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Abstract of

CEO Successor Compensation: Outside vs. Inside Successions

We propose that outside CEO candidates will have greater bargaining power than insiders. As a result, outside CEO successors will likely receive greater total compensation than inside CEO successors. Outside successors, meantime, pose more risk to the hiring firm than inside successors due to higher information asymmetry. As a result, outside successor compensation packages are tilted towards more performance-related pay-at-risk, while inside successor packages have a higher percentage in salary. In addition, outside successors may want to utilize the structure of their compensation at their previous firm in their new contracts. Using a sample of 99 firms with outside successors who were not CEOs in their prior firms, matched by industry and size to firms that hired inside candidates, we find evidence supporting these hypotheses.

Keywords: Corporate Governance, CEO compensation, Inside and Outside CEO Successor

CEO Successor Compensation: Outside vs. Inside Successions

1. Introduction

In today's world of severe economic uncertainty and upheaval, there is an increasing scrutiny from the public towards corporate practices especially CEO compensation¹. As governments around the globe, including the U.S. government, become a part owner and a major lender to an increasing number of financial institutions and corporations, one of the most volatile issues concerning the current wave of government bailouts is managerial compensation. Since many CEO compensation contracts are negotiated at the time of CEO succession, it is of particular interest to examine how boards determine successor CEO compensation.

Academic research has led to numerous studies that examine CEO compensation² or CEO succession³. However, with the exception of Barro and Barro (1990), Pfeffer and Davis-Blake (1992), and Elsaid and Davidson (2007), there has been little research linking CEO compensation and succession. In this paper, we investigate CEO compensation changes that occur around a succession and connect CEO succession compensation with bargaining theory.

In CEO succession negotiations, bargaining may occur over many issues including but not limited to future directions and plans for the firm, performance

¹ See for example, *USA Today*, 6/20/2008, CEO Pay Climbs Despite Companies' Struggles; *Forbes*, 10/23/2008, Executive Compensation Faces Scrutiny; *Financial Post*, 1/3/2009, Higher Scrutiny Seen for CEO Pay, Bonuses. *NY Times*, 1/30/2009, Obama Calls Wall Street Bonuses 'Shameful'. *CNN.com*, 2/4/2009, Obama Sets Executive Pay Limits.

² Literature on compensation includes but not limited to Morgan and Poulsen (2001), Toyne, Millar and Dixon (2000), Jin (2002), Ryan and Wiggins (2001), Newman and Mozes (1999), and Bryan, Hwang and Lilien (2000).

³ Literature on succession includes but is not limited to Canella and Shen (2001), Shen and Canella(2002a, 2002b, 2003), Zhang and Rajagopalan (2003, 2004), and Davidson, Nemeč and Worrell (2002).

benchmarks and goals, staff member employment and promotions, and of course, personal compensations for the new CEO. Bargaining outcomes are related to the well-known Nash Equilibrium solution (Rubinstein, 1982; Osborne & Rubinstein, 1990). The substance and outcomes of many negotiable items are classified and, therefore, unobservable. However, the outcome of CEO compensation negotiations in public companies is observable from both proxy statements and through the financial press.

In this paper, we compare the bargaining strength of outside CEO candidates with that of inside CEO candidates and show how this process affects the amount and structure of their compensation packages. Bargaining theory prescribes a list of non-mutually exclusive factors that determines the bargaining power of each negotiator (Muthoo 2000). Patience strengthens one's bargaining power, while risk aversion weakens it. Attractive alternatives provide credible threats to the counterparty and asymmetric information increases the risk in the bargaining process.

In the CEO compensation negotiation, the patience and degree of risk aversion of the board and the CEO candidate are unobservable, even *ex post*; however, the other options facing a candidate can be partially observed. In addition, the severity of information asymmetry between the candidate and the board can be compared between an outside candidate and an inside candidate. Therefore, we base our analyses on the attractiveness of a candidate's other options and the information asymmetry between the board and the candidate.

The successor candidate's bargaining power increases when his other job alternatives are attractive. Although the candidate's other potential jobs are not observable, we can observe a candidate's current job. Therefore we use a candidate's

current pay amount and structure as his reservation utility which must be satisfied by the hiring firm. The candidate will only sign a contract that provides him enough expected utility to overcome his reservation utility. This notion of reservation utility as opportunity cost prescribes that the more attractive a candidate's current compensation, the higher his reservation utility will be. Becoming CEO is a promotion for an inside candidate, and his current pay amount and structure may not be as attractive as that of the outgoing CEO. However, the same may not be true for an outside candidate. An outside candidate may have considerable current pay that could be greater than that of the outgoing CEO and/or he may have a superior pay structure as well. As a result, the reservation utility for an outside candidate is likely higher than that of the inside candidate giving the outsider a stronger bargaining position than the inside candidate. Murphy and Zbojnik (2004a and 2004b) state that firms are more likely to hire CEOs from outside when these individuals' general managerial skills are more important than the firm-specific skills for the CEO job. Possession of these skills could lead to higher pay for the outside candidate. However, an outside candidate might seem riskier to the hiring board than an inside successor as the board usually knows more about the insider than the outsider.

The stronger bargaining power of the outsiders can give them higher pay and more flexibility in re-structuring their compensation packages. Nevertheless, the higher risk involved in hiring an outsider may cause the board to tilt the compensation package towards more pay-at-risk payment. In section 2, we develop these hypotheses in further details. In section 3 we introduce our sample. In section 4 we present the methodology

and discuss our results. Finally, we place our conclusions and further discussions in section 5.

2. Hypothesis Development

2.1 Reservation Utility from Current Job as Opportunity Cost in Bargaining

In a CEO succession, the negotiated compensation amount and structure depends on the relative bargaining power between the board and the candidate. Lawler and Bacharach (1979) propose that the availability of other alternatives (options) determines one's bargaining power. The more alternatives a negotiator possesses, the greater his bargaining power. Muthoo (2000), however, argues that an option has to be attractive enough to be a credible threat in the bargaining process, otherwise this option is an empty threat and will not provide bargaining power.

An outside candidate has at least one alternative – his current job in another company. His current total compensation and pay structure would be his reservation utility. Other things being equal, the hiring firm has to offer greater total compensation and/or a better pay structure to make him accept the offer. An inside candidate may also have an alternative, which is his current job inside the company. However, being promoted to CEO implies that his reservation utility is lower than the outgoing CEO's compensation. Though both candidates have alternatives, the attractiveness of the alternatives is likely different. In terms of compensation, the outside candidate's alternative could represent a credible threat while the insider's alternative may be an empty threat; the reservation utility of the outside candidate could be higher than the outgoing CEO's current pay while that of the inside candidate would be lower. This

difference in opportunity cost can lead to a difference in the bargaining power between the outside candidate and the inside candidate. The party with a higher opportunity cost as reflected by his reservation utility has a stronger bargaining power (Caputo, 2005).

2.2 Inside Succession and Bargaining Power

Inside successions take place either as a relay in which the firm grooms a successor or as a horse race in which several key executives attempt to position themselves to be the next CEO (Vancil, 1987). In a horse race, the board will perceive its power as high because it will have numerous potential candidates and may or may not value any one more so than the others. In a relay, the board will place great value on one successor, the designate heir, even though there are probably other inside candidates lower in the hierarchy who would gladly step in and become CEO. The availability of other willing inside candidates would strengthen the board's bargaining position.

Board negotiation power in an inside succession can also be enhanced when the board believes that the candidate has few alternatives. Inside candidates who are passed over for the CEO position often leave the firm "because they see their future prospects diminished, because they find it difficult to work with the winner, or because the new CEO desires to hire his own people" (Hermalin & Weisbach, 1998). This phenomenon is often called 'up or out'. The board knows this up or out enhances its bargaining position while the inside candidate knows it weakens his bargaining power as it limits his alternatives which may in turn prevent him from being too aggressive in negotiations. Agrawal, Knoeber, and Tsoulouhas (2000) show that firms are more likely to hire inside

candidates when there are many potential insiders with considerable commonality. This selection process would weaken the bargaining position of any single inside candidate.

Based on the analysis in sections 2.1 and 2.2, we propose that outside candidates will have greater bargaining power than inside candidates. As a result, outside candidates should achieve higher total compensation than would an insider. Therefore, our first hypothesis is:

H₁: Outside CEO successors will receive greater total compensation than inside CEO successors.

2.3 Risks in Hiring an Outsider

With greater compensation for the outside successor comes greater risk for the board. The greater risk would be reflected in the structure of the compensation package. The pay package includes a fixed salary and also a pay-at-risk component which depends on the performance of the firm. Cao and Wang (2008) show that in CEO contracting, total compensation is used to induce retention as a response to a candidate's reservation utility, while pay-at-risk is used to induce effort as a response to the risk involved in hiring a candidate.

The reason why hiring an inside candidate is less risky than hiring an outside candidate lies in the different information asymmetry between the board and the outside candidate vs. the board and the inside candidate. Bargaining in the presence of asymmetric information usually leads to an *ex post* inefficient outcome (Klibanoff and Modurch, 1995) or even a hold-up (Muthoo 1999), though Schmitz (2002) documents the possibility of *ex post* efficiency of the outcome. When hiring a CEO successor, the board is likely to be more familiar with an inside candidate than an outside candidate. This can

be particularly true if the insider has worked for the firm for a long time and if the inside candidate has been groomed to take on the new CEO position (Zhang and Rajagopalan, 2004). The chance that the insider surprises the board with bad management skills and the chance of severe conflict with the board are less likely. However, the same cannot be said for an outside successor. Information asymmetry between the board and the outsider is greater due to lack of familiarization. As a result, hiring an outsider successor can impose risk to the hiring company and its board (Zhang & Rajagopalan, 2003, 2006).

Although an outsider may have greater bargaining power than an insider and receives greater total compensation as predicted by Hypothesis 1, the greater risk involved in hiring the outsider may cause the board to tilt the compensation package towards more pay-at-risk payment and less toward salary. Hence our second hypothesis is:

H₂: Outside successors will receive greater pay-at-risk payment but less salary payment than inside successors.

2.4 Change in the Pay Structure

In a survey of the literature, Kesnor and Sebor (1994) argue that boards hire insiders when they want to maintain the status quo. Nevertheless, boards hire outsiders when they want to instigate change to the status quo. Firms that hire inside CEO successors may be inclined to keep the inside successor's compensation structure (fixed salary versus pay-at-risk) similar to that of the predecessor (Elsaid & Davidson, 2007). That is, if things are going well for the firm, then the board may not want to disrupt what currently seems to be working. The status quo already reflects an increase in

compensation for the inside successor. On the one hand, even if the inside candidate wants to change the package, through reduced bargaining power, he may not be able to.

On the other hand, when hiring an outsider, the board may be more amenable to changing the compensation structure from that of the predecessor since hiring an outside successor is likely an indication of the board's desire for change. The exact form of these changes that the outsider may require can vary by situation. The outsider, already employed elsewhere, may be comfortable with his current pay structure and may want to keep a similar structure in the new position. We therefore propose:

H₃: An inside successor's compensation package will be structured similarly to that of the predecessor and an outside successor's compensation package will be structured more in line with the outsider's current contract.

3. Data

3.1 Sample Firms

We have obtained our sample from the Execucomp database for the years 1992 to 2003. Execucomp lists CEO names and compensation details for the S&P 1500 firms yearly. In the year a CEO's name changes, a turnover and succession has occurred. Our initial sample includes 749 successions. Using the *Wall Street Journal Index* and *Lexis-Nexis*, we determine whether the successor was an inside successor (works for the company at the time of the succession) or an outsider (does not work for the company at the time of the succession). In our sample, there are 193 outside successions and 556 inside successions.

Among the 193 outside successions, 81 of the successors were CEOs at another firm. Because our purpose is to compare outside successions with inside successions, we

need to level the playing field first. If an insider successor was not already a CEO, and if an outside successor was a CEO, it would increase the bargaining power of the outsider. This dynamic would bias the results in favor of our hypotheses. Therefore, we limit our investigation to outside successors who were not CEOs at other companies at the time of the hire. While this leaves 112 outside successions, we are able to obtain compensation data on only 99 of them.

To compare the bargaining power of outsiders to insiders, we also need a sample of inside successions. From the 556 inside successions, we find an inside succession that occurred in a firm in the same industry based on SIC codes. If there is more than one industry match, we select the inside successor whose firm's asset size is closest in size to the outside succession firm. Various research such as Gabaix and Landier (2008) and Cao and Wang (2008) have documented the relationship between executive compensation and firm size; therefore, the size restriction is necessary. This control sample contains 99 inside successions, one to match each outside-non-CEO succession⁴.

3.2 Measuring Compensation

As discussed in Murphy (1999), a typical compensation package includes salary, bonus, restricted stock, option grants and other annual compensation, which are all provided by Execucomp. The sum of these compensation components is our measure for total compensation. Salary generally does not depend directly on performance. The other compensation items have some relation to performance (e.g. bonuses are generally related to reported profits, restricted stock and options are related to stock performance).

⁴ We repeat all the analyses for 81 outside successors who were CEOs previously and compare them with 81 industry-size matched inside successors. The result is as expected, stronger than what we report here in this paper between the 99 non-CEO outside successors and their matched inside sample.

We combine all compensation items other than salary and call them pay-at-risk payments since they are not guaranteed. Among the pay-at-risk items, we focus on bonus and option grants because they account for the majority of pay-at-risk in our sample.

We define the year of the succession announcement as year 0. Because two different people serve as CEO in year 0, it is difficult to determine annual compensation. Certainly, one could annualize partial year compensation data for both the predecessor and successor. However, there are other factors that may complicate the issue. Yermack (2004) demonstrates that boards often pay departing executives considerable compensation in the year of their departure. This could potentially bias predecessor compensation upward. Similarly, newly hired executives are often given signing bonuses, stock grants, or other compensation in their initial year. These incentives could also bias year 0 compensation data. Therefore, we measure compensation for year +1 for successors and for year -1 for the predecessors. This formula/approach avoids the problems associated with using year 0 data.

Our sample period spans 11 years, and for each firm we compare compensation of the predecessor in year -1 to the successor in year +1, a two year difference in time. To avoid any bias that may occur due to inflation, we deflate each compensation figure using the Consumer Price Index, to 1992 dollar values.

4. Results

We test our hypotheses by first comparing the total compensation amount and the components of the pay package, the performance-related pay-at-risk component and the fixed salary component, between outside successors and inside successors. We then

adopt a cross-section regression framework to further investigate how reservation utility and risk affect successor compensation between outside candidates and inside candidates.

4.1 Side-by-side Comparison in Total Pay and Pay Structure: Outsiders vs. Insiders

Table 1 compares predecessor and successor compensation side by side. Panel A presents predecessor and successor pay for the outside successions. Panel B presents the corresponding results for the industry- and size- matched inside successions. Both the dollar amount and the percentage of the total compensation for several key pay components are reported. Each panel contains 99 successions. Due to severe skewness in the data, we report cross-sectional medians. The percentage changes in the median dollar pay amount from predecessor to successor are also reported.

-----*Insert Table 1 about Here*-----

Outside successions experience a 97% increase in CEO total compensation from the predecessor's \$730K to the successor's \$1,436K, while inside successions show a 52% increase from the predecessor's \$520K to the successor's \$789K. The increase in total compensation for outside successions is also highly significant with a *t-statistic* of 4.877, while the increase for inside successions is marginally significant with $t=1.767$. The highly significant and dramatic increase in outside CEO total compensation is consistent with H_1 . The increase in total compensation for outsiders comes entirely from the increase in the pay-at-risk component. Although outside CEO successors experience a 33% decrease in salary from the predecessors, a 256% increase in pay-at-risk helps to increase total compensation. Both changes are statistically significant at the 0.001 level with *t-statistics* of -6.447 and $+5.138$ respectively. Inside CEO successors, however,

receive a significant 39% increase in salary over the predecessor, but a statistically insignificant increase in pay-at-risk. The above difference in the components of outsider and insider pay packages is in line with the higher risk involved in hiring an outsider as illustrated in our H_2 . While the higher risk leads to higher total compensation for outsiders, it tilts the compensation package towards greater pay-at-risk. When we examine the two key components of pay-at-risk, bonus and option grants, we find that outside successors see a dramatic and highly significant 579% increase in option grants while the increase in option grants for inside successors is a less significant 81%.

The comparison between outside and inside successors can be better seen when we look at salary and pay-at-risk as a percentage of the total compensation. The outside successor's salary accounts for only 15% of total compensation, while the predecessor's accounts for 50%. The decrease is statistically significant with a *t-statistic* of -10.354 . On the other hand, outsider pay-at-risk accounts for 84% of the total compensation, as compared to the predecessor's 48%. The increase is also statistically significant with a *t-statistic* of 10.492 . Inside successor compensation packages are structured at a 37-62 split between salary and pay-at-risk, very similar and statistically indifferent from the predecessor's 35-63 split.

Our findings from Table 1 suggest that outside successors receive greater total compensation than inside successors relative to that of the predecessors, and this difference is driven by pay-at-risk. These preliminary results are consistent with our first and second hypotheses. While boards may give more total compensation to outsiders, they may expect more of outsiders due to higher risk shown by the big increase in pay-at-

risk. Next, we explore the successor's total compensation and pay package in a cross-sectional framework.

4.2 Cross-sectional Regressions on Total Compensation: Outsiders vs. Insiders

For outside and inside successions, we perform a cross-sectional regression with *Successor Total Compensation* as the dependent variable. The test variables are the variables that represent bargaining power and risk. For outside successions, bargaining power variables include the *Successor Total Compensation in Previous Job*—a proxy for the successor's reservation utility, and as a comparison, the total compensation of the firm's previous CEO—*Predecessor Total Compensation*. A successor's total compensation in his previous job is the opportunity cost that the successor has to forego if he accepts the new CEO position.

Inside successors usually serve as high-level managers in the firm, and their pay is highly correlated to the predecessor CEO's pay⁵. Therefore, for bargaining power variables in inside successions, we adopt a 2-stage regression framework. The first-stage regression of the inside successor's total compensation in his previous position on the predecessor CEO's total compensation yields a residual term that represents the part of the inside successor's total compensation in his previous position that is unrelated to the predecessor CEO's total compensation. In a similar fashion, we obtain the residual term from regressing the predecessor CEO's total compensation on the inside successor's total compensation in his previous position. In the second stage, we replace the highly

⁵ The pair-wise correlation between *Successor Total Compensation in Previous Job* and *Predecessor Total Compensation* for inside successions is 0.966 at the 1% significance level, while for outside successions it is 0.394 at the 1% level. Therefore, we decided to pre-whiten the variables for inside successions but not for outside successions.

correlated inside successor's total compensation in his previous position and the predecessor CEO's total compensation with the two orthogonal residual terms. The two residual terms are by design, independent of each other and by including them as the explanatory variables, we eliminate the impact from multicollinearity. The regression for inside successions is similar to that for outside successions with the only difference being the inclusion of the two residual terms. Other test variables for each regression are explained below.

In addition to the above reservation utility variables that influence the bargaining power of the candidate, independent directors can influence the bargaining power of the board (Hermalin & Weisbach, 2003). From each firm's proxy statement, we determine the *Percentage of Independent Directors* at the time of the succession using the definition of independent director in Baysinger and Butler (1985).

It is extremely difficult, if not impossible, to measure information asymmetry because it is unobservable even *ex post*. Yet, we try to proxy for this risk by using the *Successor Age* and *Successor Tenure* at the previous job as a rough estimate. The reason behind the choices is that the older the age and the longer the tenure at a previous position, the less risky the candidate is. Low (2005) and Bullard and Feigenbaum (2007) document a hump-shaped relation between an executive's age and his degree of effort aversion. Higher effort aversion is riskier to the hiring firm and performance-related profit sharing pay-at-risk payment is usually used to induce effort, thus decreasing effort aversion. In addition, for outsiders, we control for the effect of whether he comes from the same industry as the hiring firm (*D_{origin}*). Davidson, Nemec, and Worrell (2002) show that an outside candidate from a different industry represents a riskier hiring decision.

D_{origin} takes the value of 1 when the outside successor comes from a firm in the same industry as his new firm and is 0 otherwise.⁶

Control variables are listed below. First, successions that follow mergers may have occurred for reasons different than other successions. Moreover there are additional compensation issues involved in mergers such as parachutes for departing executives. To control for these possibilities, we add a dummy variable (D_{merger}) into the regression. Forced turnover can result in different implications for successor compensation and we control for this effect by adding a dummy variable $D_{foredturnover}$. Firm size may impact compensation too. Gabaix and Landier (2008) and Cao and Wang (2008) among others, show that a CEO's pay is positively related to the firm size. If a firm grows considerably from year -1 when we measure the predecessor's pay, to year $+1$ when we measure the successor's pay, compensation would be expected to increase. To control for *Change in Log Firm Size*, we compute the difference in the log of firm size in year -1 and year $+1$ and include it as a control variable. Finally, we add *Predecessor Age* and *Predecessor Tenure* as a comparison with those of the successors.⁷

The results of outside and inside cross-sectional regressions of successor total compensation are reported in Table 2. Outside CEOs total compensation is not significantly related to that of their predecessor but is significantly related to what they received in the previous job. The coefficient on *Successor Total Compensation in Previous Job* is 4.460 with a *t-statistic* of 4.407 while the coefficient on *Predecessor Total Compensation* is an insignificant -0.803 . As a matter of fact, the significance of

⁶ We acknowledge that the imprecise estimates for risk may lead to insignificant estimates in our regressions.

⁷ We also control for time period differences with a series of dummy variables for each year in the analysis. The results are not affected by the inclusion of these dummies.

Successor Total Compensation in Previous Job for outside successors helps push the *Adjusted R²* of the regression to 37.3%. However, for inside CEO successors, neither the *Residual of Successor Total Compensation in Previous Job* nor the *Residual of Predecessor Total Compensation* is significant though the latter has a higher coefficient.

-----Insert Table 2 about Here-----

These results are consistent with H_3 ; outside CEO successors tend to receive compensation that is similar to their pay at their previous position. This change may come from their increased negotiating power. It may also come from a board that is receptive to change since hiring an outsider has been interpreted as a signal of change. Surprisingly, for either the outside or the inside successions, none of the risk variables are significant and among the control variables, only the *Change in Log Firm Size* and *Predecessor Tenure* positively affect the outside successor's total compensation at the 10% significance level.

4.3 Cross-sectional Regressions on the Components of the Compensation Package: Outsiders vs. Insiders

To further investigate why the total compensation between outside successors and inside successors differs, we examine the structure of the compensation package in the cross-sectional framework. We partition total compensation into salary and pay-at-risk payments.

The dependent variable *Successor Compensation Component* refers to the successor's salary in dollar amount, pay-at-risk in dollar amount, % salary (Salary/Total Compensation) and % pay-at-risk (pay-at-risk/Total Compensation) respectively. The

explanatory variable *Successor Compensation Component in Previous Job* refers to the corresponding successor's previous pay component. *Predecessor Compensation Component* refers to the predecessor CEO's corresponding pay component. The rest of the explanatory variables remain the same.

Similar to the total compensation of inside successors, the salary and pay-at-risk components of inside successor's previous position are also highly correlated with the predecessor CEO's salary and pay-at-risk⁸. As a result, a similar 2-stage regression framework is adopted for inside successor's pay components.

Table 3 reports the results for outside CEO contracts, and Table 4 reports the results for the matched sample of inside CEO contracts. The result that stands out from Table 3 is the overall significance and dominance of *Successor Compensation Component in Previous Job* over *Predecessor Compensation Component* no matter which pay component is at issue. All four *Successor Compensation Component in Previous Job* measures, salary, pay-at-risk, % salary and % pay-at-risk, have significant and positive coefficients at the 0.001 level. However, except for a 5% significant coefficient of 0.302 on *Predecessor Salary*, all the other *Predecessor Compensation Component* measures have insignificant coefficients.

-----Insert Table 3 and Table 4 about Here-----

The estimated coefficient for the outside successor's salary in his previous firm is positive and significant ($t = 3.451$) while the estimated coefficient for the predecessor's salary is statistically less significant ($t = 2.385$). When the pay-at-risk component is the

⁸ The correlation between inside *Successor Compensation Component* and *Predecessor Compensation Component* is 0.776 for salary, 0.969 for pay-at-risk, 0.946 for %salary, and 0.955 for % pay-at-risk. All are significant at the 1% level. On the contrary, for outside successions, the correlations are 0.411, 0.311, 0.413 and 0.148, with the first two significant at the 1% level.

dependent variable, the results are similar; the estimated coefficient for the successors' pay-at-risk in their prior firm is positive and significant ($t = 4.751$) while the estimated coefficient for the predecessor's pay-at-risk is statistically insignificant. This result suggests that the outside successor's pay components, whether salary or pay-at-risk, whether in dollar amount or in percentage terms, are more closely related to what he earned in his previous job than to what his predecessor received. Thus, consistent with H_3 , not only do outside successors have a similar total compensation amount to what their previous jobs offered, they also have a compensation structure that is more similar to what they had previously than to that of their predecessors.

In Table 4, we report the 2-stage regressions on the matched sample of inside successors. The results show that both the *Residual of Successor Compensation Component in Previous Job* and the *Residual of Predecessor Compensation Component* are insignificant for pay-at-risk. However they both turn positive and significant for the remaining three component measures and the magnitude and *t-statistics* on the coefficient estimates of the *Residual of Predecessor Compensation Component* are all slightly higher than those of the *Residual of Successor Compensation Component in Previous Job*. The results seem to suggest that an inside successor's compensation is linked to both his predecessor's package and his own previous package, even after accounting for the high correlation between the two factors.

In conclusion, an outside successor's compensation is related more to his own prior compensation than to what his predecessor experienced. The results generally support the hypothesis that outside successors have more bargaining power than inside successors in that they are able to renegotiate the pay contract in a structure that is similar

to what they received in their previous jobs. For inside successors, their compensation is related to both the successor's previous compensation and predecessor's compensation. Risk variables remain insignificant as indicated in Table 3 and Table 4, and the majority of the control variables remain insignificant.

5. Discussion

In this paper we compare the bargaining power between an outside and an inside CEO successor by investigating their total compensation and their pay structure. Under the guidelines of classic bargaining theory, we base our analysis on a candidate's reservation utility (alternative options) and the information asymmetry between the candidate and the hiring board. We propose that outside successors have higher bargaining power than inside successors due to their higher reservation utility, while outside successors pose a higher risk to the hiring company due to more severe information asymmetry. As a result, outside successors see their compensation package tilted more towards pay-at-risk than to fixed salary.

Empirical results from 99 outside CEO successions industry-size matched with 99 inside successions during the period 1992 to 2003 are consistent with our hypotheses. We find that outside CEO successors receive greater total compensation than inside successors, an indication of the higher bargaining power of outside successors, though both increase from that of the predecessors. Most of the increase in outsider total compensation comes from the increase in performance related pay-at-risk. In fact, our sample outside successors' salaries drop from those of the predecessors, but are overcompensated by the bigger increase in pay-at-risk. This finding is consistent with the

notion that hiring an outsider is risky. In addition, outside candidates have a compensation package that is structured similarly to what they had in their prior firms. CEOs selected from the inside see their compensation structure determined by both the predecessor's and their own past package.

Current academic research is grounded with numerous studies that examine executive compensation or CEO succession. Compensation studies generally focus on the compensation of sitting CEOs. The problem with this approach is that once a CEO is in office, it is difficult to change the structure of the CEO's contract (Bebchuk & Fried, 2004). Incumbent CEOs are able to exert considerable influence over the board and the board's compensation committee. As a result, once a compensation contract is in place, it is rarely renegotiated unless it changes to increase the incumbent CEO's pay (Bebchuk and Fried, 2004). At the time of succession, the board has the opportunity to change the compensation contract from that of the predecessor. Our primary contribution is that we are able to show how the bargaining power of the successor influences compensation outcomes.

Since this is the first attempt to relate bargaining power of successor CEOs and boards to compensation, our measures of bargaining power may be somewhat crude. Future research could be directed at this issue and could develop alternate and more refined measures of both board and successor CEO bargaining power.

Furthermore, we are only able to examine the compensation issue in the board-successor CEO negotiations because most other negotiation issues are not readily transparent. When and if other data become available, future researchers could possibly measure other types of negotiation outcomes that occur in the successor bargaining

process. Some of these issues may be unrelated to compensation. Other issues could be related to non-monetary compensation such as the CEO's use of company airplanes and cars or perks such as country club memberships.

In our research, we relate the successor compensation to that of the predecessor and that of the successor's prior compensation. Future research could also be directed at other ways that boards make compensation decisions for successors. For example, industry compensation trends may be an important determinant. We can only speculate, but perhaps inside successor compensation is at least partially determined by the trends in the company's own industry while that of outsiders may be determined by the industry trends of the outsider's prior industry.

Our results could be evaluated under an alternative theoretical perspective – power dependence theory. This theory proposes that bargaining tactics and outcomes will depend on each party's dependence on the outcomes (Lawler & Bacharach, 1979). These authors define dependence as alternatives and value. Parties to a negotiation will have greater (lesser) bargaining power when they have other (no-other or few) alternatives and when they place low (high) value on the outcome of the negotiation. Future research could focus on this alternative theoretical perspective to determine if it also validates the results that we find.

In providing an apple-to-apple comparison between outside and inside CEO successors, we do not present results for outside successors who used to be CEOs at other companies. Given that outside successors often hold the CEO position in their previous firms, future research could be directed at this angle and compare with the results

provided in this paper. Such an approach would help clarify how the outside successor's previous position affects bargaining power.

Finally, we have proposed that outside CEOs are a riskier choice for boards because of information asymmetry when hiring an outsider. There may be other ways to measure information asymmetry and to retest our suppositions. For example, information asymmetry of all outsiders may not be the same and there may be different information asymmetry between various inside candidates as well. Future research could be directed at this issue.

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**Table 1: Side-by-side Comparison of Predecessor and Successor Pay
Outside vs. Inside successors**

Panel A	Dollar Amount (000s)				% of Total Compensation			
	Outside Succession	Predecessor	Successor	t- statistics	%change	Predecessor	Successor	t- statistics
Total Compensation	730	1436	4.877***	97%				
Salary	317	213	-6.447***	-33%	50	15		-10.354***
Pay-at-risk	312	1112	5.138***	256%	48	84		10.492***
Bonus	92	146	1.701†	58%	10	7		-1.411
Option Grants	94	639	4.742***	579%	18	59		8.735***

Panel B	Dollar Amount (000s)				% of Total Compensation			
	Inside Succession	Predecessor	Successor	t- statistics	%change	Predecessor	Successor	t- statistics
Total Compensation	520	789	1.767†	52%				
Salary	189	263	10.801***	39%	35	37		0.180
Pay-at-risk	298	474	1.645	59%	63	62		-0.004
Bonus	81	127	1.902†	58%	12	16		0.359
Option Grants	135	245	1.720†	81%	29	34		0.601

This table reports the cross-sectional medians in predecessor and successor compensations. T-statistics are for pair-wise comparison between predecessor and successor. % change from predecessor to successor is based on the reported median dollar amount in payment. In Panel A, the sample consists of 99 outside CEO successions that occurred between 1992 and 2003. In Panel B, the sample consists of 99 inside successions matched by industry and firm size.

**Table 2: Cross-sectional Regression of Successor Total Compensation
Outside vs. Inside successors**

		Outside	Inside
		<i>Successor Total Compensation</i>	<i>Successor Total Compensation</i>
Independent Variables	Constant	7537.645 (0.988)	6062.186 (1.238)
Bargaining power variables	<i>Successor Total Compensation in Previous Job</i>	4.460 (4.407)***	--
	<i>Predecessor Total Compensation</i>	-0.803 (-1.041)	--
	<i>Residual of Successor Total Compensation in Previous Job</i>	--	7.694 (1.500)
	<i>Residual of Predecessor Total Compensation</i>	--	10.066 (1.441)
	<i>Percentage of Independent directors</i>	237.338 (0.065)	1831.641 (0.451)
Risk variables	<i>Successor Age</i>	-166.437 (-1.561)	-27.820 (-0.342)
	<i>Successor Tenure</i>	101.403 (1.117)	84.704 (1.146)
	<i>D_{origin}</i>	757.748 (0.449)	--
Control variables	<i>D_{merger}</i>	1246.268 (0.577)	-2052.362 (-0.882)
	<i>D_{forcedturnover}</i>	1883.059 (1.117)	-1194.726 (-0.715)
	<i>Change in Log Firm Size</i>	853.872 (1.918)†	-802.237 (-0.609)
	<i>Predecessor Age</i>	29.729 (0.383)	-34.125 (-0.466)
	<i>Predecessor Tenure</i>	162.183 (1.896)†	-82.205 (-1.128)
Adjusted R ² (F)		37.3% (3.046)**	-1.3% (0.946)

*** Significant at 0.001, ** Significant at 0.01, * Significant at 0.05, † Significant at 0.10

Successor Total Compensation is the dollar amount (000s) of the successor's total compensation in the year after becoming CEO. *Successor Total Compensation in Previous Job* is the dollar amount (000s) of the successor's total compensation in his previous job. *Residual of Successor Total Compensation in Previous Job* is the residual term from regressing *Successor Total Compensation in Previous Job* on *Predecessor Total Compensation*. *Predecessor Total Compensation* is the dollar amount (000s) of the previous CEO's total compensation. *Residual of Predecessor Total Compensation* is the residual term from regressing *Predecessor Total Compensation* on *Successor Total Compensation in Previous Job*. *Percentage of Independent Directors* is the percent of independent directors on the board. *Successor Age* is the successor's age at the year of the succession. *Successor Tenure* is the successor's tenure in the previous position. D_{origin} equals to 1 if the successor is from the same industry according to SIC code and equal to 0 otherwise. D_{merger} equals to 1 if the succession occurred as a result of a merger and 0 otherwise. $D_{forcedturnover}$ equals to 1 for forced turnover and 0 for voluntary turnover. *Change in Log Firm Size* is the difference between the natural log of the total assets of the firm at the year after the succession and the year prior to the succession. *Predecessor Age* is the predecessor's age at the year of the succession. *Predecessor Tenure* is the predecessor's tenure as CEO. Collinearity diagnostics and all variance inflation factors (VIF) are less than 10. The sample firms are described in Table 1.

Table 3: Outside Successor Compensation Structure

Dependent: Successor Compensation Component					
Independent Variables		Salary	Pay-At-Risk	%Salary	%Pay-At-Risk
	Constant	-85.158 (-.379)	8352.519 (1.133)	-0.471 (-1.317)	0.826 (1.977)†
Bargaining power variables	<i>Successor Compensation Component in Previous Job</i>	0.509 (3.451)***	5.225 (4.751)***	0.575 (3.997)***	0.594 (4.087)***
	<i>Predecessor Compensation Component</i>	0.302 (2.385)*	-1.183 (-1.528)	0.057 (0.538)	0.027 (0.241)
	<i>Percentage of Independent directors</i>	-183.797 (-1.731)†	436.102 (0.125)	-0.097 (-0.528)	0.064 (0.339)
Risk variables	<i>Successor Age</i>	-1.788 (-0.546)	-153.166 (-1.491)	0.008 (1.523)	-0.007 (-1.331)
	<i>Successor Tenure</i>	-1.370 (-0.511)	97.005 (1.109)	-0.003 (-0.571)	0.002 (0.550)
	<i>D_{origin}</i>	-52.141 (-1.033)	758.112 (0.466)	-0.019 (-0.214)	0.019 (0.209)
Control variables	<i>D_{merger}</i>	-15.267 (-0.229)	1102.481 (0.530)	-0.013 (-0.125)	0.001 (0.008)
	<i>D_{forcedturnover}</i>	29.270 (0.579)	1549.268 (0.949)	0.005 (0.063)	-0.008 (-0.092)
	<i>Change in Log Firm Size</i>	8.059 (0.566)	734.658 (1.723)†	0.013 (0.609)	-0.017 (-0.752)
	<i>Predecessor Age</i>	6.921 (3.317)**	6.050 (0.080)	0.002 (0.495)	-0.002 (-0.539)
	<i>Predecessor Tenure</i>	-2.632 (-1.053)	172.768 (2.074)*	-0.005 (-1.280)	0.006 (1.381)
Adjusted R ² (F)		43.9% (3.891)***	40.1% (3.304)***	32.2% (2.482)*	30.7% (2.383)*

*** Significant at 0.001, ** Significant at 0.01, * Significant at 0.05, † Significant at 0.10
Successor Compensation Component refers to the component of the pay package for the successor.
Successor Compensation Component in Previous Job refers to the successor's pay component in his previous job.
Predecessor Compensation Component refers to the predecessor CEO's pay component. A pay component includes salary and pay-at-risk (in 000's dollars and as a % of the total compensation), with each matching the dependent variable of the regression. The remaining variables are defined in Table 2 and the sample firms are described in Table 1. Collinearity diagnostics and all variance inflation factors (VIF) are less than 10.

Table 4: Inside Successor Compensation Structure

Dependent: Successor Compensation Component					
Independent Variables		Salary	Pay-At-Risk	%Salary	%Pay-At-Risk
	Constant	298.769 (3.763)***	5486.464 (1.204)	-0.197 (-0.603)	1.157 (3.487)***
Bargaining power variables	<i>Residual of Successor Compensation Component in Previous Job</i>	1.156 (8.148)***	7.651 (1.417)	3.512 (2.726)**	4.848 (3.245)**
	<i>Residual of Predecessor Compensation Component</i>	2.273 (11.328)***	9.901 (1.335)	3.769 (2.884)**	5.052 (3.348)**
	<i>Percentage of Independent directors</i>	83.250 (1.350)	1942.227 (0.516)	-0.240 (-0.946)	0.253 (0.998)
Risk variables	<i>Successor Age</i>	-1.356 (-1.036)	-28.265 (-0.371)	0.002 (0.387)	-0.003 (-0.518)
	<i>Successor Tenure</i>	0.437 (0.397)	75.945 (1.111)	-0.006 (-1.312)	0.005 (1.131)
Control variables	D_{merger}	-20.269 (-0.562)	-2004.73 (-0.928)	0.101 (0.671)	-0.098 (-0.653)
	$D_{forcedturnover}$	-32.136 (-1.230)	-1106.74 (-0.714)	-0.023 (-0.210)	0.025 (0.233)
	<i>Change in Log Firm Size</i>	17.291 (0.847)	-759.914 (-0.624)	-0.034 (-0.400)	0.042 (0.489)
	<i>Predecessor Age</i>	0.929 (0.775)	-33.193 (-0.490)	0.010 (2.115)*	-0.009 (-1.930)†
	<i>Predecessor Tenure</i>	-1.128 (-0.988)	-75.255 (-1.117)	0.004 (0.783)	-0.004 (-0.794)
Adjusted R ² (F)		71.7% (12.298)***	-0.9% (0.962)	18.1% (1.929)*	23.1% (2.263)*

*** Significant at 0.001, ** Significant at 0.01, * Significant at 0.05, † Significant at 0.10

Residual of Successor Compensation Component in Previous Job and *Residual of Predecessor Compensation Component* are residual terms from regressing *Successor Compensation Component in Previous Job* on *Predecessor Compensation Component* and vice versa. The remaining variables and sample definitions are the same as in Tables 1, 2 and 3. Collinearity diagnostics and all variance inflation factors (VIF) are less than 10.