher adopts tobin’s Q as a measure of performance which may be influenced by market wide effects and not necessarily the executive officers contribution. Additional work should also incorporate other organizational contextual settings that include family and government owneships.</th>
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<td><strong>Ashley and Yang (2004).</strong></td>
<td>The study investigates the effect of earnings persistence on the type or form of executive compensation as well as on the pay-for-performance relationships.</td>
<td>High earnings persistence results in firms that focus more heavily on cash compensation (salary &amp; bonus) rather than on equity compensation (stock options) to compensate executive performance.</td>
<td>The adoption of the first difference approach into the study with respect to compensation, earnings and cashflows introduces a need to further investigate the robustness of cash flows as a measure of performance in instances of earnings management, insider trading and accounting fraud. Though the study considers only cash compensation, it should be expanded to incorporate total compensation as some components are deemed to incentivise future performance while other components reward past performance of the executives. The research model should further be expanded to incorporate the various firm, time and executive fixed effects that are expected to influence compensation and pay performance sensitivities.</td>
</tr>
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<td><strong>Fatemí, et al. (2003).</strong></td>
<td>The study examines the relationship between executive compensation and measures of firm performance that capture economic profits earned by the firm (EVA and MVA).</td>
<td>Executive compensation is positively related to the level of risk borne by the firm and MVA is a significant determinant of executive compensation while the relationship between EVA and compensation is weaker. The top managers are not only incented to increase EVA of</td>
<td>The multivariate regression model adopted in this study intimate a correlation relationship between firm performance and executive compensation. Further investigations should focus on incorporating first difference, fixed effects or instrumental variables method to explain the extents of causality. The study does not further investigate the pay performance sensitivity of the firms while controlling for the cohort classification of the firms within the sample. It is possible that pay performance sensitivities will vary depending on the cohort context that the firm falls in. The researchers recommend an extension of the work to consider including additional information regarding analysts’</td>
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</table>
the firm, but they are also rewarded for current and past additions to MVA.

estimates of future earnings. Future work should therefore expand towards use of real options alongside other firm and executive specific variables that would impact on the pay performance sensitivities to clarify whether the marketplace expects the performance of “winners,” or increase the executives are rewarded for performance “surprises.”

The study examines the determinants of managerial pay and its relation to corporate performance in Canada considering that Canadian firms are of small size than firms considered in earlier studies.

CEO earnings from cash compensation increase by 0.25% for every 1% increase in the firm’s sales. In addition, executives in utilities earn lower pay, and their compensation is less responsive to performance, than for the executives in other industries.

The study adopts a first difference approach in examining the relationship between change in total pay and change in shareholder wealth as applied by Jensen and Murphy (1990). The elasticity derived from the study finding is close to that identified in previous studies thereby calling for investigation on the effects of different cultural contexts on pay performance sensitivities. There is however need to incorporate in further developed models the firm and executive specific variables that also explain change in executive compensation. The compensation should also be decomposed further to distinguish the incentives from the rewards.

Firth, et al. (1996).
The study explores the determinants of executive compensation in Norwegian stock exchange listed firms. It also reviews the existence of an empirical relationship between compensation and stockholder returns.

There is a positive relationship between CEO pay and corporate size but no significant association between remuneration and corporate financial performance. Considering the value added, the researchers estimates of the value added by companies is significantly related to executive pay.

The model does not estimate the first difference equation for the performance measures though it estimates the same for the firm size. The incorporation of the variable representing the average wage of a company’s workforce in the model leading to an observation of a positive relationship with CEO compensation calls for inquiry on the effect of cultural preferences for income and wealth equality on pay performance sensitivities. This is informed by the intuition that Norwegians prefer income and wealth equality and a sharing of rewards and ‘sufferings’ between senior management and the general workforce. The study should also incorporate the other firm and executive specific extraneous variables that influence compensation and compensation performance relationships.
Mehran (1995) finds a positive relationship between firm performance and equity-based compensation and concludes that it is the form of compensation that motivates executives to increase firm value. It is expected under agency theory that optimal executive compensation contracts would perfectly align the interests of the executives with those of the firm's shareholders as such contracts would act as incentive mechanisms for executives to engage in behaviors that maximize the firm's value and reward executives for such behavior. It remains to be resolved on which executive compensation contract components meet this test of optimality and more importantly, whether they meet the test ex ante or ex post. Still, because, the sensitivities so far derived are disappointingly weak with wide variations, alternative paradigms to agency based models should be evaluated. These alternative paradigms include: marginal productivity theory, information – processing theory, resource dependence theory, managerial discretion theory, and social comparison theory.

Marginal productivity theory, agency theory and equity theory suggest that market forces determine executive pay. That is, in order to retain and attract qualified executives, the firm needs to maintain some parity with the market’s going rate. Though this looks obvious, the empirical support for the proposition is non – existent. Ezzamel and Watson (1998) supports asynchronous market effect on executive pay where firms react by increasing the executive pay after the going market rate has increased. This calls for an investigation on the relationship between going market rate, firm performance and executive compensation as firms may be continually willing to make market adjustments to executive compensation as independent of firm performance results.

The empirical studies so far focus on compensation – performance link under the assumption that optimal CEO compensation contracts should closely link the compensation to performance as executive behavior is largely unobservable. One reason for the conflicting findings may be the fact that the compensation components can also be based on other criteria such as firm size, market, peer compensation, behavior, individual characteristics and position. One challenge in executive compensation setting is the definition of the market. A relevant market may be an abstraction that exists in people’s mind. When a firm decides to pay executives the going rate in the CEO market, it must also decide on the appropriate comparison in the market. Such a choice
is both a social and a political process where the executives can benefit from remuneration committees deliberate choice of higher paid external executives as points of reference. In such a subjective process, judgements of committee members some of whom are interlocking board members as legitimised by opinions of external consultants may further constrain the compensation performance sensitivities.

At the moment, little research work has focussed on the sensitivity of the pay performance link to contingency and contextual factors that determine the executive pay. To improve on the studies, the basic models should control for the contextual effects that include; internationalization, environmental complexity and executive discretion which is proxied by market growth, demand instability, capital intensity, industry structures, organizational strategy, research and development levels and regulation. In the current literature, the pay performance sensitivities derived are not adjusted for these contextual effects. On internationalization, previous empirical work overwhelmingly used U.S. data sources. Studies have begun to explore whether statistical relationships apply in other settings with varied governance structures, cultures and tax regimes.

Event studies showing that introduction of performance-based compensation plans is associated with a positive stock market reaction opens an avenue for investigating the information content of the executive compensation plan adopted and whether the reaction is similar on adoption of a short – term or a long – term compensation plan. It is problematic to directly attribute the results of these event studies to the incentive effects of management compensation plans as there is a possibility that firms adopt management compensation plans after a period of favorable firm performance. Ducy et al. (1997) confirm this argument in noting that in years prior to the adoption of stock compensation plans, firms experienced either a favorable change or no change in firm performance. Positive stock market reaction to the introduction of new management compensation plans may imply various things: that the plan will provide incentives for CEOs that benefit shareholders’ interests; that the compensation plans are adopted in expectation of future stock price increases based on inside information about the firm’s future prospects. The actual implication can be investigated through portfolio studies of returns on investments in firms with management compensation plans vis – a- vis firms without.
6.0 Conclusions and Recommendations

Research on the relationship between top management compensation and firm performance has been ongoing with inconclusive findings on the actual nature of the relationship therefore calling for a reconsideration of the agency theory as a dominant paradigm in this research realm. There is need to empirically test the explanatory value of alternative paradigms to agency based models such as marginal productivity theory, information processing theory, resource dependence theory, managerial discretion theory, tournament theory and social comparison theory.

The attempts to understand the factors that determine executive compensation and its relationship with firm performance is mostly based on agency theory. There however exists concerns about equity and fairness in the executive compensation packages. The notion that optimal compensation contracts perfectly align the interests of the executives with interests of shareholders may exclude other stakeholders interests in conceiving of these optimal compensation packages. Still, research questions arise on the existence of optimal executive performance based compensation plans and whether these compensation plans meet optimality tests ex ante or ex post. Since the executives work with teams, further research should be initiated in quantitatively relating tournament incentives to pay performance sensitivity as internal underpayment and external underpayment inequity may undermine firm performance.

Notable causes of fundamental confusion in this discipline are methodological issues. Studies on pay performance relationships are conflicting without consensus with respect to measures of firm performance and the approaches to estimating causality. Establishing a causal link may not be easy as it is at times possible to have a strong correlation between pay and its explanatory variables yet there is no causal link.

In order to establish causal relationships, the studies should be informed that an ordinary least squares (OLS) model should incorporate a fixed firm, fixed time or fixed executive effect. Other robust approaches to improving the accuracy of the regression models are the application of an instrumental variable or the generation of a first difference equation on the relationships between the dependent variable (change in executive pay) and the various independent and control variables that explain the change in executive pay. These independent variables are not exclusive
to performance as other factors like tournament incentives, corporate governance practices and demographic information of the executives may also influence both performance and pay performance sensitivities.

For consistency, there is need to have a functional definition of two important parameters namely compensation and performance. The levels of pay performance sensitivities undoubtedly depend on how these two parameters are specified. Though compensation is operationalized as cash compensation or total compensation, there is need to decompose compensation into the components of rewards and incentives. Compensation should either be an incentive to maximize wealth or a reward for having maximized wealth under a principal – agent framework. It is expected that cash rewards should have a different performance sensitivity from the long term incentive plans (ltips) like the stock options.

It is universally accepted that firms are in business to succeed in a dynamic business environment where the success is measured in several ways to ascertain the efficiency and the effectiveness of the organization. Since the organization has various stakeholders that include the employees, shareholders, government, customers, competitors and the general publics, these stakeholders are expected to influence how organizational performance is measured and presented.

Though there exist an array of measures of firm performance, there is yet to be a consensus on a universally acceptable performance measure of performance. Given that these stakeholders have different information and performance expectations that are either captulated in accounting based, market based or an integrated performance measure, absolute care is required for choice of a performance measure adopted. The link between executive pay and performance is often influenced some what by the performance metric used. In the interest of the shareholders, the performance metric adopted should be in conformity with the objective of shareholder wealth maximization.

Currently, performance is also commonly operationalized using the economic value added, Accounting based performance measures and market based measures. To improve the quality of
the pay performance study output, research should be informed that the sensitivities documented will also be dependent on the kind of performance measures used in the empirical models. In this respect, there need to be consistency in performance measures applicable especially those that meet the objectives of the firms under the study. Some studies document a convex relationship between pay and performance while others suggest a linear relationship. Research attempts should be made towards identification of the factors that explain the deviation from the ideal pay performance relationships expected.

Further studies on the realm for establishing a link should be guided on controlling for the variability of performance while considering the contingency or contextual factors that may affect the relationship. These contingencies include the market, peer compensation, behavioural criteria, firm strategy, research and development level, market growth, industry concentration, regulation and national culture. There should also be a consideration of the compensation – setting process that depends on a firm’s ownership structure, board of directors, remuneration committee, market for corporate control and the general public.
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