# CEO Compensation and Company Performance 

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#### Abstract

This paper examines the relationship of CEO pay and company performance for 280 firms listed on the New York Stock Exchange for a period from 2006 through 2009. The time frame of the study is a period after the adoption of the Sarbanes Oxley Act and after the SEC approval of the corporate governance rules affecting executive pay for New York Stock Exchange companies. I find there to be a positive and significant relationship between total CEO compensation and company performance measured by return on equity. The size of the firm appears to be the most significant factor in determining the level of total CEO compensation, according to the results, and the tenure of the chief executive officer is another significant variable.


Keywords: Executive; compensation; agency theory; corporate governance.

## 1. Introduction

This paper examines the relationship of CEO pay and company performance for 280 firms listed on the New York Stock Exchange for a period from 2006 through 2009. The time frame 2006-2009 is a period after the adoption of the Sarbanes Oxley Act and after the SEC approval of the corporate governance rules affecting executive pay for New York Stock Exchange companies. Both documents were designed in part to improve the relationship between executive pay and company performance. I find there to be a positive and significant relationship between total CEO pay and firm performance measured by return on equity for the period of 2006 through 2009 for the sample of 280 companies listed on the New York Stock Exchange. The size of the firm appears to the most significant factor in determining the level of total CEO compensation, according to the results, and tenure of the chief executive officer is another significant variable.

The article first explains how the Sarbanes Oxley Act and the NYSE governance rules are designed to affect the governance of executive pay. Next, the state of CEO compensation is covered followed by a review of the literature on the sensitivity of CEO pay and firm performance. The paper then reviews the effectiveness of corporate governance in administering performance based pay to CEOs and discusses the different components of CEO compensation along with the problems associated with each component. Next, the model is presented that is used to test the CEO pay and company performance relationship. In addition, following that, statistics from the 280 companies over the period from 2006-2009 are analyzed. The paper then concludes with a discussion of the results of the regression equation used to test the CEO pay and company performance relationship.

## 2. Sarbanes Oxley - NYSE Govemance

On July 30, 2002, President George W. Bush signed into law the Sarbanes-Oxley Act of 2002 that made far-reaching changes in federal regulation applicable to corporate America and its executives, auditors and advisers. The Sarbanes Oxley Act of 2002 was designed to improve corporate governance, including criteria that impacted executive compensation. Some of the regulations included freezing any extraordinary payments to directors and company officers and forbidding increasing executive pay due to accounting restatements.

On November 4, 2003, the Security Exchange Commission approved new corporate governance rules that went beyond Sarbanes Oxley. Section 5 of the governance rules requires that the compensation committees of companies listed on the New York Stock Exchange review and approve corporate goals and objectives relevant to CEO compensation, evaluate the CEO's performance in light of those goals and objectives, and determine and approve the CEO's compensation level based on this evaluation [1]. According to the rules, companies must have compensation committees composed solely of independent directors. In addition, the committee must have a written charter that states the purposes and responsibilities of the committee as well as requiring an annual
performance evaluation of the compensation committee. The purposes and responsibilities of the compensation committee are outlined by the governance rules as follows: (1) review and approve corporate goals and objectives relevant to CEO compensation; (2) evaluate the performance of the CEO in regard to those goals and objectives; (3) determine and approve, either as a committee or with the other independent directors, the CEO's compensation level on the basis of this evaluation; (4) make recommendations to the board with respect to non-CEO compensation, incentive-compensation plans and equity-based plans; and (5) produce the report on executive compensation required to be included in the proxy statement. The compensation committee, according to the governance rules, must have the sole authority to retain, terminate and compensate a consulting firm to assist in evaluating director, CEO or senior executive compensation. This paper examines the CEO pay to company performance relationship after the new rules were approved for NYSE listed firms. I use a sample of 280 companies listed on the NYSE for a test period from 2006 through 2009.

## 3. State of CEO Pay

The Hay Group performed an annual study that examined how CEOs were compensated across all forms of pay in fiscal year 2009. The Hay Group study focused on 200 U.S. companies with more than $\$ 4$ billion in annual revenue that filed their proxy statements between October 2009 and the end of March 2010.

According to the study, pay levels for CEOs decreased slightly in 2009 for the second consecutive year. Base salaries were even with 2008 levels at $\$ 1,030,000$ while annual incentive pay grew 3.4 percent to $\$ 1,523,701$, yielding a 3.2 percent increase in overall cash compensation of $\$ 2,637,884$. Long-term incentive pay such as using restricted stock, stock options fell 4.6 percent from 2008 to $\$ 5,007,556$. There were 70 percent of the companies in the Hay Group sample that used stock options in 2009. It appeared that instead of seeing a monumental change in the manner in which CEO's were paid in 2009, many companies, according to the Hay Group, were focused on retention of their top talent, providing significant long-term incentives for executives and lowering the bar on annual performance targets [2].

During 2009, companies moved away from paying perquisites. In the study, perks were reduced by 22 percent when compared to 2009 for sample of companies. Nearly every type of perquisite declined in 2009 when compared to 2008. The perk that was reduced the most by companies was the tax gross-up. Second and third were the use of company cars and spouse travel. The personal use of corporate aircraft was the most prevalent perquisite in 2009 and declined slightly from 2008 [2].

According to the study performed by Economic Research Institute (ERI) [3] salaries comprised over 16 percent of U.S. executive total compensation in 1997 but slipped to providing only 11.2 percent of executive pay by February 2010. The rest of the compensation package for the executives of these publicly traded companies was incentive based and comprised 84 percent of total compensation in 1997 and then grew to comprise 88.8 percent by 2010.

## 4. Pay Components

Base salary comprises 11.2 percent of executive compensation, according to the 2010 study by the Economic Research Institute. While job evaluation is typically used to set employee pay in organizations, executive base salaries are influenced by the opinion of the compensation committee that consists of some or all of the members of the company's board of directors.

Incentive plans include cash bonuses that are usually paid in a lump sum at the end of the year, are a way of providing performance incentives. Incentive pay consists of cash bonuses for executive upon reaching a preset goal. The bonus pay is usually tied to accounting measures and are many times linked specifically to the executive's area of responsibility. This type of pay is designed to motivate the executive to focus on the bottom line of the company in order to increase his personal wealth. The rewards may be tiered for short term, intermediate term and long-term goal achievement.

Executive stock options are another incentive for the top executive. Qualified incentive stock options (ISOs) and nonqualified stock options are utilized by many firms as types of equity compensation for top management to motive them to work in the shareholders' best interests. Qualified options provide tax benefits but also have complicated tax consequences. Nonqualified options have the disadvantage in that taxable income is reported at the time nonqualified options are exercised whether the stock is sold or not. M oreover, the income is taxed as ordinary income and not as a long-term capital gain.
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Qualified ISOs avoid this disadvantage because there is no income to report at the time that the qualified option is exercised unless the stock is sold at the same time it is exercised. In addition, qualified options can qualify for long-term capital gain treatment for the entire appreciation above the exercise price if the stock is held for at least one year after exercising. According to many studies, executive stock options appear to reduce excessive risk aversion by giving the executive an incentive to increase firm risk by accepting risky profitable projects instead of avoiding them. This is because one way to increase the value of executive stock options is by increasing the volatility of company profits.

Restricted stock is another form of stock ownership of a company which allows the interests of the executive and shareholder to converge. Restricted stock has limitations on the shares. One of the most common restrictions requires a period of time to pass or for a certain goal to be achieved before the executive can sell the stock. This is called the vesting period which is the amount of time before the restrictions are lifted from the sale of the stock. If the restricted stock is awarded based on the employee remaining with the company for three years, those three years are the vesting period. Alternatively, if the stock vests when costs are reduced by $\$ 20$ million, the vesting period is however long it takes for that to happen, if it actually does.

A long-term incentive plan is important for motivating top management to reach the goals of the company. These programs provide executives with the incentive to meet certain corporate goals for an extended period of time as well as preventing top executives from going to work for other firms.

Stock ownership by an executive in essence makes the top manager an owner of the firm. This is done to align his interests with the company shareholders. Cash incentives reward executives many times for meeting short term as well as long-term goals. Deferred compensation consists of the incentives that are retained for a certain term and paid at the end of the period. It is usually rewarded after every three to five years. This type of compensation can be very useful in retaining top executives, but is less popular since the recipient must wait for the payout. It is a form of payment that also defers payment of taxes for the executive until it is actually received.

Many executive compensation packages contain a golden parachute. It is composed of lucrative benefits given to top executives in the event that a company is taken over by another firm that results in the loss of their job. Benefits include items such as stock options, bonuses, and severance pay. Instead of paying three times an executive's annual salary and bonus when there is a change of control, many companies are now paying only two times that amount or in some cases one time an executive's salary. There are also a number of companies that are discarding gross-ups which compensate executives for the taxes they must pay on their payouts.

Other benefits that can be a part of executive compensation are retirement plans, life insurance and health insurance, car allowances, health-club membership, travel reimbursements, paid holidays and vacations. According to federal law, it is mandatory for companies to provide the U.S. Securities and Exchange Commission (SEC) with clear disclosure regarding the compensation packages given to top-level executives. This must include the procedures that were used when deciding the executive's compensation package. The decision regarding the amount and components of an executive's remuneration package is up to company without the SEC's influence. This disclosure is also done to provide company shareholders with information regarding the company's finance and investment-related decisions.

## 5. Problems with Pay Components

Each pay component (cash bonus incentive plans, stock options, and restricted stock awards) may also entice some executives to engage in activities that produces problems for the firm. Rewarding cash bonuses to executives may encourage undesired behavior. Cash bonuses tied to accounting numbers may motivate executive to manipulate the timing of revenues and expenses to maximize pay out to them. Also, in some instances it focuses executives on short term performance which may be detrimental to the long term health of the firm.

Rewarding top management with different forms of stock compensation may not tie the executive's efforts to company performance closely enough. The stock price may rise or fall from market forces and not from moves of the company's executives. This is especially true with stock options. The manager can become wealthy by being in the right place at the right time and not by the merits of his performance. This could actually offer a disincentive to work hard if the stock price rises regardless of effort. Problems may also occur if the stock price declines after executive stock options are issued putting the options being way out of the money. With options so far out of the money, it may not give the manager the incentive to exert effort to move the stock price. In
other instances executive may be enticed to manipulate accounting numbers when they are about to exercise their options to give the appearance of superior firm performance to drive up the stock price. Restricted stock rewards executives for performance but it restricts the stock from being sold by the executive for a period. This may not encourage the manager to set a high priority on accomplishing company goals in the near term.

The mixing of the different components of pay into a complex compensation package for executives allows the shortcoming of one component to be offset by the strength of another. Cash bonuses focus executives on the immediate success of the firm by paying them for reaching short-term goals. This counters the shortcoming of restricted stock that base awards on the long run outcomes and does not pay rewards for short-term production. To reduce the problem of the company stock price moving based on market forces and not that of the executive's efforts, companies have installed adjustable exercise prices for stock options that are linked to the price movement of a market index of stocks.

The complex nature of executive pay which is driven by incentives appears to be done to align executive and shareholder interest so top management makes maximum effort to maximize shareholder wealth. The complexity of executive pay is necessary so the strengths of one component offset the weaknesses of another pay component.

## 6. Pay Sensitivity

A study by Jensen and Meckling [4] demonstrated the importance of aligning CEO pay with company performance. They documented that an executive with less than sole ownership of the firm have an incentive to take actions that reduce firm value. For example, a manager who owns two percent of the company stock receives a 100 percent benefit from the consumption of a dollar of perks but it costs the executive only two percent. Companies seem to incorporate this notion into their compensation structure with the use of long-term executive stock options attempting to motivate the CEO to behave as an owner would. Another study by Leonard [5] found that long-term incentive plans are associated with greater increases in ROE than in those firms without long-term incentive plans.

A very recent paper by Jensen and Murphy [6] presented the idea that the compensation of the top executives of most public companies is virtually independent of performance of the firm. They proposed that on average, corporate America pays its most important leaders like bureaucrats. Some found that the pay performance relationship is getting worse over time. The percentage of stock ownership by CEOs in large public companies was 10 fold greater in the 1930s than in the 1980s. Even over the last 15 years, CEO holdings as a percentage of corporate value have declined [3].

In another study performed by Jensen and Murphy [7] they estimated that CEO pay increased by $\$ 3.25$ for every $\$ 1000$ increase in shareholder wealth for a period from 1974-1986. They concluded that executive pay was insensitive to shareholder wealth. In a similar study [8] CEO pay sensitivity to company performance was tested accounting for firm variance. It found a sensitivity of $\$ 14.52$ per $\$ 1,000$ change in shareholder wealth. This study found a much higher estimate of pay performance than the prior study done by Jensen and M urphy.

A study [9] in 1998 reported statistics that signaled CEO pay was being driven more by company performance than past studies. It found that 95 percent of the estimated 1996 pay-performance sensitivity for CEOs in manufacturing companies reflected a 64 percent change in the value of existing grants of stock options and a change of 31 percent in existing stock, indicating that CEO compensation appears to be driven more by firm performance. There has also been a major increase in the use of executive stock options in the 1980s and 1990s. The exercise value of stock options has increased from nearly zero to over $\$ 7$ million in 2000 [8]. Base salaries composed 38 percent of total CEO compensation in 1992 but declined to 17 percent by the year 2000.

## 7. CEO Pay and Corporate Governance

When corporate governance of a company is weak it appears, according to the literature, that managers have a greater influence on the amount and composition of their own compensation. Because of this, executives can be overpaid and be protected from poor performance and, thereby, diminish the relationship between executive pay and the performance of the firm [10-12].

Governance failures at well-known firms have caused many to conclude that the process for setting CEO pay is broken. It is argued that CEOs are overpaid because of their influence over the board of directors. The board should be monitoring top managers on the shareholders' behalf, and this same board has significant influence over the committee that sets CEO compensation. This theory
[11] states that independent directors and consultants hired to advise the board have relatively little interest in safeguarding shareholder interests. With this backdrop, CEOs can effectively set their own pay and therefore can seriously distort the CEO compensation contract.

The empirical evidence on governance in relation to executive pay is mixed, however. Some conclude that corporate governance in United States firms works well and that the problems with CEO pay have not eliminated the advantages offered by the U.S. system. According to these studies, executive compensation levels are mostly consistent with good corporate governance and any distortions result from the perceived impact of accounting and tax rules, and any problem with pay is peculiar to an individual company and is not a general problem [13, 14].

Other academics found when executives are also members of the compensation committee, the level of compensation for CEOs is directly related to the number of executives serving as committee members [15]. On the other hand, one study [16] compared the pay of 50 CEOs who sat on their compensation committees to the CEO pay of a control sample and found that the CEOs who sat on their own committees actually received less overall compensation and had very high stock ownership. These committees were actually doing more, according to the study, to link executive pay to performance than the control sample. Another study [17] presented analysis of only a weak empirical relation between of firm internal governance and the level and structure of CEO pay.

## 8. Model

To test the relation between CEO pay and company performance, I analyze the level of CEO pay to firm performance using the following model.
CEO Pay =f (Tenure, Beta, Employees, ROE)

CEO Pay is the log of the total compensation of the CEO. Beta is the risk measure and is measured by the equity beta of the companies in the sample. Employees is the log of employees which equals the total number of employees in each firm in the sample and accounts for the size of each company. ROE is the performance measure of the firm, which is the return on equity, calculated net income divided by book value of equity. The choice of variables is explained below.

The data for the 280 companies (Table 1) in the sample is taken from Forbes magazine and Standard \& Poor's Compustat data. The dependent variable, CEO pay was taken from Forbes article each year called, Special Report CEO Compensation, from 2006-2009. To be included in the study a company must be listed on the New York Stock Exchange, appear in Forbes and in Compustat from 20062009. Total compensation for each CEO of the 280 companies in the sample is used as the dependent variable and it includes the following: salary and bonuses; other compensation, such as vested restricted stock grants, and perks; and stock gains, the value realized by exercising stock options, according to Forbes.

CEO tenure is the number of years that the chief executive has served the company as top executive officer and is taken from Forbes magazine. It is used in this study measuring the executive pay and company performance relationship. With time, the abilities of the top executive should improve as well as his or her influence over the board of directors which will work to increase CEO pay [18]. I expect that there is a positive relationship between total CEO compensation and tenure.

Beta is a measure of the degree of market risk or variability in returns on the company's common stock that cannot be eliminated by investors by holding a diversified portfolio. The riskier a firm's business the greater the probability that negative outcomes will result in the CEO being terminated. Because of this, CEOs may be more risk averse in their investment decision making for the firm than well-diversified stockholders of the firm may desire [19]. Pay incentives can encourage CEOs to increase their risk taking with company funds. Therefore, there should be a positive relationship between CEO pay and the company's beta in the sample (more risky investments will increase the firm's equity beta). Beta is calculated for a 5 -year ( 60 -month) time period, ending in the current month.

The most consistent result from many studies of CEO pay is that firm size is positively and significantly related with compensation levels [20]. I expect that size will be a major determinant of the CEO compensation, and I used the log of each firm's number of employees as the size variable.

Agency theory argues that one way to align the interests of managers to the interests of shareholders is to make managers' compensation a function of firm performance [21-23]. I use an accounting-based measure for performance which is return on equity (ROE) and is defined as income before extraordinary items divided by the average book value of common equity.

## 9. Sample Statistics

Table 1 presents descriptive statistics on compensation and the independent variables for the 280 company sample for the years 2006-2009. The median total CEO compensation was $\$ 13.95$ million in 2006 and $\$ 8.03$ million in 2007. CEO total compensation dipped to $\$ 6.13$ million in 2008 and $\$ 5.10$ million in 2009. The total compensation ranged over the study period from $\$ 0$ compensation (American International Group in 2008) to a high of $\$ 321.64$ million in 2006 (Occidental Petroleum). Pay has increased significantly over the past two decades. For instance, one study [17] reported an average cash compensation of $\$ 614,000$ for a sample of 205 firms in the U.S. between 1982 and 1984.

The performance statistics of the firms show that the median of ROE are 16.19 percent, 16.43 percent, 14.70 percent and 11.48 percent in 2006, 2007, 2008 and 2009, respectively, and ranges from -557.1 percent to 254.5 percent. The median number of employees of firms in the sample is $27,070,28,000,28,700$ and 27,650 for 2006, 2007, 2008 and 2009 , respectively, with a high of $21,000,000$ employees at Wal-Mart and a low of 190 employees over the sample period. Average tenure is between six to seven years, and the risk measure, beta, has a median ranging from . 96 to 1.22 for the sample of 280 NYSE companies over the years 20062009.

Table 1:

| Variables | Year | Mean | Median | Minimum | Maximum |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Compensation (in \$millions) | 2006 | \$13.73 | \$7.19 | \$. 10 | \$321.64 |
|  | 2007 | 13.95 | 8.03 | . 10 | 116.89 |
|  | 2008 | 11.22 | 6.13 | 0 | 222.64 |
|  | 2009 | 8.09 | 5.10 | . 08 | 114.30 |
| Tenure | 2006 | 6.7 | 5 | . 5 | 44 |
| Years | 2007 | 6.4 | 4 | . 5 | 45 |
|  | 2008 | 6.9 | 5 | . 5 | 46 |
|  | 2009 | 7.4 | 5 | . 5 | 47 |
| Risk | 2006 | . 96 | . 77 | -. 49 | 9.92 |
| Beta | 2007 | 1.09 | . 98 | . 07 | 13.43 |
|  | 2008 | 1.16 | 1.10 | -. 13 | 8.79 |
|  | 2009 | 1.22 | 1.10 | . 20 | 5.54 |
| Size | 2006 | 59.22 | 27.07 | . 23 | 1900 |
| Employees | 2007 | 60.66 | 28.00 | . 24 | 2100 |
| (in thousands) | 2008 | 61.50 | 28.70 | . 22 | 2100 |
|  | 2009 | 59.93 | 27.65 | . 19 | 2100 |
| Performance | 2006 | 18.0\% | 16.2\% | -329.9\% | 121.2\% |
| Return on Equity | 2007 | 19.2 | 16.4 | -90.7 | 254.5 |
|  | 2008 | 8.6 | 14.7 | -557.1 | 129.7 |
|  | 2009 | 11.8 | 11.5 | -155.9 | 100.6 |

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## 10. Results and Discussion

The regression results are shown in Table 2. The reported t-statistics for the independent variables are positive and significant for Tenure, Employees and ROE. It is apparent from the results that the size of the firm has the most impact on the compensation of the firm's chief executive officer. The link between size and compensation plays into the idea that corporate America pays its top executive leaders like bureaucrats using size as the determining factor [6]. On the other hand, the larger the firm the more complex it will be to operate which takes a skill set that may not be available to most managers. Tenure appears to be the next most important variable implying that either the CEO acquires more knowledge and expertise over time in the position or he or she attains more power over the compensation committee that decides the level of CEO pay. It is possibly a combination of both. Beta is not significant and has a negative sign which is at odds with the hypothesis that the more risk taken by the CEO than the larger his compensation. The company performance variable, ROE, has a positive and significant coefficient. This is consistent with the premise that CEO pay is paid in relation to how the company performs.

Table 2: M odel.
Dependent Variable Equals Log of Total CEO Compensation
Adjusted R-Squared $=0.71 \quad N=1120$
$\begin{array}{ccccc}\text { CEO Pay }= & .022 \text { Tenure }-.0018 \text { Beta }+.407 \text { Employees } & +.001 \text { ROE } \\ \text { t-statistics } & * *(11.16) & (-1.10) & * *(30.38) & * *(2.66)\end{array}$
** The variable is significant in explaining total CEO compensation at $95 \%$ level of confidence.
CEO Pay $=\log$ of total CEO compensation.
Tenure = years as CEO for each firm.
Beta =Covariance of stock's return / Variance of market's returns (risk variable).
Employees = log of employees in each firm (size variable).
ROE =return on equity (performance variable).

## 11. Conclusion

This paper tests the relationship of CEO total compensation and company performance for 280 firms listed on the New York Stock Exchange for a period from 2006 through 2009. The time frame 2006-2009 is after the adoption of the Sarbanes Oxley Act and after the approval of the corporate governance rules affecting executive pay for New York Stock Exchange companies. I find there to be a positive and significant relationship between total CEO pay and firm performance measured by return on equity for the period. The size of the firm appears to be the most significant factor in determining the level of total CEO compensation, according to the results, and the tenure of the chief executive officer is another significant variable.

## Competing Interests

The author declares that he has no competing interests.

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