CEO COMPENSATION AND SUCCESSION:
AN EMPIRICAL ANALYSIS

by

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TITLE: CEO Compensation and Succession: An Empirical Analysis

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This dissertation employs a sample of 521 successions chosen from the *ExecuComp* database over a 12-year period from 1992 to 2003 to study the relation between compensation and succession. Successions in financial institutions and utilities are excluded from the sample.

Paired samples t-tests and Wilcoxon signed rank tests for the predecessor and successor compensation around successions indicate that successors are loaded with options and restricted stocks in order to link their compensation to firm performance. The successor pay-performance compensation is on average greater than that of the predecessor. The successor fixed salary is on average less that that of the predecessor because salary is not linked to firm performance. The successor total compensation is on average greater than that of the predecessor due to the unrelenting competition between firms to hire the best CEO that they can afford.

OLS regressions show that the board structure affects the pay-performance compensation of the successors relative to the predecessors and that the compensation

committee structure affects the successor pay-performance compensation. The regression analysis shows that when the outside successor does not come from the firm's industry the successor other annual compensation is greater than that of the predecessor. The regression analysis also shows that when the inside successor was designated as the heir apparent the successor total compensation is less than that of the predecessor.

The contribution of the dissertation is that it might be among the first studies to examine the relation between CEO succession and total compensation and its different components. Most of the previous literature examined either succession or compensation. Very few studies attempted to examine both compensation and succession and study the different ways in which they affect each other.

ACKNOWLEDGEMENTS

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CHAPTER I

INTRODUCTION

The finance literature has numerous studies that examine compensation and many others that consider succession. However, there are very few studies that examine the relation between compensation and succession. This area of research is new and has been largely ignored by researchers over the years. Despite of the vast and extensive research that has been done on compensation and succession, researchers have rarely taken their research to the next level which is to relate these two very critical fields of research.

1.1 Research Motivations

The compensation literature is extensive. A large part of the literature focuses on the sensitivity of compensation to firm performance (e.g., Murphy, 1985; Jensen and Murphy, 1990; and Crawford, Ezzell, and Miles, 1995). These studies find a significantly positive relation between compensation and performance. The compensation literature also focuses on compensation structure as a function of specific firm characteristics. For example, Smith and Watts (1992) and Gaver and Gaver (1993) find that growth firms pay significantly higher levels of cash compensation to their executives and have a significantly higher probability of having stock option plans than non-growth firms. Newman and Mozes (1999) find that CEOs receive preferential treatment, at the shareholders' expense, when insiders are members of the compensation committee.

The related succession literature is just as extensive. Studies on succession indicate that investors do not react to heir apparent appointment, but react negatively to

heir apparent exit and react positively to heir apparent promotion to the CEO position (Shen and Cannella, 2003). The stock market reacts more positively to outside CEO succession announcements when the CEO comes from a firm in a related industry (Davidson, Nemec, and Worrell, 2002).

This dissertation will compare the compensation structure of the outgoing CEO (predecessor) to that of the incoming CEO (successor) around forced and voluntary CEO successions. It will try to determine how different factors affect the incoming CEO's compensation structure relative to that of the outgoing CEO. These factors include: the incoming CEO's industrial origin, whether the incoming CEO is an insider or an outsider, whether the succession is forced or voluntary, the composition of the board of directors, the composition of the compensation committee, whether the incoming CEO is the heir apparent or just an insider, and the power of the incoming CEO.

1.2 Contributions of the Study

This study employs a sample of 521 successions collected from the *ExecuComp* database over a 12-year period from 1992 to 2003 to study the relation between CEO succession and compensation and its different components. We compare the predecessor's compensation to that of the successor. We found some interesting results. First, we found that the successors are loaded up with options and restricted stocks in order to closely link their compensation to firm performance. This result persists whether the successions were inside or outside, forced or voluntary, and for the overall sample. This study is among the first studies that examines this area.

Second, we found that the successors on average have a greater pay-performance compensation compared to that of the predecessors. This result persists whether the successions were inside or outside, forced or voluntary, and for the overall sample. This finding is closely related to the previous finding since the pay-performance compensation is the summation of the CEO bonus, options, and restricted stockholdings. There are very few studies that compare the pay-performance compensation between predecessor and successor CEOs and even fewer studies that do so while taking into account the types of the successions.

Third, we found that the salary of the successor was on average less than that of the predecessor. This result persists whether the successions were inside or outside, forced or voluntary, and for the overall sample. This finding is related to the previous two findings because the firms attempt to reduce the successor compensation that is not linked to performance and increase the pay-performance compensation. Salary is risk-free compensation and is not linked to performance. This study sheds light on how the successor compensation components change relative to those of the predecessor. That area of the research has great potential and has been ignored for a long time.

Fourth, we found that the successor total compensation is greater than that of the predecessor. This result persists whether the successions were inside or outside, forced or voluntary, and for the overall sample. This study covered the relation between succession, the total compensation, and the compensation components of the successor and the predecessor. During our literature review, we did not find any other study that even came close to doing so.

Fifth, we found that the structure of the board of directors affects the successor pay-performance compensation relative to that of the predecessor. The successor pay-performance compensation is greater than that of the predecessor when the board of directors is dominated by outsiders. We also found that the compensation committee structure affects the successor pay-performance compensation. When the compensation committee is dominated by inside and/or affiliated directors in the year in which the succession occurs, the pay-performance of the successor decreases in the year following the succession. This study is among the first studies to attempt to find the relation between the structure of the board of directors and the compensation committee with respect to the successor and predecessor pay-performance compensation.

Further research needs to be conducted in order to find the relation between compensation and the power and titles of the CEO, whether the outside successor came from the firm's industry or from a different industry, and whether or not the inside successor was designated as heir apparent. Nonetheless, this study was among the first ones to address these issues and attempt to shed some light on them and their effect on compensation.

The rest of the study is organized into four sections. In Chapter II, we review the previous theoretical and empirical literature and develop the hypotheses. In Chapter III, we present the data selection and methodologies. In Chapter IV, we discuss and explain the results. In Chapter V, we present the conclusions and discuss the limitations and the potential for future research.

CHAPTER II

LITERATURE REVIEW AND HYPOTHESES

This chapter reviews the literature related to compensation, succession, and the relation between succession and compensation. The chapter includes four sections. The first section reviews the major features related to compensation. For example, pay-performance compensation plans. The second section reviews the major features that impact succession outcomes. For example, the composition of the board of directors and the compensation committee. The third section studies the relationship between succession and compensation. For example, how the successor's salary is affected by the predecessor's salary. The fourth section includes the development of the research questions and hypotheses.

2.1 Compensation

2.1.1 Pay for Performance Compensation Plans

Numerous studies have examined the link between pay-for-performance compensation proposals. Morgan and Poulsen (2001) investigated whether pay-for-performance compensation plans introduced by *S&P 500* firms in the 1990s are beneficial to stockholders. One of the internal solutions to the agency problem that plagues publicly traded companies is the development of compensation plans that link the management's compensation to the firm's performance, mainly through stock-price performance. This internal solution, pay-for-performance tradeoff, is usually more

effective than costly external solutions, such as the threat of takeover. Unfortunately, the complexity involved in designing compensation plans may lead to ineffective plans and managerial entrenchment.

Morgan and Poulsen indicate that the top executives of the firm can benefit from stock option plans, restricted stock plans, performance plans, or omnibus plans. The stock option plans allow executives to get options that mature gradually over several years, starting usually a year after the options are received. The restricted stock plans allow executives to get shares that have restrictions on when they can be sold. These plans usually require executives to hold their shares for several years. The performance plans link executive compensation to performance through accounting measures of profitability. Superior profitability is rewarded by cash rewards and stock allocations. The omnibus plans link executive compensation to the firm's performance using the security type, such as, stock options, restricted stock, or performance units.

Morgan and Poulsen use proxy statements of the *S&P 500* firms to identify management proposals of pay-for-performance. They identify 958 compensation proposals appearing on 810 proxy statements. Their sample spanned over the time period from 1992 to 1995. They use the event-study methodology and report three-day abnormal returns averaged across the announcements around the mailing date of the proxy. This analysis provides an insight into how the market reacts to the compensation plans. They also use regressions to identify firm characteristics associated with firms initiating or revising compensation plans.

Their results showed that pay-for–performance plans are beneficial to shareholders. When these plans are directed to top executives and do not excessively

dilute the shareholders' positions, shareholders gain at the announcement of such plans. Firms that propose pay-for–performance plans are usually the firms that can most benefit from such plans, given their asset type and agency considerations. These plans help in aligning managerial incentives with shareholder wealth.

2.1.2 Ownership Structure and CEO Compensation

Toyne, Millar, and Dixon (2000) examine the effect of the ownership structure on the risk of CEO compensation. The compensation contracts of CEOs usually consist of salary, a benefit package, and incentive bonus programs. The compensation risk is lower when a larger proportion of the compensation is paid out as salary. At a certain level of stock ownership, a larger proportion of stock-based compensation will decrease diversification and increase CEO risk. If CEOs can manage their compensation contracts, then they can reduce their risk by reducing the portion of their compensation that is linked to stock price performance.

Toyne, Millar, and Dixon use piece-wise regression analysis to study the effect of the ownership structure on the risk of CEO compensation. They use the stock owned by the CEO and the board of directors as their measure of control and they study its relationship with the proportion of CEO compensation based on stock price performance, which is their measure of compensation risk. Their results indicate that entrenched CEOs may bias the construction of their compensation contracts in such a way that decreases their personal risk exposure, as well as decreasing the much desired alignment of the objectives of the CEO and the shareholders.

2.1.3 Imperfect Diversification and CEO Incentive Levels

Jin (2002) examines the effect of imperfect diversification on the incentive levels of the CEOs. The incentive level is defined as the degree by which the CEO wealth is linked to the stock market performance. Systematic (market) risk and unsystematic (firm-specific) risk have different effects on incentives. It is costly for both CEOs and shareholders to bear market risk, but outside shareholders have an advantage in holding firm-specific risk because they can diversify their portfolios, while CEOs are usually undiversified because they hold large positions in their firms. CEOs, for incentive reasons, are required to maintain firm-specific risk.

Jin uses a principal-agent model to study the trade-off between granting CEOs high incentives and letting them bear firm-specific risk. He studies two models. In both models, the outside shareholder values the company using the Capital Asset Pricing Model (CAPM). In the first model, the CEO is assumed not to be able to trade the market portfolio. In the second model, the CEO is assumed to be able to trade the market portfolio, but cannot hedge the firm-specific risk. Jin uses the *ExecuComp* database maintained by *S&P's* to identify executive compensation. The measure of CEO incentives is pay-performance sensitivity. The basic risk measure is derived from the market model regression using up to 60 monthly observations immediately before the current year calendar. He includes log(sales) and the square of log(sales) in the regression analysis as control variables to control for the size-related heterogeneity of pay-performance sensitivity.

Jin's results indicate that the incentive level is inversely proportional to firm-specific risk. On the other hand, market risk does not affect the incentive level when

CEOs can trade the market portfolio because the CEOs can diversify their portfolios like the outside shareholders. The market risk is ambiguously related to the incentive level when CEOs cannot trade the market portfolio because the CEOs do not always have a disadvantage relative to the outside shareholders in bearing that risk.

2.1.4 Firm Characteristics and CEO Compensation

Ryan and Wiggins (2001) examine the effect of the managerial and firm characteristics on executive compensation. They have three hypotheses. The first is the investment opportunity hypothesis that indicates that high growth firms should mitigate their problems that arise from deriving a large portion of their value from assets not yet in place, by offering equity-based awards. The second is the managerial hypothesis that indicates that when the managers' horizon is shorter than the firms' investment horizon, the firms should offer stock-based awards to those managers who have incentives to focus on short-term horizons. The third is the risk-sharing hypothesis that indicates that firms with risky investments or volatile operating cash flows will use incentive compensation with non-linear payoffs to limit managers' downside risk.

Ryan and Wiggins use several proxies in their analysis. They use the market-to-book value of assets as a proxy for growth opportunities and the CEO's age as a proxy for the 'CEO problem.' They also use three proxies for external monitoring- the total percentage of ownership by 5% blockholders, the percentage of institutional ownership, and the fraction of outsiders on the board of directors. They obtain compensation data for the year 1997 from the *ExecuComp* database and information on board composition,

CEO stock ownership, blockholder ownership, and institutional ownership from the *Disclosure* database. They use regressions for their analysis.

Ryan and Wiggins indicate that compensation plan structures should differ depending on the types of agency costs that the firms face, the presence of other incentive alignment mechanisms, and the ability to monitor managers. Thus, managers who are difficult to monitor should have their compensation more closely linked to shareholder value. Incentives of managers who own large amounts of stock are aligned with those of shareholders.

2.1.5 Compensation Committee Structure and CEO Compensation

Newman and Mozes (1999) attempt to test for a relation between the composition of the compensation committee and CEO compensation decisions. They classify the compensation committee members as 'insiders' if they are an employee of the firm; a former employee of the firm; an employee of another firm that has significant business dealings with the firm; or an employee of another firm when the CEO of the firm is on the board of directors of the other firm. Compensation committees are usually small, consisting of five or less members. Thus, even a single insider can have a significant effect. They use firms from the 1992 *Fortune 250* and use regression analysis. Their results indicate that when insiders are on the compensation committee, CEO compensation practices are more favorable for the CEO from the CEO's perspective, but at the expense of the shareholders.

2.1.6 Board of Directors Structure and CEO Compensation

Sridharan (1996) attempts to include the nature of board composition or the extent of CEO influence over the board as one of the possible determinants of top executive pay. Evidence linking executive compensation to performance suggests a time-series relation. In the cross-section, the level of top executive pay is found to be positively related to firm size. The sample is comprised of firms included in the *Wall Street Journal/Towers Perrin CEO Compensation Survey* for the years 1989-1991 and the method of analysis used is OLS regression. Sridharan's results indicate that if the CEO of the firm also occupies the position of the chairman of the board (i.e., CEO/Chair duality), then the CEO's influence over the board would be even greater. As a result of this influence such a CEO would have a larger compensation contract.

2.1.7 Managerial Turnover and CEO Compensation

Coughlan and Schmidt (1985) examine internal control mechanisms in corporations, especially, compensation and managerial replacement or turnover. The managers' monopoly over the information required to construct compensation plans leads to agency problems. The main objective of compensation plans is to align managerial and shareholder interests, but managers can withhold information from compensation committees that link bad performance to managerial actions.

Coughlan and Schmidt have three hypotheses. The first is that there is a positive relation between changes in executive compensation and abnormal stock performance. The second is that using sales growth as a predictor of changes in executive compensation will not reduce the significance of the relation between pay and stock price

performance. The third is that there is a relation between CEO turnover and past stock price performance. Coughlan and Schmidt test their hypotheses using surveys appearing in *Forbes* which identify CEOs and their compensation from 1978 to 1982. They use a regression analysis. Their results indicate that executive compensation plans and management replacement decisions tend to align the incentives of top management with those of the shareholders.

2.1.8 CEO Options and Restricted Stockholdings

Bryan, Hwang, and Lilien (2000) examine the theories of optimal CEO stock option awards and restricted stock grants. They investigate agency cost determinants that include the abundance of the firm's investment opportunities, the noise in the firm's earnings relative to stock returns, the level of CEO ownership, and the degree of the firm's leverage. They also consider financial constraints that include tax costs and the financial cost of reporting low levels of accounting earnings.

The authors indicate that most stock options are awarded at-the-money with a 10-year duration, and they generally vest over a 3- to 5-year period. On the other hand, restricted stock awards provide executives with a fixed quantity of shares that have restrictions on resale or transfer. The main difference between stock options and restricted stock lies in their payoff functions. The payoff function of stock options is convex in stock price, while that of restricted stock is linear. They obtain data on CEO stock option awards, restricted stock awards, cash compensation, and stockholdings from the *ExecuComp* database for the time period from 1992 to 1997. They use a tobit model and report the tobit regression results using panel data.

The authors' results, relating to agency cost determinants, indicate that firms with abundant investment opportunities tend to rely heavily on incentives provided by CEO stock option awards, because stock options protect risk-averse CEOs from downside risk and provide a high upside potential. On the other hand, such firms (with abundant investment opportunities) are unlikely to rely heavily on CEO restricted stock grants, because they contribute to the 'underinvestment problem.' Firms will reduce the weight placed on the performance measure of the CEO compensation that contains noise. CEOs that hold a large portion of their firms' stocks require less stock-based compensation because their interests are already aligned with those of the shareholders.

The authors' results, relating to financial constraints, indicate that firms with liquidity constraints compensate their CEOs more with stock-based compensation than with cash compensation. On the other hand, the evidence is mixed with respect to stock option compensation. Firms with high marginal tax rates shift the mix of CEO compensation from stock-based compensation to cash compensation and there is no evidence about a significant negative relationship between tax costs and stock option compensation. Firms facing high financial reporting costs will substitute stock option awards for cash compensation. On the other hand, there is a weak association between restricted stock grants and financial reporting costs because of the negative earnings effects of restricted stock.

2.1.9 Determinants of Top Management Turnover

Hadlock and Lumer (1997) examine an important dimension of corporate governance and managerial incentives by investigating the determinants of top

management turnover. Their sample consists of 231 large industrial firms from 1933 to 1941 from the *Center for Research in Security Prices (CRSP) New York Stock Exchange (NYSE) monthly tapes*. They use logit regressions. Their results indicate that the pay-for-performance sensitivities have not changed significantly over time for larger firms and have increased significantly over time for smaller firms. Thus, on average, management compensation has become more sensitive to firm performance since the 1930s.

2.1.10 Current Performance and Future Compensation

Gibbons and Murphy (1992) examine career concerns, which are defined as the concerns about how the current performance affects the future compensation. They also examine the support for the career concerns model in the context of the relation between CEO compensation and stock market performance. Career concerns arise when the labor market (internal or external) uses a worker's current output to update its view about that worker's ability and to base future wages on these updated beliefs. In general, career concerns are stronger the further the worker is from retirement because such a worker will be willing to take more costly unobservable actions to try and influence the market's belief.

Gibbons and Murphy predicted four hypotheses. The first hypothesis predicted that the relation between CEO pay changes and current performance will be higher for executives close to retirement (i.e., the slope of the compensation contract increases as the CEO nears retirement). The second hypothesis predicted that with years remaining as CEO held constant, the pay-performance elasticity increases with tenure because managerial ability becomes estimated with less uncertainty (i.e., the slope of the

compensation contract increases with tenure as CEO). The third hypothesis predicted that the relation between current CEO pay changes and the previous year's performance should decline with years remaining as CEO. The fourth hypothesis predicted that the relation between current CEO pay changes and the previous year's performance should decline with CEO tenure.

The authors indicate that the career concerns model uses data that is obtained by following all CEOs listed in the *Executive Compensation Surveys* published in *Forbes* from 1971 to 1989. These surveys include 2,972 executives serving in 1,493 of the nation's largest corporations during the fiscal years 1970-1988, or a total of 15,148 CEO-years of data. Obtaining the data necessary to analyze the model is difficult because existing longitudinal data sets for rank-and-file workers that contain data on wages rarely also contain data on performance. The model assumes that a CEO's career path starts when an executive is appointed CEO, is paid on the basis of firm performance, and remains in the CEO position until retirement, at which point his career ends.

Testing the career concerns model involves estimating the pay-performance relation between the agent's compensation (the wage) and the principal's objective (the output net of wage) and detecting changes in the pay-performance relation (the slope of the compensation contract) as the workers gets closer to retiring. When testing for career concerns in CEO compensation, it is important to control for size-related heterogeneity in the pay-performance relation. This is done by converting the regression variables into percentage changes or logarithmic changes since the pay-performance elasticity is invariant to firm size. Thus, the logarithmic specification removes size bias from the estimated career concerns coefficient.

The authors' results indicate that there is empirical support for the first and second hypotheses, while the third and fourth hypotheses are not supported by the data. The results indicate that career concerns affect incentives, even in the presence of compensation contracts, and that optimal compensation contracts account for these implicit incentives. The optimal compensation contracts neutralize the career concern incentives by optimizing the total incentives from the contract and from career concerns, i.e., explicit contractual incentives are high when implicit career concern incentives are low, and vice versa.

2.1.11 Influence of CEOs on their Own Compensation

Yermack (1997) examines the timing of CEO stock option awards as a method of investigating corporate managers' influence over the terms of their own compensation. Stock options make up the largest part of the performance-based compensation received by CEOs in U.S. companies. Stock options, for most CEOs, are awarded once a year by the compensation committee of the board of directors. Compensation committees have the power to determine the timing and size of the stock option awards. Companies' annual proxy statements report the exact dates of managers' stock option awards due to the SEC's expansion of executive compensation disclosure requirements in 1992. The proxy statements must also include the compensation committee reports which describe the basis on which the top managers' pay was determined and disclose conflicts-of-interest among committee members.

The central hypothesis of this study is that CEOs exert influence over their compensation committees and that they exploit their power to increase the value of their

compensation and lower its risk. The author predicts that CEOs will receive option awards just before the announcement of favorable news that will increase the firm's stock price. This will lead to an increase in the CEOs' wealth for reasons that are unrelated to the purpose of the stock option awards, which is to align managerial incentives with shareholder incentives.

The author used data from the first two annual proxy statements filed by the *Fortune 500* companies in compliance with the SEC's 1992 reformed executive compensation disclosure rules. The April 1993 *Fortune 500* list is used as the basis for the sample. The sample includes 620 CEO stock option awards made in the 1992-93 and 1993-94 fiscal years. Yermack obtains daily stock return data from the *CRSP* database to estimate abnormal stock returns around the award date. He also uses daily abnormal returns to form cumulative abnormal returns (CARs) over an event period beginning 20 trading days prior to the stock option award and ending 120 trading days after the stock option award. Yermack uses the event study methodology.

The author's results indicate that the timing of awards is significantly related with favorable movements in the stock prices of the company. Stocks are subjected to an average cumulative abnormal return of approximately 2 percent in the 50 trading days following the CEO stock option awards, despite the fact that news about the awards are not disclosed until several months after the end of the fiscal year. A previous analysis of earnings announcements supports the prediction that CEOs receive stock option awards in advance of favorable corporate news. Managers that have future knowledge of performance improvements in their firms may try to influence their compensation committees to award them more performance-based pay, as a low-risk method of

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capitalizing on investors' expected reactions to the good news about performance improvements since investors will react by buying more of the firm's stocks and this will lead to an increase in the firm's stock price. The most obvious opportunity for CEOs to influence their compensation committees occurs when the CEOs personally serve as committee members. Since these CEOs have a direct opinion in structuring their own compensation, it is expected that they arrange for it so that they receive stock options before favorable news announcements.

2.1.12 Firm Diversification and CEO Compensation

Rose and Shepard (1997) examine the effects of diversification on CEO compensation by embedding a measure of diversification in a standard empirical model of executive compensation. In their model, compensation is a function of firm characteristics such as financial performance and size; CEO characteristics such as tenure and age; and industry norms.

The authors obtain the data on CEO compensation and characteristics from *Forbes' Annual CEO Compensation Survey* during the time period from 1985 to 1990. Firm characteristics information is obtained from the *S&P's Annual and Industry Segment COMPUSTAT files* and the *CRSP return files*. The authors' analysis is based on a sample of CEOs with three or more years of tenure in the CEO position. Therefore, the sample consists of 1,493 observations on 473 CEOs in 397 firms.

Rose and Shepard use two measures of CEO compensation. The first is salary and bonus which is usually a well-defined component. The second is total compensation which is the most inclusive measure of compensation reported by *Forbes*. It includes

benefits, net gains from exercising stock options, and stock appreciation rights. Rose and Shepard use *Forbes* data to construct variables of the CEO's age, his years of tenure as CEO, a dummy variable equal to one if the CEO is an outsider and equal to zero otherwise, and a dummy variable equal to one if the CEO is the firm's founder and equal to zero otherwise. They use year fixed effects to control for aggregate shifts in real compensation levels over time.

The authors' results indicate that the compensation increases with the variability of firm performance measures. The CEO tenure variable has modest effects on compensation, while the CEO age variable has a small and statistically insignificant effect. Outsider CEOs earn higher salary and bonus than insider CEOs and founder CEOs realize less salary and bonus than nonfounder CEOs.

Rose and Shepard reach the conclusion that during the late 1980s, firm diversification appeared to have been associated with significantly higher compensation for the CEO. For example, CEOs of firms with two distinct lines of business earned on average 12 percent to 14 percent more that CEOs of similar but undiversified firms. The effect of diversification on compensation is as strong for new CEOs as it is for experienced CEOs. This suggests that the diversification premium is a characteristic of the job and its demands and not a result of changes affected by incumbent managers to increase their value of the firm or pursue their own agendas. The findings of the study suggest that the average CEO has insufficient control to diversify his corporation without paying a price in forgone compensation compared to what he could have earned by maintaining the status quo. Therefore, diversification premiums can be thought of as rents earned by high-ability CEOs.

Shleifer and Vishny (1989) argue that CEOs attempt to increase their compensation by tailoring the firm to fit their abilities. In their model, increasing diversification should increase compensation. Ability models, in contrast, predict that any increase in compensation earned by an incumbent from diversifying will be less than the cross-sectional premium for the same change in diversification. On the other hand, entrenchment arguments suggest that diversification may be pursued not to raise compensation directly, as in Shleifer and Vishny, but for its indirect effect on compensation through increased firm size.

2.1.13 Conclusion of Literature Review on Compensation

The conclusion of the literature review on compensation indicates that pay-for–performance plans are beneficial to shareholders. When these plans are directed to top executives and do not excessively dilute the shareholders' positions, shareholders gain at the announcement of such plans. Entrenched CEOs may bias the construction of their compensation packages in such a way that decreases their personal risk exposure. Compensation package structures should differ depending on the types of agency costs that the firms face, the presence of other incentive alignment mechanisms, and the ability to monitor managers. When insiders are on the compensation committee, CEO compensation practices are more favorable for the CEO from the CEO's perspective, but at the expense of the shareholders. When the CEO of the firm also occupies the position of the chairman of the board the CEO's influence over the board would be even greater. As a result of this influence such a CEO would have a larger compensation package.

CEOs that hold a large portion of their firms' stocks require less stock-based compensation because their interests are already aligned with those of the shareholders. Managers that have future knowledge of performance improvements in their firms may try to influence their compensation committees to award them more performance-based pay. . Outsider CEOs earn higher salary and bonus than insider CEOs and founder CEOs realize less salary and bonus than nonfounder CEOs.

2.2 Succession

CEO succession is of central importance in strategic management. Previous research has indicated that many CEOs are unwilling and reluctant to step down from their positions and that the mismanagement of CEO successions can lead to the reduction of the shareholder wealth. In general, CEO successions involve the stepping down of the incumbent CEO at an agreed upon point in time, usually when the CEO is about 64 or 65 years old. Usually, the CEO is replaced by an heir apparent who has been identified a few years in advance and trained in the position of president or chief operating officer (COO) before taking on the CEO position. If the retiring CEO is powerful, he usually influences the choice of his successor.

2.2.1 CEO Dismissal and Succession

Shen and Cannella (2002a) examine the power dynamics within top management and investigate their impacts on CEO dismissal followed by inside succession. The conflict of interests and the competition between a CEO and the senior executives put the CEO at risk of power contests with senior executives. When the senior executives are

able to successfully challenge the CEO and get the backing of the outside directors, the CEO will probably be dismissed and he will be succeeded by one of the senior executives.

Shen and Cannella have four hypotheses. The first predicts that the CEO origin as an outsider increases the likelihood of CEO dismissal followed by inside succession. The second predicts that CEOs are at a higher risk of dismissal followed by inside succession in the early years of their tenures. The third predicts that the proportion of non-CEO inside directors increases the likelihood of CEO dismissal followed by inside succession. The final hypothesis predicts that non-CEO executive ownership increases the likelihood of CEO dismissal followed by inside succession.

The authors' sample consisted of 387 large, publicly traded U.S. firms reporting at least $200 million in sales from 1988 to 1997. The officer and director list provided in each firm's annual report to the shareholders is used as the main source of data for CEO turnover, successor selection, and board structure. *Dun & Bradstreet's Reference Book of Corporate Management* and *Dow Jones Interactive's Wall Street Journal* databases are used to obtain additional data on CEOs and their successors. *COMPUSTAT* and *CRSP* were used to collect data on firm size and performance. The authors collected information about CEO stock ownership and CEO duality in order to control for the impact of CEO power. CEO stock ownership was calculated as the proportion of the firm's outstanding shares owned by the CEO. Duality was measured as a dummy variable with a value of 1 when a CEO also held the title of chairman of the board and zero otherwise.

The authors used a continuous-time event history analysis to test their hypotheses. Event history analysis is an established methodology for analyzing a dynamic process

when the outcome of that process is a discrete event. This methodology was appropriate for the study because it accounts for time effect in estimation. CEO tenure was the duration measure in this study. When using this methodology, it is very important to choose the appropriate parametric model for the data. Shen and Cannella used the generalized gamma model which provided the best fit and the largest log-likelihood with the smallest possible Akaike information criterion.

The authors' results support their proposition that senior executive can be power contenders and can have a major impact on CEO dismissal followed by inside succession. The higher risk for outsider CEOs to be dismissed and succeeded by insiders is mainly a result of their firms' poor performance in the financial markets. However, it can also be a result of the fact that outsider CEOs lack social networks and power bases within their new firms. As a direct result, early CEO tenure shows a consistently strong and positive impact on both dismissal followed by inside succession and dismissal followed by outside succession.

Boeker (1992) examines the influence that CEOs, owners, and the board of directors have over the dismissal process, especially in the case when the firm is performing poorly. The author believes that the succession events can shed some light on the underlying power structure of different organizations. The resource allocation and the strategic direction of organizations are affected by how the succession events occur and who are appointed as successors. The succession events that are of the greatest theoretical interest involve the CEO dismissal, since it is in this case that power and influence are likely to be exercised.

Boeker obtains data on semiconductor producers from three sources: data from three of the four largest market research firms serving the semiconductor industry, personal interviews with top managers of the organizations, and information available through articles in the electronics and business press. The sample spans from 1968 to 1989. One of the sample's limitations is that it only includes firms that are survivors. However, this is necessary because it is virtually impossible to obtain accurate historical information on many variables for organizations that no longer exist, especially firms that may have failed a long time ago. The author used maximum-likelihood logistic regression estimation to model dismissal.

The author's results indicate that during periods of poor performance, CEOs are less likely to be replaced in organizations where the CEOs have a large ownership stake in the firms, the stockholder ownership is dispersed, there is a large percentage of insiders on the board of directors, and most of the board members appointed by the CEOs are insiders. On the other hand, these factors were found to have no significant effect on voluntary terminations of CEOs, such as retirement. This finding indicates that there is big difference between voluntary terminations and dismissal.

The author's results also indicate that poorly performing organizations with powerful CEOs were less likely to replace their CEOs but were significantly more likely to replace top managers reporting to the CEO. This finding provides evidence of 'scapegoating.' This indicates that the scapegoating phenomenon usually occurs at the CEO level when he lacks the power to prevent his own dismissal.

2.2.2 Relay CEO Succession

Shen and Cannella (2003) examine the wealth effect of succession planning by investigating investor reactions to the initiation and termination of a relay CEO succession process. The relay succession is one of the different types of planned succession. In relay successions, the successor to the incumbent CEO is identified in advance of the succession event and assumes the position of president or COO. Therefore, a relay succession consists of two steps: the appointment of the heir apparent and the promotion of the heir apparent to the CEO position. However, not all heirs apparent get promoted to the CEO position.

Shen and Cannella argue that there are three reasons for the importance of succession planning in general and relay succession in particular. The first is that succession planning helps the successor prepare for taking charge. For example, the heir apparent, in a relay succession, is chosen a few years in advance in order to be groomed by the incumbent CEO. The second is that succession planning reduces the potential agency problem of managerial entrenchment since having an heir apparent helps in reducing CEO entrenchment. The final reason is that the existence of a succession plan and an heir apparent provides the firm with 'backup leadership' in case the incumbent CEO is unexpectedly incapacitated.

The authors' sample consisted of 114 heir appointments, 130 heir promotions, 31 heir exits, 29 nonrelay inside successions, and 34 outside successions that occurred in large, publicly traded U.S. firms reporting at least $200 million in sales for 1988. The sample period extends from 1988 to 1997. Stock return data were collected from the *CRSP* tapes. The initial announcements of heir apparent appointment, promotion, exit,

nonrelay inside succession, and outside succession were collected from the *Dow Jones Interactive's Wall Street Journal Index*. They used an event study methodology to conduct their analysis.

The authors' results indicate that there is a positive wealth effect for heir promotion. On the other hand, nonrelay succession was found to have a negative effect on the shareholder wealth. This indicates that investors prefer relay succession to nonrelay inside succession. The selection of the CEO successor is important because the successor determines the future of the firm's strategic direction and performance. The transitionary period during which the heir apparent is groomed prepares him for taking charge and reduces any uncertainties that the investors may have about the future of the firm. There is a positive wealth effect for outside succession since the cumulative abnormal returns of outside succession are significantly higher than that of heir promotion. Directors should try to assure that the heir is promoted when the incumbent CEO's scheduled retirement approaches if the firm continues to perform well under the succession plan. On the other hand, if the firm's performance declines and the top management's capabilities are under scrutiny, then the board should probably consider disrupting the succession plan and look for a successor from outside the firm.

2.2.3 Comparing the Different Types of Successions

Zhang and Rajagopalan (2004) compare relay CEO successions with nonrelay inside successions and outside successions. They investigate how the internal and external factors influence the likelihood of relay succession and how the post-succession firm performance is affected by relay CEO succession relative to other types of CEO

succession. They define relay succession when the new CEO comes from within the firm where he was the predecessor's heir apparent, nonrelay inside succession when the new CEO comes from within the firm but was not the predecessor's heir apparent and outside succession when the new CEO comes from outside the firm.

The authors define four major factors that influence the likelihood of relay successions. These factors are the number of internal candidates, pre-succession firm performance, pre-succession strategic instability, and pre-succession industry instability. The availability of internal candidates for a CEO position is represented by the number of internal candidates and the desirability of different types of candidates for the CEO position is represented by the pre-succession firm performance, pre-succession strategic instability, and pre-succession industry instability.

The sample for the study consists of 204 CEO successions in 184 firms where 164 of these firms had one CEO succession and the remaining 20 firms had two CEO successions. These firms are relatively large (with annual sales greater than $100 million), publicly traded, U.S. nondiversified manufacturing firms on *COMPUSTAT* from 1993 to 1998. The authors identified the CEO successions from the on-line *Wall Street Journal Index and S&P's Executive Compensation* database.

Zhang and Rajagopalan used several control variables. They controlled for the departing CEO age, the departing CEO origin with a dummy variable which took the value of 1 if the departing CEO had been and outsider and the value 0 otherwise, departing CEO duality with a dummy variable which took the value of 1 if the departing CEO was also the chair of the board and the value of 0 otherwise, and circumstances in which the CEO left (voluntary departure versus dismissal) with a dummy variable which

took the value of 1 if the CEO was dismissed and the value of 0 otherwise. The authors use multinomial logit analyses and OLS regressions.

The authors' results indicate that a firm will be less likely to appoint and groom an inside candidate to be the heir apparent if it has multiple inside candidates for the CEO position. Instead the firm will choose to wait till the time of succession in order to select a new CEO. When the pre-succession firm performance is strong, this will increase the likelihood of a relay succession and reduce the likelihood of an outside succession. Thus, under good performance, the firm is more likely to appoint an heir apparent and groom him for the CEO position. On the other hand, the best post-succession performance was found to take place at firms that used relay succession and it did not differ for firms that used nonrelay inside succession and outside succession. These results highlight the value of a new CEO's learning experience, in a relay succession, before he assumes the CEO position.

Zhang and Rajagopalan's results suggest that outside successions are not significantly different from nonrelay inside successions in terms of post-succession firm performance. This finding holds even when the pre-succession performance is poor and/or when the post-succession strategic instability is high. Outside successors are usually desired for their new skills, fresh perspectives, and their willingness to make strategic changes. However, these changes will not necessarily improve the post-succession performance. It is hard for outside successors to come up with useful strategic changes due to their lack of firm-specific knowledge, the kind of knowledge that can only be known to a firm insider. Also, outside successors in general find trouble in getting full

cooperation from the firm's senior executives. As a result, it is very likely that outside successions will not improve the firm's post-succession performance.

Zhang and Rajagopalan (2003) examine the factors that determine whether the firm chooses a new CEO from within itself (intra-firm), from within its industry but from outside the firm (intra-industry), and from outside the industry (outside-industry). Outside-industry successors have generic skills that may or may not be transferable across industries and firms. In general, outside-firm successions are associated with greater information asymmetry between the board and the successor than intra-firm successions. On the other hand, intra-industry successors have industry-specific skills that may be readily transferable to firms in the same industry. Therefore, intra-industry successions usually involve less risk than outside-industry successions. Intra-industry successions usually present an opportunity for the firm to learn from the strategies and practices of other firms in its industry. In contrast, outside-successions enable the firm to learn about new strategies and technologies outside the boundaries of its industry.

The authors' sample consists of 220 CEO successions that occurred in 200 publicly traded, relatively large (with annual sales revenues greater that $100 million) U.S. manufacturing firms. The sample period extends from 1993 to 1998. These firms were identified from *COMPUSTAT* and the CEO successions were obtained from the on-line *Wall Street Journal Index* and *S&P's Executive Compensation* database. Among the 220 CEO successions, there were 132 intra-firm successions, 34 intra-industry successions, and 54 outside-industry successions. Zhang and Rajagopalan used multinomial logit analysis to estimate simultaneous logistic regression models with

'pairwise' comparisons of intra-firm successions and intra-industry successions against outside-industry successions.

The authors' results indicate that the likelihood of an intra-firm succession was increased by the presence of an heir apparent and the likelihood of an intra-industry succession was increased by the presence of large firms in the industry that have the similar sizes and are strategically homogeneous. The firm characteristics will predict the probability of intra-firm successions but not intra-industry successions. The industry characteristics will predict the probability of intra-industry successions but not intra-firm successions.

Shen and Cannella (2002b) examine the performance impacts of successor type, post-succession senior executive turnover, and departing CEO tenure. The authors categorized CEO successors into three categories: followers, contenders, and outsiders. Contenders are inside successors who were appointed following their predecessors' dismissals. Followers are inside successors who were appointed following their predecessors' retirements. The three types of CEO successors differ with respect to their firm-specific knowledge, the risk of adverse selection they introduce, and their ability to implement strategic changes.

The authors' sample consisted of 228 successions from large, publicly traded U.S. corporations that report at least $200 million in sales for the year 1988. The sample spans from 1988 to 1994. The primary data source for CEO succession and senior executive turnover was the officer list provided in each firm's 10K reports to the shareholders. Data on firm operational performance, size, diversification level, and industry characteristics were obtained from *COMPUSTAT*. The 228 successions included 159 follower

successions, 41 contender successions and 28 outsider successions. Shen and Cannella used a hierarchical multiple regression for their analysis. In a hierarchical multiple regression analysis, explanatory variables are entered into the regression equation in a pre-specified order as a means of determining their individual and joint contributions to explaining the outcome variable.

The authors' results indicate that relying only on firm origin to categorize CEO successions into insiders and outsiders would lead to the neglecting of important differences between insider successors. Despite of both being insiders, contender and follower successors differ from each other. Senior executive turnover has a positive impact on firm ROA on contender succession, but a negative impact on outsider succession. Thus, outsider successors may be beneficial to the firm operations, but a subsequent loss of senior executives may outweigh any gains that may come from the outside successors themselves. The tenure of departing CEOs influences the firm operational performance. Frequent CEO successions may disrupt organizational continuity and hurt firm performance. On the other hand, long CEO tenure is linked to top management's commitment to the status quo. This leads to difficulty when the successors try to initiate change.

2.2.4 The Promotion or Exit of the Heir Apparent

Cannella and Shen (2001) examine the expected and unexpected outcomes associated with CEO heir apparent tenures, which are promotion and exit. The authors study this issue for several reasons. First, CEO relay succession is a common practice among large public corporations. Second, studying the outcomes of CEO heir apparent

tenure may enhance the understanding of the relationships and power struggles that occur between the top executives in the firm. Finally, the determination of the factors that affect heir apparent promotion or exit has practical implications for more efficient management of relay succession.

Cannella and Shen's data on heir apparent promotion and exit were collected from 168 large, publicly traded U.S. manufacturing firms (with SIC codes 2000 through 3999). These firms must be listed on *COMUSTAT* between 1986 and 1991. The primary data source on heir apparent appointment, promotion, and exit was the lists of current officers and directors provided in annual reports to shareholders. CEO and outside director stock ownership data were gathered from proxy statements.

The authors used a competing risk, discrete time-event history analysis for their methodology. In the case that the dependent variable is a discrete event and the timing of the event's occurrence is of particular interest, the use of event history models is appropriate. Competing risk is a special case of event history models in which the dependent variable has two or more outcomes and the occurrence of any outcome removes the risk of the other outcome(s). In this paper, the outcomes are heir apparent promotion and exit.

The authors' results indicate that powerful CEOs will be reluctant to give up their power. Thus, they may attempt to delay heir apparent promotion. On the other hand, there is no evidence that incumbent CEOs attempt to force the heir apparent exit. In general, powerful outside directors are usually skeptical of heirs apparent, but they stand by them, with respect to promotion, when the firm performance is high. Heirs apparent do not usually have control over the outcome of the relay succession. However, the longer the

tenure of the heir apparent the less the probability that he will be dismissed. If outside directors have doubts about an heir's apparent ability to take on the CEO position, then they should act quickly and remove that heir apparent because dismissing an heir apparent is a lot easier and cheaper than dismissing a CEO.

2.2.5 Outside Successor Industry Origin

Davidson, Nemec, and Worrell (2002) examine the determinants that affect the board of director's decision concerning the outside successors' industry origin and the short-term stock market reaction. They focus on the industrial origin of the executives hired from outside the firm for the CEO position. Outside CEO successors can be classified into two categories. The first category includes those CEOs coming from the same industry. These CEOs have prior knowledge of the industry and its operating characteristics and this allows them to have a smooth entry into their new position and to start implementing strategic changes right away. The second category includes those CEOs coming from unrelated industries. These CEOs usually do not have the essential and critical knowledge about the industry of their new firm. On the other hand, they can bring an entirely new perspective to the firm which is the best way to change the overall corporate culture.

The authors' sample consists of 418 CEO succession announcements of which there are 363 insiders and 55 outsiders. The outside successor is classified as someone who has never worked in the firm. These succession announcements occurred between 1982 and 1992 in firms listed on *Business Week's annual survey* of the largest 1,000 U.S. corporations and their CEOs. The specific announcement day of the succession for

executives in power in 1992 was obtained from the *Wall Street Journal Index* or the *New York Times Index*.

Davidson, Nemec, and Worrell determine industry relatedness by comparing the SIC codes of the outside CEO successor's new and prior firms. *COMPUSTAT* was used to identify each firm's primary SIC code. Firms that have the same four digits SIC code conduct their business in the same industry and are closely related. Firms that have the same first three digits SIC code conduct their business in the same industry but are somewhat less related. Firms that have the same first two digits SIC code are even less related and firms that have the same first digit SIC code or have no matching digits are considered to be completely unrelated. The authors use an event study methodology, OLS regressions, and a multinomial ordered probit model.

The authors' results indicate that there is a positive reaction by the stock market to the announcement of outside CEO succession. However, the reaction is more positive when the outside successor comes from a firm in a related industry. Shareholders may perceive related outside succession as an attempt to initiate immediate organizational change, thus bringing a positive short-term impact to the firm. Independent boards tend to select outsiders from unrelated industries because these unrelated outsiders may be appropriate candidates since they are less likely to be connected to certain conditions or groups within the firm, and thus are more independent from specific organizational interests. As a result, they can potentially break the status quo and improve the corporate governance structure. The authors also indicate that firm performance as measured by prior performance cannot predict the industrial origin of outside successors. Compared to the stockholders, the board looks at the larger picture when considering its decision on

outside succession. Shareholders may demand an industry related succession, but the board considers the long-term performance impacts of the CEO succession. Thus, the boards usually use the appropriateness logic rather than the economic maximization logic.

2.2.6 Factors that Affect Successor Characteristics

Zajac and Westphal (1996) examine how the social, psychological, and sociopolitical factors affect the incumbent CEO's and the board of director's preferences regarding the desired characteristics of a new CEO. They also examine the degree to which outside successors are demographically different from their predecessors.

The sample consists of 413 of the largest U.S. industrial and service firms, as listed in the 1988 *Forbes* and *Fortune 500* indexes. The demographic data were obtained from the *Dun & Bradstreet Reference Book of Corporate Management*; *S&P's Register of Corporations*, *Directors, and Executives*; and *Who's Who in Finance and Industry*. *COMPUSTAT* was used to collect the data on diversification. Succession events were observed from 1987 to 1991 using the on-line *Wall Street Journal Index*. During this period 232 successions were observed among 198 companies.

The functional background, age, and educational background (degree type and affiliation) were the demographic characteristics that were examined in the paper. For example, 'degree type' was measured as the presence or absence of an advanced management degree (such as an MBA) and 'educational affiliation' was measured as the presence or absence of an Ivy League degree (undergraduate or postgraduate). The authors used the Heckman selection model which consists of two stages. The first stage

estimates the likelihood of succession and incorporates these estimates into an OLS regression model. The second stage uses a bivariate probit regression.

The authors' results indicate that changes in CEO characteristics are less likely to occur if the board of directors is less powerful than the departing CEO. In this case the board members attempt to change CEO demographic characteristics to resemble their own. By looking at succession from a sociopolitical perspective, the authors find that departing CEOs prefer similar successors in order to maintain their legacies for their firms. On the other hand, boards favor demographically similar CEOs in order to facilitate socialization. The results indicate that economic conditions have an effect on the likelihood and direction of change in CEO characteristics since poor firm performance enforces the need for strategic change.

Zajac and Westphal's results also indicate that outside successors are usually demographically different from their CEO predecessors while demographically similar to the members of the firm's board of directors. This is consistent with the notion that boards face greater performance ambiguity and social uncertainty in evaluating outsiders and are thus more likely to rely on demographic similarity as a way to reduce this ambiguity and uncertainty.

2.2.7 The Effect of Performance and Sociopolitical Influences on CEO Succession

Cannella and Lubatkin (1993) examine the effects of organizational performance and sociopolitical influences on selection decisions. The previous succession studies can be categorized into three categories. The first includes the studies addressing the causes of successions, the second includes the studies addressing the consequences of

successions, and the final category includes the studies addressing the shareholder wealth effects associated with successions. Organizational and managerial researchers believe that poor firm performance increases the likelihood of an outside CEO succession because outsiders are perceived as more capable than insiders in initiating and implementing strategic changes.

The authors' sample consisted of 472 succession events. The list of firms in which successions had taken place was obtained from *Forbes's annual June issues on executive compensation*. These firms are all large, publicly traded firms since the list contains the 800 U.S. firms with the highest-paid CEOs. Cannella and Lubatkin used logistic regression analysis. The logistic models contained 4 performance measures, 3 sociopolitical measures, 12 interaction terms, and 2 control variables.

Cannella and Lubatkin indicate that most previous research on succession defined return to be the only performance context of succession. However, recent organizational research has started to examine risk as another performance-related outcome. Risk refers to the level of uncertainty associated with the organization's cash flows. Using return as a performance context for succession, researchers suggested that succession events were more likely when the profitability of the firm was low relative to the profitability typical of its industry.

Cannella and Lubatkin suggest that the theory that risk may influence selection decisions stems from the fact that most organizational participants assume that CEOs have a large influence on performance outcomes. Thus, large swings in performance will likely be interpreted as the incumbent CEO not having the situation under control. Executives can often avoid taking the blame for poor performance if they can convince

the directors that the causes of poor performance are external to their firms (i.e., systematic risk). On the other hand, directors generally hold the CEOs accountable for high levels of unsystematic risk because the components of unsystematic risk are manageable but usually require the immediate attention of the executives. Directors are concerned about unsystematic risk because, like the executives they monitor, they generally do not hold diversified portfolios of investments. They are usually heavily invested in their firms. Thus, the directors will be more concerned about unsystematic risk than the shareholders whom they represent. As a result, the directors will probably include the unsystematic risk levels when they are selecting a new CEO.

The authors' results indicate that directors consider both return and risk when evaluating the performance of incumbent CEOs. High levels of unsystematic risk are associated with outsider selection when the incumbent's sociopolitical power is weak. The directors in the study were willing to disrupt the firm's status quo when the performance was poor. Directors were also willing to engage in an external search for a successor when no heir apparent was present. Directors were concerned about high levels of unsystematic risk because it threatened debt holders, thus raising both the marginal cost of capital and default risk. The directors concern about high firm instability stems from the fact that it could affect their reputations. Cannella and Lubatkin also indicate that low profitability was a good predictor of outside CEO succession, especially when sociopolitical forces were weak.

2.2.8 Circulation and Institutionalization of Power

Ocasio (1994) explains patterns of political dynamics by developing a model of the circulation of power and comparing it with the model of the institutionalization of power. The model of the circulation of power contradicts the view that CEOs are capable of perpetuating their power. As the organization's environment changes, the CEO's skills will be questioned, rivals and enemies will emerge, and it will be more likely that people in the position of power will lose power. On the other hand, the model of the institutionalization of power emphasizes the solidarity and cohesiveness among group members. In this case, political change is characterized by the full replacement of those in power.

Ocasio's sample consists of 114 randomly selected U.S. industrial corporations in the *Moody's Industrial Directory* for 1980. The sample spans from 1960 to 1990. The sample was selected as of 1980 to permit firms founded since 1960 to become part of the sample. Sampling in 1980 reduced sample selection bias and produced a representative sample of industrial firms in 1990. Data on performance and size were obtained from *COMPUSTAT*. All other data were obtained from *S&P's Directory of Corporations, Officers, and Directors*; proxy statements, 10Ks, annual reports, and *Who's Who in Industry and Finance*. The author used a continuous-time, event history analysis estimated by maximum likelihood.

The author's results indicate that the political dynamics of CEO succession in U.S. industry was characterized by both the circulation and institutionalization of power models during the period extending from 1960 to 1990. The results show that for the average CEO, it takes over a decade for his power to decrease the potential of rival

coalitions to emerge. The well known fact that poor economic performance usually leads to an increase in the rate of CEO successions does not take into account how the political dynamics of the organization respond to poor performance. This response depends on the size and composition of the board of directors, on the prior experience of the CEO on the board, and on the board's perception of whether the CEO's policies and capabilities are adequate for the task.

2.2.9 Conclusion of Literature Review on Succession

The conclusion of the literature review on succession indicates that CEO dismissal is more likely when organizational performance is poor and the power of the CEO is weak. The CEO power depends on the composition and loyalty of the board of directors and the ownership structure of the organization. There are several factors that facilitate CEO dismissal including the presence of a large number of strong outsiders on a board and a significant concentration of stock ownership in the hands of institutions or groups other than management. These factors reduce the CEO's power compared to that of the board of directors, and increase the likelihood of board-initiated succession. However, there is an alternative view concerning the assumptions that outside board members are an effective control over the CEO's power and that insiders' main duty is to rubber-stamp the CEO's proposals. This alternative view is based on the political dynamics of the circulation of power. A large number of insiders on the board may be required for boards to have adequate information to evaluate the CEO's explanations of the firm's performance. Inside board members serve several functions that may increase CEO succession in case of poor firm performance: they are readily available candidates

for the position, and they have essential information on the company's operation. The CEO's power is likely to increase over the period of his incumbency as CEO and as a member of the board of directors. Appointments to the board serve to strengthen the CEO's influence over corporate decisions and insulate him from the pressures of economic performance. The power of the CEO will become most evident under conditions of economic adversity, as more powerful CEOs will be able to use their sources of power to maintain their authority and position within the corporation.

In general, investors prefer relay succession to nonrelay inside succession. Directors should try to assure that the heir is promoted when the incumbent CEO's scheduled retirement approaches if the firm continues to perform well under the succession plan. On the other hand, if the firm's performance declines and the top management's capabilities are under scrutiny, then the board should probably consider disrupting the succession plan and look for a successor from outside the firm. Outside successors are usually desired for their new skills, fresh perspectives, and their willingness to make strategic changes. Independent boards tend to select outsiders from unrelated industries because these unrelated outsiders may be appropriate candidates since they are less likely to be connected to certain conditions or groups within the firm, and thus are more independent from specific organizational interests. The likelihood of an intra-firm succession was increased by the presence of an heir apparent and the likelihood of an intra-industry succession was increased by the presence of large firms in the industry that have the similar sizes and are strategically homogeneous. Frequent CEO successions may disrupt organizational continuity and hurt firm performance. On the

other hand, long CEO tenure is linked to top management's commitment to the status quo. This leads to difficulty when the successors try to initiate change.

2.3 Relation between Compensation and Succession

There are few studies that examine the relation between CEO compensation and succession. That is why we think that this area is a fertile ground for further research to try and shed some light on that relation and the determinants that affect it.

2.3.1 Salary Distribution and Succession

Pfeffer and Davis-Blake (1992) examine how the amount of dispersion in an organization's salary distribution and an individual's location in that distribution affect turnover and succession. The distribution of rewards affects individuals' attitudes and behavior. Organizations experience pressure to compress wages because unequal rewards create interpersonal friction that impairs productivity on interdependent tasks. However, inequality in rewards is often produced in and by organizations.

Pfeffer and Davis-Blake used data that were taken from the *College and University Personnel Association's Annual Administrative Compensation Surveys* for the two time periods from 1978 to 1979 and from 1983 to 1984. These surveys were sent to over 1,000 colleges and universities each year and they asked specific questions about several high-level administrative positions, such as president, executive vice president, chief academic officer, and chief business officer. The sample consisted of 11,412 positions in 821 colleges and universities. The authors used logistic regressions for their analysis.

The authors' results indicate that an employee who earns a relatively high salary, such as the CEO, in an organization with high salary dispersion, and whose salary is thus clearly distinct from, and better than, the salaries of others in the organization, will feel relatively advantaged and will be less likely to leave his position. On the other hand, when salary dispersion is low, with only minor differences in salary between those at the upper (e.g., the CEO) and lower ranges, an employee whose salary is in the upper range (e.g., the CEO) is unlikely to perceive any great relative advantage, and is more likely to be willing to leave his or her position than when salary dispersion is high. Individuals, such as CEOs, employed in publicly traded firms are more likely to respond to their positions in the salary distribution by quitting than individuals employed in private firms because more information about salaries is available in public than in private corporations. Thus, salaries in publicly traded firms are more likely to be disclosed and available for inspection than salaries in private firms.

Pfeffer and Davis-Blake's results indicate that individuals, such as CEOs, employed in jobs with well-developed external labor markets are more likely to respond to their positions in the salary distribution by quitting than individuals employed in jobs without well-developed external labor markets. Larger firms, that employ more workers, are better able than smaller ones to replace an employee (e.g., the CEO) who quits, with someone else who is already employed by the firm (e.g. insider or heir apparent). Corporations with greater financial resources are more capable of offering not only higher salaries than corporations with poor financial resources but also better fringe and nonpecuniary benefits such as prestige. These benefits make employees less likely to leave their positions. Employees, such as CEOs, are likely to make inter-organizational

salary comparisons. The lower an employee's salary relative to the salaries of others in comparable positions in other organizations, the greater the likelihood that the employee will leave his position.

2.3.2 Relation between CEO Compensation and Succession to Firm Performance

Barro and Barro (1990) indicate that the relation between CEO pay and turnover to performance and firm characteristics has been the focus of a number of theoretical and empirical studies. The authors extend this analysis to a new data set that covers large commercial banks over the period from 1982 to 1987. The authors' sample of 83 banks is a subset of the 140 banks that ranked highest in assets in 1986. The data are from individual proxy statements, *Compuserve*, *Business Week's annual listing on the top 200 banks*, and *S & P's* company reports. The information for each bank includes the total salary and bonus of the CEO, assets, accounting earnings, earnings per share, share prices, dividend yields, age of the CEO, and the number of years of prior experience as CEO. Over the sample period, there are 60 observations on CEOs in their first year in office. The authors use logit regressions for their analysis.

The authors' results indicate that if relative performance is weak and the perceived skill of the CEO is therefore less than expected initially, the bank may discharge the CEO instead of lowering pay or allowing assets to decline to match the level of the CEO's skill. Dismissal avoids the costs of having a poor match between CEO skill and bank size, but it introduces costs associated with CEO turnover. These costs include the loss of specific capital associated with the incumbent CEO. Barro and Barro indicate that when it comes to aggregate performance variables the CEO turnover and the

change in compensation differ from each other. Aggregate disturbances can affect values of marginal products of individual CEOs and thereby influence CEO compensation. On the other hand, for banks that stay in business, the decision to dismiss a CEO is based on the desire to replace the existing head with someone else. Thus, the probability of termination depends on relative performance and not on aggregate performance.

The authors' results indicate that unlike compensation growth, the probability of CEO departure is not significantly related to accounting-based performance. The indication is that CEO turnover depends on relative performance, unlike compensation growth that depends on relative and aggregate performance. These findings are consistent with the theory in which the compensation growth corresponds to the change in the expected marginal product, but the turnover involves a comparison of the existing CEO with alternative executives. The probability of CEO turnover does not relate significantly to accounting-based performance. Barro and Barro's findings indicate that market-based and accounting-based performances are both important for compensation growth, whereas only the market-based measure is significant for turnover probability. Since the accounting earnings are subject to manipulation by the CEO, the decision to terminate the CEO gives little weight to accounting earnings and relies instead on stock returns which cannot be manipulated.

2.3.3 Conclusion of Literature Review on Relation between Compensation and Succession

The conclusion of the literature review on the relation between compensation and succession indicates that when salary dispersion is high an employee who earns a

relatively high salary, such as the CEO, will be less likely to leave the firm. However, when the salary dispersion is low an employee whose salary is in the upper range, such as the CEO, is unlikely to perceive any great relative advantage, and is more likely to be willing to leave the firm. Unlike compensation growth, the probability of CEO departure is not significantly related to accounting-based performance. The indication is that CEO turnover depends on relative performance, unlike compensation growth that depends on relative and aggregate performance.

[Insert Table 2.1 here]

2.4 Development of the Hypotheses

2.4.1 Option Grants of Predecessor and Successor CEOs

Hall and Liebman (1998) indicate that option compensation has increased monotonically since the early 1980s. Firms tend to load up successors with new option grants in an attempt to increase total equity-based compensation for the successors. The popularity of the stock options may simply reflect their favorable tax and accounting treatment. Yermack (1997) indicates that stock options make up the largest part of the performance-based compensation received by CEOs in U.S. companies. Bryan, Hwang, and Lilien (2000) indicate that most stock option grants are awarded at-the-money with a 10-year duration and they generally vest over a 3- to 5-year period. Since option based performance plans are growing in popularity and the hiring of a new CEO requires the company to establish a compensation plan for the successor, therefore, we expect that a

greater proportion of the successor's compensation plan will consist of option grants. Thus, we hypothesize that:

Hypothesis 1: Option grants as a percentage of total compensation should be greater for the successor relative to the predecessor.

2.4.2 Pay-Performance Sensitivity of Predecessor and Successor CEOs

Jin (2002) defines the pay-performance sensitivity (PPS) of the CEO as the degree by which the CEO wealth is linked to the stock market performance. Thus, it is understandable that the PPS for the successor will be lower than that of the predecessor. PPS includes: CEO bonus, CEO restricted stockholdings, and CEO option grants. The reason is that the successor will have fewer stockholdings than the predecessor and the expiration dates for the successor's stock options will be several years into the future. Since the successor has not had enough time in his/her new position to make a noticeable difference in the firm performance, we expect that the successor's PPS will be lower than that of the predecessor's who had his/her opportunity to improve performance. Thus, we hypothesize that:

Hypothesis 2: Pay-performance sensitive portion of the total compensation should be lower for the successor relative to the predecessor.

2.4.3 Comparison between the Successor's and Predecessor's Salaries Based on the Successor's Origin

Jagannathan (1994) indicates that salary as a percentage of total compensation is significantly higher for the successors relative to the predecessors in both the voluntary

and forced successions. The higher percentage may be partially due to the high percentage of successors hired from outside the firm in forced successions. Zhang and Rajagopalan (2004) indicate that outside successors are usually desired for their new skills, fresh perspectives, and their willingness to make strategic changes. Shen and Cannella (2003) indicate that there is a positive wealth effect for outside succession since the cumulative abnormal returns of the outside succession are significantly higher than that of the inside succession.

Toyne, Millar, and Dixon (2000) indicate that the CEO's compensation risk is lower when a larger portion of the compensation is paid out in the form of salary. Thus, the compensation risk of successors hired from inside the firm will be higher than that of successors hired from outside the firm. The salary of the outside successor will be larger than that of the inside successor in order to convince the outside successor to leave his/her current position and move to a new firm. Firms generally try to hire skillful and capable outside successors who are very expensive. Since the outside successor is already taking a risk by leaving his/her current position and joining the firm, thus, we expect that the firm is obliged to reduce the successor's compensation risk by paying a larger proportion of his/her compensation in the form of salary compared to the predecessor. On the other hand, the inside successor is being promoted when he/she takes the CEO position, thus, the firm is not obliged to reduce his/her compensation risk. Thus, we hypothesize that:

Hypothesis 3a: Successors hired from outside the firm should be paid more in salary relative to the predecessors.

Hypothesis 3b: Successors hired from within the firm should be paid less in salary relative to predecessors.

2.4.4 The Effect of the Type of Succession on the Restricted Stockholdings as a Percentage of Total Compensation

In general, forced successions consist of more outside replacements and lower firm tenure than voluntary successions. Gilson and Vetsuypens (1993) indicate that the market value of stockholdings is significantly lower for replacement CEOs in both voluntary and forced successions. However, the decrease in the value of stockholdings is greater in forced successions than in voluntary successions. The reason may be that more outside successors and lower firm tenure on average exist in forced relative to voluntary successions. Since most forced successions are also outside successions, thus, we expect that the outside successor, to reduce his/her compensation risk, will demand more of his/her compensation in the form of salary and less of his/her compensation in the form of restricted stockholdings. And since forced successions generally result from poor firm performance, thus, we expect that the successor will be keen on reducing the restricted stockholdings portion of his/her compensation as much as possible. Thus, we hypothesize that:

Hypothesis 4a: Restricted stockholdings as a percentage of total compensation should fall following voluntary successions.

Hypothesis 4b: Restricted stockholdings as a percentage of total compensation should fall more dramatically following forced successions.

type

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2.4.4.1 Interaction between Hypothesis 3 and Hypothesis 4

There will be an interaction between hypotheses 3 and 4 since a forced turnover will most likely also be an outside succession. Outside successions have certain characteristics for the structure of the successor's total compensation, where salary makes up a larger percentage and restricted stock grants make up a smaller percentage of the total compensation relative to the predecessor.

2.4.5 Total Compensation of Predecessor and Successor CEOs

In general, CEOs are very well rewarded for their services. Thus, a significant increase in CEO compensation following a succession will be highly unlikely. The structure of the compensation package will differ depending on the successor's industry origin, skills, and experience. Ryan and Wiggins (2001) indicate that the structure of the compensation package will also differ depending on the types of agency costs that the firm faces, the presence of other incentive alignment mechanisms, and the ability to monitor managers. Thus, managers who are difficult to monitor should have their compensation more closely linked to shareholder value. Since CEOs, in general, are considered to be overpaid, thus, we expect that the successor's total compensation will not significantly vary from the predecessor's total compensation. Thus we hypothesize that:

Hypothesis 5: The successor's total compensation will be more or less similar to the predecessor's total compensation.

2.4.6 The Effect of the Composition of the Board of Directors on the Pay-Performance Sensitive Portion of the Total Compensation of the Successor Relative to that of the Predecessor

Usually, the outside (independent) directors are looking out for the best interest of the shareholders and they are concerned about maintaining their reputations as effective monitors. Sridharan (1996) indicates that if the CEO of the firm also occupies the position of the chairman of the board (i.e., CEO duality), then the CEO's influence on the board would be greater leading to a more lucrative compensation package for the CEO. Lower pay for the successor may not necessarily benefit the shareholders because a highly paid successor who manages to increase the firm's performance, earnings, and stock price will be better for the shareholders than a mediocre, low-paid successor who fails to increase the shareholders' wealth. Since the outside directors on the board are only interested in maximizing the shareholders' wealth, therefore, we expect that boards that are dominated by outsiders will increase the pay-performance sensitive portion of the successor's total compensation to guarantee the successor's commitment to improving the firm's performance and the shareholders' wealth. Thus, we hypothesize that:

Hypothesis 6: The total compensation of the successor will be more pay-performance sensitive than that of the predecessor's if the board of directors is dominated by outsiders.

2.4.6.1 Interaction

The prior performance under the predecessor will have an impact on how much of the successor's total compensation will be pay-performance sensitive relative to that of

the predecessor. The poorer the prior performance the larger the portion of the successor's total compensation that will be pay-performance sensitive.

The successor's industry origin will also impact the portion of the successor's total compensation that will be pay-performance sensitive. Industry outsider successors will have a more pay-performance sensitive compensation because there will be some doubt about the successor's ability to improve the firm performance in an industry that is new to him/her.

2.4.7 The Effect of the Composition of the Compensation Committee on the Pay-Performance Sensitive Portion of the Total Compensation of the Successor Relative to that of the Predecessor

The insider and affiliated directors will have a vested interest in taking the CEO's side and being very generous when it comes to the CEO's compensation package. The reason for this is that the insiders are working for the CEO and the affiliated directors have business relations with the CEO. Newman and Mozes (1999) indicate that when insiders are on the compensation committee, CEO compensation practices are more favorable for the CEO from the CEO's perspective, but at the expense of the shareholders.

Yermack (1997) indicates that stock options, for most CEOs, are awarded once a year by the firm's compensation committee which has the power to determine the timing and size of the stock option grants. Thus, the presence of inside and affiliated directors on the compensation committee is good news for the successor CEO. However, the most obvious opportunity for the successor CEOs to influence their compensation committees

occurs when they personally serve as a compensation committee member since they will have a direct opinion in structuring their own compensation. Since the affiliated and inside directors that serve on the compensation committee tend to side with the CEO, therefore, we expect that compensation committees that are dominated by insiders and/or affiliated directors will reduce the pay-performance sensitive portion of the successor's total compensation in order to lower the successor's compensation risk. Thus, we hypothesize that:

Hypothesis 7: The total compensation of the successor will be less pay-performance sensitive than that of the predecessor's if the compensation committee is dominated by inside and/or affiliated directors.

2.4.7.1 Interaction

The prior performance under the predecessor will have an impact on how much of the successor's total compensation will be pay-performance sensitive relative to that of the predecessor. The poorer the prior performance the harder it will be for the insider and affiliated dominated compensation committee to reduce the pay-performance sensitive portion of the successor's total compensation. The poor prior performance will ignite stricter monitoring by the shareholders and outside directors on the board. The insider and affiliated compensation committee will be under a lot of pressure to make sure that the successor's compensation package is structured in such a way that would motivate the successor to improve the firm's performance and will probably not be able to help the successor CEO as much as it could have under normal circumstances.

The successor's industry origin will also impact the portion of the successor's total compensation that will be pay-performance sensitive. It will be harder for the insider and affiliated compensation committee to reduce the pay-performance sensitive portion of the total compensation for a successor who is an industry outsider. This is due to the well known fact that there is more risk and uncertainty involved in whether successors who come from different industries have the skills necessary to improve firm performance ad maximize shareholder wealth.

2.4.8 The Effect of the Successor's Power and Titles on his/her Total Compensation Relative to that of the Predecessor

There are several ways to measure the CEO power. For example, CEO duality and the number of inside directors that the CEO appoints to the board. The predecessor will have more power if he was the chair of the board of directors relative to the successor who only has the CEO title. When the CEO holds the title of the chair of the board, he/she can control the flow of information to the directors and he/she can facilitate the appointment of insiders and affiliated directors to the board. He/she can also influence the structure of the different committees.

Coughlan and Schmidt (1985) indicate that the CEO's monopoly over the information required to construct compensation plans leads to agency problems. The main objective of compensation plans is to align managerial and shareholder interests, but the firm's CEO and managers can withhold information from compensation committees that link bad performance to managerial actions.

Boeker (1992) indicates that during periods of poor performance, the CEOs are less likely to be replaced in organizations where the CEOs have more power. The CEO's power can come in the form of large CEO stock ownership, dispersed stockholder ownership, large percentage of insiders on the board of directors, or most of the board members appointed by the CEO being insiders. We expect that the successor's total compensation relative to that of the predecessor will be affected by his/her power and titles. Thus, we hypothesize that:

Hypothesis 8: The successor's power and titles will affect his/her total compensation structure relative to that of the predecessor's.

2.4.9 The Effect of the Successor's Industry-Origin on his/her Total Compensation

The successor who is an industry insider will have more critical industry-specific information, his/her skills and capabilities will be more appropriate for the firm, and his/her experience will be more relevant. On the other hand, the successor who is an industry outsider has the advantage of being more able to implement major strategic changes. Nonetheless, the industry outsider successor will be more of a risk in most cases. Davidson, Nemec, and Worrell (2002) indicate that successors that come from unrelated industries usually do not have the essential and critical knowledge about the industry of their new firm. Thus, their total compensation is usually less than that of successors that come from the firm's industry. Davidson, Nemec, and Worrell also found that there is a positive reaction by the stock market to the announcement of outside CEO succession. However, the reaction is more positive when the outside successor comes from a firm in a related industry.

Zhang and Rajagopalan (2003) indicate that outside-industry successors have generic skills that may or may not be transferable across industries and firms. On the other hand, intra-industry successors have industry specific skills that may be readily transferable to firms in the same industry. Therefore, intra-industry successions usually involve less risk than outside-industry successions. Since successors that come from an industry that is unrelated to the firm's industry will be more risky and will introduce greater uncertainty, therefore, we expect that the structure of the total compensation for outside successors that come from the same industry will be different than that of outside successors that come from an unrelated industry. Thus, we hypothesize that:

Hypothesis 9: The structure of the compensation package for an outside successor who comes from the same industry that the firm operates in will be different than that of an outside successor who comes from an unrelated industry.

2.4.10 The Effect of the Inside Successor's Prior Position in the Firm on his/her Compensation

The heir apparent usually holds the position of president and/or COO (Chief Operating Officer) for a period of time before the succession takes place in order to be groomed for the CEO position. In general, the compensation package of the firm's president or COO is second to that of the firm's CEO. Shen and Cannella (2002b) categorize inside successors into followers and contenders. Contenders are inside successors who were appointed following their predecessors' dismissal. Followers are inside successors who were appointed following their predecessors' retirements.

Zhang and Rajagopalan (2004) indicate that a firm will be less likely to appoint and groom an inside candidate to be the heir apparent if it has multiple inside candidates for the CEO position. Instead the firm will choose to wait till the time of succession in order to select a new CEO. Under good performance, the firm is more likely to appoint an heir apparent and groom him/her for the CEO position. Since the heir apparent usually holds the position of the president and/or COO while being groomed for the CEO position and since the president and COO compensation is just below that of the CEO, therefore, we expect that the inside successor who was an heir apparent will receive a larger total compensation than the inside successor who was not an heir apparent. When an inside successor is promoted to the CEO position, naturally he/she gets a raise in their total compensation. The heir's apparent total compensation is already larger than any other insider except for the CEO; thus, when the heir apparent is promoted to the CEO position his/her total compensation will be higher than if any other insider is promoted to the CEO position. Thus, we hypothesize that:

Hypothesis 10: The total compensation structure of an insider successor who was designated as an heir apparent (relay succession, i.e., held the position of president and/or COO) will be larger than that of an insider successor who was not designated as an heir apparent (nonrelay succession).

A primary mechanism for controlling conflicts of interest between managers and shareholders is the ability of the board of directors to effect management changes. Several studies examine the poor performance hypothesis, which states that the effective corporate boards replace CEOs when firm performance is poor. Coughlan and Schmidt (1985), Warner, Watts, and Wruck (1988), Weisbach (1988), and Blackwell, Brickley,

and Weisbach (1994) find that the probability of a CEO change is inversely related to the firm's performance. In addition, executive turnover provides an opportunity for boards of directors to modify the structure of compensation.

Denis and Denis (1995) studied CEO successions from 1985 to 1988 and found that industry-adjusted operating income increases significantly in the years following CEO replacement. They found significant differences between samples of forced resignations and normal retirements. The forced resignations are characterized by significant improvements in operating income following succession whereas the sample of normal retirements exhibit only small post-succession improvements in operating income.

Hermalin and Weisbach (1988) indicate that the accounting measures of performance are better predictors of management succession than stock-price performance. The implication is that accounting measures capture the performance of current management. They contend that stock returns reflect both the performance of current management and the expectation of future performance, conditional on management changes. It can be argued that stock returns also reflect the expected benefits from incentive effects of compensation contracts. Hermalin and Weisbach indicate that accounting earnings are a function of the performance of current management only. Given the backward-looking nature of an accounting measure of performance, it may take a year or two before accounting measures reflect the decisions of the successors.

CHAPTER III

DATA AND METHODOLOGY

3.1 Data Collection and Variable Definition

Standard and Poor's Corporation's *ExecuComp* serves as our data source. *ExecuComp* includes annual data from proxy statements for the five highest paid executives in three cohorts of firms: the S&P 500, the S&P MidCap 400, and the S&P SmallCap 600. S&P adds and drops some firms from *ExecuComp* each year; the version that we use has 2565 companies providing useable data. The database includes compensation data from 1992 to 2003 and lists CEO successions. We collect the sample by gathering all the firms on the *ExecuComp* database that experienced a CEO succession during the time period from 1992 to 2003. The initial sample consists of 613 firms and 736 successions. We use the "SIC" column in the *ExecuComp* database which provides the last four-digit Standard Industrial Classification code of the firms to eliminate regulated financial services firms (SIC 6021-6799) and public utilities (SIC 4911-4932). As in DeFusco, Zorn, and Johnson (1991), Smith and Watts (1992) and Gaver and Gaver (1993) we believe that regulated firms have systematically different compensation schemes because regulation restricts the investment opportunity set. After eliminating regulated financial services firms (14 firms) and public utilities (47 firms) the sample consists of 552 firms and 667 successions. We use the firms' proxy statements at year -1 and year +1 to collect any information that is missing on the *ExecuComp* database.

We examine the changes in the compensation structure around CEO succession within the same firm. Thus, we are able to control for firm-specific characteristics. We

examine the various components of compensation surrounding the succession for both the predecessor and the successor (i.e. years -1 and +1). We ignore the transition year (i.e. year 0) since the transition year compensation data may include partial year salaries for successors or salaries for those individuals when they held a post other than CEO. In other words, the compensation for the predecessor will be measured as of the fiscal year prior to the succession year and the compensation for the successor is measured as of the fiscal year following the succession year.

For each corporation, we compute the successor's and predecessor's salary and bonus, restricted stock grants, option grants, and other annual compensation. The value of the CEO's stockholdings is computed by multiplying the total number of shares awarded to the CEO by the fiscal year-end price per share. We assume that the stock held prior to a particular year represents accumulated wealth, not current compensation. Only the addition to stockholdings represents stock compensation for a particular year. Option values are the Black-Scholes values of options granted during the fiscal year.

3.1.1 Classifying Forced and Voluntary CEO Successions

To determine the type of succession we examine the column "REASON" in the *ExecuComp* database which explains why the named CEO left the company. It provides four different reasons: resigned, retired, deceased, or unknown. We consider the age 60 to be the normal retirement age for a CEO (Parrino, 1997). If the CEO retired before that age or if the reason for leaving the company is unknown we examine the *Wall Street Journal (WSJ), Wall Street Journal Index (WSJI),* or both for the reasons for the successions. We classify forced successions as all CEO successions other than those

arising from retirement, death, illness, or those involving the CEO's departure for a better and more prestigious position in another firm.

3.1.2 Determining Whether the Inside Successor was the Heir Apparent or not

The successor is considered to have been the heir apparent if he/she held the position of president and/or COO (Chief Operating Officer) of the firm prior to the succession. We examine the column "TITLE" in the *ExecuComp* database which provides the title of the named executive for the most recent year on the file.

3.1.3 Identifying the Firms' CEOs

In the *ExecuComp* database there are three columns that we examine to identify the firms' CEOs. The first is the "BECAMECEO" column which indicates the date the individual became the chief executive officer. This is crucial in determining the firms that experienced a succession during our sample period. The second is the "CEOANN" column which indicates whether the individual was the CEO for all or most of the indicated fiscal year. The third is the "PCEO" column which is the code that identifies the executive who held the CEO position for all or most of the most recent year on file for the company. This item is historical and it denotes which executive is CEO for each given year.

3.1.4 Identifying Total CEO Restricted Stockholdings

To determine the value of the CEO stockholdings we have to get the product of the values in two columns in the *ExecuComp* database. The first is the "NUMBER"

column which provides the number of shares awarded to the CEO. The second is the "PRCCF" column which provides the close price of the company's stock for the fiscal year.

3.1.5 Identifying the Different Components of the Total Compensation

To determine the salary of the CEO we examine the column "SALARY" in the *ExecuComp* database which provides the dollar value of the base salary earned by the CEO during the fiscal year. To determine the bonus of the CEO we examine the column "BONUS" in the *ExecuComp* database which provides the dollar value of the bonus earned by the CEO during the fiscal year. To determine the value of the CEO restricted stock grants we examine the column "RSTKHLDV" in the *ExecuComp* database which provides the aggregate value of restricted stock holdings granted to the CEO at the end of the year. In order to determine the value of the CEO option grants we examine the column "BLK_VALUE" in the *ExecuComp* database which provides the aggregate value of stock options granted during the year as valued using *S&P's* Black-Scholes methodology. The "BLK_VALUE" indicates the total value of all options received during the year. The calculation of this figure takes into account the volatility of each individual company. To determine the value of the other CEO compensation we examine the column "OTHANN" " in the *ExecuComp* database which provides the dollar value of other annual CEO compensation not properly categorized as salary or bonus. This includes items such as: perquisites, other personal benefits, and tax reimbursements.

3.1.6 Determining the Composition of the Compensation Committee and Board of Directors

We use the firms' proxy statements for year -2 and year 0 to determine the composition of the compensation committee and the composition of the board of directors and their effects on the predecessor's total compensation (t=-1) as well as the successor's total compensation (t=+1). It is well documented in the literature that the CEO's total compensation is determined during the previous year (Newman and Mozes, 1999 and Sridharan, 1996).

3.1.7 Determining the Pay-Performance Sensitive Portion of the Total Compensation

Prior research has established that the board of directors award stock compensation to managers to heighten the wealth consequences of their performance. We recognize that there may be other considerations that influence the award of stock-based pay, for example, the possibility for firms and executives to realize joint tax savings from arrangements such as stock options (Miller and Scholes, 1982).

Influential principal-agent models, beginning with Jensen and Meckling (1976) and Holmstrom (1979), often emphasize the benefits of managerial ownership. Stock options and restricted stocks have been used by most major U.S. firms for this purpose (Yermack and Ofek, 2000; and Yermack 1997). Restricted stocks are shares whose sale is barred for three to five years. Their sensitivity to firm value exceeds that of stock options and is likely near one. As in Yermack and Ofek (2000) and Yermack (1997), we assume that the pay-performance sensitive portion of the CEO's total compensation in a certain year is the summation of the stock option grants and restricted stock grants awarded to

the CEO during that particular year. However, we also add CEO bonus to this summation.

ExecuComp's pay-performance sensitive portion of the total CEO compensation includes the dollar value of the stock options awarded during the year, the dollar value of restricted stock awarded during the year, and the dollar value of the CEO bonus during the year. We estimate the number of new restricted shares by dividing this award value by the year-end stock price. We exclude "reload" options from the sample. Reloads are given by some companies when an executive exercises unexpired options and pays the exercise price by surrendering shares of company stock. Including reloads in the sample could bias the results since they create a mechanical relation among option awards, option exercises, and stock ownership.

3.1.8 Caveat

We realize that we have an *ExecuComp* selection bias in our results. Further research will be required to examine our hypotheses using a different sample whose firms are not listed on *ExecuComp* in order to search for any discrepancies between the results. There are numerous other sources that can be used to collect the data, for example, the *Forbes Annual Survey of Compensation*.

3.2 Methodology

To calculate the changes in compensation we determine the total value of the predecessor's and successor's compensation as the sum of: salary, bonus, the Black-Scholes value of options, the value of the restricted stock grants, and the value of other

annual compensation. We then calculate the percentage of each of these components using total compensation as the denominator. We calculate the changes in these percentages by subtracting the predecessor's compensation percentage from the successor's compensation percentage.

The analysis focuses on percentages of compensation since percentages better capture the composition of the compensation package. The percentage of compensation also effectively controls for the systematic differences in the level of pay due to differences in firm size. We calculate the mean of the compensation data. We use the paired samples t-test and the Wilcoxon signed rank (non-parametric) test to test the equality of the compensation component means at t=-1 and at t=+1.

3.2.1 Testing Hypothesis 1

The Wilcoxon signed rank test and the paired samples t-test are used to test the equality of the stock options component of the total compensation at t=-1 and t=+1.

3.2.2 Testing Hypothesis 2

The Wilcoxon signed rank test and the paired samples t-test are used to test the equality of the pay performance sensitive portion of the total compensation at t=-1 and t=+1.

3.2.3 Testing Hypothesis 3a and 3b

We split the sample according to whether the successor is an insider or an outsider. The Wilcoxon signed rank test and the paired samples t-test are used to test the

equality of the salary component of the total compensation at t=-1 and t=+1 for both subsamples.

3.2.4 Testing Hypothesis 4a and 4b

We split the sample according to the type of succession (forced vs. voluntary).The Wilcoxon signed rank test and the paired samples t-test are used to test the equality of the restricted stockholdings at t=-1 and t=+1 for both subsamples.

3.2.5 Testing Hypothesis 5

The Wilcoxon signed rank test and the paired samples t-test are used to test the equality of the total compensation at t=-1 and t=+1. We also run these tests to test the equality of the total compensation after we split the sample into inside and outside successions and into forced and voluntary successions.

3.2.6 Testing Hypothesis 6

We use OLS regressions. The dependent variable is the percentage change in the pay-performance sensitive portion of total compensation. The test variables are dummy variables that indicate whether the board of directors was dominated by outsiders or inside and/or affiliated directors at year -2 and 0. We also use the percentage change in outside directors as a test variable. We can test this hypothesis for year -1 and year +1 individually. In this case, the dependent variable is the pay-performance sensitive portion as a percentage of total compensation for the predecessor and the successor, respectively.

3.2.7 Testing Hypothesis 7

We use OLS regressions. The dependent variable is the percentage change in the pay performance sensitive portion of total compensation. The test variables are dummy variables that indicate whether the compensation committee was dominated by outsiders or inside and/or affiliated directors at year -2 and 0. We also use the percentage change in inside and/or affiliated directors on the compensation committee as a test variable. We can test this hypothesis for year -1 and year +1 individually. In this case, the dependent variable is the pay-performance sensitive portion as a percentage of total compensation for the predecessor and the successor, respectively.

3.2.8 Testing Hypothesis 8

We use OLS regressions. We use the percentage change in total compensation and all its components as dependent variables. We use five dummy variables as test variables. Four of the dummy variables take into account all the different possibilities of the predecessor and the successor also being the chair of the board of directors. The fifth dummy variable indicates whether the succession was an inside or outside succession.

3.2.9 Testing Hypothesis 9

We use OLS regressions. We use the percentage change in total compensation and all its components as dependent variables. We use two dummy variables as test variables. The dummy variables indicate whether the outside successor comes from the firm's industry or from a different industry.

3.2.10 Testing Hypothesis 10

We use OLS regressions. We use the percentage change in total compensation and all its components as dependent variables. We use two dummy variables as test variables. The dummy variables indicate whether or not the inside successor was designated as the firm's heir apparent.

3.3 Control Variables

3.3.1 Firm Size

There is a well documented positive relation in the compensation literature between executive compensation and firm size (Murphy, 1985; Jensen and Murphy, 1990; Chung and Pruitt, 1996). In our analysis, we include total assets to account for differences in firm size and we specify our variable as the natural logarithm of total assets, consistent with Murphy (1995), Yermack (1995), and Mehran (1995). We define this control variable as the difference between the Log of the total assets of the firm for the year following the succession and the year prior to the succession.

3.3.2 CEO Age

We control for CEO age in the regressions. We define this control variable as the difference between the age of the successor and the age of the predecessor.

3.3.3 Prior Performance

We use the industry-adjusted ROA (Barber and Lyon, 1996). Industry-adjusted performance measures are used to capture relative performance evaluation in compensation contracts (Blackwell, Brickley, and Weisbach, 1994; and Mehran, 1995). We define this control variable as the difference between the industry-adjusted return on assets of the firm for the year following the succession and the year prior to the succession.

3.3.4 Tobin's Q

Many studies have found a positive relation between stock options and growth opportunities (Smith and Watts, 1992; Gaver and Gaver, 1993; and Mehran, 1995). We use Tobin's Q as a proxy for growth opportunities (Smith and Watts, 1992; Gaver and Gaver, 1993; and Yermack, 1995). We define this control variable as the difference between the Tobin's Q of the firm for the year following the succession and the year prior to the succession.

3.3.5 Merger

We control for whether the succession occurred due to a merger or not. Successions that occur due to mergers are different from other successions that occur for other reasons, such as, poor firm performance and retirement of the CEO.

3.3.6 Controlling for Endogeneity

If we expect that a dependent variable is endogenous with one of the independent variables we conduct a Hauseman test and run simultaneous regressions (2SLS) in order to correct for the endogeneity.

CHAPTER IV

EMPIRICAL ANALYSIS

4.1 Descriptive Statistics and Paired Samples T-Tests

Tables 4.1, 4.2, 4.3, and 4.4 provide percentages of the total compensation components surrounding the CEO succession between the predecessor and the successor. We ignore the transition year because its compensation data may include partial year salaries for incoming CEOs or salaries for the individual when they held a post other than CEO.

[Insert Table 4.1 here]

4.1.1 Structural Changes in Compensation for the Overall Sample

In Table 4.1, we report the descriptive statistics for all the total compensation components for both the predecessor and the successor CEO. The mean of the salary as a percentage of total compensation is significantly lower for the successor (38.41%) relative to the predecessor (48.42%). The reason for this is that salary is not linked to firm performance and the firms generally want to closely link the successor compensation to firm performance.

We did not find a significant relation between the successor and predecessor bonus as a percentage of total compensation. We did not find a significant relation between the successor and predecessor other annual compensation as a percentage of total compensation.

The mean of the restricted stockholdings granted to the CEO as a percentage of total compensation is significantly higher for the successor (6.26 %) relative to the predecessor (3.93%). Thus, the structure of the CEO restricted stockholdings appears to change around the succession, where the successors are loaded up with restricted stocks compared to the predecessors. Firms tend to load up successors with restricted stocks in an attempt to increase the link between successor compensation and firm performance.

The mean of the options granted to the CEO as a percentage of total compensation is significantly higher for the successor (30.94 %) relative to the predecessor (22.27%). Thus, the structure of the CEO option grants appears to change around the succession, where the successors are loaded up with options compared to the predecessors. Firms tend to load up successors with new option grants in an attempt to increase total equity-based compensation for the successors. Therefore, hypothesis 1 (*option grants as a percentage of total compensation should be greater for the successor relative to the predecessor*) is supported.

We also note that for the successors, the stock options make up the largest part of the pay-performance sensitive portion of their total compensation. The mean of stock options as a percentage of total compensation is 30.94% relative to 6.26% for restricted stockholdings and 21.93% for bonus.

The mean of the pay-performance sensitive portion as a percentage of total compensation is significantly larger for the successor (59.47%) relative to the predecessor (49.32%). Therefore, hypothesis 2 (*pay-performance sensitive portion of the total compensation should be lower for the successor relative to the predecessor*) is not supported. The reason is that firms are trying to encourage the successors to enhance and

improve the firm performance by basing a large part of their total compensation, about

60%, on performance related components such as, bonus, restricted stocks, and options.

[Insert Table 4.2 here]

4.1.2 Structural Changes in Compensation after Inside and Outside CEO Successions

Table 4.2 shows compensation structure data around inside and outside

successions in our data. Panel A reports the descriptive statistics for all the total

compensation components for both the predecessor and the successor around outside

successions. Panel B reports the descriptive statistics for all the total compensation

components for both the predecessor and the successor around inside successions.

In Panel A in Table 4.2, the mean of the salary as a percentage of total

compensation is significantly lower for the successor (40.82%) relative to the predecessor

(51.00%). Therefore, hypothesis 3a (*successors hired from outside the firm should be*

paid more in salary relative to predecessors) is not supported. The reasoning for that is

firms want outside successors to focus on improving the firms' performance. That is why

they decrease the successors' salary as a percentage of total compensation relative to the

predecessors' since salary is not tied to performance.

In Panel A in Table 4.2, the mean of the bonus as a percentage of total

compensation is significantly higher for the successor (19.74%) relative to the

predecessor (16.36%). The reason for this is that the firms try to increase the portion of

the successors' compensation that is linked to performance. In Panel A in Table 4.2, we

did not find a significant relation between the successor and predecessor other annual

compensation as a percentage of total compensation.

In Panel A in Table 4.2, the mean of the CEO restricted stockholdings as a percentage of total compensation is significantly higher for the successor (6.91%) relative to the predecessor (3.49%). The reason for this is that the firms attempt to increase the successors' compensation that is linked to performance. In Panel A in Table 4.2, we did not find a significant relation between the successor and predecessor option grants as a percentage of total compensation.

In Panel A in Table 4.2, the mean of the pay-performance compensation as a percentage of total compensation is significantly higher for the successor (55.86%) relative to the predecessor (45.96%). The reason for this is that the firms attempt to more closely tie the successors' compensation to the firms' performance.

In Panel B in Table 4.2, the mean of the salary as a percentage of total compensation is significantly lower for the successor (37.48%) relative to the predecessor (47.42%). Therefore, hypothesis 3b (*successors hired from within the firm should be paid less in salary relative to predecessors*) is supported. The reason for that is inside successors are being promoted when they take the CEO position, thus, the firms are not obliged to reduce their compensation risk by giving them a large portion of their compensation in the form of salary. The CEOs' compensation risk is lower when a larger part of the total compensation is paid out in the form of salary. The results indicate that successors on average get lower salaries than predecessors, irrespective of whether the succession was an inside or outside succession.

In Panel B in Table 4.2, the mean of the bonus as a percentage of total compensation is significantly lower for the successor (22.77%) relative to the predecessor (25.19%). This result is counterintuitive and we cannot explain it. Bonus is one of the

total compensation components linked to performance. We expected the firms to attempt to increase the successors' bonus as a percentage of total compensation.

In Panel B in Table 4.2, the mean of the other annual compensation as a percentage of total compensation is significantly lower for the successor (1.69%) relative to the predecessor (1.71%). The reason for this is that firms try to reduce the total compensation components that are not linked to performance. The CEO other annual compensation is not linked to firm performance.

In Panel B in Table 4.2, the mean of the CEO restricted stockholdings as a percentage of total compensation is significantly higher for the successor (6.01%) relative to the predecessor (4.10%). The reason for this is that firms try to more closely link the successors' compensation to firm performance.

In Panel B in Table 4.2, the mean of the CEO option grants as a percentage of total compensation is significantly higher for the successor (32.05%) relative to the predecessor (21.04%). The reason for this is that firms try to more closely link the successors' compensation to firm performance.

In Panel B in Table 4.2, the mean of the pay-performance compensation as a percentage of total compensation is significantly higher for the successor (60.83%) relative to the predecessor (50.60%). The reason for this is to more closely tie the successors' compensation to the firms' performance.

[Insert Table 4.3 here]

4.1.3 Structural Changes in Compensation after Forced and Voluntary CEO Successions

Table 4.3 shows compensation structure data around forced and voluntary successions in our data. Panel A reports the descriptive statistics for all the total compensation components for both the predecessor and the successor around voluntary successions. Panel B reports the descriptive statistics for all the total compensation components for both the predecessor and the successor around forced successions.

In Panel A in Table 4.3, the mean of the salary as a percentage of total compensation is significantly lower for the successor (38.29%) relative to the predecessor (48.09%). The reason for this is that firms try to reduce the successor compensation that is not linked to performance. In Panel A in Table 4.3, we did not find a relation between the successor and predecessor bonus as a percentage of total compensation. In Panel A in Table 4.3, we did not find a relation between the successor and predecessor other annual compensation as a percentage of total compensation.

In Panel A in Table 4.3, the mean of the restricted stockholdings as a percentage of total compensation is significantly higher for the successor (6.34%) relative to the predecessor (4.09%). Therefore, hypothesis 4a (*restricted stockholdings as a percentage of total compensation should fall following voluntary successions*) is not supported. The reason for this is that firms want to increase the successors' compensation components that are linked to firm performance.

In Panel A in Table 4.3, the mean of the CEO option grants as a percentage of total compensation is significantly higher for the successor (30.79%) relative to the predecessor (21.59%). The reason for this is that firms attempt to increase the total compensation components that are linked to performance.

In Panel A in Table 4.3, the mean of the pay-performance compensation as a percentage of total compensation is significantly higher for the successor (59.46%) relative to the predecessor (49.62%). The reason for this is that firms try to increase the part of the successors' total compensation that is linked to firm performance.

In Panel B in Table 4.3, the mean of the salary as a percentage of total compensation is significantly lower for the successor (39.47%) relative to the predecessor (51.32%). The reason for this is that firms attempt to reduce the successor salary since salary is a compensation component that is not linked to firm performance.

In Panel B in Table 4.3, the mean of the bonus as a percentage of total compensation is significantly higher for the successor (21.73%) relative to the predecessor (15.89%). The reason for this is that firms attempt to increase the successor bonus since bonus is one of the total compensation components that are linked to firm performance. In Panel B in Table 4.3, we did not find a relation between the successor and predecessor other annual compensation as a percentage of total compensation.

In Panel B in Table 4.3, the mean of the restricted stockholdings as a percentage of total compensation is significantly higher for the successor (5.59%) relative to the predecessor (2.51%). Therefore, hypothesis 4b (*restricted stockholdings as a percentage of total compensation should fall more dramatically following forced successions*) is not supported. The results indicate that successors on average get higher restricted stockholdings than predecessors, irrespective of whether the succession was a forced or voluntary succession.

As a matter of fact, the opposite of the hypotheses is true. The results indicate that the restricted stockholdings as a percentage of total compensation increase more

following forced succession (an increase of 122.71%) than voluntary successions (an increase of 55.01%). The reason the restricted stockholdings as a percentage of total compensation increases for the successors relative to the predecessors is that the firms want to more closely tie the successors' pay to their performance and the value of restricted stockholdings is tied to how well the firm performs.

There are two reasons the restricted stockholdings as a percentage of total compensation increases more for the forced successions relative to voluntary successions. The first reason is that since most forced successions are also outside successions, thus, we expect that the firms will be concerned about how well the successors are familiar with the firms' industry, capabilities, place in the market, culture, and other aspects that are well known to insiders. Therefore, in order to try and hedge this risk, firms will increase the restricted stockholdings as a percentage of total compensation more for forced successions relative to voluntary successions. The second reason is that forced successions generally result from poor firm performance, thus, we expect that the firms will attempt to link the successors' compensation more closely to the firms' performance by increasing the restricted stockholdings as a percentage of total compensation more for forced successions relative to voluntary successions. Since restricted stockholdings is a pay-performance sensitive component of the total compensation.

In Panel B in Table 4.3, we did not find a relation between the successor and predecessor option grants as a percentage of total compensation. In Panel B in Table 4.3, the mean of the pay-performance compensation as a percentage of total compensation is significantly higher for the successor (59.56%) relative to the predecessor (46.71%). The

reason for this is that firms try to increase the part of the successors' total compensation that is linked to performance.

<p style="text-align:center">[Insert Table 4.4 here]</p>

4.1.4 Structural Changes in the Total Compensation

In Panel A in Table 4.4, we report the descriptive statistics for the total compensation for both the predecessor and the successor CEO for the overall sample. The mean of the total compensation (in thousands of dollars) is significantly higher for the successor ($2932.55) relative to the predecessor ($1850.39). This result indicates that the mean of the total compensation for the successor is 60.10% higher than that of the predecessor. Therefore, hypothesis 5 (*the successor total compensation will be more or less similar to the predecessor total compensation*) is not supported. The reason for this is the unrelenting competition between firms to hire the most experienced, skillful, smart, well educated CEOs. Since there are few CEOs who fit this description, then the laws of supply and demand will explain why the mean of the successors' total compensation is larger than that of the predecessors'.

It is worth noting, that the mean of the total compensation is significantly higher for the successor relative to the predecessor in the cases of outside vs. inside successions and forced vs. voluntary successions. In Panel B in Table 4.4 (outside successions), the mean of the total compensation is significantly higher for the successor ($2320.10) relative to the predecessor ($1411.59). This result indicates that the mean of the total compensation for the successor is 64.36% higher than that of the predecessor for outside successions. In Panel C in Table 4.4 (inside successions), the mean of the total

compensation is significantly higher for the successor ($3168.74) relative to the predecessor ($2019.60). This result indicates that the mean of the total compensation for the successor is 56.90% higher than that of the predecessor for inside successions. In Panel D in Table 4.4 (voluntary successions), the mean of the total compensation is significantly higher for the successor ($2892.88) relative to the predecessor ($1857.05). This result indicates that the mean of the total compensation for the successor is 55.78% higher than that of the predecessor for voluntary successions. In Panel E in Table 4.4 (forced successions), the mean of the total compensation is significantly higher for the successor ($3282.91) relative to the predecessor ($1791.52). This result indicates that the mean of the total compensation for the successor is 83.25% higher than that of the predecessor for forced successions.

We noticed that the percentage increase in the successor total compensation compared to that of the predecessor is close in the case of the overall sample (60.10%), the subsample of outside successions (64.36%), the subsample of inside successions (56.90%), and the subsample for voluntary successions (55.78%). However, the percentage increase in total compensation is noticeably greater for the subsample of forced successions (83.25%). The reason is that most forced successions follow poor firm performance. As a result, the firms actively seek to hire qualified CEOs in order to improve their performance. In order to do so the firms have to significantly increase the successor total compensation.

4.2 OLS Regressions

4.2.1 Relating Board of Directors Structure and Compensation Structure

Given the change in compensation structure following CEO succession discussed previously, we now investigate whether there is an association between the structure of the board of directors, if it is dominated by inside and/or affiliated directors or outsiders, and the pay-performance sensitive portion of the total compensation. Our approach is to use the percentage change in pay-performance compensation as a percentage of total compensation as the dependent variable.

We have six control variables. The variable *"DiffCEOAge"* is the difference between the age of the successor and the age of the predecessor. The variable *"DiffLogTotAs"* is the difference between the Log of the total assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffLev"* is the difference between the leverage of the firm for the year following the succession and the year prior to the succession. The variable *"DiffIndAdjROA"* is the difference between the industry adjusted return on assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffTobin'sQ"* is the difference between the Tobin's Q of the firm for the year following the succession and the year prior to the succession. The variable *"Merger"* is a dummy variable equal to 1 if the succession occurred due to a merger and equal to 0 otherwise.

Table 4.5 consists of three panels. In Panel A, we report the results of the regression of the dependent variable on the test variables. In Panel B, we report the

results of the regression of the dependent variable on the control variables. In Panel C, we report the results of the regression of the dependent variable on the test variables and the control variables.

[Insert Table 4.5 here]

4.2.1.1 Regression 1in Table 4.5

Changeinpppstc = f (Dummy variable 1, Dummy variable 2, Dummy variable 3, and control variables)

The dependent variable *"Changeinpppstc"* is the percentage change in the pay-performance compensation as a percentage of total compensation. *Dummy variable 1* is equal to 1 if the board of directors is dominated by outsiders at year -2 and year 0 and equal to 0 otherwise. *Dummy variable 2* is equal to 1 if the board of directors is dominated by inside and/or affiliated directors at year -2 and dominated by outsiders at year 0 and equal to 0 otherwise. *Dummy variable 3* is equal to 1 if the board of directors is dominated by outsiders at year -2 and dominated by inside and/or affiliated directors at year 0 and equal to 0 otherwise.

In regression 1 of Panel A in Table 4.5, we report that the estimated coefficient of *Dummy variable 1* is significant and equal to 2.618 and the estimated coefficient of *Dummy variable 2* is significant and equal to 12.861. In regression 1 of Panel B in Table 4.5, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 1 of Panel C in Table 4.5, we report that the estimated coefficient of *Dummy variable 1* is significant and equal to 2.753 and the estimated coefficient of *Dummy variable 2* is significant and equal to 13.113. These results indicate that if the board of directors is dominated by outsider at year -2 and 0 then the pay-performance sensitive portion of total compensation of the successor will increase relative to that of the predecessor. On the other hand, when the board of directors is dominated by inside and/or affiliated directors at year -2 and by outsiders at year 0 then the pay-performance sensitive portion of total compensation of the successor will increase relative to that of the predecessor. Therefore, hypothesis 6 (*the total compensation of the successor will be more pay-performance sensitive than that of the predecessor if the board of directors is dominated by outsiders)* is supported.

It is worth noting that the increase in the pay-performance sensitive portion of total compensation for the successor is greater (13.113) when there is a change in the board of directors from being dominated by inside and/or affiliated directors at year -2 to being dominated by outsiders at year 0, in comparison to being dominated by outsiders at both year -2 and 0 (2.753). When the board of directors is dominated by inside and/or affiliated directors at year -2 and is dominated by outsiders at year 0 the percentage change in the pay-performance compensation between the successor and the predecessor will increase by 13.113 units. However, when the board of directors is dominated by outsiders at both year -2 and 0 the percentage change in the pay-performance compensation between the successor and the predecessor will increase by 2.753 units. The reason is that the outside directors will try to make up for the period when the board

of directors was dominated by inside and/or affiliated directors and did not sufficiently link the CEOs' compensation to the firms' performance.

The reason for this is that the outside directors are looking out for the best interest of the shareholders and they are concerned about maintaining their reputations as effective monitors. Since the outside directors on the board are only interested in maximizing the shareholders' wealth, therefore, the boards that are dominated by outsiders will increase the pay-performance sensitive portion of the successor's total compensation to guarantee the successor's commitment to improving the firm's performance and the shareholders' wealth.

In regression 1 of Panel C in Table 4.5, we report that there is no relation between the dependent variable and *Dummy variable 3*. We also report that there is no relation between the dependent variable and the control variables.

4.2.1.2 Regression 2 in Table 4.5

Changeinpppstc = f (Changeinpoutdir and control variables)

The variable *"Changeinpoutdir"* is the change in the percentage of outside directors on the board of directors at year 0 and -2, respectively. In regression 2 of Panel A in Table 4.5, we report that the estimated coefficient of variable *"Changeinpoutdir"* is significant and equal to 5.130. In regression 2 of Panel B in Table 4.5, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 2 of Panel C in Table 4.5, we report that the estimated coefficient of variable *"Changeinpoutdir"* is significant and equal to 5.069. Therefore, hypothesis 6 is

supported. The reason is that as the percentage of outsiders on the board increases the pay-performance sensitive portion of total compensation for the successor will increase relative to that of the predecessor. In regression 2 of Panel C in Table 4.5, we report that there is no relation between the dependent variable and the control variables.

4.2.1.3 Regression 3 in Table 4.5

Regression 3 is similar to regression 2. The only difference is that it is run only on the observations where the board of directors was dominated by outsiders at both year -2 and 0. In regression 3 of Panel A in Table 4.5, we report that the estimated coefficient of variable *"Changeinpoutdir"* is significant and equal to 33.619. In regression 3 of Panel B in Table 4.5, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 3 of Panel C in Table 4.5, we report that the estimated coefficient of variable *"Changeinpoutdir"* is significant and equal to 34.738. Therefore, hypothesis 6 is supported. The reason is similar to that stated in regression 2 in Table 4.5. In regression 3 of Panel C in Table 4.5, we report that there is no relation between the dependent variable and the control variables.

4.2.1.4 Regression 4 in Table 4.5

Changeinpppstc = f (poutdir0 and control variables)

The variable *"poutdir0"* is the percentage of outside directors on the board of directors at year 0. In regression 4 of Panels A, B, and C in Table 4.5, we report that the

estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

4.2.1.5 Regression 5 in Table 4.5

Changeinpppstc = f (outsider0 and control variables)

The variable *"outsider0"* is a dummy variable that is equal to 1 if the board of directors is dominated by outsiders at year 0 and equal to 0 otherwise. In regression 5 of Panels A, B, and C in Table 4.5, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

4.2.1.6 Regression 6 in Table 4.5

pppstc1= f (poutdir0 and control variables)

The dependent variable *"pppstc1"* is the pay-performance compensation as a percentage of total compensation for the year following the succession (i.e., year +1). The variable *"poutdir0"* is the percentage of outside directors on the board of directors at year 0.

In regression 6 of Panel A in Table 4.5, we report that the estimated coefficient of the test variable *"poutdir0"* is significant and equal to 0.137. In regression 6 of Panel B in Table 4.5, we report that the estimated coefficient of *"DiffLogTotAs"* is significant and equal to 0.094 and the estimated coefficient of *"Merger"* is significant and equal to 0.087.

In regression 6 of Panel C in Table 4.5, we report that the estimated coefficient of the test variable *"poutdir0"* is significant and equal to 0.141. This result indicates that the pay-performance compensation as a percentage of total compensation for the year following the succession increases with the increase in the percentage of outside directors on the board at year 0. Therefore, hypothesis 6 is supported.

In regression 6 of Panel C in Table 4.5, we report that there is no relation between the dependent variable and four of the control variables. These four control variables are *"DiffCEOAge,"* *"DiffLev,"* *"DiffIndAdjROA,"* and *"DiffTobin'sQ."* The estimated coefficient of *"DiffLogTotAs"* is significant and equal to 0.103. The estimated coefficient of *"Merger"* is significant and equal to 0.093. The estimated coefficient of *"DiffLogTotAs"* indicates that the pay-performance sensitive portion of total compensation for the successor will increase with the increase in the difference in firm size in the year following and the year prior to the succession. The estimated coefficient of *"Merger"* indicates that the pay-performance sensitive portion of total compensation for the successor will increase if the succession occurred due to a merger.

4.2.1.7 Regression 7 in Table 4.5

pppstcn1= f (poutdirn2 and control variables)

The dependent variable *"pppstcn1"* is the pay-performance compensation as a percentage of total compensation for the year prior to the succession (i.e., year -1). The variable *"poutdirn2"* is the percentage of outside directors on the board of directors at year -2.

In regression 7 of Panel A in Table 4.5, we report that the estimated coefficient of the test variable *"poutdirn2"* is significant and equal to 0.140. In regression 7 of Panel B in Table 4.5, we report that the estimated coefficient of *"DiffLev"* is significant and equal to 0.002.

In regression 7 of Panel C in Table 4.5, we report that the estimated coefficient of the test variable *"poutdirn2"* is significant and equal to 0.157. This result indicates that the pay-performance compensation as a percentage of total compensation for the year prior to the succession increases with the increase in the percentage of outside directors on the board at year -2. Therefore, hypothesis 6 is supported.

In regression 7 of Panel C in Table 4.5, we report that there is no relation between the dependent variable and four of the control variables. These four control variables are *"DiffLogTotAs,"* *"DiffIndAdjROA,"* *"DiffTobin'sQ,"* and *"Merger."* The estimated coefficient of *"DiffCEOAge"* is significant and equal to 0.002. The estimated coefficient of *"DiffLev"* is significant and equal to 0.002. The estimated coefficient of *"DiffCEOAge"* indicates that the pay-performance sensitive portion of total compensation for the predecessor will increase with the increase in the difference in age of the successor and predecessor. The estimated coefficient of *"DiffLev"* indicates that the pay-performance sensitive portion of total compensation for the predecessor will increase with the increase in the difference in firm leverage in the year following and the year prior to the succession.

4.2.2 Relating the Compensation Committee Structure and the Compensation Structure

We investigate whether there is an association between the structure of the compensation committee, if it is dominated by inside and/or affiliated directors or outsiders, and the pay-performance sensitive portion of the total compensation. Our approach is to use the same dependent variable that we used in the previous section which is the percentage change in pay-performance compensation as a percentage of total compensation. We have the same six control variables that we described previously. These control variables are *"DiffCEOAge," "DiffLogTotAs," "DiffLev," "DiffIndAdjROA," "DiffTobin'sQ,"* and *"Merger."*

Table 4.6 and Table 4.6.1 each consist of three panels. In Panel A, we report the results of the regression of the dependent variable on the test variables. In Panel B, we report the results of the regression of the dependent variable on the control variables. In Panel C, we report the results of the regression of the dependent variable on the test variables and the control variables.

[Insert Table 4.6 here]

4.2.2.1 Regression 1 in Table 4.6

Changeinpppstc = f (Dummy variable 1, Dummy variable 2, Dummy variable 3, and control variables)

The dependent variable *"Changeinpppstc"* is the percentage change in the pay-performance compensation as a percentage of total compensation. *Dummy variable 1* is equal to 1 if the compensation committee is dominated by inside and/or affiliated directors at year -2 and year 0 and equal to 0 otherwise. *Dummy variable 2* is equal to 1 if

the compensation committee is dominated by outsiders at year -2 and dominated by inside and/or affiliated directors at year 0 and equal to 0 otherwise. *Dummy variable 3 is* equal to 1 if the board of directors is dominated by inside and/or affiliated directors at year -2 and dominated by outsiders at year 0 and equal to 0 otherwise. In regression 1 of Panels A, B, and C in Table 4.6, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

4.2.2.2 Regression 2 in Table 4.6

Changeinpppstc = f (Changeinpinsaffcompcom and control variables)

The variable *"Changeinpinsaffcompcom"* is the change in the percentage of inside and/or affiliated directors on the compensation committee at year 0 and -2, respectively. In regression 2 of Panels A, B, and C in Table 4.6, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

4.2.2.3 Regression 3 in Table 4.6

Regression 3 is similar to regression 2. The only difference is that it is run only on the observations were the compensation committee was dominated by inside and/or affiliated directors at both year -2 and 0. In regression 3 of Panels A, B, and C in Table 4.6, we report that there is no relation between the dependent variable, the test variable, and five of the control variables. The estimated coefficient of the variable *"DiffCEOAge"* is significant and is equal to -0.075.

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4.2.2.4 Regression 4 in Table 4.6

Changeinpppstc = f (pinsaffcompcom0 and control variables)

The variable *"pinsaffcompcom0"* is the percentage of inside and/or affiliated directors on the compensation committee at year 0. In regression 4 of Panels A, B, and C in Table 4.6, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

4.2.2.5 Regression 5 in Table 4.6

Changeinpppstc = f (insaffcompcom0 and control variables)

The variable *"insaffcompcom0"* is a dummy variable that is equal to 1 if the compensation committee is dominated by inside and/or affiliated directors at year 0 and equal to 0 otherwise. In regression 5 of Panels A, B, and C in Table 4.6, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

4.2.2.6 Regression 6 in Table 4.6

pppstc1= f (pinsaffcompcom0 and control variables)

The dependent variable *"pppstc1"* is the pay-performance compensation as a percentage of total compensation for the year following the succession (i.e., year +1). The variable *"pinsaffcompcom0"* is the percentage of inside and/or affiliated directors on the compensation committee at year 0.

In regression 6 of Panel A in Table 4.6, we report that the estimated coefficient of *"pinsaffcompcom0"* is significant and equal to -0.111. In regression 6 of Panel B in Table 4.6, we report that the estimated coefficient of *"DiffLogTotAs"* is significant and equal to 0.094 and the estimated coefficient of *"Merger"* is significant and equal to 0.087.

In regression 6 of Panel C in Table 4.6, we report that the estimated coefficient of *"pinsaffcompcom0"* is significant and equal to -0.129. This result indicates that the pay-performance compensation as a percentage of total compensation for the year following the succession decreases with the increase in the percentage of inside and/or affiliated directors on the compensation committee at year 0. Therefore, hypothesis 7 (*the total compensation of the successor will be less pay-performance sensitive than that of the predecessor if the compensation committee is dominated by inside and/or affiliated directors*) is supported.

The reason for this is inside and affiliated directors have a vested interest in being favorable and generous when it comes to determining the CEOs' compensation. This is because inside directors work for the CEO and affiliated directors have business relations with the CEO. As a result, when the compensation committee is dominated by inside and/or affiliated directors, the CEO compensation will be more favorable from the CEOs' perspectives, but at the expense of the shareholders. One way to accomplish this goal is to reduce the pay-performance sensitive portion of the total compensation since it is the riskiest part of the compensation.

In regression 6 of Panel C in Table 4.6, we report that there is no relation between the dependent variable and four of the control variables. These four control variables are *"DiffCEOAge,"* *"DiffLev,"* *"DiffIndAdjROA,"* and *"DiffTobin'sQ."* The estimated

coefficient of *"DiffLogTotAs"* is significant and equal to 0.096. The estimated coefficient of *"Merger"* is significant and equal to 0.102.

4.2.2.7 Regression 7 in Table 4.6

pppstcn1 = f (pinsaffcompcomn2 and control variables)

The dependent variable *"pppstcn1"* is the pay-performance compensation as a percentage of total compensation for the year prior to the succession (i.e., year -1). The variable *"pinsaffcompcomn2"* is the percentage of inside and/or affiliated directors on the compensation committee at year -2.

In regression 7 of Panel A in Table 4.6, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables. In regression 7 of Panel B in Table 4.6, we report that the estimated coefficient of *"DiffLev"* is significant and equal to 0.002.

In regression 7 of Panel C in Table 4.6, we report that there is no relation between the dependent variable, the test variable, and five of the control variables. These five control variables are *"DiffCEOAge,"* *"DiffLogTotAs,"* *"DiffIndAdjROA,"* *"DiffTobin'sQ,"* and *"Merger."* The estimated coefficient of *"DiffLev"* is significant and equal to 0.002.

[Insert Table 4.6.1 here]

4.2.2.8 Regression 1 in Table 4.6.1

In this regression we removed the tails of the distribution for the dependent variable in an attempt to get rid of any potential outliers. We removed any observation whose cumulative percentage was less than 1% or greater than 99%. This led to the removal of four observations from a total of 521 observations.

Changeinpppstc = f (Dummy variable 1 and control variables)

The dependent variable *"Changeinpppstc"* is the percentage change in the pay-performance compensation as a percentage of total compensation. *Dummy variable 1* is equal to 1 if the compensation committee is dominated by inside and/or affiliated directors at year -2 and dominated by outsiders at year 0 and equal to 0 otherwise.

In regression 1 of Panel A in Table 4.6.1, we report that the estimated coefficient of *Dummy variable 1* is significant and equal to 0.651. In regression 1 of Panel B in Table 4.6.1, we report that that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 1 of Panel C in Table 4.6.1, we report that the estimated coefficient of *Dummy variable 1* is significant and equal to 0.687. This result indicates that the exact opposite of hypothesis 7 is supported. The reason is that in this case the total compensation of the successor was more pay-performance sensitive than that of the predecessor when the compensation committee changed from being dominated by inside and/or affiliated directors at year -2 to being dominated by outsiders at year 0. The reason for that is when the compensation committee became dominated by outside directors the year following the succession, the bias that was present due to inside and affiliated

director domination disappeared and the CEO compensation was structured to benefit the shareholders by being more closely linked to firm performance. In regression 1 of Panel C in Table 4.6.1, we report that there is no relation between the dependent variable and the control variables.

4.2.3 Relating Successors' Power and Titles to Total Compensation and its Components

We investigate whether there is an association between the successor also being the chair of the board of directors and the percentage change in total compensation in Table 4.7, the percentage change in the pay-performance sensitive portion of the total compensation in Table 4.7.1, and the percentage change in the CEO other annual compensation in Table 4.7.2. We have the same six control variables that we described previously. These control variables are *"DiffCEOAge," "DiffLogTotAs," "DiffLev," "DiffIndAdjROA," "DiffTobin'sQ,"* and *"Merger."*

Tables 4.7, 4.7.1, and 4.7.2 each consist of three panels. In Panel A, we report the results of the regression of the dependent variable on the test variables. In Panel B, we report the results of the regression of the dependent variable on the control variables. In Panel C, we report the results of the regression of the dependent variable on the test variables and the control variables.

[Insert Table 4.7 here]

4.2.3.1 Regression 1 in Table 4.7

ChangeinTotComp= f (Dummy variable 1, Dummy variable 2, Dummy variable 3, Dummy variable 5, and control variables)

The dependent variable for the regressions is *"ChangeinTotComp"* which is the percentage change in the total compensation of the successor and the predecessor. *Dummy variable 1* is equal to 1 if the successor is the chair of the board of directors at year +1 and the predecessor was not the chair of the board of directors at year -1 and equal to 0 otherwise. *Dummy variable 2* is equal to 1 if the successor is not the chair of the board of directors at year +1 and the predecessor was the chair of the board of directors at year -1 and equal to 0 otherwise. *Dummy variable 3* is equal to 1 if the successor is the chair of the board of directors at year +1 and the predecessor was the chair of the board of directors at year -1 and equal to 0 otherwise. *Dummy variable 5* is equal to 1 if the succession was an outside succession and equal to 0 otherwise.

In regression 1 of Panel A in Table 4.7, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables. In regression 1 of Panel B in Table 4.7, we report that the estimated coefficient of *"DiffLogTotAs"* is significant and equal to 1.399.

In regression 1 of Panel C in Table 4.7, we report that there is no relation between the dependent variable, the test variables, and five of the control variables. The estimated coefficient of *"DiffLogTotAs"* is significant and equal to 1.350.

4.2.3.2 Regression 2 in Table 4.7

ChangeinTotComp= f (Dummy variable 1, Dummy variable 2, Dummy variable 3, and control variables)

In regression 2 of Panel A in Table 4.7, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables. In regression 2 of Panel B in Table 4.7, we report that the estimated coefficient of *"DiffLogTotAs"* is significant and equal to 1.399.

In regression 2 of Panel C in Table 4.7, we report that there is no relation between the dependent variable, the test variables, and five of the control variables. The estimated coefficient of *"DiffLogTotAs"* is significant and equal to 1.282.

4.2.3.3 Regression 3 in Table 4.7

ChangeinTotComp= f (Dummy variable 1, Dummy variable 2, and control variables)

In regression 3 of Panel A in Table 4.7, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables. In regression 3 of Panel B in Table 4.7, we report that the estimated coefficient of *"DiffLogTotAs"* is significant and equal to 1.399.

In regression 3 of Panel C in Table 4.7, we report that there is no relation between the dependent variable, the test variables, and five of the control variables. The estimated coefficient of *"DiffLogTotAs"* is significant and equal to 1.322.

[Insert Table 4.7.1 here]

4.2.3.4 Regression 1 in Table 4.7.1

Changeinpppstc= f (Dummy variable 1, Dummy variable 2, Dummy variable 3, Dummy variable 5, and control variables)

The dependent variable *"Changeinpppstc"* is the percentage change in the pay-performance compensation as a percentage of total compensation. *Dummy variable 1* is equal to 1 if the successor is the chair of the board of directors at year +1 and the predecessor was not the chair of the board of directors at year -1 and equal to 0 otherwise. *Dummy variable 2* is equal to 1 if the successor is not the chair of the board of directors at year +1 and the predecessor was the chair of the board of directors at year -1 and equal to 0 otherwise. *Dummy variable 3* is equal to 1 if the successor is the chair of the board of directors at year +1 and the predecessor was the chair of the board of directors at year -1 and equal to 0 otherwise. *Dummy variable 5* is equal to 1 if the succession was an outside succession and equal to 0 otherwise.

In regression 1 of Panel A in Table 4.7.1, we report that the estimated coefficient of *Dummy variable 1* is significant and is equal to -3.601 and the estimated coefficient of *Dummy variable 2* is significant and is equal to -3.889. In regression 1 of Panel B in Table 4.7.1, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 1 of Panel C in Table 4.7.1, we report that the estimated coefficient of *Dummy variable 1* is significant and is equal to -3.892. The estimated coefficient of *Dummy variable 2* is significant and is equal to -4.030. The estimated coefficient of *Dummy variable 3* is significant and is equal to -3.190. Therefore, hypothesis 8 (*the*

successors' power and titles will affect their total compensation structure relative to that of the predecessors) is supported.

The estimated coefficient of *Dummy variable 1* indicates that when the successor is the chair and the predecessor is not the chair, then the pay-performance sensitive portion of the successor total compensation decreases relative to that of the predecessor. The reason is that successors who are also the chairs have more power than predecessors who were not the chairs. The successors will use this power to decrease their compensation risk by decreasing the pay-performance sensitive portion of their total compensation to that of the predecessors.

The estimated coefficient of *Dummy variable 2* indicates that when the successor is not the chair and the predecessor is the chair, then the pay-performance sensitive portion of the successor total compensation decreases relative to that of the predecessor. This result is counterintuitive and we cannot explain it.

The estimated coefficient of *Dummy variable 3* indicates that when the successor is the chair and the predecessor is the chair, then the pay-performance sensitive portion of the successor total compensation decreases relative to that of the predecessor. In this case both the successors and predecessors have the power of being the chairs of the board of directors in the year following and prior to the succession, respectively. However, successors still want to get a better compensation package than their predecessors. This is the reason why they will use their power to reduce their compensation risk by reducing its pay-performance sensitive portion relative to that of the predecessor.

When the CEOs hold the title of the chair of the board, they can control the flow of information to the directors and can facilitate the appointment of insiders and affiliated

directors to the board. They can also influence the structure of the different committees. This will lead to CEOs' monopoly over the information required to construct compensation plans.

In regression 1 of Panel C in Table 4.7.1, we report that there is no relation between the dependent variable and *Dummy variable 5*. We also report that there is no relation between the dependent variable and the control variables.

4.2.3.5 Regression 2 in Table 4.7.1

Changeinpppstc= f (Dummy variable 1, Dummy variable 2, Dummy variable 3, and control variables)

In regression 2 of Panel A in Table 4.7.1, we report that the estimated coefficient of *Dummy variable 1* is significant and is equal to -3.613 and the estimated coefficient of *Dummy variable 2* is significant and is equal to -3.827. In regression 2 of Panel B in Table 4.7.1, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 2 of Panel C in Table 4.7.1, we report that the estimated coefficient of *Dummy variable 1* is significant and is equal to -3.900. The estimated coefficient of *Dummy variable 2* is significant and is equal to -3.940. The estimated coefficient of *Dummy variable 3* is significant and is equal to -3.196. Therefore, hypothesis 8 is supported. The results are similar to those in regression 1 in Table 4.7.1. In regression 2 of Panel C in Table 4.7.1, we report that there is no relation between the dependent variable and the control variables.

4.2.3.6 Regression 3 in Table 4.7.1

Changeinpppstc= f (Dummy variable 1, Dummy variable 2, and control variables)

In regression 3 of Panel A in Table 4.7.1, we report that the estimated coefficient of *Dummy variable 2* is significant and is equal to -2.340. In regression 3 of Panel B in Table 4.7.1, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 3 of Panel C in Table 4.7.1, we report that there is no relation between the dependent variable and *Dummy variable 1*. The estimated coefficient of *Dummy variable 2* is significant and is equal to -2.334 and this indicates that when the successor is not the chair and the predecessor is the chair, then the pay-performance sensitive portion of the successor total compensation decreases relative to that of the predecessor. We also report that there is no relation between the dependent variable and the control variables.

4.2.3.7 Regression 4 in Table 4.7.1

Changeinpppstc= f (Dummy variable 1, Dummy variable 4, Dummy variable 5, and control variables)

Dummy variable 4 is equal to 1 if the successor is not the chair of the board of directors at year +1 and the predecessor was not the chair of the board of directors at year -1 and equal to 0 otherwise. In regression 4 of Panel A in Table 4.7.1, we report that the estimated coefficient of *Dummy variable 4* is significant and is equal to 3.643. In

regression 4 of Panel B in Table 4.7.1, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 4 of Panel C in Table 4.7.1, we report that there is no relation between the dependent variable and *Dummy variable 1*. The estimated coefficient of *Dummy variable 4* is significant and is equal to 3.824. The estimated coefficient of *Dummy variable 4* indicates that when the successor is not the chair and the predecessor is not the chair, then the pay-performance sensitive portion of the successor total compensation increases relative to that of the predecessor.

The reason is that the successors do not have the power of being the chairs of the board of directors. As a result, the firms will increase the pay-performance sensitive portion of the successors' total compensation in order to more closely link their compensation to firm performance.

In regression 4 of Panel C in Table 4.7.1, we report there is no relation between the dependent variable and *Dummy variable 5*. We also report that there is no relation between the dependent variable and the control variables.

4.2.3.8 Regression 5 in Table 4.7.1

Changeinpppstc= f (Dummy variable 2, Dummy variable 4, Dummy variable 5, and control variables)

In regression 5 of Panel A in Table 4.7.1, we report that the estimated coefficient of *Dummy variable 4* is significant and is equal to 3.195. In regression 5 of Panel B in Table 4.7.1, we report that the estimated coefficients of the independent variables are

insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 5 of Panel C in Table 4.7.1, we report that there is no relation between the dependent variable and *Dummy variable 2*. The estimated coefficient of *Dummy variable 4* is significant and is equal to 3.527. This result is similar to that of regression 4 in Table 4.7.1.

In regression 5 of Panel C in Table 4.7.1, we report that that there is no relation between the dependent variable and *Dummy variable 5*. We also report that there is no relation between the dependent variable and the control variables.

4.2.3.9 Regression 6 in Table 4.7.1

Changeinpppstc= f (Dummy variable 4 and control variables)

In regression 6 of Panel A in Table 4.7.1, we report that the estimated coefficient of *Dummy variable 4* is significant and is equal to 3.621. In regression 6 of Panel B in Table 4.7.1, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 6 of Panel C in Table 4.7.1, we report that the estimated coefficient of *Dummy variable 4* is significant and is equal to 3.802. This result is similar to that of regression 4 and 5 in Table 4.7.1. We also report that there is no relation between the dependent variable and the control variables.

[Insert Table 4.7.2 here]

4.2.3.10 Regression 1 in Table 4.7.2

Changeinpoth= f (Dummy variable 1, Dummy variable 2, Dummy variable 3,

Dummy variable 5 and control variables)

The dependent variable *"Changeinpoth"* is the percentage change in the CEO's other annual compensation as a percentage of total compensation. In regression 1 of Panel A in Table 4.7.2, we report that the estimated coefficient of *Dummy variable 3* is significant and equal to 28.999. In regression 1 of Panel B in Table 4.7.2, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 1 of Panel C in Table 4.7.2, we report that there is no relation between the dependent variable and *Dummy variable 1*. We also report that there is no relation between the dependent variable and *Dummy variable 2*. The estimated coefficient of *Dummy variable 3* is significant and equal to 27.203 and it indicates that when the successor is the chair and the predecessor is the chair, then the other annual compensation of the successor increases relative to that of the predecessor.

The reason is that since the successors have the power of also being the chairs of the board of directors like the predecessors, then they will use this power to increase their other annual compensation relative to their predecessors. Increasing other annual compensation reduces the successors' total compensation risk since it is not a pay-performance sensitive part of the compensation.

In regression 1 of Panel C in Table 4.7.2, we report that there is no relation between the dependent variable and *Dummy variable 5*. We also report that that there is

no relation between the dependent variable and five of the control variables. The estimated coefficient of *"DiffLev"* is significant and equal to -1.066.

4.2.3.11 Regression 2 in Table 4.7.2

Changeinpoth= f (Dummy variable 1, Dummy variable 3, and control variables)

In regression 2 of Panel A in Table 4.7.2, we report that the estimated coefficient of *Dummy variable 3* is significant and equal to 26.052. In regression 2 of Panel B in Table 4.7.2, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 2 of Panel C in Table 4.7.2, we report there is no relation between the dependent variable and *Dummy variable 1*. The estimated coefficient of *Dummy variable 3* is significant and equal to 27.219. This result is similar to that of regression 1 in Table 4.7.2. We also report that there is no relation between the dependent variable and the control variables.

4.2.3.12 Regression 3 in Table 4.7.2

Changeinpoth= f (Dummy variable 2, Dummy variable 3, and control variables)

In regression 3 of Panel A in Table 4.7.2, we report that the estimated coefficient of *Dummy variable 3* is significant and equal to 28.000. In regression 3 of Panel B in Table 4.7.2, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 3 of Panel C in Table 4.7.2, we report there is no relation between the dependent variable and *Dummy variable 2*. The estimated coefficient of *Dummy variable 3* is significant and equal to 25.862. This result is similar to that of regression 1 and 2 in Table 4.7.2. We also report that there is no relation between the dependent variable and the control variables.

4.2.3.13 Regression 4 in Table 4.7.2

Changeinpoth= f (Dummy variable 3 and control variables)

In regression 4 of Panel A in Table 4.7.2, we report that the estimated coefficient of *Dummy variable 3* is significant and equal to 26.273. In regression 4 of Panel B in Table 4.7.2, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 4 of Panel C in Table 4.7.2, we report that the estimated coefficient of *Dummy variable 3* is significant and equal to 26.918. This result is similar to that of regression 1, 2, and 3 in Table 4.7.2. We also report that there is no relation between the dependent variable and the control variables.

4.2.3.14 Regression 5 in Table 4.7.2

Changeinpoth= f (Dummy variable 1, Dummy variable 2, Dummy variable 4, and control variables)

In regression 5 of Panel A in Table 4.7.2, we report that the estimated coefficient of *Dummy variable 1* is significant and equal to -27.417 and the estimated coefficient of

Dummy variable 2 is significant and equal to -25.548. Therefore, hypothesis 8 (*the successor's power and titles will affect his/her total compensation structure relative to that of the predecessor's)* is supported. In regression 5 of Panel B in Table 4.7.2, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 5 of Panel C in Table 4.7.2, we report that there is no relation between the dependent variable and *Dummy variable 1*. The estimated coefficient of *Dummy variable 2* is significant and equal to -27.542 and indicates that when the successor is not the chair and the predecessor is the chair, then the other annual compensation of the successor decreases relative to that of the predecessor.

The reason is that since the successors do not have the power of being the chairs of the board of directors the firms will try to reduce their other annual compensation which is a part of the total compensation that is not related to the firms' performance. The goal behind this is to try and link the successors' compensation to the firms' performance as much as possible.

In regression 5 of Panel C in Table 4.7.2, we report that there is no relation between the dependent variable and *Dummy variable 4.* We also report that there is no relation between the dependent variable and the control variables.

4.2.4 Relating CEO Origin to Compensation Structure

We investigate whether there is an association between the outside successor's origin and the percentage change in total compensation in Table 4.8 and the percentage

change in the CEO other annual compensation in Table 4.8.1. We have the same six

control variables that we described previously. These control variables are

"DiffCEOAge," "DiffLogTotAs," "DiffLev," "DiffIndAdjROA," "DiffTobin'sQ," and

"Merger."

Tables 4.8 and 4.8.1 each consist of three panels. In Panel A, we report the results

of the regression of the dependent variable on the test variables. In Panel B, we report the

results of the regression of the dependent variable on the control variables. In Panel C, we

report the results of the regression of the dependent variable on the test variables and the

control variables.

[Insert Table 4.8 here]

4.2.4.1 Regression 1 in Table 4.8

ChangeinTotComp= f (Dummy variable 1, Dummy variable 2, and control

variables)

The dependent variable *"ChangeinTotComp"* is the percentage change in the total

compensation of the successor and the predecessor. *Dummy variable 1* is equal to 1 if the

outside successor comes from the firm's industry and equal to 0 otherwise. *Dummy*

variable 2 is equal to 1 if the outside successor does not come from the firm's industry

and equal to 0 otherwise.

In regression 1 of Panel A in Table 4.8, we report that the estimated coefficients

of the independent variables are insignificant and therefore, there is no relation between

the dependent variable and the independent variables. In regression 1 of Panel B in Table

4.8, we report that the estimated coefficient of *"DiffLogTotAs"* is significant and equal to 1.399.

In regression 1 of Panel C in Table 4.8, we report that there is no relation between the dependent variable, the test variables, and five of the control variables. The estimated coefficient of *"DiffLogTotAs"* is significant and equal to 1.466.

4.2.4.2 Regression 2 in Table 4.8

ChangeinTotComp= f (Dummy variable 1 and control variables)

In regression 2 of Panel A in Table 4.8, we report that the estimated coefficient of the independent variable is insignificant and therefore, there is no relation between the dependent variable and the independent variable. In regression 2 of Panel B in Table 4.8, we report that the estimated coefficient of *"DiffLogTotAs"* is significant and equal to 1.399.

In regression 2 of Panel C in Table 4.8, we report that there is no relation between the dependent variable, the test variable, and five of the control variables. The estimated coefficient of *"DiffLogTotAs"* is significant and equal to 1.399.

[Insert Table 4.8.1 here]

4.2.4.3 Regression 1 in Table 4.8.1

Changeinpoth= f (Dummy variable 2 and control variables)

The dependent variable *"Changeinpoth" is* the percentage change in the CEO other annual compensation as a percentage of total compensation. In regression 1 of Panel A in Table 4.8.1, we report that the estimated coefficient of *Dummy variable 2* is

significant and equal to 23.072. In regression 1 of Panel B in Table 4.8.1, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 1 of Panel C in Table 4.8.1, we report that the estimated coefficient of *Dummy variable 2* is significant and equal to 21.294. This result indicates that when the outside successor does not come from the firm's industry, there will be an increase in the other annual compensation for the successor relative to the predecessor.

The reason is that the firms try to increase the risk-free part of the successors' total compensation in order to encourage outside successors not from the firms' industry to make the risky move to a different industry. As we stated earlier, the other annual compensation of successors is not related to the firms' performance. Thus, increasing it reduces the successors' compensation risk. In regression 1 of Panel C in Table 4.8.1, we report that there is no relation between the dependent variable and the control variables.

4.2.4.4 Regression 2 in Table 4.8.1

Changeinpoth= f (Dummy variable 1, Dummy variable 2, and control variables)

In regression 2 of Panel A in Table 4.8.1, we report that the estimated coefficient of *Dummy variable 2* is significant and equal to 23.022. In regression 2 of Panel B in Table 4.8.1, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 2 of Panel C in Table 4.8.1, we report that there is no relation between the dependent variable and *Dummy variable 1*. The estimated coefficient of

Dummy variable 2 is significant and equal to 21.082. This result is similar to that of regression 1 in Table 4.8.1. We also report that there is no relation between the dependent variable and the control variables.

4.2.5 Relating Relay Successions to Compensation Structure

We investigate whether there is an association between whether or not the inside successor was designated as heir apparent and the percentage change in total compensation in Table 4.9, the percentage change in the salary in Table 4.9.1, the percentage change in the CEO other annual compensation in Table 4.9.2, and the percentage change in the restricted stockholdings in Table 4.9.3. We have the same six control variables that we described previously. These control variables are *"DiffCEOAge," "DiffLogTotAs," "DiffLev," "DiffIndAdjROA," "DiffTobin'sQ,"* and *"Merger."*

Tables 4.9, 4.9.1, 4.9.2, and 4.9.3 each consist of three panels. In Panel A, we report the results of the regression of the dependent variable on the test variables. In Panel B, we report the results of the regression of the dependent variable on the control variables. In Panel C, we report the results of the regression of the dependent variable on the test variables and the control variables.

[Insert Table 4.9 here]

4.2.5.1 Regression 1 in Table 4.9

ChangeinTotComp= f (Dummy variable1 and control variables)

The dependent variable *"ChangeinTotComp"* is the percentage change in the total compensation of the successor and the predecessor. *Dummy variable 1* is equal to 1 if the inside successor was designated as heir apparent and equal to 0 otherwise. *Dummy variable 2* is equal to 1 if the inside successor was not designated as heir apparent and equal to 0 otherwise.

In regression 1 of Panel A in Table 4.9, we report that the estimated coefficient of the independent variable is insignificant and therefore, there is no relation between the dependent variable and the independent variable. In regression 1 of Panel B in Table 4.9, we report that the estimated coefficient of *"DiffLogTotAs"* is significant and equal to 1.399.

In regression 1 of Panel C in Table 4.9, we report that the estimated coefficient of *Dummy variable 1* is significant and equal to -0.899. This result indicates that the total compensation of the inside successor who was designated as heir apparent will decrease relative to that of the predecessor. The reason is that the predecessor was the mentor of the inside successor who was designated as heir apparent while he/she was being groomed in order to take over the CEO position. The students should not get a greater total compensation than the mentors.

Relay successions usually occur when the firm performance is good and shareholders want to maintain the same managerial philosophy. As a result, the predecessor must have been doing a good job and it would be logical to give the successor who just took over the CEO position a lower total compensation than that of the predecessor.

In regression 1 of Panel C in Table 4.9, we report that there is no relation between the dependent variable and five of the control variables. The estimated coefficient of *"DiffLogTotAs"* is significant and equal to 1.572.

[Insert Table 4.9.1 here]

4.2.5.2 Regression 1 in Table 4.9.1

Changeinpsal= (Dummy variable 1, Dummy variable 2, and control variables)

The dependent variable *"Changeinpsal"* is the percentage change in the salary of the successor and the predecessor as a percentage of total compensation. In regression 1 of Panel A in Table 4.9.1, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables. In regression 1 of Panel B in Table 4.9.1, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 1 of Panel C in Table 4.9.1, we report that there is no relation between the dependent variable and *Dummy variable 1*. The estimated coefficient of *Dummy variable 2* is significant and equal to 0.333. This result indicates that the salary of the inside successor who was not designated as heir apparent will increase relative to that of the predecessor. We also report that there is no relation between the dependent variable and the control variables.

4.2.5.3 Regression 2 in Table 4.9.1

Changeinpsal= (Dummy variable 2 and control variables)

In regression 2 of Panel A in Table 4.9.1, we report that the estimated coefficient of the independent variable is insignificant and therefore, there is no relation between the dependent variable and the independent variable. In regression 2 of Panel B in Table 4.9.1, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 2 of Panel C in Table 4.9.1, we report that the estimated coefficient of *Dummy variable 2* is significant and equal to 0.330. This result indicates that the salary of the inside successor who was not designated as heir apparent will increase relative to that of the predecessor. The reason is that the inside successor who was not designated as heir apparent received a lower compensation than that of the CEO, the president, and the COO of the firm. The firm awards the successor a larger salary than that of the predecessor as a reward for the promotion to the CEO position. This can be construed as a vote of confidence for the inside successor who was not designated as heir apparent since the salary is risk-free compensation. It shows that the firm has confidence in the successor and that it is willing to increase the part of his/her compensation that is not linked to performance. We also report that there is no relation between the dependent variable and the control variables.

[Insert Table 4.9.2 here]

4.2.5.4 Regression 1 in Table 4.9.2

Changeinpoth= f (Dummy variable 1 and Dummy variable 2)

The dependent variable *"Changeinpoth"* is the percentage change in the other annual compensation as a percentage of total compensation. In regression 1 of Panel A in Table 4.9.2, we report that the estimated coefficient of *Dummy variable 1* is significant and equal to -18.224 and the estimated coefficient of *Dummy variable 2* is significant and equal to -21.242. This result indicates that the other annual compensation of the inside successor who was designated as heir apparent decreases relative to that of the predecessor and the same applies for the inside successor who was not designated as heir apparent. Therefore hypothesis 10 (*the total compensation structure of an inside successor who was designated as an heir apparent will be different (larger) than that of an inside successor who was not designated as an heir apparent*) is supported. This is because the other annual compensation of the inside successor who was designated as heir apparent will be larger than that of the inside successor who was not designated as heir apparent. In both cases the other annual compensation of the successor will decrease relative to that of the predecessor. However, the other annual compensation will decrease less in the case of inside successor who was designated as heir apparent.

The reasoning here is that the heirs apparent usually hold the position of president while they are being groomed for the CEO position. The president's compensation is usually just below that of the CEO. When insiders are named to be successors their total compensation and its components will increase. Since the heirs' apparent total compensation is already greater than that of any other insider except for the CEO. Therefore, when the heirs apparent are promoted to the CEO position their total

compensation and its components will be greater than that of any other insider that is promoted to the CEO position.

In regression 1 of Panel B in Table 4.9.2, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables. In regression 1 of Panel C in Table 4.9.2 we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

[Insert Table 4.9.3 here]

4.2.5.5 Regression 1 in Table 4.9.3

Changeinprsgrt= f (Dummy variable 1 and control variables)

The dependent variable *"Changeinprsgrt"* is the percentage change in the restricted stockholdings as a percentage of total compensation. In regression 1 of Panel A in Table 4.9.3, we report that the estimated coefficient of the independent variable is insignificant and therefore, there is no relation between the dependent variable and the independent variable. In regression 1 of Panel B in Table 4.9.3, we report that the estimated coefficients of the independent variables are insignificant and therefore, there is no relation between the dependent variable and the independent variables.

In regression 1 of Panel C in Table 4.9.3, we report that the estimated coefficient of *Dummy variable 1* is significant and equal to 0.725. This result indicates that the restricted stockholdings of the inside successor who was designated as heir apparent will

increase relative to that of the predecessor. The reason is that the firm wants to closely tie the successor's compensation to the firm performance.

Relay successions usually occur when the firm performance is good. The firms want to maintain this good performance so they attempt to more closely link the successors' compensation to performance. Restricted stock is a part of the pay-performance compensation. We also report that there is no relation between the dependent variable and the control variables.

CHAPTER V

CONCLUSIONS

5.1 Conclusions and Discussion

Although there are numerous studies that separately examine compensation and succession, there are relatively few studies that examine both compensation and succession and their impact on one another. Using a sample of 521 successions in *ExecuComp* database from 1992 to 2003, we conducted a study of the total compensation and its components of the successors and predecessors around successions. We found that successors are loaded up with options and restricted stocks in order to closely link their compensation to firm performance. As a result, the pay-performance compensation is on average greater for successors than for predecessors. The salary component of CEO total compensation is on average less for successors than for predecessors. This is because salary is not linked to firm performance and is considered as risk-free compensation. The successors' total compensation is on average greater than that of the predecessors' due to the unrelenting competition between firms for the most qualified CEOs.

The board structure affects the CEO pay-performance compensation. When the board of directors is dominated by outsiders at year -2 and 0 or when there is a shift from being dominated by inside and/or affiliated directors to outsiders the successor pay-performance compensation is greater than that of the predecessor. The CEO pay-performance compensation increases with the increase of the percentage of outsiders on the board of directors.

We did not find significant evidence to demonstrate how the successor pay-performance compensation changes with respect to that of the predecessor depending on the compensation committee structure. However, we found that when there is an increase in the percentage of inside and/or affiliated directors on the compensation committee at year 0 the successor pay-performance compensation decreases. In the case when the sample was truncated to remove observations that had a cumulative percentage less than 1% and more than 99% we found that when there is a change in the compensation committee domination from inside and/or affiliated directors at year -2 to outsiders at year 0 the successor pay-performance compensation increases relative to that of the predecessor.

We did not find significant evidence to demonstrate how the successor total compensation changes with respect to that of the predecessor depending on the successor and predecessor power and titles. However, we found that the successor pay-performance compensation is less than that of the predecessor in two cases. The first case is when the successor is also chair of the board of directors at the year following the succession and the predecessor was not the chair of the board of directors in the year prior to the succession. The second case is when the successor is not chair of the board of directors at the year following the succession and the predecessor was the chair of the board of directors in the year prior to the succession. We also found that the successor pay-performance compensation is greater than that of the predecessor when both the successor and predecessor was not the chair of the board of directors in the year following the succession and the year prior to the succession, respectively. The successor other annual compensation is greater than that of the predecessor when both the successor

and predecessor was the chair of the board of directors in the year following the succession and the year prior to the succession, respectively. The successor other annual compensation is less than that of the predecessor when the successor is not chair of the board of directors at the year following the succession and the predecessor was the chair of the board of directors in the year prior to the succession.

We did not find significant evidence to demonstrate how the successor total compensation changes with respect to that of the predecessor depending on whether the outside successor came from the firm's industry or from a different industry. However, we found that the successor other annual compensation is greater than that of the predecessor when the outside successor does not come from the firm's industry.

We did not find significant evidence to demonstrate how the successor total compensation changes with respect to that of the predecessor depending on whether or not the inside successor was designated as heir apparent. However, we found that the successor total compensation is less that that of the predecessor when the inside successor was designated as heir apparent. The successor salary is greater than that of the predecessor when the inside successor was not designated as heir apparent. The successor other annual compensation is less than that of the predecessor in both cases. However, the decrease is greater in the case when the inside successor was not designated as heir apparent. The successor restricted stockholding is greater than that of the predecessor when the inside successor was designated as heir apparent.

[Insert Table 5.1 here]

5.2 Limitations

One problem that we encountered was that we used the percentage change in compensation components as our dependent variable and when the predecessor's compensation components was zero we lost that observation because we were dividing a number by zero. Another limitation was that we lost some observations because we could not find all the firm's compensation data on *ExecuComp* for the years that we were looking at or we could not find all the firm proxies that we needed on Lexis-Nexis for the years we were looking at.

5.3 Future Research

In this study we excluded the successions that occurred in financial institutions and utilities. We can use those successions to create two samples, one sample for financial institutions and the other for utilities, and test our hypotheses for those two samples. We can then compare the results between all three samples. We can also add the excluded successions to our original sample and test our hypotheses to see if there is a change in any of the results.

We realize that we have an *ExecuComp* bias since our sample consists of only the successions that were reported by the *ExecuComp* database. We can create a larger sample for a longer time period that includes successions that are collected from a range of different databases. However, in this case we have to look out for overlapping successions that were reported in more than one database.

We can test for cultural factors by creating another sample for successions that occurred within the same time period in a different country like Japan. It would be

interesting to see if the cultural factors have an effect on the results. The huge compensations that are paid out to CEOs in the United States are unacceptable in other countries that have a socialist history or that have certain regulations that the CEOs' compensation should not be more than a certain multiple of the salary of the average worker in the firm. It is also possible to do a cross-cultural study. One sample will be for U.S. firms, another sample can be for a European country and a third sample can be for an Asian country. We can compare the results and study whether or not the cultural factors play a role.

We can try and improve the study by adjusting all compensation components for inflation and reporting them in 2004 dollars by using the *Consumer Price Index (CPI)*. This will help give us a clearer picture when comparing the compensation components.

Table 2.1

Summary of Previous Studies

Study	Topic	Methodology	Conclusion
Morgan and Poulsen (2001)	Compensation	Event study	Pay-for-performance plans are beneficial to shareholders.
Toyne, Millar, and Dixon (2000)	Compensation	Piece-wise regression	Across a middle control range (between 13 and 22% of total shares), increases in board stock ownership are associated with decreases in stock-based compensation.
Jin (2002)	Compensation	Principal-agent model [Market-model regressions]	The optimal incentive level decreases with nonsystematic (firm-specific) risk but does not change with systematic (market) risk.
Ryan and Wiggins (2001)	Compensation	Regression	The firm and managerial characteristics influence executive compensation.
Newman and Mozes (1999)	Compensation	Regression	CEOs receive preferential treatment, at the shareholders' expense, when insiders are members of the compensation committee.
Sridharan (1996)	Compensation	OLS regression	CEO influence over the board can explain the size of CEO pay.
Coughlan and Schmidt (1985)	Compensation	Regression	Corporate boards control top management behavior by making compensation and management termination decisions related to the firm's stock price performance.
Bryan, Hwang, and Lilien (2000)	Compensation	Tobit model	Restricted stock, due to its linear payoff function, is relatively inefficient in inducing risk-averse CEOs to accept risky, value-increasing investment projects.
Hadlock and Lumer (1997)	Compensation	Logit regressions	The internal incentive mechanisms under the control of the board of directors have become more sensitive to firm performance over the past half century.
Gibbons and Murphy (1992)	Compensation	Career concerns model [Regression]	Career concerns can still create important incentives, even in the presence of incentive contracts.
Yermack (1997)	Compensation	Event study	The timing of CEO stock option awards coincides with favorable movements in company stock prices.
Rose and Shepard (1997)	Compensation	Fixed effects model	Diversification premiums can be considered as rents earned by high-ability CEOs.
Shen and Cannella (2002a)	Succession	Continuous-time event history analysis	Non-CEO senior executives frequently play an important role in CEO dismissal.
Shen and Cannella (2003)	Succession	Event study	Investors do not react to heir apparent appointment, but react negatively to heir apparent exit and react positively to heir apparent promotion to the CEO position.
Zhang and Rajagopalan (2004)	Succession	Multinomial logit analyses and OLS regressions	The likelihood of relay succession is negatively associated with the number of internal candidates and positively associated with pre-succession firm performance.

Table 2.1 (continued)

Davidson, Nemec, and Worrell (2002)	Succession	Event study, OLS regressions, and a multinomial ordered probit model	The stock market reacts more positively to outside CEO succession announcements when the CEO comes from a firm in a related industry.
Zajac and Westphal (1996)	Succession	Heckman selection model	Powerful boards are more likely to change CEO characteristics in the direction of their own demographic profile.
Cannella and Shen (2001)	Succession	Discrete time-event history model	The incumbent CEO and outside director power are important influences on heir promotion and exit. The heirs who arise from within a firm are less likely to exit.
Zhang and Rajagopalan (2003)	Succession	Multinomial logit analysis	Firm-level characteristics are useful in discriminating between intra-firm and outside-firm successions, while industry-level characteristics are useful in discriminating between intra-industry and outside-industry successions.
Cannella and Lubatkin (1993)	Succession	Logistic regression analysis	Poor performance will lead to outside CEO succession only when sociopolitical forces are weak.
Shen and Cannella (2002b)	Succession	Hierarchical multiple regression	There is an inverted U-shaped relationship between departing CEO tenure and post-succession firm ROA.
Boeker (1992)	Succession	Maximum-likelihood logistic regression	Powerful CEOs blame poor performance on their top managers (scapegoating), who are subsequently replaced, while the CEOs remain.
Ocasio (1994)	Succession	Continuous-time, event history analysis	There is an increasing rate of CEO succession during the first decade of CEO tenure, consistent with the model of circulation, followed by a slow decline, consistent with the model of institutionalization.
Pfeffer and Davis-Blake (1992)	Compensation & succession	Logistic regressions	Salary dispersion negatively affected the turnover of employees with relatively high salaries and positively affected the turnover of those with relatively low salaries.
Barro and Barro (1990)	Compensation & succession	Logit regressions	CEO turnover depends on relative performance, unlike compensation growth that depends on relative and aggregate performance. The sensitivity of pay to performance diminishes with experience.

Table 2.1 is a table of some of the previous studies conducted on compensation, succession, and the relation between compensation and succession. The table is divided into four columns, the first states the names of the author(s) and the year the paper was published, the second states the topic of the paper, for example, compensation or succession, the third states the methodology used in the paper, and the final column states a summary of the paper's conclusions.

Table 4.1

Descriptive Statistics
Comparison of Changes in Compensation Structure Around CEO Successions

	Mean	Median	Maximum	Minimum	Standard Deviation	Paired Samples T-Test[1]	Wilcoxon Singed Rank Test[1]
Salary Predecessor	48.42%	44.40%	100%	0.00%	26.35%	-7.382***	-7.603***
Successor	38.41%	35.69%	100%	0.00%	24.13%		
Bonus Predecessor	22.73%	20.81%	96.00%	0.00%	20.02%	-0.801	-0.567
Successor	21.93%	20.44%	78.00%	0.00%	16.85%		
Other annual compensation Predecessor	1.88%	0.00%	41.00%	0.00%	5.39%	0.039	-0.794
Successor	1.89%	0.00%	68.00%	0.00%	6.64%		
Restricted Stockholdings Predecessor	3.93%	0.00%	84.56%	0.00%	11.73%	3.102**	-2.962**
Successor	6.26%	0.00%	96.07%	0.00%	15.43%		
Options Predecessor	22.27%	9.52%	100.00%	0.00%	26.24%	5.710***	-5.590***
Successor	30.94%	26.76%	100.00%	0.00%	29.79%		
Pay-Performance sensitive portion of total compensation Predecessor	49.32%	53.40%	100%	0.00%	25.98%	7.415***	-7.519***
Successor	59.47%	62.32%	100%	0.00%	24.92%		

***, **, *, and ^ denote significance at the 0.001, 0.01, 0.05, and 0.10 levels, respectively.

The descriptive statistics are for a sample of 521 CEO successions occurring between 1992 and 2003. The compensation for the predecessor is measured as of the fiscal year prior to the CEO succession year. The compensation for the successor is measured as of the fiscal year following the CEO succession. "Salary" is the value of the CEO salary as a percentage of total compensation. "Bonus" is the value of CEO bonus as a percentage of total compensation. "Other annual compensation" is the value of the CEO other annual compensation as a percentage of total compensation. "Restricted stockholdings" is the value of restricted

stockholdings granted to the CEO as a percentage of total compensation. "Options" is the value of stock options granted to the CEO as a percentage of the total compensation. "Pay-performance sensitive portion of total compensation" is the sum of the value of the bonus, restricted stockholdings and stock options granted to the CEO as a percentage of total compensation.

[1] The paired samples t-test and the Wilcoxon singed rank (non parametric) test are used to test the equality of the means of compensation component at *t=-1* (the year prior to the CEO succession) and *t=+1* (the year following the CEO succession).

Table 4.2

Descriptive Statistics
Comparison of Changes in Compensation Structure Based on Whether the Successor was
Hired from Inside or Outside the Firm

Panel A - Percentages of Total Compensation Components Around Outside Successions

	Mean	Median	Maximum	Minimum	Standard Deviation	Paired Samples T-Test[1]	Wilcoxon Singed Rank Test[1]
Salary Predecessor	51.00%	46.39%	100.00%	0.00%	28.74%	-3.422***	-3.222***
Successor	40.82%	37.48%	100.00%	0.00%	26.06%		
Bonus Predecessor	16.36%	11.72%	96.00%	0.00%	18.79%	1.637	-1.966*
Successor	19.74%	17.49%	65.00%	0.00%	16.58%		
Other annual compensation Predecessor	2.30%	0.00%	41.00%	0.00%	6.31%	0.159	-1.087
Successor	2.41%	0.00%	38.00%	0.00%	5.66%		
Restricted Stockholdings Predecessor	3.49%	0.00%	81.00%	0.00%	12.89%	2.237*	-2.319*
Successor	6.91%	0.00%	89.00%	0.00%	16.99%		
Options Predecessor	25.47%	18.88%	100.00%	0.00%	28.06%	0.833	-0.700
Successor	28.06%	23.04%	100.00%	0.00%	30.05%		
Pay-Performance sensitive portion of total compensation Predecessor	45.96%	50.96%	100.00%	0.00%	28.44%	3.121**	-3.155**
Successor	55.86%	59.92%	100.00%	0.00%	26.58%		

Table 4.2 (continued)

Panel B - Percentages of Total Compensation Components Around Inside Successions

	Mean	Median	Maximum	Minimum	Standard Deviation	Paired Samples T-Test[1]	Wilcoxon Singed Rank Test[1]
<u>Salary</u> Predecessor	47.42%	43.54%	100.00%	0.00%	25.34%	-6.670***	-7.084***
Successor	37.48%	35.47%	100.00%	0.00%	23.32%		
<u>Bonus</u> Predecessor	25.19%	23.98%	96.00%	0.00%	19.96%	-2.132*	-1.966*
Successor	22.77%	20.95%	78.00%	0.00%	16.89%		
<u>Other annual compensation</u> Predecessor	1.71%	0.00%	40.00%	0.00%	4.99%	-0.056	-1.962*
Successor	1.69%	0.00%	68.00%	0.00%	6.98%		
<u>Restricted Stockholdings</u> Predecessor	4.10%	0.00%	85.00%	0.00%	11.27%	2.227*	-1.974*
Successor	6.01%	0.00%	96.00%	0.00%	14.80%		
<u>Options</u> Predecessor	21.04%	7.78%	90.00%	0.00%	25.43%	6.415***	-6.242***
Successor	32.05%	27.69%	100.00%	0.00%	29.66%		
<u>Pay-Performance sensitive portion of total compensation</u> Predecessor	50.60%	54.85%	97.00%	0.00%	24.89%	6.919***	-7.049***
Successor	60.83%	63.29%	100.00%	0.00%	24.16%		

***, **, *, and ^ denote significance at the 0.001, 0.01, 0.05, and 0.10 levels, respectively.

The descriptive statistics are for a sample of 145 outside CEO successions and 376 inside CEO successions occurring between 1992 and 2003. The compensation for the predecessor is measured as of the fiscal year prior to the CEO succession year. The compensation for the successor is measured as of the fiscal year following the CEO succession. "Salary" is the value of the CEO salary as a percentage of total compensation. "Bonus" is the value of CEO bonus as a percentage of total compensation. "Other annual compensation" is the value of the CEO other annual compensation as a percentage of total compensation. "Restricted stockholdings" is the value of restricted stockholdings granted to the CEO as a percentage of

total compensation. "Options" is the value of stock options granted to the CEO as a percentage of the total compensation. "Pay-performance sensitive portion of total compensation" is the sum of the value of the bonus, restricted stockholdings and stock options granted to the CEO as a percentage of total compensation. [1] The paired samples t-test and the Wilcoxon singed rank (non parametric) test are used to test the equality of the means of salary at $t=-1$ (the year prior to the CEO succession) and $t=+1$ (the year following the CEO succession).

Table 4.3

Descriptive Statistics
Comparison of Changes in Compensation Structure Based on Whether the CEO
Succession was Forced or Voluntary

Panel A - Percentages of Total Compensation Components Around Voluntary Successions

	Mean	Median	Maximum	Minimum	Standard Deviation	Paired Samples T-Test[1]	Wilcoxon Singed Rank Test[1]
<u>Salary</u> Predecessor	48.09%	43.99%	100.00%	0.00%	26.13%	-6.857***	-7.142***
Successor	38.29%	35.59%	100.00%	0.00%	23.92%		
<u>Bonus</u> Predecessor	23.51%	21.45%	96.00%	0.00%	20.09%	-1.469	-1.300
Successor	21.95%	20.32%	78.00%	0.00%	16.96%		
<u>Other annual</u> <u>compensation</u> Predecessor	1.86%	0.00%	41.00%	0.00%	5.48%	0.345	-0.439
Successor	1.99%	0.00%	68.00%	0.00%	6.93%		
<u>Restricted</u> <u>Stockholdings</u> Predecessor	4.09%	0.00%	85.00%	0.00%	11.95%	2.823**	-2.677**
Successor	6.34%	0.00%	96.00%	0.00%	15.56%		
<u>Options</u> Predecessor	21.59%	7.78%	100.00%	0.00%	26.06%	5.792***	-5.664***
Successor	30.79%	26.82%	100.00%	0.00%	29.49%		
<u>Pay-</u> <u>Performance</u> <u>sensitive</u> <u>portion of total</u> <u>compensation</u> Predecessor	49.62%	53.90%	100.00%	0.00%	25.70%	6.826***	-6.982***
Successor	59.46%	62.33%	100.00%	0.00%	24.86%		

Table 4.3 (continued)

Panel B - Percentages of Total Compensation Components Around Forced Successions

	Mean	Median	Maximum	Minimum	Standard Deviation	Paired Samples T-Test[1]	Wilcoxon Singed Rank Test[1]
Salary Predecessor	51.32%	51.12%	100.00%	8.00%	28.33%	-2.744**	-2.659**
Successor	39.47%	37.38%	100.00%	0.00%	26.20%		
Bonus Predecessor	15.89%	11.56%	73.00%	0.00%	18.16%	1.904^	-2.133*
Successor	21.73%	21.54%	55.00%	0.00%	15.98%		
Other annual compensation Predecessor	1.98%	0.00%	23.00%	0.00%	45.22%	-1.278	-0.961
Successor	0.97%	0.00%	17.00%	0.00%	30.19%		
Restricted Stockholdings Predecessor	2.51%	0.00%	49.00%	0.00%	9.54%	1.339*	-1.477*
Successor	5.59%	0.00%	62.00%	0.00%	14.39%		
Options Predecessor	28.31%	20.73%	87.00%	0.00%	27.28%	0.775	-0.660
Successor	32.24%	25.91%	100.00%	0.00%	32.62%		
Pay-Performance sensitive portion of total compensation Predecessor	46.71%	47.01%	91.00%	0.00%	28.43%	2.928**	-2.841**
Successor	59.56%	61.21%	100.00%	0.00%	25.73%		

***, **, *, and ^ denote significance at the 0.001, 0.01, 0.05, and 0.10 levels, respectively.

The descriptive statistics are for a sample of 468 voluntary CEO successions and 53 forced CEO successions occurring between 1992 and 2003. The compensation for the predecessor is measured as of the fiscal year prior to the CEO succession year. The compensation for the successor is measured as of the fiscal year following the CEO succession. "Salary" is the value of the CEO salary as a percentage of total compensation. "Bonus" is the value of CEO bonus as a percentage of total compensation. "Other annual compensation" is the value of the CEO other annual compensation as a percentage of total compensation.

"Restricted stockholdings" is the value of restricted stockholdings granted to the CEO as a percentage of total compensation. "Options" is the value of stock options granted to the CEO as a percentage of the total compensation. "Pay-performance sensitive portion of total compensation" is the sum of the value of the bonus, restricted stockholdings and stock options granted to the CEO as a percentage of total compensation. [1] The paired samples t-test and the Wilcoxon singed rank (non parametric) test are used to test the equality of the means of "Restricted stockholdings" at *t=-1* (the year prior to the CEO succession) and *t=+1* (the year following the CEO succession.

Table 4.4

Descriptive Statistics
Comparison of Changes in the Total Compensation Around CEO Successions (Figures in thousands of dollars)

Panel A – Changes in the Total Compensation for the Overall Sample

	Mean	Median	Maximum	Minimum	Standard Deviation	Paired Samples T-Test[1]	Wilcoxon Singed Rank Test[1]
Total compensation Predecessor	1850.39	1150.40	20835.22	0.00	2386.17	3.328***	-6.942***
Successor	2932.55	1423.96	152594.31	0.00	7521.72		

Panel B – Changes in the Total Compensation Around Outside Successions

	Mean	Median	Maximum	Minimum	Standard Deviation	Paired Samples T-Test[1]	Wilcoxon Singed Rank Test[1]
Total compensation Predecessor	1411.59	1000.00	13697.39	0.00	1580.73	3.613***	-3.905***
Successor	2320.10	1291.13	18988.52	0.00	3049.66		

Panel C – Changes in the Total Compensation for Around Inside Successions

	Mean	Median	Maximum	Minimum	Standard Deviation	Paired Samples T-Test[1]	Wilcoxon Singed Rank Test[1]
Total compensation Predecessor	2019.60	1272.26	20835.22	0.00	2613.95	2.611**	-5.776***
Successor	3168.74	1443.85	152594.31	0.00	8641.77		

Table 4.4 (continued)

Panel D – Changes in the Total Compensation Around Voluntary Successions

	Mean	Median	Maximum	Minimum	Standard Deviation	Paired Samples T-Test[1]	Wilcoxon Singed Rank Test[1]
<u>Total compensation</u> Predecessor	1857.05	1159.77	20835.22	0.00	2440.59	2.904**	-6.443***
Successor	2892.88	1421.56	152594.31	0.00	7773.12		

Panel E – Changes in the Total Compensation Around Forced Successions

	Mean	Median	Maximum	Minimum	Standard Deviation	Paired Samples T-Test[1]	Wilcoxon Singed Rank Test[1]
<u>Total compensation</u> Predecessor	1791.52	1094.65	10235.05	311.08	1854.77	2.709**	-2.634**
Successor	3282.91	1491.88	23703.30	348.31	4795.19		

***, **, *, and ^ denote significance at the 0.001, 0.01, 0.05, and 0.10 levels, respectively.

The descriptive statistics are for a sample of 521 CEO successions occurring between 1992 and 2003. The compensation for the predecessor is measured as of the fiscal year prior to the CEO succession year. The compensation for the successor is measured as of the fiscal year following the CEO succession. The total compensation (in thousands of dollars) of the CEO is the sum of the CEO salary, bonus, other annual compensation, restricted stockholdings, and options. "Total compensation" is the percentage change in total compensation between successor and predecessor.

[1] The paired samples t-test and the Wilcoxon singed rank (non parametric) test are used to test the equality of the means of total compensation and compensation components at *t=-1* (the year prior to the CEO succession) and *t=+1* (the year following the CEO succession).

Table 4.5

Ordinary Least Square Regression Relating Pay-Performance Sensitive Compensation and Board of Directors Structure

Panel A

	Reg. 1	Reg. 2	Reg. 3[1]	Reg. 4	Reg. 5	Reg. 6	Reg. 7
Dependent variable	*Changeinppp stc*	*Changeinppp stc*	*Changeinppp stc*	*Changeinppp stc*	*Changein pppstc*	*pppstc1*	*pppstcn1*
Constant	-1.164 (-1.221)	0.955 (1.981)*	0.820 (1.305)	-0.993 (-0.549)	0.523 (0.525)	0.509 (12.478)****	0.408 (9.821)***
Dummy variable 1	2.618 (2.379)*	--	--	--	--	--	--
Dummy variable 2	12.861 (5.079)***	--	--	--	--	--	--
Dummy variable 3	0.959 (0.314)	--	--	--	--	--	--
Changeinpoutdir	--	5.130 (3.082)**	33.619 (7.467)***	--	--	--	--
poutdir0	--	--	--	3.484 (1.254)	--	0.137 (2.172)*	--
outsider0	--	--	--	--	0.871 (0.768)	--	--
poutdirn2	--	--	--	--	--	--	0.140 (2.143)*
Adjusted R² *F*	0.049 8.944***	0.018 9.497**	0.143 55.760***	0.001 1.572	-0.001 0.590	0.007 4.718*	0.007 4.593*

Panel B

	Regressions 1 through 5	Regression 6	Regression 7
Dependent variable	*Changeinpppstc*	*pppstc1*	*pppstcn1*
Constant	1.610 (2.387)*	0.581 (39.590)***	0.504 (32.033)***
DiffCEOAge	0.018 (0.350)	0.001 (0.509)	0.002 (1.623)
DiffLogTotAs	-1.255 (-0.803)	0.094 (2.843)**	0.025 (0.724)
DiffLev	-0.015 (-0.421)	0.000 (0.108)	0.002 (1.828)^
DiffIndAdjROA	-0.001 (-0.110)	0.000 (0.390)	0.000 (0.366)
DiffTobin'sQ	-0.322 (-0.231)	-0.051 (-1.606)	-0.041 (-1.205)
Merger	-0.741 (-0.353)	0.087 (1.934)^	-0.002 (-0.048)
Adjusted R² *F*	-0.010 0.270	0.028 3.385**	0.003 1.256

Table 4.5 (continued)

Panel C

	Reg. 1	Reg. 2	Reg. 3[1]	Reg. 4	Reg. 5	Reg. 6	Reg. 7
Dependent variable	*Changeinpppstc*	*Changeinpppstc*	*Changeinpppstc*	*Changeinpppstc*	*Changeinpppstc*	*pppstc1*	*pppstcn1*
Constant	-0.860 (-0.790)	1.299 (1.910)^	0.958 (1.015)	-0.473 (-0.238)	0.957 (0.844)	0.493 (11.498)****	0.408 (9.230)***
Dummy variable 1	2.753 (2.371)*	--	--	--	--	--	--
Dummy variable 2	13.113 (5.015)***	--	--	--	--	--	--
Dummy variable 3	1.592 (0.450)	--	--	--	--	--	--
Changeinpoutdir	--	5.069 (2.943)**	34.738 (7.341)***	--	--	--	--
poutdir0	--	--	--	3.310 (1.114)	--	0.141 (2.198)**	--
outsider0	--	--	--	--	0.869 (0.716)	--	--
poutdirn2	--	--	--	--	--	--	0.157 (2.326)*
DiffCEOAge	0.028 (0.561)	0.016 (0.317)	0.004 (0.060)	0.022 (0.420)	0.022 (0.419)	0.001 (0.599)	0.002 (1.681)^
DiffLogTotAs	-1.185 (-0.777)	-1.144 (-0.737)	1.042 (0.433)	-1.042 (-0.662)	-1.231 (-0.787)	0.103 (3.103)**	0.030 (0.860)
DiffLev	-0.025 (-0.713)	-0.017 (-0.489)	-0.097 (-1.202)	-0.15 (-0.418)	-0.015 (-0.420)	0.000 (0.092)	0.002 (1.822)^
DiffIndAdjROA	-0.001 (-0.228)	-0.001 (-0.159)	0.002 (0.261)	-0.001 (-0.173)	-0.001 (-0.118)	0.000 (0.231)	0.000 (0.248)
DiffTobin'sQ	0.271 (0.197)	-0.092 (-0.066)	3.188 (0.591)	-0.139 (-0.099)	-0.206 (-0.147)	-0.043 (-1.358)	-0.036 (-1.055)
Merger	-0.242 (-0.118)	-0.338 (-0.162)	-3.192 (-1.182)	-0.735 (-0.351)	-0.743 (-0.354)	0.093 (2.065)**	-0.005 (-0.105)
Adjusted R^2 / *F*	0.040 / 3.074***	0.007 / 1.474	0.136 / 8.080***	-0.009 / 0.409	-0.011 / 0.305	0.036 / 3.614***	0.012 / 1.860^

***, **, *, and ^ denote significance at the 0.001, 0.01, 0.05, and 0.10 levels, respectively.

<u>Dependent variable</u>
The dependent variable for regressions 1 through 5 is *"Changeinpppstc"* which is the percentage change in the pay-performance sensitive portion for the CEO as a percentage of total compensation. The pay-performance sensitive portion of the CEO is the sum of the bonus, restricted stockholdings, and options granted to the CEO. The dependent variable for regressions 6 and 7 is *"pppstc1"* and *"pppstcn1,"* respectively. The variable *"pppstc1"* is the pay-performance sensitive portion for the CEO as a percentage of total compensation for the year following the succession (i.e., year +1). The variable *"pppstcn1"* is the

pay-performance sensitive portion for the CEO as a percentage of total compensation for the year prior to the succession (i.e., year -1).

Test variables

Dummy variable 1 is equal to 1 if the board of directors is dominated by outsiders at year -2 and year 0 and equal to 0 otherwise. *Dummy variable 2* is equal to 1 if the board of directors is dominated by insiders at year -2 and dominated by outsiders at year 0 and equal to 0 otherwise. *Dummy variable 3* is equal to 1 if the board of directors is dominated by outsiders at year -2 and dominated by insiders at year 0 and equal to 0 otherwise. The variable *"Changeinpoutdir"* is the change in the percentage of outside directors on the board of directors at year 0 and -2, respectively. The variable *"poutdir0"* is the percentage of outside directors on the board of directors at year 0. The variable *"outsider0"* is a dummy variable that is equal to 1 if the board of directors is dominated by outsiders at year 0 and equal to 0 otherwise. The variable *"poutdirn2"* is the percentage of outside directors on the board of directors at year -2.

Control variables

The variable *"DiffCEOAge"* is the difference between the age of the successor and the age of the predecessor. The variable *"DiffLogTotAs"* is the difference between the Log of the total assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffLev"* is the difference between the leverage of the firm for the year following the succession and the year prior to the succession. The variable *"DiffIndAdjROA" "* is the difference between the industry adjusted return on assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffTobin'sQ"* is the difference between the Tobin's Q of the firm for the year following the succession and the year prior to the succession. The variable *"Merger"* is a dummy variable equal to 1 if the succession occurred due to a merger and equal to 0 otherwise.

Testing for endogeneity

We ran 2SLS regressions for all of the above regressions and we found that there was no endogeneity between the dependent variable and any of the independent variables.

[1] Regression 3 was run only on the observations were the board of directors was dominated by outsiders at both year -2 and 0.

Table 4.6

Ordinary Least Square Regression Relating Pay-Performance Sensitive Compensation and Compensation Committee Structure

Panel A

	Reg. 1	Reg. 2	Reg. 3[1]	Reg. 4	Reg. 5	Reg. 6	Reg. 7
Dependent variable	*Changeinpppstc*	*Changeinpppstc*	*Changeinpppstc*	*Changeinpppstc*	*Changeinpppstc*	*pppstc1*	*pppstcn1*
Constant	1.256 (2.513)**	0.426 (2.432)**	0.224 (0.471)	1.513 (2.705)**	1.246 (2.552)**	0.609 (47.489)***	0.501 (36.566)***
Dummy variable 1	-1.076 (-0.356)	--	--	--	--	--	--
Dummy variable 2	-1.131 (0.732)	--	--	--	--	--	--
Dummy variable 3	-0.239 (-0.096)	--	--	--	--	--	--
Changeinpinsaffcompcom	--	-0.254 (-0.928)	-1.421 (-0.187)	--	--	--	--
pinsaffcompcom0	--	--	--	-2.510 (-1.086)	--	-0.111 (-2.157)*	--
insaffcompcom0	--	--	--	--	-1.092 (-0.485)	--	--
pinsaffcompcomn2	--	--	--	--	--	--	-0.051 (-0.998)
Adjusted R² F	-0.006 0.081	-0.001 0.862	-0.096 0.035	0.000 1.179	-0.002 0.235	0.007 4.651*	0.000 0.996

Panel B

	Regressions 1 through 5	Regression 6	Regression 7
Dependent variable	*Changeinpppstc*	*pppstc1*	*pppstcn1*
Constant	1.610 (2.387)*	0.581 (39.590)***	0.504 (32.033)***
DiffCEOAge	0.018 (0.350)	0.001 (0.509)	0.002 (1.623)
DiffLogTotAs	-1.255 (-0.803)	0.094 (2.843)**	0.025 (0.724)
DiffLev	-0.015 (-0.421)	0.000 (0.108)	0.002 (1.828)^
DiffIndAdjROA	-0.001 (-0.110)	0.000 (0.390)	0.000 (0.366)
DiffTobin'sQ	-0.322 (-0.231)	-0.051 (-1.606)	-0.041 (-1.205)

Table 4.6 (continued)

Merger	-0.741 (-0.353)	0.087 (1.934)^	-0.002 (-0.048)
Adjusted R² F	-0.010 0.270	0.028 3.385**	0.003 1.256

Panel C

	Reg. 1	Reg. 2	Reg. 3[1]	Reg. 4	Reg. 5	Reg. 6	Reg. 7
Dependent variable	*Changeinpppstc*	*Changeinpppstc*	*Changeinpppstc*	*Changeinpppstc*	*Changeinpppstc*	*pppstc1*	*pppstcn1*
Constant	1.656 (2.406)**	0.310 (1.373)	-0.386 (-0.618)	1.978 (2.620)**	1.648 (2.416)**	0.599 (36.829)***	0.512 (28.832)***
Dummy variable 1	-1.164 (-0.374)	--	--	--	--	--	--
Dummy variable 2	-0.591 (-0.170)	--	--	--	--	--	--
Dummy variable 3	-0.125 (-0.047)	--	--	--	--	--	--
Changeinpinsaffcompcom	--	-0.144 (-0.485)	-5.795 (-0.734)	--	--	--	--
pinsaffcompcom0	--	--	--	-2.635 (-1.084)	--	-0.129 (-2.506)**	--
insaffcompcom0	--	--	--	--	-0.906 (-0.389)	--	--
pinsaffcompcomn2	--	--	--	--	--	--	-0.051 (-0.958)
DiffCEOAge	0.018 (0.351)	-0.022 (-1.330)	-0.075 (-2.094)^	0.024 (0.465)	0.018 (0.355)	0.001 (0.731)	0.002 (1.645)
DiffLogTotAs	-1.231 (-0.784)	0.006 (0.012)	1.801 (0.606)	-1.196 (-0.765)	-1.227 (-0.784)	0.096 (2.923)**	0.025 (0.713)
DiffLev	-0.015 (-0.415)	-0.008 (-0.633)	-0.030 (-0.654)	-0.015 (-0.432)	-0.014 (-0.411)	0.000 (0.056)	0.002 (1.803)^
DiffIndAdjROA	-0.001 (-0.101)	-0.003 (-0.418)	-0.004 (-0.545)	-0.001 (-0.140)	-0.001 (-0.109)	0.000 (0.300)	0.000 (0.349)
DiffTobin's Q	-0.329 (-0.235)	-0.122 (-0.373)	0.723 (0.201)	-0.283 (-0.203)	-0.326 (-0.234)	-0.049 (-1.542)	-0.041 (-1.201)
Merger	-0.703 (-0.326)	-0.087 (-0.127)	--	-0.523 (-0.248)	-0.653 (-0.309)	0.102 (2.251)**	-0.003 (-0.064)
Adjusted R² F	-0.016 0.198	-0.021 0.500	-0.052 0.910	-0.009 0.400	-0.012 0.253	0.038 3.830***	0.003 1.208

***, **, *, and ^ denote significance at the 0.001, 0.01, 0.05, and 0.10 levels, respectively.

<u>Dependent variable</u>
The dependent variable for regressions 1 through 5 is *"Changeinpppstc"* which is the percentage change in the pay-performance sensitive portion for the CEO as a percentage of total compensation. The pay-performance sensitive portion of the CEO is the sum of the bonus, restricted stockholdings, and options granted to the CEO. The dependent variable for regressions 6 and 7 is *"pppstc1"* and *"pppstcn1,"*

respectively. The variable *"pppstc1"* is the pay-performance sensitive portion for the CEO as a percentage of total compensation for the year following the succession (i.e., year +1). The variable *"pppstcn1"* is the pay-performance sensitive portion for the CEO as a percentage of total compensation for the year prior to the succession (i.e., year -1).

Test variables

Dummy variable 1 is equal to 1 if the compensation committee is dominated by inside and/or affiliated directors at year -2 and year 0 and equal to 0 otherwise. *Dummy variable 2* is equal to 1 if the compensation committee is dominated by outsiders at year -2 and dominated by inside and/or affiliated directors at year 0 and equal to 0 otherwise. *Dummy variable 3* is equal to 1 if the board of directors is dominated by inside and/or affiliated directors at year -2 and dominated by outsiders at year 0 and equal to 0 otherwise. The variable *"Changeinpinsaffcompcom"* is the change in the percentage of inside and/or affiliated directors on the compensation committee at year 0 and -2, respectively. The variable *"pinsaffcompcom0"* is the percentage of inside and/or affiliated directors on the compensation committee at year 0. The variable *"insaffcompcom0"* is a dummy variable that is equal to 1 if the compensation committee is dominated by inside and/or affiliated directors at year 0 and equal to 0 otherwise. The variable *"pinsaffcompcomn2"* is the percentage of inside and/or affiliated directors on the compensation committee at year -2.

Control variables

The variable *"DiffCEOAge"* is the difference between the age of the successor and the age of the predecessor. The variable *"DiffLogTotAs"* is the difference between the Log of the total assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffLev"* is the difference between the leverage of the firm for the year following the succession and the year prior to the succession. The variable *"DiffIndAdjROA"* " is the difference between the industry adjusted return on assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffTobin'sQ"* is the difference between the Tobin's Q of the firm for the year following the succession and the year prior to the succession. The variable *"Merger"* is a dummy variable equal to 1 if the succession occurred due to a merger and equal to 0 otherwise.

Testing for endogeneity

We ran 2SLS regressions for all of the above regressions and we found that there was no endogeneity between the dependent variable and any of the independent variables.

[1] Regression 3 was run only on the observations were the compensation committee was dominated by inside and/or affiliated directors at both year -2 and 0.

Table 4.6.1

Ordinary Least Square Regression Relating Pay-Performance Sensitive Compensation and Compensation Committee Structure after Removing Potential Outliers

Panel A

	Regression 1
Constant	0.366 (4.692)***
Dummy variable 1	0.651 (1.647)^
Adjusted R² *F*	0.004 2.712^

Panel B

	Regression 1
Constant	0.386 (3.558)***
DiffCEOAge	-0.003 (-0.412)
DiffLogTotAs	-0.079 (-0.314)
DiffLev	0.002 (0.348)
DiffIndAdjROA	0.000 (-0.019)
DiffTobin'sQ	-0.236 (-1.059)
Merger	-0.010 (-0.030)
Adjusted R² *F*	-0.010 0.237

Panel C

	Regression 1
Constant	0.368 (3.381)***
Dummy variable 1	0.687 (1.646)^
DiffCEOAge	-0.002 (-0.290)
DiffLogTotAs	-0.084 (-0.337)
DiffLev	0.002 (0.364)
DiffIndAdjROA	0.000 (0.003)

Table 4.6.1 (continued)

DiffTobin'sQ	-0.235
	(-1.057)
Merger	-0.009
	(-0.026)
Adjusted R²	-0.007
F	0.591

***, **, *, and ^ denote significance at the 0.001, 0.01, 0.05, and 0.10 levels, respectively.

<u>Dependent variable</u>
The dependent variable for the regressions is *"Changeinpppstc"* which is the percentage change in the pay-performance sensitive portion for the CEO as a percentage of total compensation. The pay-performance sensitive portion of the CEO is the sum of the bonus, restricted stockholdings, and options granted to the CEO. It should be noted that we removed the tails of the distribution for the dependent variable in an attempt to get rid of any potential outliers.

<u>Test variable</u>
Dummy variable 1 is equal to 1 if the compensation committee is dominated by inside and/or affiliated directors at year -2 and dominated by outsiders at year 0 and equal to 0 otherwise.

<u>Control variables</u>
The variable *"DiffCEOAge"* is the difference between the age of the successor and the age of the predecessor. The variable *"DiffLogTotAs"* is the difference between the Log of the total assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffLev"* is the difference between the leverage of the firm for the year following the succession and the year prior to the succession. The variable *"DiffIndAdjROA" "* is the difference between the industry adjusted return on assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffTobin'sQ"* is the difference between the Tobin's Q of the firm for the year following the succession and the year prior to the succession. The variable *"Merger"* is a dummy variable equal to 1 if the succession occurred due to a merger and equal to 0 otherwise.

<u>Testing for endogeneity</u>
We ran 2SLS regressions for all of the above regressions and we found that there was no endogeneity between the dependent variable and any of the independent variables.

Table 4.7

Ordinary Least Square Regression Relating the CEO's Power and Titles and Total Compensation

Panel A

	Regression 1	Regression 2	Regression 3
Constant	0.941 (1.359)	1.095 (1.696)^	0.914 (2.030)*
Dummy variable 1	0.118 (0.128)	0.107 (0.115)	0.288 (0.360)
Dummy variable 2	0.598 (0.814)	0.505 (0.702)	0.686 (1.248)
Dummy variable 3	-0.336 (-0.372)	-0.353 (-0.392)	--
Dummy variable 4	0.347 (0.620)	--	--
Adjusted R² *F*	-0.004 0.537	-0.002 0.589	-0.001 0.808

Panel B

	Regression 1 through 3
Constant	1.119 (3.334)***
DiffCEOAge	-0.007 (-0.267)
DiffLogTotAs	1.399 (1.883)^
DiffLev	-0.017 (-0.943)
DiffIndAdjROA	-0.001 (-0.199)
DiffTobin'sQ	0.090 (0.125)
Merger	0.114 (0.109)
Adjusted R² *F*	-0.002 0.802

Table 4.7 (continued)

Panel C

	Regression 1	Regression 2	Regression 3
Constant	0.743 (0.987)	1.015 (1.464)	0.800 (1.610)
Dummy variable 1	0.068 (0.071)	0.040 (0.042)	0.253 (0.760)
Dummy variable 2	0.520 (0.677)	0.382 (0.507)	0.593 (1.010)
Dummy variable 3	-0.396 (-0.418)	-0.422 (-0.446)	--
Dummy variable 4	0.548 (0.930)	--	--
DiffCEOAge	-0.003 (-0.124)	-0.001 (-0.027)	-0.001 (-0.021)
DiffLogTotAs	1.350 (1.782)^	1.282 (1.701)^	1.322 (1.768)^
DiffLev	-0.017 (-0.948)	-0.016 (0.363)	-0.016 (-0.905)
DiffIndAdjROA	-0.001 (-0.205)	-0.001 (-0.218)	-0.001 (-0.221)
DiffTobin'sQ	0.090 (0.124)	0.050 (0.068)	0.088 (0.122)
Merger	0.190 (0.181)	0.140 (0.133)	0.133 (0.126)
Adjusted R² *F*	-0.006 0.690	-0.006 0.670	-0.004 0.730

***, **, *, and ^ denote significance at the 0.001, 0.01, 0.05, and 0.10 levels, respectively.

Dependent variable
The dependent variable for the regressions is *"ChangeinTotComp"* which is the percentage change in the total compensation of the successor and the predecessor. The total compensation for the predecessor is measured as of the fiscal year prior to the CEO succession year. The total compensation for the successor is measured as of the fiscal year following the CEO succession. The total compensation (in thousands of dollars) of the CEO is the sum of the CEO salary, bonus, other annual compensation, restricted stockholdings, and options.

Test variables
Dummy variable 1 is equal to 1 if the successor is the chair of the board of directors at year +1 and the predecessor was not the chair of the board of directors at year -1 and equal to 0 otherwise. *Dummy variable 2* is equal to 1 if the successor is not the chair of the board of directors at year +1 and the predecessor was the chair of the board of directors at year -1 and equal to 0 otherwise. *Dummy variable 3* is equal to 1 if the successor is the chair of the board of directors at year +1 and the predecessor was the chair of the board of directors at year -1 and equal to 0 otherwise. *Dummy variable 4* is equal to 1 if the succession was an outside succession and equal to 0 otherwise.

Control variables
The variable *"DiffCEOAge"* is the difference between the age of the successor and the age of the predecessor. The variable *"DiffLogTotAs"* is the difference between the Log of the total assets of the firm

for the year following the succession and the year prior to the succession. The variable *"DiffLev"* is the difference between the leverage of the firm for the year following the succession and the year prior to the succession. The variable *"DiffIndAdjROA" "* is the difference between the industry adjusted return on assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffTobin'sQ"* is the difference between the Tobin's Q of the firm for the year following the succession and the year prior to the succession. The variable *"Merger"* is a dummy variable equal to 1 if the succession occurred due to a merger and equal to 0 otherwise.

Testing for endogeneity
We ran 2SLS regressions for all of the above regressions and we found that there was no endogeneity between the dependent variable and any of the independent variables.

Table 4.7.1

Ordinary Least Square Regression Relating the CEO's Power and Titles and Pay-Performance Sensitive Compensation

Panel A

	Regression 1	Regression 2	Regression 3	Regression 4	Regression 5	Regression 6
Constant	4.417 (3.287)***	4.312 (3.393)***	2.825 (3.210)***	0.712 (1.187)	1.226 (1.222)	0.691 (1.354)
Dummy variable 1	-3.601 (-1.969)*	-3.613 (-1.978)*	-2.126 (-1.344)	0.035 (0.024)	--	--
Dummy variable 2	-3.889 (-2.701)**	-3.827 (-2.704)**	-2.340 (-2.168)*	--	-0.697 (-0.619)	--
Dummy variable 3	-2.846 (-1.616)	-2.848 (-1.620)	--	--	--	--
Dummy variable 4	--	--	--	3.643 (2.599)**	3.195 (2.057)*	3.621 (2.648)**
Dummy variable 5	-0.274 (-0.243)	--	--	-0.111 (-0.100)	-0.283 (-0.252)	--
Adjusted R^2 F	0.008 1.887	0.010 2.502^	0.006 2.432^	0.008 2.331^	0.009 2.461^	0.013 7.014**

Panel B

	Regression 1 through 6
Constant	1.610 (2.387)*
DiffCEOAge	0.018 (0.350)
DiffLogTotAs	-1.255 (-0.803)
DiffLev	-0.015 (-0.421)
DiffIndAdjROA	-0.001 (-0.110)
DiffTobin'sQ	-0.322 (-0.231)
Merger	-0.741 (-0.353)
Adjusted R^2 F	-0.010 0.270

Table 4.7.1 (continued)

Panel C

	Reg. 1	Reg. 2	Reg. 3	Reg. 4	Reg. 5	Reg. 6
Constant	4.953 (3.350)***	4.770 (3.448)***	3.099 (3.142)**	1.129 (1.317)	1.423 (1.289)	1.007 (1.424)
Dummy variable 1	-3.892 (-2.051)*	-3.900 (-2.057)*	-2.256 (-1.375)	-0.101 (-0.066)	--	--
Dummy variable 2	-4.030 (-2.659)**	-3.940 (-2.639)**	-2.334 (-2.000)*	--	-0.511 (-0.414)	--
Dummy variable 3	-3.190 (-1.714)^	-3.196 (-1.719)^	--	--	--	--
Dummy variable 4	--	--	--	3.824 (2.604)**	3.527 (2.166)*	3.802 (2.663)**
Dummy variable 5	-0.423 (-0.353)	--	--	-0.304 (-0.258)	-0.424 (-0.354)	--
DiffCEOAge	0.006 (0.114)	0.004 (0.082)	0.003 (0.056)	0.010 (0.198)	0.004 (0.083)	0.008 (0.148)
DiffLogTotAs	-1.252 (-0.790)	-1.193 (-0.758)	-0.925 (-0.586)	-1.368 (-0.871)	-1.286 (-0.813)	-1.308 (-0.843)
DiffLev	-0.020 (-0.556)	-0.020 (-0.573)	-0.018 (-0.526)	-0.019 (-0.548)	-0.019 (-0.554)	-0.020 (-0.563)
DiffIndAdjROA	0.000 (-0.059)	0.000 (-0.054)	0.000 (-0.064)	0.000 (-0.067)	0.000 (-0.058)	0.000 (-0.061)
DiffTobin'sQ	-0.600 (-0.429)	-0.572 (-0.410)	-0.301 (-0.217)	-0.655 (-0.469)	-0.621 (-0.444)	-0.628 (-0.452)
Merger	-0.803 (-0.384)	-0.781 (-0.374)	-0.841 (-0.402)	-0.761 (-0.364)	-0.796 (-0.381)	-0.751 (-0.361)
Adjusted R^2	-0.002	0.000	-0.005	-0.001	0.000	0.004
F	0.906	0.995	0.747	0.975	0.994	(1.247)

***, **, *, and ^ denote significance at the 0.001, 0.01, 0.05, and 0.10 levels, respectively.

<u>Dependent variable</u>
The dependent variable for the regressions is *"Changeinpppstc"* which is the percentage change in the pay-performance sensitive portion as a percentage of total compensation. The pay-performance sensitive portion of the CEO is the sum of the bonus, restricted stockholdings, and options granted to the CEO.

<u>Test variables</u>
Dummy variable 1 is equal to 1 if the successor is the chair of the board of directors at year +1 and the predecessor was not the chair of the board of directors at year -1 and equal to 0 otherwise. *Dummy variable 2* is equal to 1 if the successor is not the chair of the board of directors at year +1 and the predecessor was the chair of the board of directors at year -1 and equal to 0 otherwise. *Dummy variable 3* is equal to 1 if the successor is the chair of the board of directors at year +1 and the predecessor was the chair of the board of directors at year -1 and equal to 0 otherwise. *Dummy variable 4* is equal to 1 if the successor is not the chair of the board of directors at year +1 and the predecessor was not the chair of the board of directors at year -1 and equal to 0 otherwise. *Dummy variable 5* is equal to 1 if the succession was an outside succession and equal to 0 otherwise.

<u>Control variables</u>
The variable *"DiffCEOAge"* is the difference between the age of the successor and the age of the predecessor. The variable *"DiffLogTotAs"* is the difference between the Log of the total assets of the firm

for the year following the succession and the year prior to the succession. The variable *"DiffLev"* is the difference between the leverage of the firm for the year following the succession and the year prior to the succession. The variable *"DiffIndAdjROA" "* is the difference between the industry adjusted return on assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffTobin'sQ"* is the difference between the Tobin's Q of the firm for the year following the succession and the year prior to the succession. The variable *"Merger"* is a dummy variable equal to 1 if the succession occurred due to a merger and equal to 0 otherwise.

Testing for endogeneity
We ran 2SLS regressions for all of the above regressions and we found that there was no endogeneity between the dependent variable and any of the independent variables.

Table 4.7.2

Ordinary Least Square Regression Relating the CEO's Power and Titles and Other Annual Compensation

Panel A

	Regression 1	Regression 2	Regression 3	Regression 4	Regression 5
Constant	-8.669 (-0.577)	2.417 (0.428)	0.469 (0.049)	2.196 (0.426)	28.469 (2.726)**
Dummy variable 1	1.206 (0.063)	-1.366 (-0.097)	--	--	-27.417 (-1.653)^
Dummy variable 2	8.919 (0.565)	--	2.452 (0.216)	--	-25.548 (-2.105)*
Dummy variable 3	28.999 (1.655)^	26.052 (2.199)*	28.000 (1.985)*	26.273 (2.266)*	--
Dummy variable 4	--	--	--	--	-28.705 (-1.630)
Dummy variable 5	17.802 (1.635)	--	--	--	--
Adjusted R² *F*	0.021 1.963	0.017 2.557^	0.018 2.576^	0.023 5.133*	0.012 1.709

Panel B

	Regression 1 through 5
Constant	7.135 (1.142)
DiffCEOAge	-0.130 (-0.253)
DiffLogTotAs	-15.109 (-0.843)
DiffLev	-0.869 (-1.366)
DiffIndAdjROA	0.064 (0.206)
DiffTobin'sQ	-3.674 (-0.075)
Merger	-21.855 (-0.855)
Adjusted R² *F*	0.012 1.340

Table 4.7.2 (continued)

Panel C

	Regression 1	Regression 2	Regression 3	Regression 4	Regression 5
Constant	-6.747 (-0.424)	0.253 (0.033)	1.528 (0.153)	0.577 (0.083)	27.393 (2.331)*
Dummy variable 1	1.023 (0.052)	1.413 (0.096)	--	--	-25.782 (-1.474)
Dummy variable 2	4.645 (0.266)	--	-1.680 (-0.134)	--	-27.542 (-1.977)*
Dummy variable 3	27.203 (1.430)^	27.219 (2.023)*	25.862 (1.692)^	26.918 (2.063)*	--
Dummy variable 4	--	--	--	--	-25.969 (-1.363)
Dummy variable 5	15.929 (1.373)	--	--	--	--
DiffCEOAge	-0.286 (-0.521)	-0.311 (-0.590)	-0.325 (-0.595)	-0.301 (-0.585)	-0.325 (-0.592)
DiffLogTotAs	-1.946 (-0.105)	-6.629 (-0.362)	-6.639 (-0.363)	-6.712 (-0.369)	-6.633 (-0.362)
DiffLev	-1.066 (-1.664)^	-0.990 (-1.559)	-0.984 (-1.550)	-0.988 (-1.561)	-0.985 (-1.540)
DiffIndAdjROA	0.051 (0.163)	-0.003 (-0.011)	-0.008 (-0.025)	-0.003 (-0.008)	-0.008 (-0.024)
DiffTobin'sQ	16.007 (0.320)	8.816 (0.181)	7.856 (0.160)	8.764 (0.180)	7.921 (0.159)
Merger	-27.720 (-1.085)	-24.978 (-0.982)	-24.892 (-0.979)	-24.899 (-0.982)	-24.903 (-0.975)
Adjusted R²	0.025	0.025	0.025	0.031	0.019
F	1.428	1.549	1.550	1.780^	1.369

***, **, *, and ^ denote significance at the 0.001, 0.01, 0.05, and 0.10 levels, respectively.

<u>Dependent variable</u>
The dependent variable for the regressions is *"Changeinpoth"* which is the percentage change in the CEO's other annual compensation portion as a percentage of total compensation.

<u>Test variables</u>
Dummy variable 1 is equal to 1 if the successor is the chair of the board of directors at year +1 and the predecessor was not the chair of the board of directors at year -1 and equal to 0 otherwise. *Dummy variable 2* is equal to 1 if the successor is not the chair of the board of directors at year +1 and the predecessor was the chair of the board of directors at year -1 and equal to 0 otherwise. *Dummy variable 3* is equal to 1 if the successor is the chair of the board of directors at year +1 and the predecessor was the chair of the board of directors at year -1 and equal to 0 otherwise. *Dummy variable 4* is equal to 1 if the successor is not the chair of the board of directors at year +1 and the predecessor was not the chair of the board of directors at year -1 and equal to 0 otherwise. *Dummy variable 5* is equal to 1 if the succession was an outside succession and equal to 0 otherwise.

<u>Control variables</u>
The variable *"DiffCEOAge"* is the difference between the age of the successor and the age of the predecessor. The variable *"DiffLogTotAs"* is the difference between the Log of the total assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffLev"* is the

difference between the leverage of the firm for the year following the succession and the year prior to the succession. The variable *"DiffIndAdjROA" "* is the difference between the industry adjusted return on assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffTobin'sQ"* is the difference between the Tobin's Q of the firm for the year following the succession and the year prior to the succession. The variable *"Merger"* is a dummy variable equal to 1 if the succession occurred due to a merger and equal to 0 otherwise.

Testing for endogeneity
We ran 2SLS regressions for all of the above regressions and we found that there was no endogeneity between the dependent variable and any of the independent variables.

Table 4.8

Ordinary Least Square Regression Relating Outside Successor Origin and Total Compensation

Panel A

	Regression 1	Regression 2
Constant	1.309 (4.615)***	1.352 (5.462)***
Dummy variable 1	0.028 (0.026)	-0.015 (-0.014)
Dummy variable 2	0.183 (0.313)	--
Adjusted R² / F	-0.004 / 0.049	-0.002 / 0.000

Panel B

	Regressions 1 and 2
Constant	1.119 (3.334)***
DiffCEOAge	-0.007 (-0.267)
DiffLogTotAs	1.399 (1.883)^
DiffLev	-0.017 (-0.943)
DiffIndAdjROA	-0.001 (-0.199)
DiffTobin'sQ	0.090 (0.125)
Merger	0.114 (0.109)
Adjusted R² / F	-0.002 / 0.802

Panel C

	Regression 1	Regression 2
Constant	0.972 (2.457)*	1.119 (3.266)***
Dummy variable 1	0.108 (0.096)	-0.003 (-0.003)
Dummy variable 2	0.460 (0.741)	--
DiffCEOAge	-0.010 (-0.384)	-0.007 (-0.266)
DiffLogTotAs	1.466 (1.956)^	1.399 (1.881)^

Table 4.8 (continued)

DiffLev	-0.017 (-0.975)	-0.017 (-0.942)
DiffIndAdjROA	-0.001 (-0.193)	-0.001 (-0.199)
DiffTobin'sQ	0.111 (0.153)	0.090 (0.125)
Merger	0.181 (0.172)	0.114 (0.109)
Adjusted R² *F*	-0.005 0.668	-0.004 0.686

***, **, *, and ^ denote significance at the 0.001, 0.01, 0.05, and 0.10 levels, respectively.

<u>Dependent variable</u>
The dependent variable for the regressions is *"ChangeinTotComp"* which is the percentage change in the total compensation of the successor and the predecessor. The total compensation for the predecessor is measured as of the fiscal year prior to the CEO succession year. The total compensation for the successor is measured as of the fiscal year following the CEO succession. The total compensation (in thousands of dollars) of the CEO is the sum of the CEO salary, bonus, other annual compensation, restricted stockholdings, and options.

<u>Test variables</u>
Dummy variable 1 is equal to 1 if the outside successor comes from the firm's industry and equal to 0 otherwise. *Dummy variable 2* is equal to 1 if the outside successor does not come from the firm's industry and equal to 0 otherwise.

<u>Control variables</u>
The variable *"DiffCEOAge"* is the difference between the age of the successor and the age of the predecessor. The variable *"DiffLogTotAs"* is the difference between the Log of the total assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffLev"* is the difference between the leverage of the firm for the year following the succession and the year prior to the succession. The variable *"DiffIndAdjROA" "* is the difference between the industry adjusted return on assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffTobin'sQ"* is the difference between the Tobin's Q of the firm for the year following the succession and the year prior to the succession. The variable *"Merger"* is a dummy variable equal to 1 if the succession occurred due to a merger and equal to 0 otherwise.

<u>Testing for endogeneity</u>
We ran 2SLS regressions for all of the above regressions and we found that there was no endogeneity between the dependent variable and any of the independent variables.

Table 4.8.1

Ordinary Least Square Regression Relating Outside Successor Origin and Other Annual Compensation

Panel A

	Regression 1	Regression 2
Constant	1.786 (0.336)	1.836 (0.334)
Dummy variable 1	--	-0.844 (-0.038)
Dummy variable 2	23.072 (2.139)*	23.022 (2.112)*
Adjusted R² *F*	0.020 4.575*	0.014 2.275

Panel B

	Regression 1 and 2
Constant	7.135 (1.142)
DiffCEOAge	-0.130 (-0.253)
DiffLogTotAs	-15.109 (-0.843)
DiffLev	-0.869 (-1.366)
DiffIndAdjROA	0.064 (0.206)
DiffTobin'sQ	-3.674 (-0.075)
Merger	-21.855 (-0.855)
Adjusted R² *F*	0.012 1.340

Panel C

	Regression 1	Regression 2
Constant	1.383 (0.200)	1.604 (0224)
Dummy variable 1	--	-3.062 (-0.124)
Dummy variable 2	21.294 (1.888)^	21.082 (1.842)^
DiffCEOAge	-0.157 (-0.307)	-0.148 (-0.288)
DiffLogTotAs	-8.775 (-0.485)	-9.041 (-0.495)

Table 4.8.1 (continued)

DiffLev	-0.886 (-1.402)	-0.873 (-1.359)
DiffIndAdjROA	0.076 (0.248)	0.071 (0.230)
DiffTobin'sQ	-5.290 (-0.110)	-6.663 (-0.134)
Merger	-20.809 (-0.820)	-20.079 (-0.769)
Adjusted R² *F*	0.027 1.676	0.021 1.459

***, **, *, and ^ denote significance at the 0.001, 0.01, 0.05, and 0.10 levels, respectively.

Dependent variable
The dependent variable for the regressions is *"Changeinpoth"* which is the percentage change in the CEO other annual compensation as a percentage of total compensation. The CEO other annual compensation for the predecessor is measured as of the fiscal year prior to the CEO succession year. The CEO other annual compensation for the successor is measured as of the fiscal year following the CEO succession.

Test variables
Dummy variable 1 is equal to 1 if the outside successor comes from the firm's industry and equal to 0 otherwise. *Dummy variable 2* is equal to 1 if the outside successor does not come from the firm's industry and equal to 0 otherwise.

Control variables
The variable *"DiffCEOAge"* is the difference between the age of the successor and the age of the predecessor. The variable *"DiffLogTotAs"* is the difference between the Log of the total assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffLev"* is the difference between the leverage of the firm for the year following the succession and the year prior to the succession. The variable *"DiffIndAdjROA" "* is the difference between the industry adjusted return on assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffTobin'sQ"* is the difference between the Tobin's Q of the firm for the year following the succession and the year prior to the succession. The variable *"Merger"* is a dummy variable equal to 1 if the succession occurred due to a merger and equal to 0 otherwise.

Testing for endogeneity
We ran 2SLS regressions for all of the above regressions and we found that there was no endogeneity between the dependent variable and any of the independent variables.

Table 4.9

Ordinary Least Square Regression Relating Relay Successions and Total Compensation

Panel A

	<u>Regression 1</u>
Constant	1.629 (4.936)***
Dummy variable 1	-0.593 (-1.229)
Dummy variable 2	--
Adjusted R²	0.001
F	1.510

Panel B

	<u>Regression 1</u>
Constant	1.119 (3.334)***
DiffCEOAge	-0.007 (-0.267)
DiffLogTotAs	1.399 (1.883)^
DiffLev	-0.017 (-0.943)
DiffIndAdjROA	-0.001 (-0.199)
DiffTobin'sQ	0.090 (0.125)
Merger	0.114 (0.109)
Adjusted R²	-0.002
F	0.802

Panel C

	<u>Regression 1</u>
Constant	1.424 (3.752)***
Dummy variable 1	-0.899 (-1.710)*
Dummy variable 2	--
DiffCEOAge	-0.019 (-0.718)
DiffLogTotAs	1.572 (2.100)*
DiffLev	-0.018 (-1.020)

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Table 4.9 (continued)

DiffIndAdjROA	-0.001
	(-0.283)
DiffTobin'sQ	0.138
	(0.192)
Merger	0.133
	(0.128)
Adjusted R²	0.002
F	1.108

***, **, *, and ^ denote significance at the 0.001, 0.01, 0.05, and 0.10 levels, respectively.

Dependent variable
The dependent variable for the regressions is *"ChangeinTotComp"* which is the percentage change in the total compensation of the successor and the predecessor. The total compensation for the predecessor is measured as of the fiscal year prior to the CEO succession year. The total compensation for the successor is measured as of the fiscal year following the CEO succession. The total compensation (in thousands of dollars) of the CEO is the sum of the CEO salary, bonus, other annual compensation, restricted stockholdings, and options.

Test variables
Dummy variable 1 is equal to 1 if the inside successor was designated as heir apparent and equal to 0 otherwise. *Dummy variable 2* is equal to 1 if the inside successor was not designated as heir apparent and equal to 0 otherwise.

Control variables
The variable *"DiffCEOAge"* is the difference between the age of the successor and the age of the predecessor. The variable *"DiffLogTotAs"* is the difference between the Log of the total assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffLev"* is the difference between the leverage of the firm for the year following the succession and the year prior to the succession. The variable *"DiffIndAdjROA" "* is the difference between the industry adjusted return on assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffTobin'sQ"* is the difference between the Tobin's Q of the firm for the year following the succession and the year prior to the succession. The variable *"Merger"* is a dummy variable equal to 1 if the succession occurred due to a merger and equal to 0 otherwise.

Testing for endogeneity
We ran 2SLS regressions for all of the above regressions and we found that there was no endogeneity between the dependent variable and any of the independent variables.

Table 4.9.1

Ordinary Least Square Regression Relating Relay Successions and Salary

Panel A

	Regression 1	Regression 2
Constant	0.176 (1.097)	0.031 (0.320)
Dummy variable 1	-0.229 (-1.136)	--
Dummy variable 2	0.095 (0.413)	0.239 (1.251)
Adjusted R² *F*	0.002 1.428	0.001 1.564

Panel B

	Regression 1 to 2
Constant	0.139 (1.421)
DiffCEOAge	0.003 (0.397)
DiffLogTotAs	-0.309 (-1.400)
DiffLev	0.004 (0.797)
DiffIndAdjROA	0.000 (-0.196)
DiffTobin'sQ	-0.018 (-0.086)
Merger	-0.295 (-0.964)
Adjusted R² *F*	-0.004 0.683

Panel C

	Regression 1	Regression 2
Constant	0.037 (0.255)	0.039 (0.353)
Dummy variable 1	0.004 (0.021)	--
Dummy variable 2	0.333 (1.650)*	0.330 (1.943)*
DiffCEOAge	0.001 (0.115)	0.001 (0.114)
DiffLogTotAs	-0.295 (-1.324)	-0.295 (-1.338)

Table 4.9.1 (continued)

DiffLev	0.004 (0.797)	0.004 (0.798)
DiffIndAdjROA	0.000 (-0.340)	0.000 (-0.341)
DiffTobin'sQ	-0.024 (-0.115)	-0.024 (-0.114)
Merger	-0.315 (-1.028)	-0.314 (-1.029)
Adjusted R² *F*	0.000 0.985	0.002 1.128

***, **, *, and ^ denote significance at the 0.001, 0.01, 0.05, and 0.10 levels, respectively.

<u>Dependent variable</u>
The dependent variable for the regressions is *"Changeinpsal"* which is the percentage change in the salary of the successor and the predecessor as a percentage of total compensation. The salary for the predecessor is measured as of the fiscal year prior to the CEO succession year. The salary for the successor is measured as of the fiscal year following the CEO succession.

<u>Test variables</u>
Dummy variable 1 is equal to 1 if the inside successor was designated as heir apparent and equal to 0 otherwise. *Dummy variable 2* is equal to 1 if the inside successor was not designated as heir apparent and equal to 0 otherwise.

<u>Control variables</u>
The variable *"DiffCEOAge"* is the difference between the age of the successor and the age of the predecessor. The variable *"DiffLogTotAs"* is the difference between the Log of the total assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffLev"* is the difference between the leverage of the firm for the year following the succession and the year prior to the succession. The variable *"DiffIndAdjROA" "* is the difference between the industry adjusted return on assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffTobin'sQ"* is the difference between the Tobin's Q of the firm for the year following the succession and the year prior to the succession. The variable *"Merger"* is a dummy variable equal to 1 if the succession occurred due to a merger and equal to 0 otherwise.

<u>Testing for endogeneity</u>
We ran 2SLS regressions for all of the above regressions and we found that there was no endogeneity between the dependent variable and any of the independent variables.

Table 4.9.2

Ordinary Least Square Regression Relay Successions and Other Annual Compensation

Panel A

	Regression 1
Constant	21.114 (2.436)**
Dummy variable 1	-18.224 (-1.651)*
Dummy variable 2	-21.242 (-1.668)*
Adjusted R²	0.009
F	1.795

Panel B

	Regression 1
Constant	7.135 (1.142)
DiffCEOAge	-0.130 (-0.253)
DiffLogTotAs	-15.109 (-0.843)
DiffLev	-0.869 (-1.366)
DiffIndAdjROA	0.064 (0.206)
DiffTobin'sQ	-3.674 (-0.075)
Merger	-21.855 (-0.855)
Adjusted R²	0.012
F	1.340

Panel C

	Regression 1
Constant	19.397 (2.001)*
Dummy variable 1	-16.266 (-1.368)
Dummy variable 2	-20.360 (-1.512)
DiffCEOAge	-0.156 (-0.293)
DiffLogTotAs	-8.685 (-0.474)

Table 4.9.2 (continued)

DiffLev	-0.963
	(-1.511)
DiffIndAdjROA	0.096
	(0.311)
DiffTobin'sQ	3.067
	(0.063)
Merger	-25.557
	(-0.998)
Adjusted R²	0.016
F	1.354

***, **, *, and ^ denote significance at the 0.001, 0.01, 0.05, and 0.10 levels, respectively.

Dependent variable
The dependent variable for the regressions is *"Changeinpoth"* which is the percentage change in the other annual compensation of the successor and the predecessor as a percentage of total compensation. The other annual compensation for the predecessor is measured as of the fiscal year prior to the CEO succession year. The other annual compensation for the successor is measured as of the fiscal year following the CEO succession.

Test variables
Dummy variable 1 is equal to 1 if the inside successor was designated as heir apparent and equal to 0 otherwise. *Dummy variable 2* is equal to 1 if the inside successor was not designated as heir apparent and equal to 0 otherwise.

Control variables
The variable *"DiffCEOAge"* is the difference between the age of the successor and the age of the predecessor. The variable *"DiffLogTotAs"* is the difference between the Log of the total assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffLev"* is the difference between the leverage of the firm for the year following the succession and the year prior to the succession. The variable *"DiffIndAdjROA" "* is the difference between the industry adjusted return on assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffTobin'sQ"* is the difference between the Tobin's Q of the firm for the year following the succession and the year prior to the succession. The variable *"Merger"* is a dummy variable equal to 1 if the succession occurred due to a merger and equal to 0 otherwise.

Testing for endogeneity
We ran 2SLS regressions for all of the above regressions and we found that there was no endogeneity between the dependent variable and any of the independent variables.

Table 4.9.3

Ordinary Least Square Regression Relating Relay Successions and Restricted Stockholdings

Panel A

	Regression 1
Constant	-0.582 (-1.411)
Dummy variable 1	0.848 (1.633)
Dummy variable 2	--
Adjusted R²	0.020
F	2.666

Panel B

	Regression 1
Constant	-0.118 (-0.496)
DiffCEOAge	0.012 (0.571)
DiffLogTotAs	0.447 (0.625)
DiffLev	-0.012 (-0.384)
DiffIndAdjROA	0.007 (1.206)
DiffTobin'sQ	-0.784 (-0.313)
Merger	-0.782 (-0.971)
Adjusted R²	-0.030
F	0.620

Panel C

	Regression 1
Constant	-0.470 (-1.500)
Dummy variable 1	0.725 (1.698)*
Dummy variable 2	--
DiffCEOAge	0.019 (0.926)
DiffLogTotAs	0.210 (0.291)
DiffLev	-0.001 (-0.033)

Table 4.9.3 (continued)

DiffIndAdjROA	0.006 (1.083)
DiffTobin'sQ	-1.561 (-0.620)
Merger	-0.993 (-1.233)
Adjusted R² *F*	-0.004 0.957

***, **, *, and ^ denote significance at the 0.001, 0.01, 0.05, and 0.10 levels, respectively.

<u>Dependent variable</u>
The dependent variable for the regressions is *"Changeinprsgrt"* which is the percentage change in the restricted stockholdings of the successor and the predecessor as a percentage of total compensation. The restricted stockholdings for the predecessor are measured as of the fiscal year prior to the CEO succession year. The restricted stockholdings for the successor are measured as of the fiscal year following the CEO succession.

<u>Test variables</u>
Dummy variable 1 is equal to 1 if the inside successor was designated as heir apparent and equal to 0 otherwise. *Dummy variable 2* is equal to 1 if the inside successor was not designated as heir apparent and equal to 0 otherwise.

<u>Control variables</u>
The variable *"DiffCEOAge"* is the difference between the age of the successor and the age of the predecessor. The variable *"DiffLogTotAs"* is the difference between the Log of the total assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffLev"* is the difference between the leverage of the firm for the year following the succession and the year prior to the succession. The variable *"DiffIndAdjROA" "* is the difference between the industry adjusted return on assets of the firm for the year following the succession and the year prior to the succession. The variable *"DiffTobin'sQ"* is the difference between the Tobin's Q of the firm for the year following the succession and the year prior to the succession. The variable *"Merger"* is a dummy variable equal to 1 if the succession occurred due to a merger and equal to 0 otherwise.

<u>Testing for endogeneity</u>
We ran 2SLS regressions for all of the above regressions and we found that there was no endogeneity between the dependent variable and any of the independent variables.

Table 5.1

Summary of Hypotheses

Hypothesis	Outcome
H1- Option grants as a percentage of total compensation should be greater for the successor relative to the predecessor.	Supported
H2- Pay-performance sensitive portion of the total compensation should be lower for the successor relative to the predecessor.	Not supported
H3a- Successors hired from outside the firm should be paid more in salary relative to the predecessors.	Not supported
H3b- Successors hired from within the firm should be paid less in salary relative to the predecessors.	Supported
H4a- Restricted stockholdings as a percentage of total compensation should fall following voluntary successions.	Not supported
H4b- Restricted stockholdings as a percentage of total compensation should fall more dramatically following forced successions.	Not supported
H5- The successor's total compensation will be more or less similar to the predecessor's total compensation.	Not supported
H6- The total compensation of the successor will be more pay-performance sensitive than that of the predecessor's if the board of directors is dominated by outsiders.	Supported
H7- The total compensation of the successor will be less pay-performance sensitive than that of the predecessor's if the compensation committee is dominated by inside and/or affiliated directors.	Supported (in the case of the successor)
H7- The total compensation of the successor will be less pay-performance sensitive than that of the predecessor's if the compensation committee is dominated by inside and/or affiliated directors.	Not supported (after removing the outliers)
H8- The successor's power and titles will affect his/her total compensation structure relative to that of the predecessor's.	Supported (in the case of pay-performance compensation)
H8- The successor's power and titles will affect his/her total compensation structure relative to that of the predecessor's.	Supported (in the case of other annual compensation)
H9- The structure of the compensation package for an outside successor who comes from the same industry that the firm operates in will be different than that of an outside successor who comes from an unrelated industry.	There is no relation
H10- The total compensation structure of an insider successor who was designated as an heir apparent will be larger than that of an insider successor who was not designated as an heir apparent.	Supported (in the case of other annual compensation)

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APPENDIX

APPENDIX

Firms Excluded from the Sample

For being Public Utilities

American Electric Power (SIC 4911), AGL Resources Inc (SIC 4924), Atlantic Energy Inc (SIC 4911), KEYSPAN Corp (SIC 4932), Cascade Natural Gas Corp (SIC 4924), Central Vermont Pub Serv (SIC 4911), UNICOM Corp (SIC 4911), DPL Inc (SIC 4911), DTE Energy Co (SIC 4911), Duke Energy Corp (SIC 4911), El Paso Electric Co (SIC 4911), Energen Corp (SIC 4924), ATMOS Energy Corp (SIC 4924), Equitable Resources Inc (SIC 4923), Florida Progress Corp (SIC 4911), GPU Inc (SIC 4911), Green Mountain Power Corp (SIC 4911), MDU Resources Group Inc (SIC 4932), Entergy Corp (SIC 4911), MidAmerican Energy HLDG-OLD (SIC 4931), Montana Power Co (SIC 4931), NUI Corp (SIC 4924), New Jersey Resources (SIC 4924), Niagara Mohawk Holdings Inc (SIC 4931), NICOR Inc (SIC 4924), Northeast Utilities (SIC 4911), Northwest Natural Gas Co (SIC 4924), ONEOK Inc (SIC 4923), PG&E Corp (SIC 4931), SEMPRA Energy (SIC 4932), PACIFICORP (SIC 4911), Pennsylvania Enterprises Inc (SIC 4924), PUGET Energy Inc (SIC 4931), ENOVA Corp (SIC 4931), SCANA Corp (SIC 4931), Ocean Energy Inc (SIC 4923), Sierra Pacific RES-OLD (SIC 4931), Southern Co (SIC 4911), Southwest Gas Corp (SIC 4923), TECO Energy Inc (SIC 4931), TNP Enterprises Inc (SIC 4911), UNISOURCE Energy Corp (SIC 4911), UGI Corp (SIC 4932), WICOR Inc (SIC 4924), Washington Energy Co (SIC 4924), Williams COS Inc (SIC 4922), CINERGY Corp (SIC 4911).

For being Financial Services Firms

Eaton Vance Corp (SIC 6282), Gallagher (Arthur J.) & Co (SIC 6411), Lincoln National Corp (SIC 6311), Merrill Lynch & Co (SIC 6211), SAFECO Corp (SIC 6331), USLIFE Corp (SIC 6311), PACIFICARE Health Systems (SIC 6324), Price (T. Rowe) Group (SIC 6282), FHP International Corp (SIC 6324), Schwab (Charles) Corp (SIC 6211), HILB ROGAL & Hamilton Co (SIC 6411), TRANSATLANTIC Holdings Inc (SIC 6331), Oxford Health Plans Inc (SIC 6324), HUMANA Inc (SIC 6324).

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