Shifts in executive compensation structure: Impact of Sarbanes-Oxley and Dodd-Frank acts

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ABSTRACT

Chief Officers (COs) of public companies are expected to make decisions that maximize corporate value and shareholder wealth. This agency relationship has a major shortcoming as rational individuals tend to choose the path that benefits their self-interest. To align the interests of the COs and the shareholders, the composition of the compensation packages of the COs frequently include bonuses tied to earnings and stock options that become increasingly valuable as corporate earnings and stock prices increase. In certain instances, these earnings-based incentives may entice COs to fraudulently manage earnings. Observations are collected over a 20-year period (1995-2014) covering pre- and post-Sarbanes-Oxley Act of 2002 (SOX) and the Dodd-Frank Act of 2010 (DFA). The study tracks the pay structure of 100 corporate executives accused of financial statement fraud (accused, not necessarily convicted) before and after these legislative efforts to determine whether shifts in compensation packages occur with the passage of the Acts. Each executive accused of fraud is then paired with an executive not charged with fraud from a public company of similar financial standing (equity size) and industry sector to normalize the trends in executive compensation over the 20-year time span and to isolate the trends associated with fraud. The findings indicate that the pay package of all executives, whether accused of fraud or not, shifted away from incentivized awards after the passage of each legislation. Stock-options and bonuses decreased as a percentage of total compensation and non-incentivized stock awards increased. This finding suggests that the legislation helped curb incentives to commit financial statement fraud. However, the executives accused of fraud maintained a higher percentage of incentivized pay components over the 20-year period compared to the executives not charged with fraud. This finding suggests that incentivized executive compensation continues to create an opportunity and increased risk of financial statement fraud.

Keywords: Chief executives, compensation structure, Sarbanes-Oxley, Dodd-Frank, fraud

INTRODUCTION

The high-ranking executives (COs) of public companies are regarded as agents of company shareholders. They are hired to manage the company because of their expertise. They are given the freedom to make decisions on behalf of the corporation and, consequently, the shareholders. This agency relationship between COs and shareholders indicates a need to align the interests of the COs and the shareholders. Consequently, many corporations include earnings incentives as a part of total compensation. While these compensation structures nudge the COs towards making decisions that will maximize earnings and shareholder wealth, the manner in which these decisions are made can potentially enrich management while hurting the corporations and their shareholders. Thus, the composition of compensation packages may inadvertently lead to manipulation of earnings to the extent that it may constitute fraud.

BACKGROUND

While there has been a significant amount of research performed over the past 40 years pertaining to executive compensation, only those that are path-breaking will be discussed in this section. This field of research originally began in the 1970s with the idea of comparing the relationship of executives and shareholders to that of agents and principals (Jensen and Meckling 1976). During the 1980s, researchers focused on the relationship between executive pay and company performance, establishing that increased incentives lead to improved company performance (Coughlan and Schmidt 1985). In early 1990s, a study conducted to observe the positive aspects of incentive based compensation found that including earnings based incentives in compensation packages shielded executives from market changes that were out of their control while aligning the goals of management with shareholder interest (Sloan 1993). Later, the research focused on the structure and composition of compensation packages and their influence on earnings management (Holthausen, et al 1995). In addition, Murphy (1999) compiled all of the previous theoretical research concerning executive compensation to provide a current description of pay practices. He found that executive compensation generally relies on meeting earnings goals.

The passage of SOX in 2002 opened the door to a multitude of research opportunities. For example, a study investigated how SOX impacted the compensation of corporate executives, research and development expenditures, and capital investment (Cohen, et al 2008). The study found that incentive based compensation, as well as research and development and capital expenditures declined. Not surprisingly, these changes may be indicators of earnings management. In addition, another study (Bergstresser and Philippon 2004) analyzed the correlation between discretionary accruals and incentive based compensation. The study found that earnings management was more likely to take place in an organization where executives' compensation is more heavily based on earnings incentives.

Three researchers at the University of Pennsylvania went one step further and looked at the trends in the structure of compensation packages pre- and post-SOX. They found that earnings management was correlated to compensation structure, and, that a decrease in earnings based rewards will decrease the amount of earnings management performed (Carter, et al 2005). Another study conducted a a few years later showed that equity based compensation did not lead to earnings management, unlike most previous research had found (Laux and Laux 2009). The researchers determined that with an increase in incentive based compensation, there would ultimately be an increase in the oversight of the audit committee that reduced the opportunity for earnings management.

As the research continued to show mixed results as to the effectiveness of incentive based compensation, Essid (2012) sought to uncover if there was an optimal proportion of stock option incentive in the compensation package that would be sufficient to align executive and shareholder interests, without enticing executives to manage earnings. Essid found that at lower levels of executive stock options, there was less incentive to manage earnings and thus the interests of shareholders and executives were aligned. On the other hand, higher proportions of stock options in the compensation packages caused a conflict in short- and long-term agency relationships.

The DFA led to several new research questions as it included a requirement that the SEC implement accounting rules for a clawback provision in financial statements. Clawback would originally be optional and allow a company to recover any earnings incentives paid to an executive if, during the following years, a restatement of earnings for that year was required due to SEC action or financial audits. Shortly after the passage of the DFA, companies started to voluntarily adopt these clawback provisions into their executive compensation contracts and financial reports. In 2013, three researchers from the University of Washington studied the impact of the voluntary clawback provisions on financial statement quality and found that for companies that adopted the optional clawback provision had improved financial statement quality (Dehaan, et al 2013). On July 1, 2015, the SEC required all listed companies to develop and enforce clawback policies. By requiring an executive to pay back the earnings incentive received due earnings misstatements, the SEC envisions a decline in earnings management activities that stretch accounting rules beyond what was intended and may even be fraudulent.

Since the research performed in 2005, there has been little focus on the composition of executive compensation. The authors have decided to add to the research originally performed, that looked at compensation structure and earnings management in the first two years after SOX. However, instead of involving the earnings management portion, they will only be looking at the changes in the composition of compensation. This will be conducted over a much larger time frame than previously researched, encompassing the establishment of both pieces of legislation (SOX and DFA). The authors will split the 200 executives into 100 accused fraudsters (Accused, but not necessarily convicted by the SEC) and 100 non-fraudsters. The group of non-fraudsters will act as the control in this data set. Each fraudster will have a similar non-fraudster matched based on the company's total equity. The hope for this study is that it will add to research previously conducted and aid researchers in the future who seek to find an optimal level of earnings incentives in order to align management and shareholder interests.

PURPOSE

Over the past 15 years, two major pieces of legislation have been enacted that had significant impact on financial accounting and reporting. SOX changed the way how all stakeholders viewed and used the information reported in financial statements. With this shift in focus, increased level of scrutiny, and academic research results demonstrating the positive correlation between increased earnings management and the level of earnings based incentives in executive compensation packages, it is warranted to study the changes, if any, in the proportion of earnings based pay in CO compensation packages, after the enactment of SOX. DFA introduced the concept of clawback provisions into legislation. Although this legislation was not fully enforced until late 2015, some corporations started including them shortly after the act was passed in 2010. Thus, it is warranted to study the impact of DFA on the structure of compensation packages, after the law was enacted.

METHODOLOGY

Observations concerning 200 CO compensation packages were collected over the 1995-2014 period to accomplish the purposes of the study using EDGAR, proxy statements, and 10-K reports. First, using the EDGAR data base, all COs who were accused, but not necessarily convicted, of financial statement fraud by the SEC (described as "accused" hereafter) were identified. There were 100 accused COs in the 20-year period. To maximize the validity and reliability of the comparisons, each accused CO was paired with a CO who was not accused, as follows: 1) the selection is made from those COs available in the same year when the accused CO was listed in EDGAR; 2) the CO must occupy the same or similar executive position as the accused CO; 3) the firm must be of similar size as indicated by total equity; and 4) the firm must be in the same or a similar industry.

To determine the composition and structure of the compensation packages, all three data bases identified above were used. Data was collected describing the executive and the amounts included in his/her total compensation for base salary, bonus, current stock awards, fair value of stock options, and other non-equity incentives that are based on achieving strategic goals which may or may not be tied to level of earnings. To further improve the validity of the comparisons, pre- and post-SOX sample sizes were equalized, necessitating that the pre-SOX period was set for 1995-2002. In addition, the post-SOX observations were equally divided into pre- and post-DFA, necessitating that post-DFA period extend to 2014.

Since past research found a positive correlation between earnings management and compensation structure, comparing the composition of the compensation packages of accused COs to those who are not accused is warranted. In this manner, the shifts in the proportion of compensation categories can be measured in both fraudulent and non-fraudulent settings and for both pre- and post-SOX and pre- and post-DFA periods.

ANALYSIS

First, the totals for each of the compensation categories were compared to the total compensation and expressed as a percent of total compensation. Next, percentages were compiled to observe the shifts over each time period used in the study.

Pre-SOX: 1995-2002 and Post-SOX: 2002-2014 Comparisons

Both the pre-SOX and post-SOX analyses focused on 100 CO compensation packages each (200 in total), where 50 accused COs in the given period were first identified. Next, each accused CO was matched with a CO without accusation, as described in the methodology section above. First, the two sets were analyzed separately. Graphs 1 and 2 and Tables 1 and 2 (Appendix) show a clear difference in the composition of the compensation packages of those accused and those who were not accused during both the pre-SOX and the post-SOX periods.

As expected from previous research performed, a higher percentage of earnings driven compensation was found in the group accused of fraud compared to the group who were not accused, during both the pre- and post-SOX periods. During the pre-SOX period, the compensation of accused COs consisted of only 4% salary and 7% current stock awards, while the remainder (89%) was entirely based on some form of earnings driven criteria. During the same period, those not accused of any fraud were compensated based on incentives other than earnings at the 27% level. Finally, stock options constituted the majority of the pay in both sets of compensation structures (79% and 61%, respectively).

SOX had a profound impact on both sets of compensation structures. During the post-SOX period, the proportion of compensation based on stock options declined in both the accused group (down to 25% from 61%) and those who were not accused (down to 50% from 79%) and the proportion of the other four categories increased. Increases were most prominent in accused salaries (from 4% to 19%) and in the current stock awards of those not accused of fraud (from 11% to 35%). Finally, non-equity based incentives increased in both groups (0% to 8% and 3% to 14%, respectively).

Post-SOX and pre-DFA: 2002-2010 compared to Post-DFA: 2010-2014

Currently, the DFA is a major source of controversy. To analyze the incremental impact of the DFA on compensation structures, the post-SOX observations (100 compensation packages) were split into two groups, each containing 50 packages. Thus, the post-SOX observations are split between pre- and post-DFA groups of 50 observations, each containing 25 COs accused of fraud and 25 COs who were not accused. Pre- and post-DFA salaries for accused COs decreased from 24% to 16% of the total compensation, while the salaries of those not accused held consistent at 20% (see Graphs and Tables 3 and 4 in Appendix). Another major impact was the proportional decrease of both bonuses and stock options in compensation structures. Finally, the proportions of both current stock awards and non-equity based incentives increased significantly in both compensation structures.

The analysis of post-DFA compensation structures indicates that the percentage of compensation based on earnings related criteria is less than 50% in both the accused and non-accused group. The changes in compensation structures of both groups from 2010 to 2014 have been more profound than the comparable changes from 1995 to 2010. Thus, the DFA had a significant incremental impact on the structure of CO compensation.

Combined Pre-SOX: 1995-2002; Post-SOX and Pre-DFA: 2002-2010; and Post-DFA: 2010-2014

The study analyzed the impact of SOX and DFA on all observations (see Graph and Table 5 in Appendix) without focusing on those accused and those who were not accused. Thus, the 200 observations were grouped into three periods: 1) 100 during the pre-SOX period; 2) 50 during the post-SOX and pre-DFA period; and 3) 50 during the post-DFA period. Overall, there is a clear downward trend in the percentage of stock options and bonuses in compensation structures. Although salary proportion initially increased post-SOX, there was a slight decrease, in the post-DFA time period. Finally, current stock awards and non-equity based incentives both increased. In total, there is an overall decrease in stock options and bonuses, with an increase in stock awards, salary, and non-equity incentives, as a percentage of total compensation.

CONCLUSION AND SUGGESTIONS FOR FUTURE RESEARCH

Although there are many different factors that can impact executive compensation, the recent enactment of SOX and FA influenced the decisions made by the board of directors concerning executive compensation. While the data used in this study was not random and was intentionally collected to ensure a perfect match between those COs accused of fraud and those who were not accused over all periods analyzed, certain conclusions can be drawn. First, there is an obvious shift in the structure of compensation packages away from bonuses and stock options towards. Second, the proportion of base salaries, non-equity incentives, and current stock awards in compensation packages increased significantly at the expense of bonuses and stock options over the last 20 years. Companies are relying less on earnings based incentives (~30%) and more on non-earnings criteria (~70%). It is encouraging to see that a balanced compensation structure can be implemented that would provide sufficient incentives for executives to maximize profits without putting shareholders at risk.

To improve the validity of the results, future research should apply the methodology used in this study to a large data base such as the S&P. In addition, a more detailed analysis of other factors, such as the overall economic conditions and earnings forecasts, that may impact compensation structures can be undertaken. While there is not one specific reason that leads executives to engage in financial statement fraud, the composition of compensation packages has proven to be a significant factor. The results of this study may aid future studies and legislation to ensure that compensation packages may be designed to both align the interests of executives and shareholders and eliminate the need to commit fraud.

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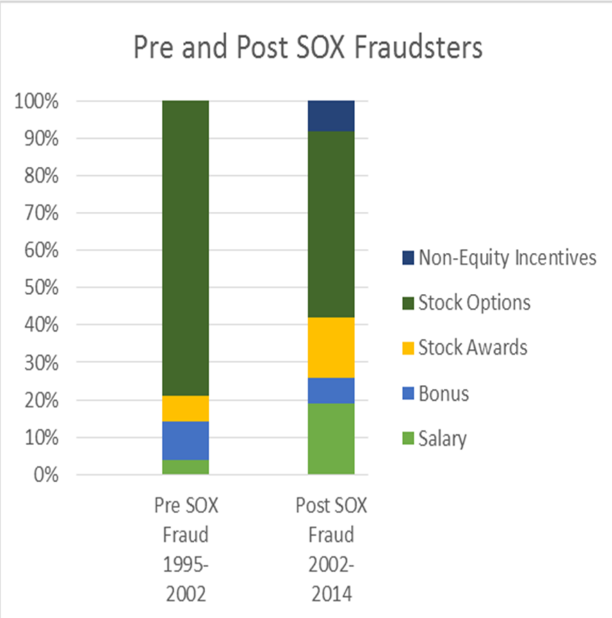
APPENDIX

Graph 1: Pre- and Post-SOX (accused)



Graph 2: Pre- and Post-Sox (non-accused)

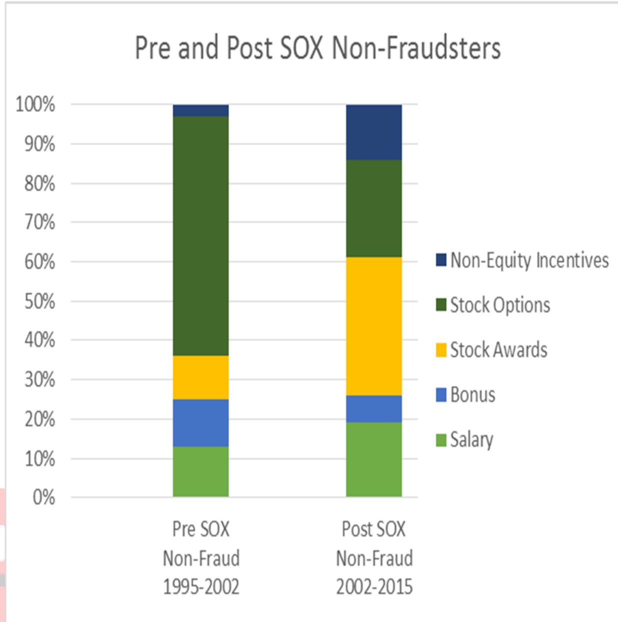


Table 1: Composition of Compensation (accused)

Pre and Post SOX		
	Pre SOX Fraud 1995-2002	**Post SOX Fraud 2002-2014**
Salary	4%	19%
Bonus	10%	7%
Stock Awards	7%	16%
Stock Options	79%	50%
Non-Equity Incentives	0%	8%

Table 2: Composition of Compensation (non-accused)

Pre and Post SOX		
	Pre SOX Non-Fraud 1995-2002	**Post SOX Non-Fraud 2002-2015**
Salary	13%	19%
Bonus	12%	7%
Stock Awards	11%	35%
Stock Options	61%	25%
Non-Equity Incentives	3%	14%

Graph 3: Post-SOX and Pre-DFA

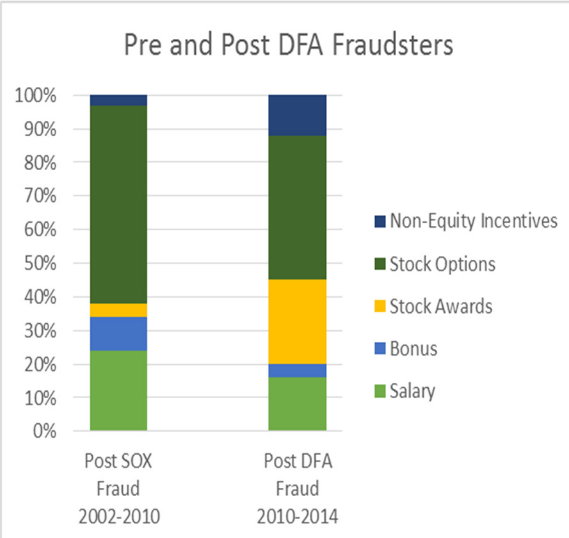


Table 3: Composition of Compensation (accused) Versus Post-DFA (accused)

Pre and Post DFA		
	Post SOX Fraud 2002-2010	**Post DFA Fraud 2010-2014**
Salary	24%	16%
Bonus	10%	4%
Stock Awards	4%	25%
Stock Options	59%	43%
Non-Equity Incentives	3%	12%

Graph 4: Post-SOX and Pre-DFA versus Post-DFA (non- accused)

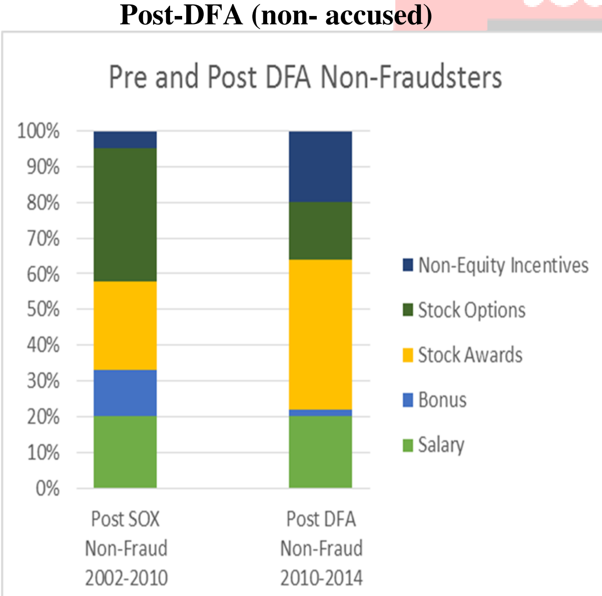


Table 4: Composition of Compensation (non-accused)

Pre and Post DFA		
	Post SOX Non-Fraud 2002-2010	**Post DFA Non-Fraud 2010-2014**
Salary	20%	20%
Bonus	13%	2%
Stock Awards	25%	42%
Stock Options	37%	16%
Non-Equity Incentives	5%	20%

Graph 5: Compensation Structure of pre-SOX, post-SOX and pre-DFA, and Post-DFA Periods

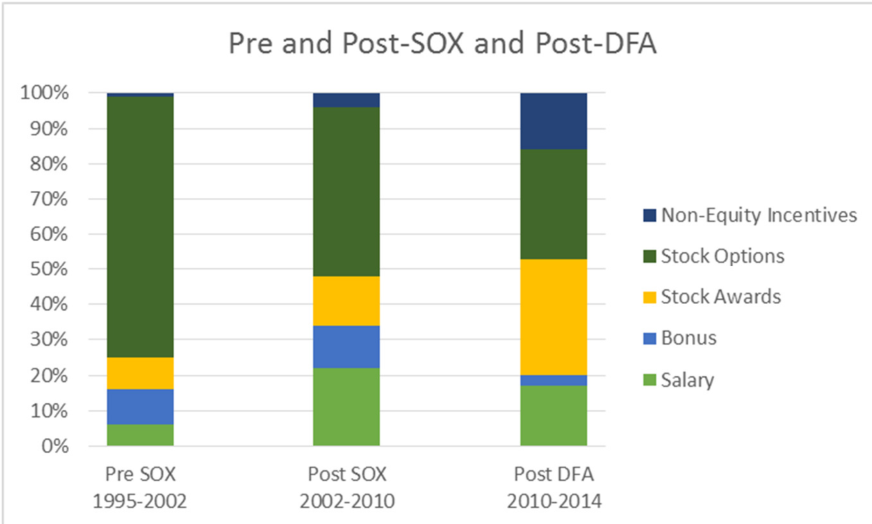


Table 5: Composition of Compensation (all executives)

	Pre SOX 1995-2002	Post SOX 2002-2010	Post DFA 2010-2014
Salary	6%	22%	17%
Bonus	10%	12%	3%
Stock Awards	9%	14%	33%
Stock Options	74%	48%	31%
Non-Equity Incentives	1%	4%	16%

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