# The Study of CEO Compensation System in American Health Companies: An Analysis between CEO Compensation, Firm Size, Accounting Performance, and Corporate Governance 

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#### Abstract

This study investigated the CEO Compensation system of the American Health sector. It attested the relationship between the CEO Compensation, the Firm Size, the Accounting Firm Performance, and the Corporate Governance from the period 2005 to the period 2010. The research question for this study was: is there a relationship between the CEO Cash Compensation, the Firm Size, the Accounting Firm Performance, and the Corporate Governance in the American Health Companies?. It was found that, there was a relationship between the CEO Salary, the CEO Bonus, the CEO Total Compensation, the Firm Size, the Accounting Firm Performance, and the Corporate Governance in the American Health Companies.


Index Terms- CEO Compensation, Accounting Performance, Firm Size, Corporate Governance, CEO Power, and Health Compensation.

## 1 Introduction

TThe purpose of this research is to understand in-depth the CEO Compensation system of the American Health companies. In addition, over the past decade, the United States public had raised concerns over the huge bonuses declared to the CEOs by their board of directors. The failure to understand the determinants of the CEO compensation by the public had leaded to blaming the CEOs of rent grabbing; misused of its power towards board; and its monopolization of the compensation system. Thus, these ever growing concerns bring to the foreground conclusion the need to further study in depth at least one important sector of the American economy, namely the Health sector, in terms of the primary relationship and the resulting dynamics between the CEO Compensation, the Firm Size, the Accounting Firm Performance, and the Corporate Governance.

The CEOs and the other executives would like to eliminate the risk exposure in their compensation packages by decoupling their pay from performance and linking it to a more stable factor, the Firm Size. This strategy indeed deviates from obtaining the optimum results from the principal-agent contracting. In general, the past studies had found a strong relationship between the CEO Compensation and the Firm Size but the correlation results were ranged from the nil to the strong positive ratios. The variables used in the past studies as a proxy for the Firm Size were either the Total Sales, the Total Number of Employees, or the Total Assets. Therefore, the Firm Size needs to be studied with the CEO Cash Compensation on an extensive basis such as: using both the Total Sales and the Total Number of Employees, in particular focusing on the American Health companies.
The most researched topic in the executive compensation is between the CEO Compensation and the Firm Performance. Al-
though the executive compensation and the firm performance had been the subject of debate amongst the academic, there was little consensus on the precise nature of the relationship as such, further researched in greater detail need to be conducted to understand in the finer terms the true extent of the relationship between them. As such, this research had unprecedentedly used eight variables to attest with the CEO compensation, that is, the Return on Assets (ROA), the Return on Equity (ROE), the Earnings per Share (EPS), the Cash Flow per Share (CFPS), the Net Profit Margin (NPM), the Book Value per Common Shares Outstanding (BVCSO), and the Market Value per Common Shares Outstanding (MVCSO).

The relationship between the CEO compensation and the Corporate Governance (CEO Power) was not attested extensively in the past, especially in Canada. In fact, only few credible researched papers were available for to study. That is, the CEO Power only had been the subject of the recent focus among the researchers, primarily due to the effect of the researchers failed to find the strong relationship between the CEO Compensation, the Firm Size, and the Firm Performance. The variables used in the past studies as a proxy for the Corporate Governance such as, the CEO Age; the CEO Tenure; and the CEO Tenure, were found to have the weak to the negligible relationship with the CEO Compensation. In addition, the third party data collection, the lower quality of the sampling population focus such as at the industry level, and the use of different statistical methods, all had leaded to the divergency in the results. Therefore, the Corporate Governance needs to be studied with the CEO compensation on an extensive basis such as by using, the CEO Age, the CEO Shares Outstanding, the CEO Share Value, the CEO Tenure, the CEO

Turnover, the Management 5 percent ownership, and the Individuals/Institutions 5 percent ownership.

## 2 LITERATURE REVIEW

### 2.1 CEO COMPENSATION AND FIRM SIZE

Gomez-Mejia and Barkema (1998) defined the relationship as: A positive relationship between the CEO compensation and the firm performance would be consistent with the agency theory, the dominant paradigm in this stream of research. The CEOs cash incentives have a strong relationship with the firm size as the CEOs in larger companies make higher income than the CEOs in the smaller companies. This is supported by Finkelstein and Hambrick (1996) that the firm size is related to the level of executive compensation. According to Tosi and Gomez-Mejia (1994) the measurement of the firm size was the composite score of the standardized values of reported the total sales and the number of employees. Shafer (1998) showed that the pay sensitivity (measured as the dollar change in CEO wealth per dollar change in firm value) falls with the square root of the firm size. That is, the CEO incentives are 10 times higher for a $\$ 10$ billion firm than for a $\$ 100$ million firm.

From the famous meta-analysis conducted by Tosi, Werner, Katz, and Gomez-Mejia (2000) they found that the estimated correlation between the CEO pay and the aggregate firm size factor is .643 , signifying that the firm size accounts for over $40 \%$ of the variance in CEO pay. Similarly, the adjusted composite correlation between the change in the CEO pay and the change in the Firm Size is .225, accounting for about 5\% of the variance in changes in the CEO pay. In addition, they found that the CEOs can exert more influence over the Firm Size than the CEO Performance, and therefore, they would prefer to use the firm size as the criterion for the compensation purposes. Firstly, this is supported by Simmons, \& Wright (1990) that the CEO pay increases considerably following a major acquisition even when the firm performance suffers. Secondly, Kostiuk (1990) argued that the greater the size may be used to legitimize the higher CEO pays by appealing to rationalizations to justify a size premium. Rationalizations may include: the greater organizational complexity; and more CEO human capital required to run the business (Agarwal, 1981). Thirdly, executives are risk averse. They can reduce or eliminate risk exposure in their compensation package by decoupling their pay from performance and linking it to a more stable factor, the firm size (Dyl, 1988; and McEachern, 1975). In addition, according to Gomez-Mejia (1994), a host of structural factors and the pragmatic problems make it difficult for the corporations to effectively control executives, leading to the compensation packages that are more closely tied to the firm size than the performance. According to Sigler (2011), the firm size appears to be the most significant factor in determining the level of the total CEO compensation. His examination was based on the 280 firms listed on the New York Stock Exchange from 2006 to 2009.

There was a substantial evidence that the firm size was a major determinant of the CEO pay Fox (1983). Finkelstein and Hambrick (1989) believed that the bigger firms tend to pay more
because the CEO oversees substantial resources, rather than because of their number of hierarchical pay levels. This theory was explained in other form by Fox (1983) that the CEOs are paid more in the larger firms primarily due to its leadership demand and more hierarchical layers exist in the larger firms. However, the results have varied from nil to strongly positive associations between the CEO compensation and the larger firms (Finkelstein and Hambrick, 1989).

Gomez-Mejia, Tosi, and Hinkin (1987) believed that the firm size was a less risky basis for setting executives' pay than performance, which was subject to many uncontrollable forces outside the managerial sphere of influence. Similarly, McEachern (1975) argued that the CEOs in management-controlled firms will prefer to avoid the risk of tying pay to the performance, therefore, the firm size, which was likely to vary less than performance, will most affect pay. This was supported by Hambrick and Finkelstein (1995) and Gomez-Mejia et al. (1987) that the firm size was related to the total pay in the management-controlled firms but not the owner-controlled firms suggesting that the managerial control was a moderator of the pay-size relationship. In the own-er-controlled firms, the large share of compensation should be contingent on the firm performance than was base salary (Go-mez-Mezia, Tosi, and Hinkin, 1987). Murphy (1985) showed that the holding the value of a firm constant, a firm whose sales grow by 10 percent will increase the salary and bonus of its CEO by between 2 percent and 3 percent. These findings suggested that the size-pay relation is causal. It also suggests that CEOs can increase their pay by increasing the firm-size, even when the increase in size reduces the firm's market value. Prasad (1974) believed that executive salaries appear to be far more closely correlated with the scale of operations of the firm than its profitability. He also believed that the executive compensation was primarily a reward for the past sales performance and was not necessarily an incentive for future sales efforts.

Tosi et al. (2000) believed that the most of the studies conducted by scholars found that the executive pay as a control mechanism are remarkably inconsistent not only with the theory but with each other. This is supported by studies conducted by Belkaoui and Picur (1993), David, Koachhar, and Levitas (1998), and Gray and Cannella (1997) that the correlations between the firm size and the CEO pay are as low as .107, .110, and .170, while studies conducted by Boyd (1994), and Finkelstein and Boyd (1998) reported correlations of .62, .50, and . 42 .

### 2.2 CEO COMPENSATION AND FIRM PERFORMANCE LINKAGE

The CEO cash compensation is generally believed to be weakly related to the firm performance, according to a majority of studies conducted in the United States and the UK. It is believed that the CEO power and weaker governance plays an important role in the weak relationship between the CEO cash compensation and the firm performance. Henderson and Fredrickson (1996) stated that while the CEO total pay may be unrelated to performance, it is related to the organizational complexity that they manage. Likewise, other similar studies conducted by Murphy (1985); Jensen and Murphy (1990); and Joskow and Rose (1994) supported this nature of the relationship.

Jensen and Murphy (1990) argued that incentive alignment as an explanatory agency construct for the CEO pay is weakly supported at best. That is, objective provisions of princip-al-agent contract cannot be comprehensive enough to effectively create a strong direct CEO pay and performance relationship. They found that the pay performance sensitivity for the executives is approximately $\$ 3.25$ per $\$ 1000$ change in the shareholder wealth, the "small for an occupation in which the incentive pay is expected to play an important role". This is supported by legendary work of Tosi, Werner, Katz, and Gomez-Mejia (2000) on pay studies in the form of the meta-analysis that the overall ratio of the change in the CEO pay and change in the financial performance is 0.203 , an accounting for about $4 \%$ of the variance. The estimated true correlation between the CEO pay and the Return on Equity is .212. And the estimated true correlation between the CEO pay and the Total Assets is 0.117 . Thus, these other financial measures account for less than the $2 \%$ of the variance in the CEO pay levels. This weak relationship is explained by Borman \& Motowidlo (1993); and Rosen (1990), who stated that the archival performance data focuses only on a small portion of the CEO's job performance requirements and therefore it is difficult to form an overall conclusion.

According to Jensen and Murphy (1990) it is possible that the CEO bonuses are strongly tied to an unexamined or unobservable measure of the performance. If the bonuses depend on the performance measures observable only to the board of directors and are highly variable, they could provide a significant incentives. One way to detect the existence of such "phantom" performance measures is to examine the magnitude of year-to-year fluctuations in the CEO compensation. The large swings in the CEO pay from year to year were consistent with the existence of an overlooked but important performance measure: small annual changes in the CEO pay suggested that the CEO pay was essentially unrelated to all the relevant performance measures. Furthermore, they argued that although bonuses represent $50 \%$ of the CEO salary, such bonuses were awarded in ways that were not highly sensitive to performance as measured by changes in the market value of the equity, the accounting earnings, or the sales. In addition, they found that, that while more of the variation in the CEO pay could be explained by the changes in the accounting profits than the stock market value, however, the payperformance sensitivity remains insignificant.

Jensen and Murphy (1990) found in their studies that the CEO received an average pay increase of $\$ 31,700$ in years when the shareholders earned the zero return, and received on average an additional $1.35 \Phi$ per $\$ 1,000$ increase in the shareholder's wealth. These estimates are comparable to those of Murphy (1985 and 1986); Coughlan and Schmidt (1985); and Gibbons and Murphy (1990), who found pay-performance elasticity of approximately 0.1 - the salaries and the bonuses increased by about one percent for every ten percent rise in the value of the firm. Additionally, they stated that the average pay increase for the CEO who's shareholders gain $\$ 400$ million was $\$ 37,300$, compared to an average pay increase of $\$ 26,500$ for the CEO who's shareholders lose $\$ 400$ million. Their Forbes study was based on the Executive Compensation Surveys covered from the period 1974 to1986. Jensen and Murphy (1990) provided one explanation for the
small pay-performance sensitivity was that, the boards have fairly good information regarding the managerial activity and therefore the weight on output was small relative to the weight on input.

On the other hand, Jensen and Zimmerman (1985) argued that the evidence was inconsistent with the view that executive compensation is unrelated to the firm performance and that the executive compensation plans enrich managers at the expense of shareholders. This argument was supported by Mehran (1995) reported that the CEO pay structure was positively related to same-year performance. In addition, Gibbons and Murphy (1990) also found in their studies that the CEO salaries and the bonuses were positively and significantly related to the firm performance as measured by the rate of return on common stock. That is, CEO pay changes by about $1.6 \%$ for each $10 \%$ return on the common stock. In addition, they found that the CEO cash compensation was positively related to the firm performance and negatively related to the industry performance, ceteris paribus. Similarly, Antle and Smith (1986) found no relation between the salary and the bonus and the industry returns. Blanchard, Lopez-de-Silanes and Shleifer (1994); and Bertrand and Mullainathan (2001) argued that there was an evidence that CEO cash compensation increases when firm profits rise for reasons that clearly have nothing to do with managers' efforts.

Murphy (1985), and Jensen and Murphy (1990) found a significant relationship between the level of pay (measured by changes in executive wealth) and the performance (measured by changes in firm value). At the same time, Jensen and Murphy (1990) argued that the failure to include the cash performance measure in the pay-performance studies may thus create the impression that the management compensation was unresponsive to the corporate performance. Similarly, Iyengar, Raghavan J. (2000) found that on the average, the level of the CEO cash compensation was positively related to the firms' level of the operating cash flows. On the other hand, Carpenter and Sanders (2002) argued that the CEO's total pay may be unrelated to the performance, but it may related to the organizational complexity that they manage. This argument was supported by Jensen and Murphy (1989) as he provided additional hypothesis in the form of political forces factor in the contracting process which implicitly regulate executive compensation by constraining the type of the contracts that can be written between the management and the shareholders. These political forces, operating in both the political sector and within organizations, appear to be important but were difficult to document because they operate in informal and indirect ways. The public disapproval of high rewards seems to have truncated the upper tail of the earnings distribution of the corporate executives. The equilibrium in the managerial labour market then prohibits the large penalties for the poor performance and as a result the dependence of pay on performance was decreased. Their findings that, the pay-performance relation; the raw variability of the pay changes; and the inflation-adjusted pay levels, have declined substantially since the1930s, was consistent with such implicit regulation.

Mehran (1995) found that the companies in which the CEO compensation was relatively sensitive to the firm performance tend to produce the higher returns for the shareholders
than the companies in which the relationship between the CEO pay and the performance was weak. Lambert and Larcker (1987) and Sloan (1993) found in their empirical studies that there was a positive relation between the CEO compensation and the stock returns. Jensen and Murphy (1990) believed that the cash compensation should be structured to provide big rewards for the outstanding performance and the meaningful penalties for the poor performance. Also, they believed that weak link between the CEO cash compensation and the corporate performance would be less troubling if the CEOs owned a large percentage of corporate equity.

According to McEachern (1975); Allen (1981); Amould (1985); Gomez-Mejia, Tosi, and Hinkin (1987); Dyl (1988); GomezMejia and Tosi (1989); and Kroll, Simmons, and Wright (1989), the relationship between the executive pay and the performance may be stronger in the owner-controlled than in the managementcontrolled firms. Werner and Tosi (1995) showed that the managers in widely held firms are paid more than the managers in the closely held firms through the higher salaries, the higher bonuses, and the higher long-term incentives. Dyl (1988) argued that that there is a downside hedge in the pay of CEOs in managementcontrolled firms, given that it is more strongly related to the firm size, not the performance. He also believed that, the ownercontrolled firms will seek to transfer some of the risks borne to the managers, and this should be reflected in their compensation policies (Antle and Smith, 1986).

### 2.3 CEO COMPENSATION AND CORPORATE GOVERNANCE (CEO POWER)

It is believed that the CEO in the larger firms tend to own less stock and have less compensation-based incentives than the CEOs in the smaller firms. This is supported by Jensen and Murphy (1985) by stating that our all-inclusive estimate of the payperformance sensitivity for the CEOs in the firms in the top half of our sample (ranked by market value) is $\$ 1.85$ per $\$ 1,000$, compared to $\$ 8.05$ per $\$ 1,000$ for the CEOs in the firms in the bottom half of our sample. In addition, they (1990) argued that as a percentage of the total corporate value, the CEO share ownership had never been very high. The median CEO of one of the nation's 250 largest public companies own shares worth just over $\$ 2.4$ million - again, less than $0.07 \%$ of the company's market value. Also, 9 out of 10 CEO own less than $1 \%$ of their company's stock, while fewer than 1 in 20 owns more than $5 \%$ of the company's outstanding shares. Jensen and Murphy (1990) found in their study that the most powerful link between the shareholder wealth and the executive wealth was direct ownership of the shares by the CEO. They found, on average, the CEOs receive about $50 \%$ of their base pay in the form of the bonuses. They argued that most experts assessed the CEO stock ownership in terms of the dollar value of the CEO's holdings or the value of his shares as a percentage of his annual cash compensation. However, they also argued that neither of these measures were relevant in the CEO incentive determination. They believed that the percentage of the company's outstanding shares of the CEO ownership influences the CEO's pay. However, their statistical analysis found no correlation between the CEO stock ownership and pay-for-performance sensitivity in cash compensation. That is, the
board of directors ignore the CEO stock ownership when structuring incentive plans. This is supported by Cyert, Kang, and Kumar (2002) study who found a negative correlation between the equity ownership of the largest shareholder and the amount of the CEO compensation: doubling the percentage ownership of the outside shareholder reduces the non-salary compensation by 12-14 percent. This was supported to the great extent by Murphy and Jensen (1990) who found in their study that there was a small and insignificant positive coefficient of the ownership-interaction variable exist, which implied that the relation between compensation and performance was independent of an executive's stock holdings. The result that the pay-performance relation was not affected by stock ownership seems inconsistent with the agency theory since the optimal compensation contracts that provide incentives for managers to create shareholder wealth will not be independent of their shareholdings. Their study findings were based on the sampling of the 73 manufacturing firms for the 15 years period. Cyert, Kang, and Kumar (2002) also argued that the CEO pay is negatively related to the share ownership of the board's compensation committee; and doubling compensation committee ownership reduces non-salary compensation by 4-5 percent. In addition, many other studies also failed to find any relationship between the firm value and the executives' equity stakes (e.g., Agrawal \& Knoeber 1996, Himmelberg et al. 1999, Demsetz \& Villalonga 2001), primarily due to the equity holdings were the decision of the managers and the boards, none of these correlations can be interpreted as causal. However, these findings were challenged by Mehran (1995) who found a positive relationship between the percentage of total compensation in cash (salary and bonus) and the percentage of shares held by managers. This was supported by Jensen and Murphy (1990) found in their study that changes in both the CEO's pay-related wealth and the value of his stock holdings were positively and statistically related to the changes in the shareholder's wealth, and the CEO turnover probabilities were negatively and significantly related to changes in shareholder wealth. Ungson and Steers (1984) believed that in the firms where the CEO had large shareholdings, long tenure, control of the top management team, or other means, the CEO can largely shape his or her pay. Similarly, Finkelstein and Hambrick (1988), believed that the relative power of the CEO may affect the height of the hurdles that are set to qualify for the contingent pay. In addition, they also believed that the executives who own the significant portions of their firms are likely to control not only the operating decisions but the board decisions as well. As such, the executives would be in a position to essentially set their own compensation. In addition, they believed that the stronger the family's position in the firm, the stronger will be the executive's position, despite the family shareholders may not be as active as the independent directors might be. They also found that the CEO compensation and shareholdings are related in an inverted-U manner, with the compensation highest in situations of moderate the CEO ownership. That is, the point of inflection happened when the CEO shareholdings reached about the 9 percent. Up to that point, increases in the CEO ownership seemed to bring increased salaries, due to increase in the CEO Power and the CEO Tenure for the first 18 years, and beyond that ownership level, the salaries dropped, due to tax preference of incurring the
capital gains over the current income.
Jensen and Murphy (1989) found that the executive in-side-stock ownership can provide incentives, but these holdings are not generally controlled by the corporate board, and the majority of the top executives have the small personal equity ownership. Bertrand and Mullainathan (2000) found that the CEOs in the firms that lacks a 5 percent (or larger) external shareholder tend to receive more luck-based pay - pay associated with the profit increases that are entirely generated by the external factors rather than by managers' efforts. They also found that in the firms lacking large external shareholders, the cash compensation of CEOs is reduced less when their option-based compensation is increased.

Murphy (1986) argued that the CEO tenure had shown to influence the CEO performance pay in prior research. The increased CEO tenure may promote a principal's trust of an agent and the assumption that actions will be taken in the principal's interest. Sigler (2011) argued that the CEO tenure appears to be one of the significant variables in determining the level of the CEO compensation. His examination was based on the 280 firms listed on the New York Stock Exchange for a period from 2006 to 2009.

Finkelstein and Hambrick (1989) believed that the CEO tenure was thought to have a positive link with the compensation, with pay steadily increasing as the CEO gains and solidifies the power over-time. However, in their findings such a pattern was not observed for any of the measures of the CEO compensation. Since a monotonic relationship was not found between the CEO tenure and the CEO pay, the existence of a curvilinear association was investigated. In addition, the average tenure of the CEOs was significantly lower in the externally-controlled firms ( 2.96 years) than the management-controlled firms ( 5.92 years). Thus, they believed that the boards of the externally-controlled firms may not need to pay from the profitability because the CEO tenure was dependent on the owner's satisfaction with the CEO performance. For the total pay, this finding was relatively strong with the inflation adjusted pay starting to decline at about 18 years of tenure. According to them there were two possible explanations for this curvilinear pattern. The first was that the power accrues for a while and then diminishes due to the CEO's reduced mobility in the managerial labor market, or due to his evolution into a figurehead with one or two younger high priced executives who carry the actual weight of the CEO's job. The second possibility was that executive reach a point where they prefer other forms of the compensation over the current cash. This could occur because of the changes in the family and the financial circumstances, or due to a switch to reliance on the stock appreciation and dividends, as the CEO's shareholdings increase over-time. This supposition was supported when the two subsamples were examined ( $\mathrm{p}<0.01$ ) greater shareholdings than a short-tenure low-pay group. Hence, it was not that longertenured CEOs are paid less, but rather that the pay mix shifts from the cash to the stock earnings over-time, supporting the notion that personal circumstances influence pay. They also argued that the longer the CEO's tenure, the more the board will consist of his or her own, often sympathetic appointees. In addition, the management-controlled firms where the CEOs were
relatively powerful, CEO tenure was likely to be important to pay determinants. Despite their detailed findings their study was inconclusive as they failed to derive strong expected correlations among the variables due to the small sample-sized sampling which had affected the results not being representative of the larger population. However, Pfeffer (1981) supported Finkelstein and Hambrick (1989) findings and believed that the creation of a personal mystique which may induce unquestioned deference or loyalty, can be expected to occur when the CEO power becomes institutionalized in the organization. A second source of power that is expected to affect compensation is the executive's shareholdings in the firm.

Deckop (1988) argued that the CEO's age had little effect on the CEO compensation. However, Finkelstein and Hambrick (1998) found an inverted U-shaped relationship between the CEO age and the CEO cash compensation. The cash compensation increased with an age up to a point at 59 years, beyond which real cash earnings decreased. They also believed that this pattern of the earnings over-time is in line with the CEO's need for cash, which tends to drop off as he or she gets older due to no major expenditures to incur such as house and child-rearing expenses.

## 3 RESEARCH METHODOLOGY

This research had adopted the quantitative research method as it is the method to be used for the historical data collection and the descriptive studies. The longitudinal study approach had been selected under the quantitative research methodology to study the corporate financial records from 2005 to 2010. The random sampling method had been selected for this research to obtain the total sampling population of the sixteen companies from the NYSE index.

For the statistical tests, the CEO Compensation was assigned as the dependent variable; the Firm Size was assigned as the control variable and the independent variable; and the CEO Performance and the Corporate Governance had been assigned as independent variables. Each sub-variables of the CEO Compensation had been used separately to attest with all the subindependent variables of the Firm Size, the Firm Performance, and the Corporate Governance. The total of the nine models were created and accordingly attest each of them to address the research question.

The survey method had been adopted as it is the most appropriate approach to collect the historical data. The historical data of the sampled companies had been obtained from the TMX Group Inc. and the CDS Inc. The Inferential statistics-based methodology, which is very instrumental to this quantitative research, had been used to obtain statistical results. The 95 percent confidence level will be assumed for all the research attestations.

## 4 DATA FINDINGS AND CONCLUSIONS

## DATA FINDINGS

### 4.1 CEO COMPENSATION AND FIRM SIZE

Table 1 (Regression Analysis - ANOVA)

|  | Salary | Bonus | Total Compensation |
| :---: | :---: | :---: | :---: |
| Firm Size | $\mathrm{F}(2,97)=65.89$ | $\mathrm{F}(2,97)=4.268$ | $\mathrm{F}(2,99)=19.538$ |
|  | $\mathrm{p}=.000$ | $\mathrm{p}=.017$ | $\mathrm{p}=.000$ |
|  | R2=0.576 | R2 $=0.081$ | R2=0.283 |
| Firm Performance | $\mathrm{F}(8,91)=13.369$ | $\mathrm{F}(8,88)=3.059$ | $\mathrm{F}(8,91)=8.826$ |
|  | $\mathrm{p}=.000$ | $\mathrm{p}=.000$ | $\mathrm{p}=.000$ |
|  | R2=0.540 | R2=0.218 | R2=0.437 |
| Corporate Governance | $\mathrm{F}(7,93)=7.942$ | $F(7,80)=2.134$ | $\mathrm{F}(7,92)=6.715$ |
|  | $\mathrm{p}=.000$ | $\mathrm{p}=.048$ | $\mathrm{p}=.000$ |
|  | R2=0.374 | R2=0.144 | R2=0.338 |

The above ANOVA table 1 results were based on the linear regression testing. It showed that there was a relationship between the CEO Salary, the CEO Bonus, the Total Compensation, the Firm Size, the Firm Performance, and the Corporate Governance. The first model between the CEO Salary and the Firm Size was .576 as such characterized as strong. The second and third models between the CEO Bonus, the Total Compensation, and the Firm Size were .081 and .283 respectively as such characterized as weak. This is perhaps due to very weak influence perhaps of bonus beta and also perhaps negative influence of long-term compensation components of the CEO Compensation, resulted in creating overall weak model. The fourth, fifth, and the sixth models - between the CEO Salary, the CEO Bonus, the Total Compensation, and the Firm Performance, were $.540, .218$, and .437 , respectively as such characterized as weak to good. The Salary and the Total Compensation models were consistent as such, the variables of cash and non-cash components of the CEO Compensation were characterized as good influential factors. Thus, the CEO Contract heavily portioned the variables of the firm performance that affects both the short-term and long-term compensations. On the other hand, the Bonus model illustrated the weak influence due to negative betas of predictor variables of firm performance. Thus, the short-term bonus rewards are not influenced strongly based on current performances rather it included additional criteria such as the organizational management and achievements of strategic objectives. The seventh, eight, and ninth models - between the CEO Salary, the CEO Bonus, the Total Compensation, and the Corporate Governance were $.374, .144$, and .338 respectively as such characterized as weak. The Salary and the Total Compensation models were consistent as such, the variables of cash and non-cash components of the CEO Compensation were
characterized as moderate influential factors. . On the other hand, the Bonus model illustrated the weak influence due to negative betas of predictor variables of Firm Performance.

Table 2 - Correlations (CEO Compensation vs. Firm Size)

|  |  |  |  |
| :--- | :--- | :--- | :--- |
|  | Salary | Bonus | Total Compensation |
| Total Sales | 0.738 | 0.110 | 0.495 |
| Total Employees | 0.612 | 0.269 | 0.473 |

The above table 2 illustrated the correlation results between the three categories of the CEO Compensation and the Firm Size. It showed that there was a strong correlation existed between the CEO Salary, the Total Compensation, the Total Sales, and the Total Employees. On the other hand, the CEO Bonus had weak relationship with the Firm Size. Thus, it signifies that in the American Health companies, the CEO Salary and the long-term benefits are highly correlated to the Firm Size variables such as the Total Sales and the Total Employees. The relationship between the CEO Salary, the Total Sales, and the Total Employees was .738 and .612 respectively that indicated that the Total Sales and the Total Employees were influential factor in determining the CEO Salary and the Total Compensation. However, the relationship between the CEO Bonus, the Total Sales, and the Total Employees was .110 and .269 respectively which indicated that the level of the Total Sales and the Total Employees were low influential factor in determining he CEO Bonus. Likewise, the relationship between the CEO Total Compensation, the Total Sales, and the Total Employees was .495 and .473 respectively which also indicated that the level of the Total Sales and the Total Employees were influential factor in determining the CEO Total Compensation. In addition, it showed that the cash and non-cash components of the CEO compensation was equally influenced by the variables of the Firm Size.

### 4.2 CEO COMPENSATION AND FIRM PERFORMANCE

Table 3 - Correlations (CEO Compensation vs. Firm Performance)

|  | Salary | Bonus | Total <br> Compensation |
| :--- | :--- | :--- | :--- |
| Return on Assets | 0.289 | 0.098 | 0.243 |
| Return on Equity | 0.088 | -0.096 | 0.109 |
| Earnings per Share | 0.508 | 0.180 | 0.507 |
| Cash Flow per Share | -0.154 | -0.195 | -0.183 |
| Net Profit Margin | 0.361 | -0.111 | 0.266 |
| Common Stock <br> Outstanding | 0.575 | 0.040 | 0.413 |
| Book Value of <br> Common Stock | -0.082 | 0.131 | -0.057 |
| Market Value of <br> Common Stock | 0.407 | 0.084 | 0.317 |

The above Table 3 illustrated the correlation results between the three categories of the CEO Compensation and the Firm Performance. It showed that there was a weak positive correlation existed between the CEO Salary, the CEO Bonus, the CEO Total

Compensation, the Return on Assets (ROA), the Return on Equity (ROE), and the Net Profit Margin (NPM). It showed that there was a weak to good positive relationship between the CEO Salary, the CEO Bonus, the CEO Total Compensation, the Earnings Per Share, and the Common Shares Outstanding. It showed that there was a weak to good mixed relationship between the CEO Salary, the CEO Bonus, the CEO Total Compensation, the Cash Flow Per Share, the Book Value Per Common Share Outstanding, and the Market Value of Per Common Share Outstanding. Thus, it signifies that the in the American Health companies, among the balance sheets involved items such as the Return on Assets, the Return on Equity, and the Cash Flow Per Share , the influence to any component of the CEO Compensation was characterized as weak, perhaps due to the CEO Compensation contract gives less importance to the assets and the related returns. In addition, the Earnings Per Share, the Net Profit Margin, the Common Shares Outstanding, and the Market Value Per Common Share Outstanding were the four major determinants of the CEO Compensation signifying, perhaps the effect of additional shares and outstanding in the market and the effect of strong earnings and positive market reactions.

### 4.3 CEO COMPENSATION AND CORPORATE GOVERNANCE

Table 4 - Correlations (CEO Cash Compensation vs. Corporate Governance)

|  | Salary | Bonus | Total Compensation |
| :--- | :--- | :--- | :--- |
| CEO Age | .068 | -.114 | .--077 |
| CEO Shares <br> Outstanding | .136 | .149 | .213 |
| CEO Share <br> Value | .236 | .072 | .277 |
| CEO Tenure | -.086 | -.113 | -.252 |
| CEO Turnover | -.088 | -.007 | .100 |
| MGMT. 5\% <br> Ownership | -.505 | .255 | -.457 |
| INDV./INST. 5\% <br> Ownership | .195 | .048 | -.158 |

The above table 4 illustrated the correlation results between the three categories of the CEO Compensation and the CEO Corporate Governance. It showed that there was a weak to strong mixed (negative and positive) correlation existed between the CEO Salary, the CEO Age, the CEO Shares Outstanding, the CEO Share Value, the CEO Tenure, the CEO Turnover, the 5 percent Management Ownership, and the 5 percent Individuals/Institutions Ownership. Thus, it signifies that in the American Health companies, the correlations between the CEO Salary and the Corporate Governance were $.068, .136, .236,-.086,-.088$, .505 , and .195 , respectively. The most relevant ratio was found to be the correlation between the CEO Compensation and the Management 5 percent Ownership. This important negative relationship between them may perhaps due to effect of the Health industry compensation effect as under management ownership,
most of the CEOs are rewarded based on the scientific advancements such as the patent approval, the FDA successful filings, progression in research projects, and the organizational management. The correlations between the CEO Bonus and the Corporate Governance were -.114, .149, .072, -.113, -.007, -.255, and -.048, respectively. That is, the correlations between the CEO Bonus, the CEO Age, and the CEO Share Outstanding were found to be weakly positive. On the other hand, the correlations between the CEO Tenure, the CEO Turnover, the 5 percent Management Ownership, and the 5 percent Individuals/Institutions Ownership were found to have a weak negative relationship. Thus, overall, it signifies that there was a weak influence on the CEO bonus determination by the CEO Power. The one reason was perhaps due to lesser influence of the non-accounting performance factors or the CEO contract ignored the Corporate Governance factors. The other reasons may be the board ignored the CEO shares ownership in the company and the market price of the stock as a performance factor. In addition, the board also ignored the impact of the Management-controlled and the Ownercontrolled criteria towards determining the CEO Bonus.

The CEO Age, the CEO Tenure, and the CEO Turnover, had a weak negative correlation with the CEO Bonus signifying that the duration of the service with increased aging had not been appreciated by the Board. The correlations between the CEO Total Compensation and the Corporate Governance were -.077, .213, $.277,-.252, .100,-.457$, and -.158 , respectively. That is, the correlations between the CEO Total Compensation, the CEO Age, the CEO Tenure, and the 5 percent Management Ownership found to be weakly negative. On the other hand, the correlations between the CEO Total Compensation, CEO Shares Outstanding, the CEO Shares, and the CEO Turnover, had weak positive ratios. Thus, it signifies that the CEO Total Compensation which includes the non-cash components, found to be ranged from the strong negative to the weak positive ratios. More importantly, overall, the Corporate Governance had weak influence on the CEO Compensation mainly due to the strong influence of the Firm Size and the Accounting Firm Performance as prime criteria towards determining CEO Compensation.

## 5 CONCLUSION

Overall, there was a relationship existed between the CEO Salary, the CEO Bonus, the Total Compensation, the Firm Size, the Accounting Firm Performance, and the Corporate Governance in the American Health Companies. The correlation between the CEO Salary, the Total Compensation, the Total Sales, and the Total Employees was characterized as strong. The correlation between the CEO Bonus, the Total Sales, and the Total Employees was weak. There was a weak positive correlation existed between the CEO Salary, the CEO Bonus, the CEO Total Compensation, the Return on Assets (ROA), the Return on Equity (ROE), the Cash Flow Per Share (CFPS), the Net Profit Margin (NPM), and the Book Value Per Common Shares Outstanding (BVCSO). However, there was a strong correlation existed between the CEO Salary, the CEO Bonus, the Total Compensation, the Earnings Per Share (EPS), and the Common Shares Outstanding (CSO). In addition, there was a negative correlation between the CEO Salary, the CEO Bonus, the Total Compensation, and the

## Cash Flow Per Share.

It was found that there was a positive correlation existed between the CEO Salary, the CEO Age, the CEO Shares Outstanding, and the CEO Shares. Conversely, there was a weak negative correlation existed between the CEO Salary, the CEO Tenure, the CEO Turnover, and the 5 percent Management Ownership, and the 5 percent Individuals/Institutions Ownership. The correlations between the CEO Bonus, the CEO Age, the CEO Tenure, the CEO Turnover, the Management 5 percent Ownership, and the 5 percent Individuals/Institutions Ownership found to be weakly positive. Conversely, the correlations between the CEO Bonus, the CEO Shares Outstanding, and the CEO Turnover were found to be weakly negative. The correlations between the CEO Total Compensation, the CEO Age, the CEO Tenure, the 5 percent Management Ownership, and the 5 percent Individuals/Institutions Ownership found to be weakly negative ratios. Overall all these relationships were ranged from strong negative to strong positive. Thus, it showed that the Corporate Governance variables were inconsistent and lacks interrelationship between them. As such, the Corporate Governance had a minimum impact on the CEO Compensation despite the CEO Shares ownership. Overall, based on this in-depth research findings and despite the positive impact of the Firm Size and Accounting Firm Performance on CEO Compensation - to fulfil the true understanding of the CEO Compensation, the non-financial performance or qualitative criteria need to be studied between the CEO Compensation, the CEO Contract, the Organizational Management System, and the Company's Research Milestones and achieving Strategic Objectives, need to be further studied in the Health sector companies.

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## 7 APPENDIX A

Operational Hypothesis Statement
H0: There is no relationship between, the CEO Compensation, the Firm Size, the Accounting Firm Performance, and the Corporate Governance in the American Health Companies.
H1: There is a relationship between, the CEO Compensation, the Firm Size, the Accounting Firm Performance, and the Corporate Governance in the American Health Companies.

To address this Operational Hypothesis Statement, the separate model was developed for each dependent variable:

## Firm Size

For Salary: $\quad \mathrm{Y} 1=\mathrm{c}+\mathrm{B} 1 \mathrm{X} 1+\mathrm{B} 2 \mathrm{X} 2+\epsilon$
For Bonus: $\quad Y 2=c+B 1 X 1+B 2 X 2+\epsilon$
(Y1=Salary; Y2=Bonus; $\mathrm{c}=$ constant predictor; B1=influential factor for the Total Sales; B2=influential factor for the Total Number of Employees; and $\epsilon=$ error). (X1=Value of the Total Sales; X2=Value of the Total Number of Employees).

## Firm Performance

For Salary: $\quad Y 3=c+$
B1X1+B2X2+B3X3+B4X4+B5X5+B6X6+B7X7+B8X8 + $\epsilon$
For Bonus: $\quad Y 4=c+$
B1X1+B2X2+B3X3+B4X4+B5X5+B6X6+B7X7+B8X8+ (Y1=Salary; $\mathrm{Y} 2=$ Bonus; $\mathrm{c}=$ constant predictor; B1=influential factor for Return on Assets (ROA); B2=influential factor for Return on Equity (ROE); B3=influential factor for Earnings per Share (EPS); B4=influential factor for Cash Flow per Share (CFPS); B5=influential factor for Net Profit Margin (NPM); B6=influential factor for Common Shares Outstanding (CSO); B7=influential factor for Book Value of Common Shares Outstanding (BVCSO); B8=influential factor for Market Value of Common Share Outstanding (MVCSO);
and $\epsilon=$ error)
Let X1=Value of ROA; X2=Value of ROE; X3=Value of EPS; X4=Value of CFPS; X5=Value of NPM; X6=Value of CSO; X7=Value of BVCSO; B8=Value of MVCSO.

## CEO Power

For Salary: $\quad \mathrm{Y} 5=\mathrm{c}+$ B1X1+B2X2+B3X3+B4X4+B5X5+B6X6+B7X7+ $\epsilon$ For Bonus: $\quad \mathrm{Y} 6=\mathrm{c}+$ B1X1+B2X2+B3X3+B4X4+B5X5+B6X6+B7X7+ $\epsilon$ (Y5=Salary; $\mathrm{Y} 6=$ Bonus; $\mathrm{c}=$ constant predictor; B1=influential factor for the CEO Age; B2=influential factor for the CEO Shares Outstanding; B3=influential factor for CEO Shares Value; B4=influential factor for CEO Tenure; B5=influential factor for CEO Turnover; B6=influential factor for the Management 5 percent Shares Ownership; B7= Individuals/Institutions 5 percent Ownership; and $\epsilon=$ error).
Let X1=Value of CEO Age; X2=Value of CEO Shares Outstanding; X3=Value of CEO Shares Value; $\mathrm{X} 4=$ Value of CEO Tenure; $\mathrm{X} 5=$ Value of CEO Turnover; $\mathrm{X} 6=$ Value of Management 5 percent Shares Ownership; and X7=Value of Individuals/Institutions 5 percent Ownership.

All the six models assumed to have a confidence level (a) of 5 percent.

## 8 APPENDIX B

## American Health Companies

| 1 | Aetna Inc. |
| :--- | :--- |
| 2 | Allergan Inc. |
| 3 | Alliance Health Care Inc. |
| 4 | Barter International Inc. |
| 5 | Becton Dickinson \& Co. |
| 6 | Boston Scientific Corp. |
| 7 | Bristol Myers Squible Co. |
| 8 | Cryolife Inc. |
| 9 | Edwards Lifesciences Corp. |
| 10 | Enzo Biochem Inc. |
| 11 | Five Star Quality Care |
| 12 | Metropolitan Health Networks Inc. |
| 13 | Sunrise Senior Living Inc. |
| 14 | Symmetry Medical Inc. |
| 15 | Tenet Healthcare Corp. |
| 16 | Theragenics Corp. |

