

## ABSTRACT

CHEN, YUANYUAN. Changes in the Compensation Package of the Board of Directors and CEOs after the Corporate Scandals in Late 2001. (Under the direction of Charles R. Knoeber.)

The corporate scandal wave beginning in late 2001 shocked the U.S. corporate system. New rules from both the legislative and regulatory fields were passed in reaction. These rules were intended to induce the board of directors to increase their monitoring role. This thesis hypothesizes that these requirements also induced changes in the compensation packages for both the board of directors and CEOs. For directors, compensation will focus more on the incentive payments, and for CEOs, cash payments will become relatively more important.

Changes in the Compensation Package of the Board of Directors and CEOs after the Corporate  
Scandal in late 2001

by  
Yuanyuan Chen

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APPROVED BY:

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Howard Bondell

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Mark Walker

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Charles R. Knoeber  
Chair of Advisory Committee

## DEDICATION

To my parents----Thank you for everything you have done to love and care for me. I love you.

To my friend Yakun----Thank you for being such a wise friend and all the growth paths we have covered together.

To my current roommate May----Thank you for living your whole life as a wonderful testimony and I appreciate your patience, love and care.

## BIOGRAPHY

Yuanyuan Chen was born in Zunyi, China in February 1986. She obtained her bachelor degree in English Language and Literature with a minor in German in Shanghai International Studies University in year 2008. From year 2008 to 2010 she studied in North Carolina State University and graduated with a master degree in Economics and a minor in Statistics. She is a big fan of travel, classical music and movies. She currently lives in Raleigh and is happy to explore this city.

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## Chapter 1

### Background Introduction

#### 1.1 Background Introduction

The former energy giant Enron filed for bankruptcy in December 2001, and then CFO Andrew Fastow along with several other high level executives were accused of fraud for manipulating off balance sheet accounts to disguise high-risk activities from shareholders and from Enron's own Board of Directors. Enron's accounting firm, Arthur Anderson, LLP, was accused of being complicit and destroying relevant documents to cover up the scandal. Arthur Anderson also eventually failed. In July 2002, WorldCom the former telecommunications giant filed for bankruptcy due to large hidden debts and fraudulent accounting. Several of its high ranking executives were convicted of altering accounting records to hide the debt and misleading investors with a claim of huge profit and financial growth while the company was encountering very serious difficulties.

Besides the two big shocks from Enron and WorldCom, the successive scandals of Adelphia, Tyco, Global Crossing and other companies together generated relentless criticism of U.S. corporate governance failure and engendered a demand for legislative and regulatory changes.

#### 1.2 Introduction of the Sarbanes-Oxley Act and Regulatory Regulations

The Sarbanes-Oxley Act (SOX), also known as the Public Company Accounting Reform and Investor Protection of 2002, was passed by Congress on July 30<sup>th</sup>, 2002 and was intended to reinforce several aspects of corporate internal control and to watch over the financial reporting systems of public traded companies. The SOX Act imposes greater duties on directors. For the board's audit committee, it is even required all members to be outside directors who are independent of any economic relationship with the company. Furthermore, the committee is mandated to hire an outside audit firm. Related Sarbanes-

Oxley Section 404 mandates reports from both the management and the external auditors regarding the company's internal control over financial reporting.<sup>1</sup>

The legislative increase in the directors' duties and responsibility increase their value and to some extent frees them from the executives' influence on their behavior. For example, the board of the Walt Disney Company of the 1990s, while Michael Eisner was the then CEO, was criticized as the worst board in the history of American corporate governance. It had 16 board members in total including 3 high executives of the company. Although each of the other 13 directors worked in a different place, they all bore certain economic relationship with the CEO. For example, one was his personal lawyer, one was the university president for which Eisner was a very generous donor, and one was the architect for some of Disney's projects.<sup>2</sup> Hence, an effective monitoring role for the board of directors was very weak.

Fraudulent use of off-balance sheet instruments was another big issue the SOX Act intended to fix. The off-balance-sheet usually contains asset, debt or financial activity that is not shown on the balance sheet. Usually the legal off-balance-sheet items are classified under the Generally Accepted Accounting Principles (GAAP) and tax laws, however, a fraudulent one could disguise the company's problems and present a positive image to attract potential investors. Enron was not the only company that manipulated these items. In year 2010, Lehman Brothers' bankruptcy also revealed their mis-use of an instrument called "Repo 105". The SOX required a full disclosure of all the off-balance-sheet items as well as required an SEC study and report to test the feasibility of such instruments in the context of accounting principles.<sup>3</sup>

The SOX Act also imposes restrictions on executives' compensation designed to render their incentive income less liquid and their activity more focused on long-term

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<sup>1</sup> See New Center for Data Analysis Report.

<sup>2</sup> Kim A., Kenneth, John R. Nofsinger., 2003. Corporate Governance. Uppt Saddle River, New Jersey , p36.

<sup>3</sup> Report and Recommendations Pursuant to Section 401 (c) of the Sarbanes-Oxley Act of 2002 On Arrangements with Off-Balance Sheet Implications, Special Purpose Entities, and Transparency of Filings by Issuers.

plan. One provision states that if a financial report is restated due to the “misconduct”, any profits from any bonus and stock sales for CEO and CFO will be taken away during the 12 months’ period after the financial report.<sup>4</sup> Due to vagueness of “misconduct” and a more strict internal control, improper actions’ chances of falling into this category are increased. Another provision sets the maximum days to two days instead of the ten days for the executives to inform shareholders of trading company stocks, which also contributes to less liquid executive incentives.

Lastly, criminal penalties for misreporting and retaliation against administration regulators were stated in the SOX provision. Both the Section 802(a) of the SOX, 18 U.S.C. § 1519 and Section 1107 of the SOX 18 U.S.C. § 1513(e) set out penalties for such behavior as fines and up to 20 years’ imprison for misreporting and up to 10 years’ imprison for retaliation.

Along with SOX, regulatory changes were enacted by the New York Stock Exchange and NASDAQ in year 2002. These changes required listed firms to maintain a majority of outside directors on their Boards, where these directors should bear no economic relationships with the company. Moreover, these independent directors were required to meet regularly separate from executives (inside directors). Firms failing to satisfy these new rules would be dropped from the exchanges.

This episode of corporate scandal and political response was cast as a failure of corporate governance and Boards of Directors were castigated for failure to perform their duties to monitor executives within their firms. Both the specific changes to board structure imposed by SOX and the new exchange rules and the spotlight shined on boards can be expected to motivate shareholders to expect more from their Boards. And these expectations should in turn lead to attempts to better motivate directors to perform their monitoring role.

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<sup>4</sup> Holmstrom, Bengt, Steven, Kaplan., 2003. The State of U.S. Corporate Governance: What’s Right and What’s Wrong?, p20.

### 1.3 Hypothesis

The corporate scandals of the early 2000s shined a spotlight on corporate boards of directors leading both to public criticism of their oversight of firm executives and to statutory and regulatory induced changes in board composition. I make two arguments. First, in addition to the political response to the corporate scandals, the compensation of directors will change to better motivate them to perform their duty of monitoring managers. Specifically, director pay should become more performance based or more closely tied to shareholder returns. This should be evidenced in a larger fraction of director pay in the form of company stock or options to buy company stock. Moreover, because this change in director compensation will induce more effort by directors and more risk bearing (both costly to directors), total director compensation should rise as well. Second, because directors increase monitoring activity in response to their stronger incentives, reliance on performance incentives for managers should fall. That is, because managers are better motivated by board oversight, they need less motivation from their own stock and option holdings. As a result, stock and option awards should become a less important component of managerial compensation. Specifically, stock and option awards should shrink as a fraction of CEO pay.

## Chapter 2

### Brief Description of Boards of Directors

The board of directors is a group elected by the shareholders to oversee a firm's management and to ensure that shareholders' interests are pursued by the firm. The board may supervise the executives, especially the CEO, by which they are able to hire, evaluate and even fire the CEO.<sup>5</sup> Moreover, they may override management on both operating and financial decisions. Most common law countries state the powers of the board to be viewed as a whole instead of in individual directors.<sup>6</sup> Among the most

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<sup>5</sup> Kim A., Kenneth, John R. Nofsinger., 2003. Corporate Governance. Uprrt Saddle River, New Jersey , p31.

<sup>6</sup> Breckland Group Holdings Ltd v London and Suffolk Properties [1989] BCLC 100

common board subcommittees are the compensation committee, the audit committee and the nomination committee. The compensation committee is mainly in charge of designing the compensation package for the executives. The audit committee is responsible to review financial statements and to hire an independent audit agency and also review the company's accounting statement objectively. The nomination committee has the commitment to find suitable director candidates in case of board vacancies. The board is composed of several subcommittees and the individual work from each subcommittee will not be implemented before the whole board's approval.

Normally, directors are classified as insiders or outsiders. An inside director is an executive for the company while an outside director doesn't hold position in the company. For most, the position of director itself is not their solely work. Outside directors could be from different fields of work, the university presidents, CEOs from other companies, bankers, lawyers and scientists and so on. Previously, the board size might be as large as 16 members with a majority of them insiders; however, regulation from the scandals strictly requires more outsiders and motivates a smaller board size. According to the Korn/Ferry study, the outside directors now make up for 3/4 of the board members and the board size is typically around 11 people.<sup>7</sup>

Boards have been criticized for failing to exercise their monitoring role by overseeing the management. In part this was due to the CEO's influence, directors' deference and insufficient effort and expertise by board members. In part it was due to an over-size board that induces free riding, as each director tends to let others do it. Too many insiders inhibit outside directors' power, and an insufficient invested interest of the directors in the company fails to align their practice with the shareholders' profit. For example, the 1997 *Business Week* showed that two outside directors from Occidental Petroleum, who had been serving on the board for 14 years, owned only 2,280 and 1,450

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<sup>7</sup> Kim A., Kenneth, John R. Nofsinger., 2003. Corporate Governance. Upprt Saddle River, New Jersey , p36.

shares respectively of the company's stock, while the CEO was approved of a \$95 million's payout.<sup>8</sup>

## Chapter 3

### Data Selection

#### 3.1 Data Description

In order to gain a distinctive insight into the change in the directors' compensation package as a result of the early 2000 corporate scandals, I use dates of year 2000 and 2005 in that 2000 is the year before the series of scandals' broke-out and 2005 is several years after the legislative and regulatory changes motivated by the scandals became effective. The later date should allow time for firms to respond.

Variables needed are pulled out from the Executive Compensation data-set on the WRDS website (Wharton Research Data Service). Since I need the compensation components for directors and CEOs as well as the end of year stock prices for both fiscal years to calculate option values, three data sets are extracted from WRDS. Each data set has a different total number of variables available. After screening out companies with only one year's available data and those with fragmented information of essential variables, including missing key variables for a single year, all variables missing and so on, I match the three sets on the basis of the company name and came to 293 firms in total.

In order to calculate the directors' compensation packages, I need the annual retainer for both years 2000 and 2005, the number of options received in both years, the number of shares received in both years, and the end of year stock prices for both years. The first six variables are available directly from the WRDS. There are four things worthy of mentioning about these six variables. First, all measure the average compensation of independent directors on the board. Independent directors are not employed at the firm they supervise though they might serve as CEOs themselves in some other companies,

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<sup>8</sup> Kim A., Kenneth, John R. Nofsinger., 2003. Corporate Governance. Upprt Saddle River, New Jersey , p37

and they bear no economic relationships with the executives or the firm that they oversee. Part of the regulatory reaction to the early 2000 corporate scandals was rules increasing the number of independent directors on corporate boards. Second, there are 15 firms in total whose annual retainers are zero for both years 2000 and year 2005 as they were shown in the WRDS database. Third, some values for the number of options in the database are shown as a “dot” instead of a specific number, and this situation occurred largely in year 2000. For this part, I replaced the missing value with zero. Last, all values for the retainers, the options and shares are measured in thousands.

The option values, C, were calculated using the Black-Sholes formula

$C = S * N(d1) - K * EXP(-r * t) * N(d2)$  where S is the end of year stock price, K is the strike price for the options (assumed to be the same as the end of year stock price), t is the time until expiration for the options which I assume to be uniformly 7 years, r is the risk free interest rate, d1 and d2 reflect the volatility of the underlying stock price and N is the cumulative standard normal distribution function. For simplicity, the value for stock price volatility was assumed to be identical for each firm and equal to the average volatility for all firms in Execucomp.

The average standard deviation of stock price is set to the uniform value of 24.24% for all firms in both years. Volatility across firms was assumed to be the same in order to minimize data collection and volatility across time was assumed to be the same because of the long duration of the options.

To summarize

Table 1 Black-Scholes Formula

year	C	S	K	t	r	sd	d1	N(d1)	d2	N(d2)
2000				7	0.0612	0.2424	0.988652	0.838583	0.347322	0.635825
2005				7	0.0286	0.2424	0.632829	0.736577	-0.0085	0.496609

Data to calculate CEOs' compensation were drawn in the same manner from the Executive Compensation data-set. Variables needed are the bonuses and salaries received in both years, options granted for both years, restricted stock grants and end of the year stock prices for both years. Moreover, the C values from the Black-Scholes calculation are used and they are constructed identically to those used in calculating directors' compensations.

### 3.2 Directors' Compensation Analysis

For each director, total compensation equals the retainer and the incentive pay added together. The incentive pay is composed of the value of options granted plus the value of shares granted. The shares value is calculated as the total number of shares granted times the end of year stock price. The value of options granted is calculated as the number of options granted times the C value from the Black-Scholes formula. All values in the following tables are in thousands of dollars.

Table 2: Total compensation granted in 2000 and 2005

	year 2000	year 2005	increase amount	increase rate
Average TTL Comp.	87.56281948	112.2104274	24.64760796	28.15%
Median	51.9096249	90.86713286	38.95750796	75.05%
Highest Value	1099.628063	807.5	-292.128063	
Lowest value	4	11.84951	7.84951	
Ttest for difference in means of total compensation for directors, between 2005 and 2000: t= 2.64 Pr<0.01				

Although the highest value in year 2005 is smaller than the counterpart in year 2000, the average total compensation was substantially larger in year 2005 with the increase rate of around 28%. The chart below plots the cumulative distribution of total director compensation for the year 2000 and 2005. Worthy of mentioning is that the two largest



values for director compensation in year 2000 are \$1,099,628 and \$923,972. However, in year 2005 the number dropped sharply down to \$299,0895 and \$129,3395. This could be for various reasons, for example, a sudden drop of the profits, a change of policy and so on. Nonetheless, most firms paid their directors substantially more in 2005 than in 2000. In conclusion, the 293 firms indicate an increase in the total compensation for directors.

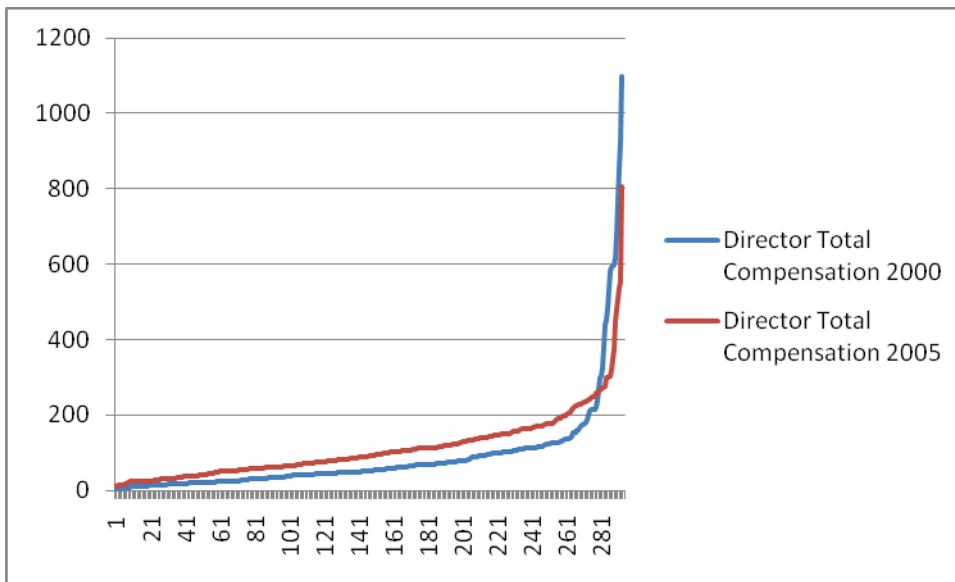


Figure1: Total Compensation for Directors in 2000 and 2005

Table3: Retainers granted in 2000 and in 2005

	year 2000	year 2005	increase amount	increase rate
average retainers	21.3055802	35.66494198	14.3593617	67.40%
Median	20	30	10	50%
Highest Value	100	125		
Lowest Value	0	0		
Lowest not zero value	4	5		
Retainer ratio	0.483	0.475	- 0.008	-1.70%
Median Retainer Ratio	0.411215	0.380469	-0.03075	-7.48%

Table 3 Continued

Ttest for difference in means of retainer values and ratios for directors between 2005 and 2000:  
 -Retainer Values:  $t=10.02$   $Pr<0.0001$   
 -Retainer Ratio:  $t=3.12$   $Pr<0.002$

Retainers are the amounts paid to directors as cash incomes. The average retainer in 2005 is greater than the one in year 2000. More firms paid their directors with retainers greater than or equal to \$100,000, and more payments fall in the range between \$50,000 to \$100,000. There were 6 firms that paid more than or equal to \$100,000 in year 2005 while there was only one that paid more than or equal to \$100,000, and there were 75 firms in 2005 that paid between \$50,000-\$100,000 while the number was only 14 in year 2000. While the value of the retainer increased in 2005, its ratio to total compensation decreased. The average shares of total compensation due to the retainer fell from 48.3% in 2000 to 47.5% in 2005. Median share fell from 41.1% to 38%. In year 2000, there were 125 firms above the mean while in year 2005 the number was 98. Moreover, 30 firms that paid only retainers in year 2000 decreased this proportion to below 1, among which 24 of them decreased this amount to below 0.5.

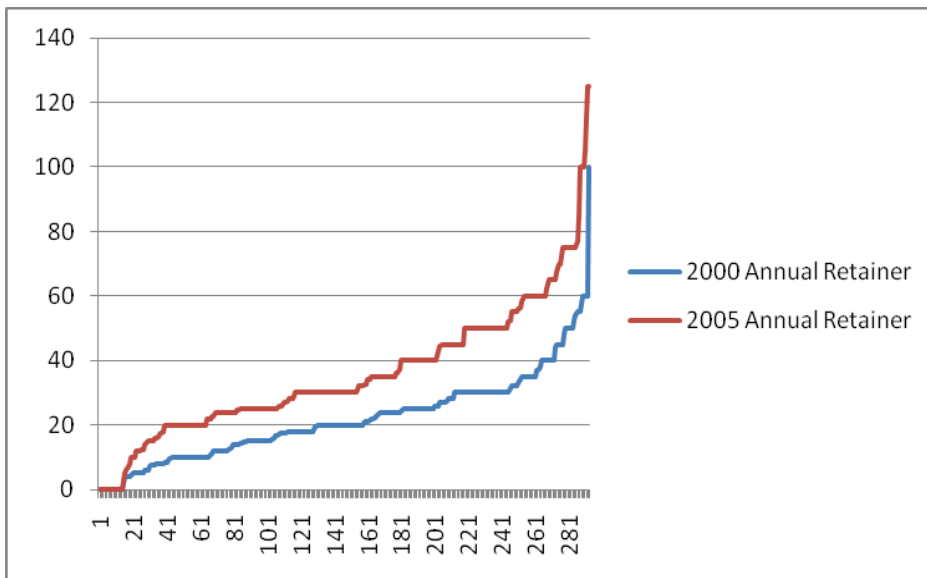


Figure2: Director Annual Retainer in 2000 and 2005

Table 4. The incentive payments in year 2000 and 2005

	year 2000	year 2005	increase amount	increase rate
average incentives	65.77515737	76.54548546	10.7703281	16.37%
Median	31.42552404	59.15	27.72447596	88.22%
Highest Value	1075.628063	757.5		
Lowest Value	0	0		
Lowest not zero value	0.976975786	1.782377625		
ave incentive ratio	0.509600911	0.564728846	0.055127935	10.82%
Ratio t-test to testify 2005>2000 ratio	Student's t t 3.539493 Pr >  t  0.0005			
Ttest for difference in means of incentive payment values and ratios between 2005 and 2000: Incentive values: t=1.13 Pr=0.26 Incentive ratios: t =3.12 Pr < 0.0020				

Table 4 shows an increase in incentive pay to directors in year 2005. Several noticeable things regarding the incentive payments are shown here: First, though the average rate of increase is comparatively smaller than for retainer payments, the absolute increase in incentive pay is large. This part is composed of the options payment as well as the shares payment. The options payment actually decreased by 26.87% while the shares payment increased by 336.13% (this can be seen in table 5, table 6 and table7). The very big increase in shares payment did not cause the same big increase in incentive payments because firms began to shift their emphasis to shares payment from options payment after the scandal wave. Almost a majority of firms increased from a very small, even zero amount of previous shares payments. Still the options payment remained most important. Second, the median increase in incentive payments for 2005 was very large with an increase of 88.22%, even larger than the increase of 75.05% for total compensation. Incentive pay seems to have become more important for directors. Lastly, for the highest value for incentive pay in 2000, the firm of the Adobe Systems Inc. decreased its incentive payment to only \$269,089 in year 2005. Much of this was due to the fact that the end-of-year stock price was almost half the amount in year 2005 as it was in year 2000,

which was \$63.3750 and \$32.61 respectively. Below are the curves indicating the payment in both years:

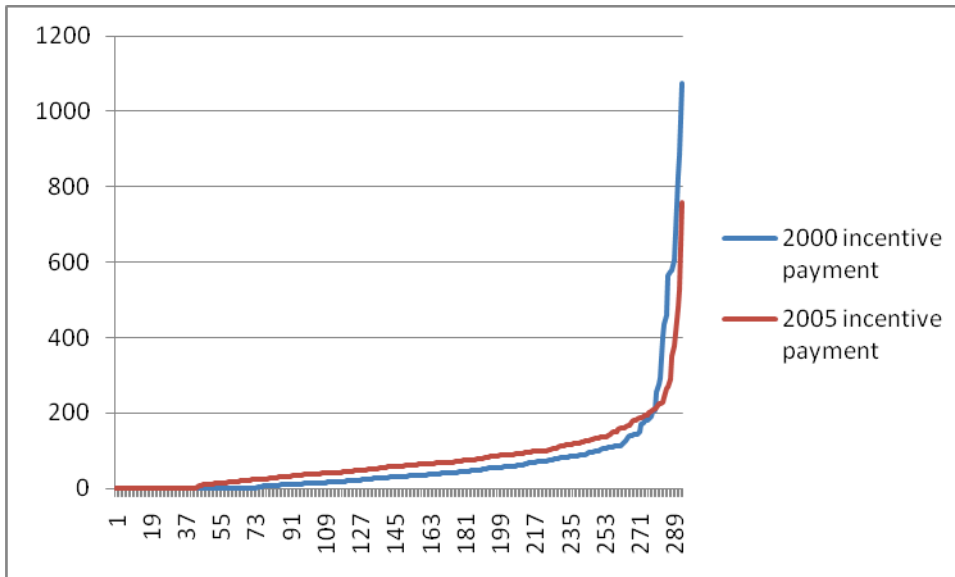


Figure 3: Director Incentive Payments for year 2000 and 2005

More companies granted incentive payments in 2005. 71 companies granted no incentive payments in 2000, but this shrank to 38 in 2005. Moreover, in year 2005, there were 4 more companies paying incentives between \$200,000 to \$800,000; 27 companies, exactly twice of 2000 number, paying between \$100,000 to \$200,000; and 2 more companies paying above \$0 but less than \$100,000. The relatively large number of companies with no incentive payment made the distribution skewed which is inconsistent with the distributional assumption for a t-test for a difference in means between 2000 and 2005. The appendix table addresses this difficulty by providing a similar test using logged values of incentive payments.

Table 5: Options granted in year 2000 and 2005

Annual Director Options (\$Thous)	year 2000	year 2005	increase amount	increase rate
average Options	57.9394565	42.37176425	15.56769225	-26.87%
Median Option Values	16.97243493	11.01900173	-5.9534332	-35%
Highest Value	1075.62806	527.847832		
Lowest Value	0	0		
Lowest not zero value	0.976975786	1.055979524		
Ave Option Ratio <sup>1</sup>	0.559	0.436		
Median Option Ratio <sup>1</sup>	0.8	0.248	-0.552	-69%
Ave Option Ratio <sup>2</sup>	0.397999863	0.30260533	0.095394534	-23.97%
MEDI Option Ratio <sup>2</sup>	0.399688425	0.141861234	0.257827191	-64.50%
T test for difference in means of option payment values and ratios between 2000 and 2005				
Option Payment Value: t=3.78 Pr < 0.0002				
Option Ratio <sup>1</sup> : t=4.43 Pr<0.001				
Option Rate <sup>2</sup> : t=4.82 Pr <0.0001				

1. The options' proportions from the total incentive payment.
2. The options' proportions from the total compensation payment.

The incentive payment is composed of two parts: the option payment and the share payment. The option payment value is determined from two parts, the number of options granted and the value of an option. The average option payment decreased by 26.97% in year 2005. In year 2000, there were 10 firms that paid more than \$400,000 for directors' option payment while the number shrinks to only 2 in year 2005. Likewise, in year 2000 there were 114 firms that didn't pay any options to directors while in year 2005 the number rose to 137. Moreover, 5 of the firms that had the largest option payment in 2000 decreased the option payments in 2005.

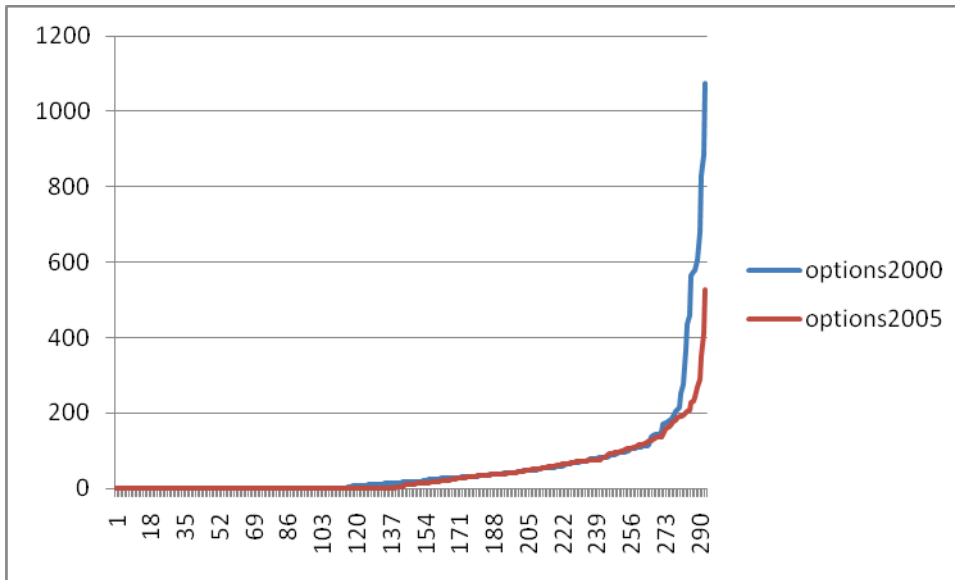


Figure 4. Option values for directors in year 2000 and 2005

The lower value of options payment in 2005 was due both to fewer option grants and to a lower value per option.

Table 6: Options and C-value Comparison

	Year 2000	Year 2005	increase amount	increase rate
Average Options Number	3.924925	3.837433	-0.087492	-2.23%
Median Options Number	2	1.159	-0.841	-42.05%
Average C Value	14.42164	13.4733	-0.94834	-6.58%
Median C Value	12.06634	11.89242	-0.17392	-1.44%

Thus, the decrease in total option payment is not merely result of a lower stock price, which induces a smaller C-value. It is also from the change in corporate governance policy, i.e. a smaller number of options given out to directors. Though the average rate of decrease is larger for the C-value than for the number of options granted, the decrease rate for the median number of options is much larger than the one for C-values.

Table 7: Share Values granted in year 2000 and 2005

Annual Director Share Values (\$Thous)	year 2000	year 2005	increase amount	increase rate
average Share Values	7.83570086	34.1737212	26.3380203	336.13%
Median Share Values	0	10.68912	10.68912	N/A
Highest Value	110.344938	757.5		
Lowest Value	0	0		
Lowest not zero value	1.210375	6.388905		
Ave Value Ratio <sup>1</sup>	0.19840307	0.49276807	0.294365	148.37%
Median Value Ratio <sup>1</sup>	0	0.46765281	0.46765281	NA
Ave Value Ration <sup>2</sup>	0.11160105	0.26212352	0.15052247	134.88%
MEDI Value Ration <sup>2</sup>	0	0.157455	0.157455	NA
Ttest for difference in means of 2005 and 2000:				
Share Payments: t= 9.26 Pr<0.001				
Share Rates <sup>2</sup> Mean test: t=9.66 Pr<0.0001				

1. The share values' proportions from the total incentive payment.
2. The share values' proportions from the total compensation payment.

Table 7 shows that the value of shares granted in year 2005 increased greatly. A closer look at the table for the value of shares granted to directors shows that the median value for year 2000 is actually zero while the median value is \$10,689 for year 2005. Many more companies in year 2000 than in year 2005 gave no shares to directors. Specifically, there were 202 firms out of 293 firms in year 2000 that didn't grant any stock shares to directors while the number decreased to 136 in year 2005; Only one firm in year 2000 granted to directors shares valued of greater than \$100,000 and this number reached to 24 in year 2005. The highest value in year 2005 is \$757,500 for Nabors Industries Ltd, while the second largest value in 2005 is \$ 287,920 for BJ Services Co. There is a big difference between these two values. However, I didn't screen out the first value. A closer analysis of the compensation adjustment for Nabors Industries Ltd. for both years finds that in year 2000 the company paid no shares to directors and the option values constitute the sole

component for the incentive part, however in 2005, the directors' incentive compensation is totally made up from the share value and the option value paid was zero. Very possibly there's an intermediate process that the incentives shift from the options to shares instead of an abrupt leap. This large number, instead of being an unwanted outlier, may actually be the pioneer representative of the trend for most of the companies. , the whole trend for the companies will be clearly shown up in the curves below without the interference of this big number.

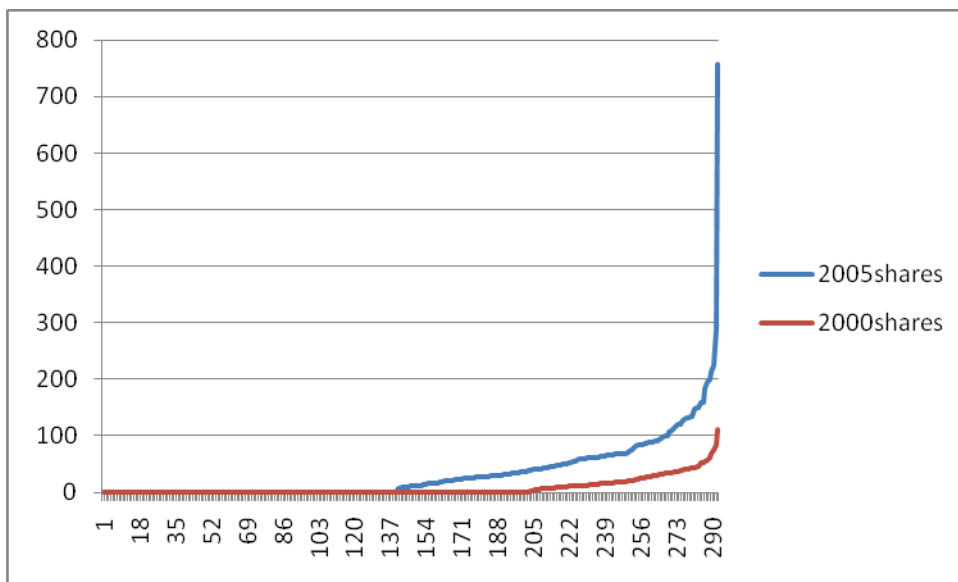


Figure 5: Share values for directors in year 2000 and 2005

Since shares values are influenced by the numbers of shares granted and the end-of-year stock prices of the given year, below is a glimpse of the change in both variables .

Table 8: Shares and Stock Price Comparison

	Year 2000	Year 2005	increase amount	increase rate
Average Shares Number	0.280382253	1.018532423	0.738150171	263.27%
Median Shares Number	0	0.262	0.262	N/A
Average Stock Price	33.98838532	40.8195256	6.831140273	20.10%
Median Stock Price	28.4375	36.03	7.5925	26.70%



Both the number of shares granted and the value per share contribute to the larger value of stock grants in year 2005.

To summarize, director pay increased substantially between 2000 and 2005. The largest increase was in incentive pay, although the mix of incentive pay changed. Pay in option grants fell while pay in stock grants rose even more.

### 3.3 CEOs' Compensation Analysis

Table 9: Total compensation for CEOs in year 2000 and 2005

The Total Compensation	year 2000	year 2005	increase amount	increase rate
Average	4093.262918	5056.321088	963.0581699	23.53%
Median	1831.412834	3024.898287	1193.485453	65.17%
Highest Value	90743.71917	55614.67		
Lowest value	0.001	222.6808		
2ND Lowest <sup>1</sup>	129.6	355.042		
Ttest for difference in means of total compensation for CEOs between 2005 and 2000: t= 1.48 Pr=0.138				

The reason for there's being a 2<sup>nd</sup> lowest value is because the very small lowest value of year 2000 is merely 0.001, in order to adjust for a more fair analysis; I also take into consideration the 2<sup>nd</sup> lowest value.

Total compensation for CEOs constitutes cash payments and incentive payments. The cash payments include the salary and bonus, and the salary is counted as the retainer part. The bonus is a short-term incentive, often determined based on the accounting measures of firm performance. For CEOs, the bonus is decided by directors instead of by fixed rules. The incentive payment is as well composed of options payments and shares payment, while the calculations for the options payment values are the same as for the directors', i.e., the number of options times the C values. The shares payment part is the restricted stock grant taken directly from the WRDS website.

The average total compensation for CEOs increased by 23.53% in year 2005 while the median increased by 65.7%. The top two highest compensations in year 2000 are \$90,743,719 and \$73,646,920, which were both bigger than the biggest one in year 2005, which is \$55,614,670. Worthy of mention is that in 2000 the firm with the largest total compensation was the Nabors Industries Ltd., the one that paid the most shares to directors in 2005. The total payment to the CEO in 2005 for Nabors Industries decreased to \$51,678,030. Since one responsibility for directors is to work out the payment package for CEOs, the sudden decrease for the CEO's payment in Nabors Industries in year 2005 might be from its directors' stricter fulfillment of their responsibility with their benefits more closely linked to the company's long-term performance. Moreover, the lowest value for year 2000 came from the Standex International Corp. In year 2000, this company didn't pay any incentive payments to either its CEO or directors. In year 2005, the company began to give shares to both the CEO and directors but no options. This might be due to the company beginning to implement its "Focused Diversity" growth strategy in 2001 to focus on businesses with the greatest potential.

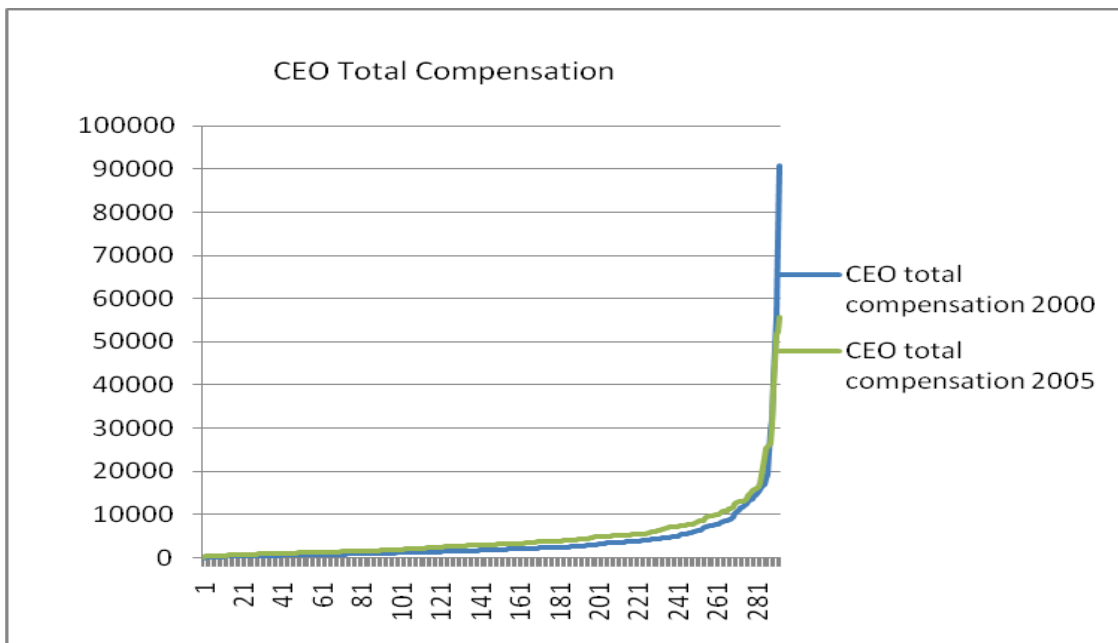


Figure 6: Total compensation for CEOs in year 2000 and 2005

Table 10 . Cash payment for CEOs in Year 2000 and 2005

CEO Retainer	year 2000	year 2005	increase amount	increase rate
Average	1046.865198	1871.857229	824.9920307	78.81%
Median	738.095	1377.9	639.805	86.68%
Highest Value	13387.5	22519.6		
Lowest Value	0.001	49.287		
Lowest not zero value	88.332	214.263		
ave retainer ratio	0.493255496	0.535532179		
TTest: for difference in means between 2005 and 2000				
Payment value: t= 10.40 Pr<0.001				
Ratio value: t= 7.655 Pr<0.0001				

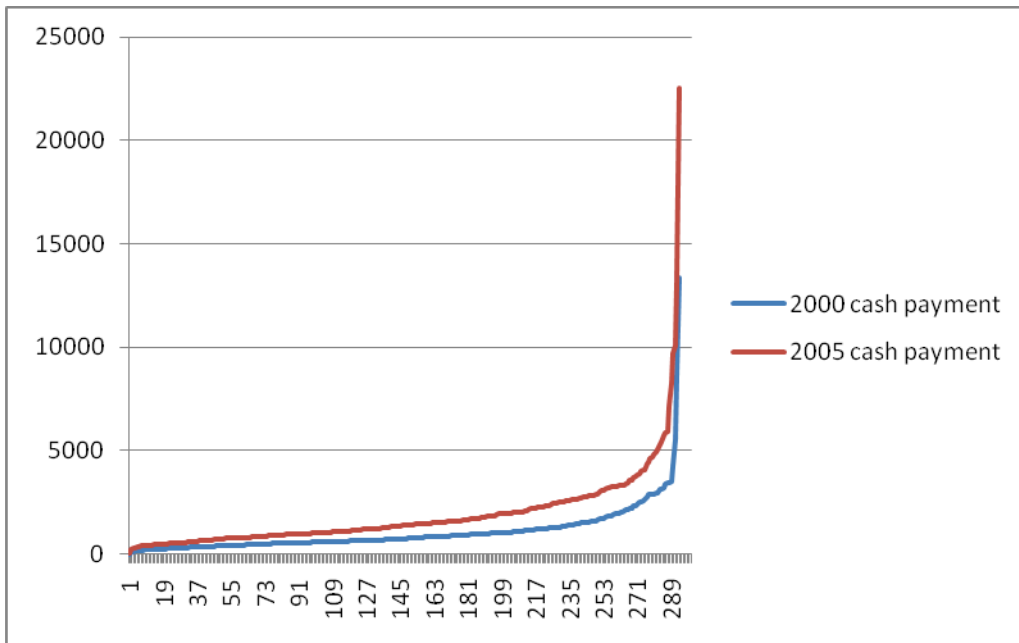


Figure7: Cash payments for CEOs in year 2000 and 2005

Average cash payments to CEOs increased in year 2005 by 78.81%. More companies paid more than \$2,500,000 and less than \$5,000,000 to the CEOs in year 2005 than in year 2000. The median cash payment made to CEOs almost doubled in year 2005 increasing by 86.68% for year 2000. In year 2000, there were only 19 firms that paid their CEOs above \$2500,000 and below \$5000,000 while the number for year 2005 is 52, almost three times as great. Moreover, for the range between \$1000,000 and \$2000,000,

69 firms paid CEOs in this range in year 2000. By 2005 the number increased to 109. In 2000 most firms paid CEOs below \$1000,000: there were 193 firms with payments in this range while in year 2005 the number shrank to only 98. For payment above \$5000,000, there was also a slight increase in year 2005: two more firms paid their CEOs above \$10,000,000 in year 2005 and 7 more in the range between \$5,000,000 and \$10,000,000. Thus, the common cash payment package for CEOs has shifted from below \$1,000,000 to the range between \$1,000,000 and \$5,000,000.

Table 11: Incentive Payments for CEOs in Year 2000 and Year 2005

Incentive Payments	year 2000	year 2005	increase amount	increase rate
Average	3046.39772	3184.463859	138.0661392	4.53%
Median	927.1192576	1455.608391	528.4891334	57.00%
Highest Value	89069.72	50674.67		
Lowest Value	0	0		
Lowest not zero value	5.290626	8.317762		
Average incentive ratio	0.506744504	0.464467821	0.042276683	-8.34%
Ttest for difference in means of incentive payments and ratios between 2000 and 2005 Incentive Payments: t=-1.09 Pr=0.28 Ratios: t=2.27, Pr<0.0241				

The incentive payments for CEOs are made up from the stock options and restricted stock grants. Restricted stock grants have the same value as the market stock price during the time it is granted, but the shares can't be sold until certain requirements are fulfilled. Average incentive pay for CEOs rose 4.53% in 2005 and the median rose 57%, but this increase is a mild one compared to the 78.81% increase for cash payments. The curves below present an almost similar general incentive payment for year 2000 and year 2005 with 3 more companies paying higher payment than the highest value in year 2005. Moreover, the top two incentive payments in year 2000 are almost \$20,000,000 higher than the highest value in year 2005. With an increasing total compensation and an increasing cash payment amount, the roughly constant incentive payment became a smaller portion in the total payment package.

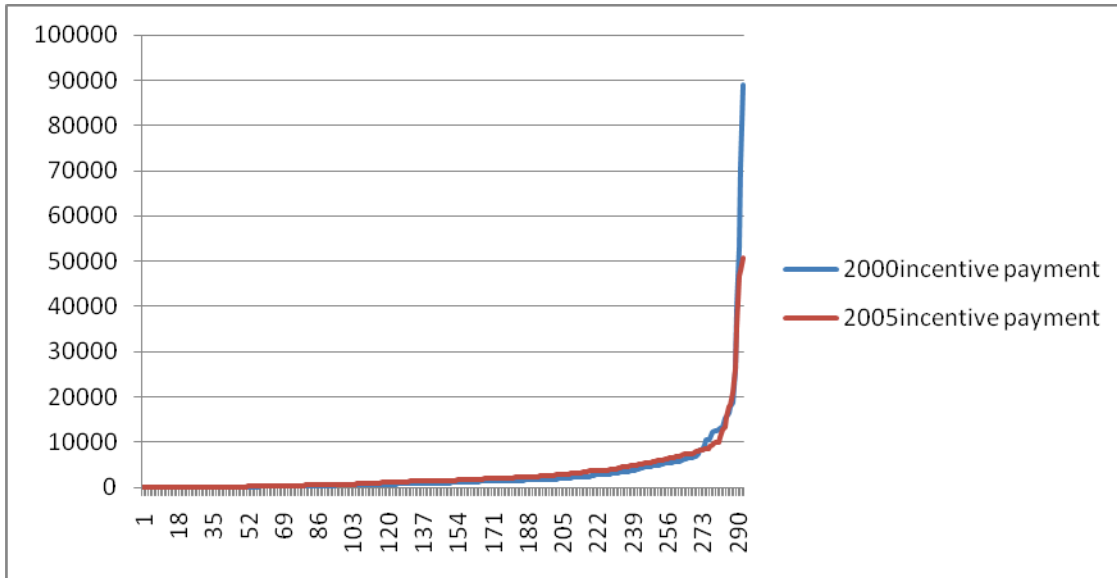


Figure 8: Incentive payments for CEOs in year 2000 and 2005

Table 12. The Option Granted in Year 2000 and 2005

Annual Options (\$Thous)	year 2000	year 2005	increase amount	increase rate
Average	2743.324 843	2058.002743	-685.3220998	-24.98%
Median Option Ratio <sup>1</sup>	816.2680 424	730.3905577	-85.8774846	-11%
Highest	89068.72	44217.24		
Lowest	0	0		
Lowest not zero	5.290626	8.317762		
Ave Option Ratio <sup>1</sup>	0.760020 002	0.57312555	-0.186894452	-25%
Median Option Ratio	1	0.61678181	-0.38321819	-38%
Ave Option Ratio <sup>2</sup>	0.455351	0.304648	-0.1507	-33.10%
Median Option Ratio	0.481533	0.296859	-0.18467	-38.35%
TTest for difference in means of option values and ratios between 2000 and 2005: Option Paymens: test: t=1.64 Pr>0.1023 Option Rate <sup>1</sup> : t=4.43 Pr<0.001 Option Rate <sup>2</sup> : t=8.21 Pr<0.0001				

1. The options' proportions from the total incentive payment.
2. The options' proportions from the total compensation payment.

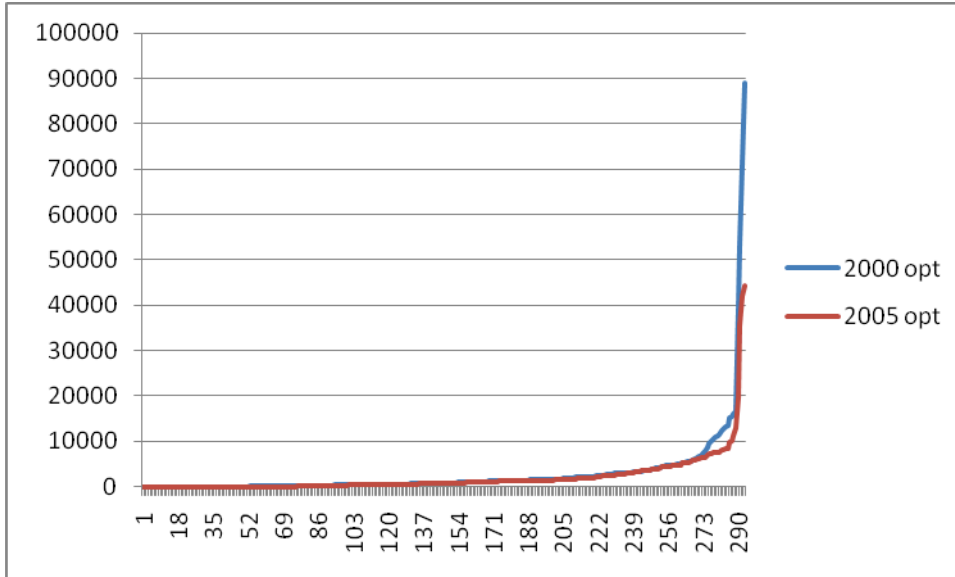


Figure 9: Options payments for CEOs in year 2000 and 2005

Option payments falls in year 2005 though total incentive payments rose slightly. The average option payment in 2005 is around \$685,322 less than in 2000. The median shifted down by 11%. Moreover, the proportion of the option payments in incentive pay decreased by 25%. Since the incentive payments lost weight in the total compensation package, in turn the option payments decreased by 33.1% in the total compensation payment. Specifically, in year 2000, there were 3 firms with option payments higher than \$50,000,000 and the number dropped to zero in 2000; 1 firm paid between \$20,000,000 and \$50,000,000 in year 2000 and in 2005 two more firms' option payments fell into that range; In 2005,9 more firms had option payments between \$10,000,000 and \$20,000,000 than in 2000; for payment value below \$10,000,000 but above \$0, there were 226 firms in year 2000 and 212 in 2005. Moreover, the year 2005 witnessed an increase in the number of firms who decided not to pay any option payment to CEOs. Since the option values are determined by both the option number granted as well as the C-value, below is an analysis of the two individual components:

Table 13: Option Numbers and C Values Comparison

	Year 2000	Year 2005	increase amount	increase rate
Average Options Number	176.9851331	155.5572321	21.42790102	-12.11%
Median Options Number	75	71.186	-3.814	-5.09%
Option Number Ratio	0.314144775	0.231204038	0.082940737	-26.40%
Average C value	14.42164145	13.47329796	0.948343496	-6.58%
Median C value	12.06634045	11.89241958	-0.17392087	-1.44%
C Value Ratio	0.027887727	0.022464336	0.005423391	-19.45%

From the table, though both the number of options issued and the C-values decreased in year 2005, the option numbers decreased more, falling by 26.4%.

The decline in the number of options is the biggest reason for the decreasing value of option payments of 24.98%. Moreover, both the average and median values of options' numbers in year 2005 decreased much more than the C-values. Thus, the decrease in the option payment is not merely a result of lower stock prices in year 2005, the decrease is primarily from a reduced number of the options granted.

Table 14: The Restricted Stock Grants in Year 2000 and 2005

Annual Restricted Stock Grants (\$Thous)	year 2000	year 2005	increase amount	increase rate
Average Value	303.0728771	1126.461116	823.3882389	271.68%
Median Value	0	0	0	NA
Highest	15000	30900.18		
Lowest	0	0		
Lowest not zero	2.899	19.123		
Average Ratio <sup>1</sup>	0.096635	0.293769	0.197134	204.00%

Table14 Continued

Median Ratio	0	0		
Average Ratio <sup>2</sup>	0.051394	0.15982	0.108427	210.97%
Median Ratio	0	0		
T test: for difference in means of stock grants values and ratios between 2005 and 2000				
Stock Grants Payment: t=4.86 Pr<0.0001				
Stock Rate Ratio <sup>1</sup> : t= 8.74 Pr<0.0001				
Stock Rate Ratio <sup>2</sup> : t=8.53 Pr<0.0001				

1. The stock grants' proportions from the total incentive payment.
2. The stock grants' proportions from the total compensation payment.

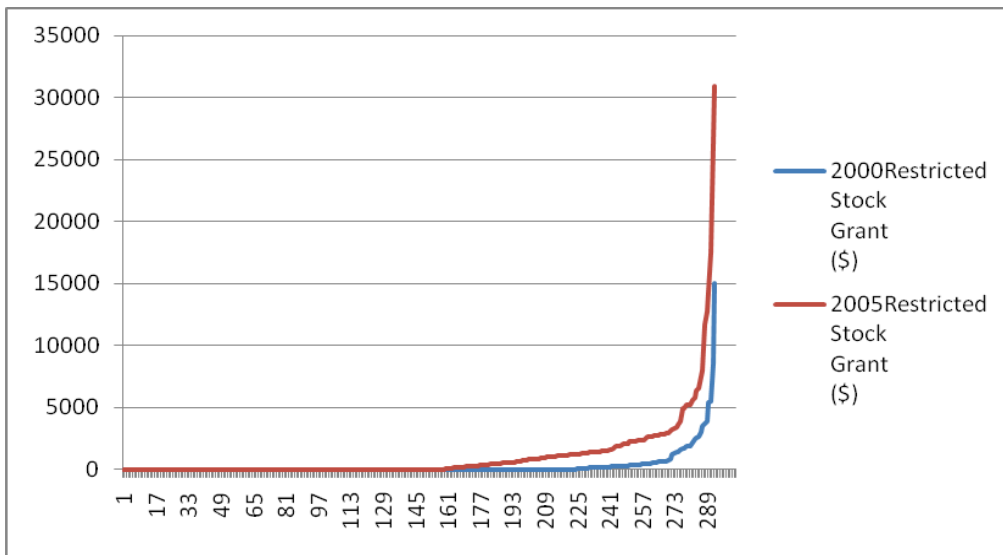


Figure 10. Restricted stock grants payments to CEOs in year 2000 and 2005

Restricted stock grants paid to CEOs increased greatly in year 2005. The grants imposed on CEOs certain requirements before they could sell the stock. The table shows a large increase in the annual restricted stock payment in year 2005 of 271.68%. Noticeable is that the median value for both year 2000 and 2005 are zero. There were 219 firms out of 293 firms that granted no restricted stock payment to CEOs in year 2000, and in year 2005 there were still 159 firms that didn't grant any restricted stock payment to CEOs. Thus, though there was a big increase in the average value of restricted stock grants, there were still a substantial number of firms that did not include this payment in their package. For year 2000, a large number of the firms made a stock grant payment



less than \$500,000, however, fewer stock grant payments fell in this range in year 2005, rather the payment amount shifted upward and centered on the range between \$1,000,000 and \$5,000,000. Moreover, there were 5 more firms in year 2005 that paid more than \$10,000,000 while there was only 1 firm in year 2000 did so. In short, in year 2005, more firms were willing to pay in stock and the average stock grant value increased and some firms made a very high stock payment to CEOs.

### 3.4 Summary

It appears that director pay increased following the 2002 corporate scandals and the proportion of director pay that is incentive pay (tied to stock price) also increased. This is consistent with my first two predictions. There's also evidence that while incentive pay for CEOs did not decrease following 2002, the proportion of pay which is incentive pay did decrease. Moreover, stock payments increased to replace option payments to CEOs following the corporate scandals.

### 3.5 Extension

The basic data together with the curves presented suggest that director pay increases are becoming more performance oriented after the early 2000s corporate scandals. Moreover, CEO pay seems to have become less tied to company performance (proportionally less payment in stock and options). Both effects were hypothesized. Here, I check to see if those firms that increased performance pay for directors the most also reduced the proportion of stock and options in CEO pay the most. Such findings would further support my hypothesis. To do that, I constructed a simple linear regression. In the regression model, the dependent variable is the change in the ratio of performance pay (between 2000 and 2005) for CEOs of each company; the independent variable is the similar change in the ratio of performance pay for directors.

The slope coefficient is 0.258 and is statistically significant. This indicates an increase ratio of incentive payments in CEO pay with an increase in the ratio of director incentive payment something not predicted. However, I suspect that there are other determinants of the change in CEO incentive payments that have not been included. Thus, I added company performance as a second variable into this linear model. Company performance is measured by the proportionate change in the stock price between 2000 and 2005. Firms performing better will see a greater increase in their stock price.

The slope coefficient on the change in incentive pay for directors now decreases to 0.1544 and becomes insignificant. As expected, the coefficient on the performance variable is positive and statistically significant. Since bigger incentive rewards are expected where a company performs better, this result confirms the strong relationship between performance and CEO incentive pay. I suspect there are some other missing control variables that may still be confounding the result. For example, director's incentive payments increase when they stay longer at a company and this amount reaches a peak when they are about to leave the firm. This is the same with the CEOs. Thus, there may be occasions where there are several new directors while the CEO has been at the company for a very long time. A more complete test would control for these differences across firms.

## Chapter 4

### Conclusion

The legislative and regulatory reaction to the successive corporate scandals of the early 2000s required several modifications to corporate boards of directors. Board composition was required to be more outsider-oriented. For the audit committee, all committee members were required to be outsiders and the audit company should itself be independent of the firm.

I hypothesize that this political scrutiny induced firms to also change the way in which directors are compensated. Director pay should be greater and should be linked more strongly to the company's performance, i.e., incentive compensation should be a larger proportion of pay while the retainer will become relatively less important. Also, because of the greater monitoring of CEOs performance induced by this change in director pay, firms should rely less on stock and option pay to incentivize their CEOs.

A basic analysis of the data from 293 firms is constructed to test the hypothesis. Between 2000 and 2005, pay for directors both rose and became more incentive oriented. At the same time the ratio of incentive pay (but not the actual amount) fell for CEOs.

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## APPENDICES

Table 15: Test of logged values of incentive payments for directors

Directors	year 2000	year 2005	ttest for mean differences	
Ln (incentive Payments)	2.94	3.58	t=6.77 Pr<0.0001	year2005-2000
Ln (Option Values)	2.38	2.12	t=1.51 Pr<0.05	year2005-2000
Ln ( Share Value)	0.94	2.02	t=-7.43 Pr<0.0001	year2005-2000

Table 16: Test of logged values of incentive payments for CEOs

CEOs	year 2000	year 2005	ttest for mean differences	
Ln (Incentive Payments)	6.98	7.46	t=7.90 Pr<0.001	year2000-2005
Ln (Option Values)	5.85	5.32	t=2.05 Pr<0.0253	year2000-2005
Ln (Share Values)	1.49	3.24	t=-6.59 Pr<0.0001	year 2005-2000