

CEO Deal-Making Activity, CEO Compensation and Firm Value^{*}

December 11, 2008

Eliezer M. Fich

LeBow College of Business
Drexel University
Philadelphia, PA 19104
(215) 895-2304
efich@drexel.edu

Laura T. Starks

McCombs School of Business
University of Texas
Austin, TX 78712-1179
(512) 471-5899
lstars@mail.utexas.edu

Adam S. Yore

LeBow College of Business
Drexel University
Philadelphia, PA 19104
(215) 895-1279
yore@drexel.edu

Abstract

CEOs often engage in deal-making activities. We explore whether the motivation for these activities is related more to compensation increases or to signals of CEO quality. To investigate this question, we analyze firms executing joint ventures, strategic alliances, seasoned equity offerings, and spinoffs. We find that total CEO compensation increases when any of these transactions are completed even when the deals are not expected to improve firm value. A further way to distinguish between our hypotheses is to determine the role of board monitoring. We find that pay increases received by CEOs executing deals that do not increase firm value are dispensed when monitoring appears to be weak, as proxied by busy and/or hand-picked boards. Our results also indicate that deal-making CEOs are less likely to be fired for poor performance. Overall, the results support the CEO activity hypothesis over the CEO quality signaling hypothesis.

JEL classification: G30, G34, K22

Keywords: Deals, Executive Compensation, Corporate Governance

^{*} We acknowledge the helpful comments of N. K. Chidambaran, Kose John, Ralph Walkling, seminar participants at Clemson University, Instituto de Empresa (IE), Northern Illinois University, Pace University, the Securities and Exchange Commission (SEC), Universidad Carlos III, University of Mississippi, University of Wyoming, and at the 2008 meetings of the Financial Management Association (Gaylord, TX). All errors are our responsibility.

On July 27th, 1999 AT&T announced it was undertaking a joint venture project with British Telecom plc. The announcement was met with a \$4.2 billion decline in the market capitalization of AT&T.¹ Despite this lackluster market response to the joint venture, which was completed on October 26th, 2000, and a dismal stock market performance during the year 2000, in early 2001, the AT&T board rewarded its CEO, Mr. C. Michael Armstrong, with a salary increase. His total compensation rose from \$17.6 million to \$24.6 million. When justifying the pay raise, the board cited Mr. Armstrong's leadership in executing the joint venture.

This anecdote raises the question of whether and how CEO activity affects CEO compensation. Absent the moral hazard problem described by Hölmstrom (1979) and others, CEOs would be expected to only enter into deals that enhance their shareholders' value. In the presence of moral hazard, however, boards should attempt to provide their executives with the appropriate incentives to choose activities that increase shareholder wealth. Often these incentives are embedded in the compensation system. Thus, in well-governed firms, top management compensation would be expected to be related to a deal's expected success or failure. Alternatively, given the difficulty of ascertaining a deal's success until some period after its inception, it is possible that top managers orchestrate deals in order to enhance their compensation regardless of the deal's impact on shareholder wealth. That is, CEOs might want to show that they are active in brokering deals in order to justify a pay raise. Indeed, as the AT&T example suggests, such deals could appear detrimental to firm value from investors' perspectives and yet might ultimately serve as justification for corporate boards and compensation committees to raise the CEOs' pay.

In this paper, we consider the issue of CEO activity and its relation to CEO compensation. If executives are compensated on the basis of their activities (e.g., mergers, joint ventures, seasoned equity offerings, strategic alliances or spinoffs), then the question arises as to the rationale for such

¹ This estimate is based on a 5-day cumulative abnormal return (*CAR*) for AT&T. Section V provides a detailed explanation on the calculation of the *CARs*.

compensation increases. There exist at least two potential hypotheses. First, there is the *active CEO* hypothesis, which posits that CEOs are rewarded for executing corporate deals, irrespective of whether such deals enhance shareholders' wealth. Second, there is the *signal of CEO quality* hypothesis, which posits that CEOs are rewarded for executing corporate deals because they are a signal of CEO quality.

We study which of these hypotheses is the most likely to hold, although they are not completely mutually exclusive. For this purpose, we conduct several tests to distinguish between the hypotheses. First, we establish whether CEO compensation is, in fact, related to CEO activity. Second, we investigate the relation between CEO compensation and the expected performance of the deal (as reflected in the market reaction to the announcements). A positive relation would support the signal of CEO quality hypothesis and a negative relation would support the active CEO hypothesis. Third, since the CEO's compensation is set by the firm's board of directors, we examine the characteristics of the board to determine whether the board and its decisions about compensation may be influenced by the CEO. In particular, we examine whether managerial power, busy boards of directors, or CEO-hand-picked boards are more likely to raise the compensation of CEOs that execute the deals that do not appear to improve firm value. Such a result would be more consistent with the active CEO hypothesis.

We examine compensation surrounding four types of corporate actions that would indicate CEO deal-making activity: joint ventures, seasoned equity offerings (SEO), strategic alliances and spin-offs. We begin by evaluating firms that broker at least one joint venture, strategic alliance or SEO deal between 1996 and 2004.² Comparing firms initiating these deals to other companies in the Execucomp database during the sample period, we find evidence in support of both the active CEO and the signal of CEO

² A joint venture is an entity formed between two or more parties to undertake economic activity together. The parties agree to create a new entity by both contributing equity, and they then share in the revenues, expenses, and control of the enterprise. The venture can be for one specific project only, or a continuing business relationship such as Verizon Wireless which is a joint venture between Verizon Communications and Vodafone. This is in contrast to strategic alliances, a deal type that we also analyze in this paper, which involve no equity stake by the participants, and is a less rigid arrangement. The joint venture can be organized as a partnership, a corporation, or any other form of business organization the participating firms choose. In the United States, joint ventures are often governed by state Partnership, Contracts, and Commercial Transactions law and are treated like a partnership for Federal Income Tax purposes.

quality hypotheses. We find that for all types of deals studied, the compensation for the CEOs increases. For example, during the year of an initiation of a joint venture deal, the deal-making CEOs experience a non-trivial average increase in their total compensation of \$2.6 million. These results, which obtain in different empirical specifications and are robust to numerous controls, suggest that deal-making activity may be a vehicle for corporate boards to justify a pay raise for their CEOs. While the majority of deal-making CEOs receive higher pay increases than non-deal-making CEOs in terms of pay increases, only 6 percent of the deals we analyze are expected to increase their firms' value.

When we examine board monitoring of the CEOs who engage in these deals, we find that the monitoring appears to be weaker than for other CEOs. We employ three proxies for the level of board monitoring: the managerial power index (Grinstein and Hribar, 2004), the board's ability to devote attention to monitoring due to other board positions (Fich and Shivdasani, 2006) and the fraction of directors appointed while the CEO brokering the deal has been in office (Shivdasani and Yermack, 1999). We find that weak and/or inattentive boards pay more to their CEOs during the year a deal is executed. Further, the higher compensation occurs regardless of the deal's performance.

SEOs increase the size of the firm. Joint ventures and strategic alliances do not, although they do give the CEO some control over a larger base of assets. Thus, a potential concern with our results is that a CEO pay increase related to any of these activities might be due to the increase in firm size or effective firm size. To address this issue, we investigate our research questions in a different sample of firms in which the deal-making activity is more likely to result in firm size decreases: firms that spin off divisions. The results related to spinoffs also indicate that CEOs are rewarded for increased activity even if the deal has no material effect on shareholder wealth and that the increases are more likely to come from weak boards.

Another potential concern is whether the deals cause a firm's level of diversification to increase. Rose and Shepard (1997) find that CEOs leading more diversified firms command higher levels of

compensation. However, the multivariate results related to all of the different deals we consider are robust to firm effects, which alleviate concerns that the pay increases we uncover are due to firm diversification.

In general, our results indicate that CEOs receive pay increases for executing certain corporate transactions whether or not the deals appear to improve firm value. Moreover, our findings also indicate that the compensation increases dispensed to CEOs appear to be more pervasive when board monitoring is weak. These findings support the active CEO hypothesis over the signaling of CEO quality hypothesis.

Beyond the compensation increases, additional tests reveal that deal-making benefits CEOs in other ways. Our findings indicate that deal-making severely curtails the inverse firm performance-CEO turnover relation documented in other studies (see, for example, Weisbach, 1988 and Parrino, 1997a). We view this result as evidence that deal-making might help CEOs become entrenched. Under this interpretation, our turnover results also support the CEO activity hypothesis.

Our paper is related to two strands of literature. The first is the literature that examines the relation between CEO compensation and acquisitions. For example, Harford and Li (2007) show that, even in mergers in which bidding shareholders are worse off, bidding CEOs experience wealth increases three quarters of the time. Grinstein and Hribar (2004) find that acquiring CEOs receive a larger bonus after the deal is completed, even if the acquisition is not value increasing. Denis *et al.* (1997) and Datta *et al.* (2001) examine CEO compensation and ownership structures prior to M&A deals, and independently show that increased insider ownership and equity-based compensation improve long-run post-acquisition performance. Likewise, Bliss and Rosen (2001) find that CEO pay often increases following bank mergers even if the acquirer's stock price declines. Our paper differs in that we consider other types of CEO-deal-making, which diverge from mergers in terms of both motivation and payoffs. Given the results in the extant literature, is not ex-ante obvious that other types of corporate transactions will have a meaningful effect on CEO compensation or that CEO pay will rise or fall with the success or failure of different corporate activities. The existing evidence documents pay increases for CEOs engaged in mergers and acquisitions, an activity that typically increases the size of the firm. On the other hand, in our

study we examine how deals that often leave the size of the firm unchanged affect CEO compensation. In addition, we provide further analysis of the effects of these deals by examining the motivations of CEOs to enter such activities as well as the impact of the deals on CEO turnover.

The second strand of literature related to our paper is the empirical research based on the premise that compensation contracts fail to align the incentives of managers with those of shareholders when governance structures are weak. For example, Hallock (1997) and Fich and White (2005) find that interlocking boards provide higher compensation for their CEOs. Core *et al.* (1999) find that CEOs that also hold the title of “Chairman of the Board” receive larger compensation. Blanchard, Lopez De Silanes, and Shleifer (1994) find that when companies receive cash for reasons unrelated to corporate performance, CEOs receive a compensation increase. In contrast, Hartzell and Starks (2003) find that institutional ownership concentration is positively related to the pay-for-performance sensitivity of executive compensation. They argue that institutions serve a monitoring role in mitigating the agency problem between shareholders and top-managers. A characteristic common to these studies is their static analysis of the firm. That is, the empirical design of these studies does not require a specific firm action in order to study the relation between CEO compensation and corporate governance.³ Therefore, our paper goes beyond this literature by examining how the dynamic setting of the performance of a given deal affects the compensation of the CEO under different governance structures.

The paper proceeds as follows. In Section II we discuss our hypotheses. We describe our data in Section III and present the empirical analyses in Sections IV and V. We conclude in Section VI.

I. Theories and Hypothesis

Hölmstrom (1979), Grossman and Hart (1983), and Fudenberg and Tirole (1990) among others, show that accounting for the moral hazard problem is essential when designing effective managerial compensation contracts. In Hölmstrom's model, the agent (CEO) performs a series of unobservable

³ However, all these studies control for contemporaneous and/or lagged performance.

actions aimed at maximizing the utility of the principals (investors). However, Hölmstrom argues that the lack of observability by investors may induce CEOs to undertake actions that do not maximize investors' wealth. Hölmstrom also argues that, in order to alleviate the moral hazard problem, the board should align managerial incentives with those of shareholders by tying CEO compensation to observable outcomes that are correlated with a CEO's activities. Thus, boards may interpret a CEO's activity as meaningful accomplishments and reward the CEO accordingly. This leads to our *active CEO* hypothesis which predicts that CEOs will undertake actions that improve their own wealth even when such actions do not enhance shareholders' wealth. Alternatively, the CEO's activities could be a way of signaling his quality to the board and the market and the compensation is appropriate for the activity. We term this the *signal of CEO quality* hypothesis. That is, CEOs are rewarded for executing corporate deals because they are a signal of CEO quality.

These hypotheses are somewhat difficult to differentiate because both suggest that a CEO's activities would increase the CEO's compensation. Two tests can aid in differentiating the hypotheses. First, an examination of whether the deals are value-increasing should help in understanding the CEO's motivation. Unfortunately, we cannot directly measure the value of a deal ex ante, only whether the market believes the deal to be value-increasing on its announcement. A second way to attempt to distinguish between the hypotheses is by examining the quality of the corporate board. Hölmstrom's arguments suggest that essential to a successful managerial compensation arrangement is an effective board that writes the contract, and closely monitors the CEO. Indeed, Jensen and Meckling (1976) argue that in many instances the firm's governance is too weak to effectively enforce top-management compensation contracts and Hermalin and Weisbach (1998) show that board monitoring efficacy weakens over time as the CEO gains power over the board. Thus, we examine whether weak boards are more likely to authorize a pay raise for CEOs during the year when a deal that does not increase firm value is executed.

II. Data

A. Selection criteria

Our sample consists of firms executing one or more joint ventures, strategic alliances, seasoned equity offerings, or spinoffs between January 1, 1996 and December 31, 2004 for which we were able to retrieve data on the deals from the Thomson Financial database. We also require that each observation has complete governance, compensation, stock market, and accounting data from IRRC, Execucomp, CRSP, and Compustat, respectively.

Over our sample period, we obtain the initial joint venture and strategic alliance samples from the Thomson Financial's SDC Platinum Joint Ventures/Alliances database. We restrict our analyses to U.S. joint ventures and strategic alliances and require that there be only two participants in each deal, where each party is a publicly traded U.S. company.⁴ We construct the initial SEO sample by identifying all US common stock secondary issuances in Thomson Financial's SDC Platinum IPO database and the initial spinoff sample by identifying these transactions in the Thomson Financial database. We require that each observation has complete data in Execucomp on salary and bonus, equity-based compensation, perquisite compensation, and total compensation for the chief executive officer for the year preceding, the year of, and the year after each deal type is undertaken.⁵ We also require that each firm has governance data in the IRRC database and accounting and stock market data from Compustat and CRSP, respectively. After excluding observations for which data are not available in any of these sources, our final sample consists of 450 participant-year observations for the joint venture sample, 3,147 observations for the strategic alliance sample, 469 observations for the SEO sample, and 141 observations for the spinoff sample.

⁴ Limiting our samples to two parties does not eliminate a large number of firms. For example, ninety-five percent of all domestic joint ventures involve only two participants.

⁵ We utilize four proxies to measure the annual compensation of the CEO. The first is *Salary & Bonus Compensation* which sums the annual cash and bonus compensation. The second is *Equity-Based Compensation* it adds the Black-Scholes value of options granted, restricted stock grants, and any long-term incentive payouts. Next is *Perquisite Compensation* which aggregates other annual compensation and all other total compensation. Our last proxy is *Total Compensation* which adds *Salary & Bonus*, *Equity-Based*, and *Perquisite Compensation*.

B. Sample characteristics

Panel A of Table I shows that the temporal distribution of the deals included in the final sample. The temporal distribution varies by type of deal. For example, the peak year for joint ventures is 1997, which contains the largest numbers of deals at 113 (25% of the total), while the largest peak years for strategic alliances, SEOs, and spinoffs occurred in 1999, 2002, and 2000, respectively. The smallest number of joint ventures, strategic alliances and spinoffs occurred in the same year, 2004.

Sample statistics for key variables are reported in Panel B of Table I. The median firm in the sample has about \$9 billion in assets and provides about \$6.3 million to its CEO in total annual compensation. The average board has 11 directors, 66% of whom are independent. About 36% of the independent directors are appointed while the current CEO is in office. These statistics are comparable to those presented by Yermack (1996), who studies governance data from 1984-1991, and to those by Coles, Daniel, and Naveen (2007) who examine board data from 1996-2005.

III. Empirical Analyses

A. The effects of deal-making on CEO compensation

Because of the differences in motivations and outcomes across deal types, we examine each type of deal separately. For each type, we analyze all of the firms in the Execucomp database over the 1996-2004 sample period, a total of 9,587 observations. We estimate CEO-compensation regressions using salary and bonus, equity-based pay, perquisites, and total compensation, as separate dependent variables. The key independent variable in each of these regressions is an indicator that is “1” if the firm is involved in the deal-making activity during the year and is “0” otherwise.

We first test whether the level of total compensation CEOs receive in a given year is related to their joint venture deal-making activity. Table II presents our compensation regressions using two different econometric specifications. Since executive compensation is a left-censored variable with a lower bound at zero, for the regressions in Panel A of Table II, we use a Tobit specification that controls for industry

and calendar year effects. For the regressions in Panel B, we use a fixed-effects specification in order to account for unobservable attributes of each firm in our panel. The fixed-effects regression assigns a unique intercept to each firm in the sample. The results in both panels of Table II are generally consistent and indicate that engaging in joint venture deals enhances CEOs' wealth significantly. In model (4), Panel B, the fixed-effects coefficient estimate for the joint venture indicator implies that CEOs of joint venture firms receive an additional \$2.6 million in total compensation during the year of the deal, the bulk of which (\$2.3 million) comes from equity-based pay (model (2)).

Table III presents the two sets of compensation regressions for our strategic alliance and SEO samples, respectively. In models (1) and (2) we use an indicator variable that is "1" whenever a deal is completed and "0" otherwise. The coefficient estimate for this variable in model (2) shows that CEOs of strategic alliance firms earn an additional \$3.8 million in total pay during the year of the deal. In models (3) and (4) our key independent variable is a dummy that is "1" if an SEO takes place and "0" otherwise. The coefficient estimate for this variable in model (4) indicates that CEOs of firms that initiated an SEO earn an additional \$2.0 million in total pay during the year. The results in Table III show strategic alliances and SEOs appear to have a non-trivial effect on CEO compensation.

We note that the results in Tables II and III are robust to several firm- and CEO-specific characteristics. Moreover, these controls generate inferences analogous to those in other CEO compensation studies. For example, we find an inverse association between total CEO pay and CEO ownership and a positive association between total CEO pay and the firm's lagged stock return. These results are similar to those in Core *et al.* (1999) and Core *et al.* (2008), respectively.

Overall, the results in Tables II and III suggest that deal-making is important for CEOs in achieving increases in pay. Such interpretation is consistent with both the active CEO hypothesis, which predicts a pay raise from deal-making activity, and the CEO quality signaling hypothesis, which predicts the deal-making signals CEOs of higher quality. A first step in differentiating these two hypotheses is to examine whether the compensation increases are related to expected deal performance, which we measure through

changes in shareholder wealth at the announcement of the deal. However, before addressing that issue, we probe the robustness of our results.

B. Robustness issues

B.1 Firm size

In the previous section, we find that CEOs who engage in deal-making activities such as joint ventures, strategic alliances or SEOs receive pay raises related to their undertaking of these deals. Similarly, Grinstein and Hribar (2004) find that CEOs of acquiring firms experience a pay raise during the year of the merger. It is possible that the CEO pay increases documented by Grinstein and Hribar and this paper occur because of the relation between compensation and firm size (e.g., Baker, 1939; Murphy, 1998; and Frydman and Saks, 2007). That is, the deals increase firm size (or effective firm size), which then enable CEOs to command higher levels of compensation. (Although joint ventures and strategic alliances do not actually increase firm size, as do SEOs, they provide the CEO with some control over a larger set of assets. This could be viewed as effectively increasing firm size, resulting in a rationale for greater compensation.)

We note that all of our multivariate tests control for the firms' assets (Compustat data item 6), which is a commonly used proxy for firm size. Moreover, in unreported tests we replace assets with the firms' total capital or the firms' net sales. The use of these alternative size proxies does not alter the significance and inferences of our results.⁶ Notwithstanding our firm size controls, one might still be concerned that the pay increases for CEOs of firms that engage in joint ventures, strategic alliances, and SEOs arise because these deals cause effective firm size to increase. If CEOs of larger firms are paid more than those who head smaller companies, then pay increases to CEOs in our sample may simply reflect increases in firm size.

⁶ Sales are Compustat data item 12 and total capital adds the market value of the firm's equity, book value, long-term debt, and an estimated market value of preferred stock. We calculate the market value of preferred stock by dividing preferred dividends over the prevailing yield on Moody's index of high-grade industrial preferred stocks.

To address this issue, we assemble a separate sample of 141 firms that undergo the type of deal that lowers firm size rather than increase it – a spinoff.⁷ In terms of assets, firms are likely to experience a reduction in firm size after spinning off one or more of its divisions.

To be consistent with our previous tests, we analyze our spinoff firms together with all firms in the Execucomp database during the sample period. Table IV presents the results of our analysis where the key independent variable is a (0,1) indicator for spinoffs. Consistent with our earlier results on CEO deal-making activities, we find that firms undergoing a spinoff increase the total compensation of their CEOs. The coefficient for the spinoff (0,1) variable implies that this activity is associated with a \$4.2 million increase in total CEO compensation. These analyses involving firms that spinoff a division should alleviate concerns that the foregoing results obtain simply due to increases in firm size. The results related to spinoff deals are consistent with those related to joint venture, strategic alliance, and SEO deals and again provide support for both the active CEO hypothesis and the CEO quality signaling hypothesis.

B.2 Empirical specification

The compensation regressions we run in Tables II, III, and IV use the actual dollar amount the CEOs earn as the dependent variable. This choice causes the coefficient on the deal indicator variables in these tests to reflect the change in the actual dollar compensation associated with each deal type for firms in our sample. Consequently, our specification produces deal indicator coefficients which are readily interpretable. However, several existing compensation studies use logarithms of the compensation, sales, and performance variables, instead of levels. Murphy (1985) argues that the logarithmic transformation reduces the skewness of the size distribution of sample firms.

We repeat all of our tests using the logarithmic transformation for the compensation and size variables. In these tests, we are mindful that the economic effect of the deal indicators will be calculated

⁷ A spinoff is a divestiture by a corporation of a division or subsidiary by issuing to stockholders shares in a new company set up to continue the operations of the division or subsidiary. Spinoffs involve the transfer of corporate assets of a subsidiary to shareholders in the form of a pro-rata stock dividend distribution without the surrender of any stock by the shareholders of the corporation. It is important to note that the parent firm's management relinquishes all control over the spun-off unit and, unlike an asset sale or equity carve-out, no cash is generated by the transaction.

with the standard $e^{\beta} - 1$ transformation, where β is the coefficient for the deal indicator variable. The results of these tests yield inferences similar to those reported.

In addition, we also construct a deal indicator variable that is “1” if any of the deals we study is announced during the year. We use this indicator as the key independent variable in a regression in which the natural log of total compensation is the dependent variable. Control variables are similar to those in Table IV and logarithmically transformed when appropriate. The statistically significant coefficient estimate for the deal indicator variable is 0.149403 which implies that total compensation for deal-making CEOs is about 16% higher than in other firms.

B.3 Firm diversification

A further issue of potential concern is that deals such as joint ventures or strategic alliances may not necessarily enhance firm value, but may provide additional effective diversification for the firm. Rose and Shepard (1997) show that CEOs of diversified firms tend to earn higher compensation levels. Hence, it is possible that the pay raise documented for CEOs of joint ventures and strategic alliances might be due to the diversifying effect these deals have on the firm. We note however that, (1) our results in all deal types hold after controlling for industry effects, and (2) our results also hold in SEOs, and spinoffs, and these deals are unlikely to diversify the firm.

B.4 Periodic compensation increases

One additional potential concern may be that the increases in compensation we document simply reflect annual pay raises received by CEOs, rather than the result of CEO deal-making. We note that the tests in Tables II, III, and IV analyze our deal-making firms in tandem with all firms in the Execucomp database. Therefore, our results indicate that deal-making has a meaningful effect on total CEO pay. To illustrate our result, Figure 1 displays mean levels of total CEO pay during the year of the deal (year t), as well as during the years immediately surrounding the deal. The pattern represented in Figure 1 suggests that deal-making has a material impact on total CEO pay above any periodic pay raise given to CEOs. Indeed, according to Figure 1, total CEO pay in year t exceeds total pay in year $t-1$ and in year $t+1$. Total

CEO pay in years t is statistically significantly larger at better than the 1 percent level when compared to total CEO pay in year $t-1$ and at better than the 2 percent level when compared to total pay in year $t+1$.

B.5 The effect of stock options on total compensation

Our tests reveal that deal making CEOs experience a meaningful increase in their total compensation during the year they execute a seasoned equity offering, strategic alliance, joint venture, and/or spinoff. Our results also show that, for any of these deals, the lion's share of the pay raise is in the form of equity-based compensation. Because stock options and other equity-based instruments increase in value with the firm's equity, it is possible that the total pay increases we detect for deal making CEOs result from stock price appreciations. Alternatively, it is also possible that, all else equal, the total pay increases result from an increase in the number of options awarded to CEOs during the deal year.

Figure 2 illustrates the mean number of stock options awarded to deal making CEOs in our sample (normalized by the number of shares outstanding) during the year of the deal (t) as well as the years immediately preceding and following the deal. The patterns in Figure 2 indicate that the mean number of options is higher in year t than in $t-1$ and $t+1$, respectively. These differences are statistically significant. For instance, the mean difference of the stock options awarded between $t-1$ and t has a p -value of 0.03. Similarly, the mean difference between t and $t+1$ exhibits a p -value of 0.00. We also find median differences between $t-1$ and t as well as between t and $t+1$ to be statistically significant.⁸ In contrast, when we compare the number of options granted in $t-1$ with the options granted in $t+1$, we find that neither the mean nor the median difference is statistically significant. The fact that the increase in the number of options awarded to CEOs occurs only during the year of the deal suggests that deal making materially affects compensation.

The statistically significant increase in options during the year of the deal alleviates our concerns on whether stock price appreciations drive the total compensation increases we detect for deal making CEOs

⁸ For instance, the median difference between $t-1$ and t exhibits a p -value of 0.00 whereas the median difference between t and $t+1$ exhibits a p -value of 0.08.

in our sample. The patterns in the number of options granted around the deal making might be noteworthy in light of the predictions in Bebchuk and Fried (2003) that increases in option-based pay facilitates rent extraction by top managers in public firms. To investigate this issue further, we now examine the shareholder wealth effects of deal making for firms in our sample.

C. The expected performance of the deals and shareholder wealth

There is also the question of whether spinoffs increase firm value as there exists mixed evidence. For example, Burch and Nanda (2003) show that spinoffs reduce diversification losses and Ahn and Denis (2004) argue that spinoffs that break up the conglomerate create value by improving investment efficiency. In contrast, Desai and Jain (1999) find that only those spinoffs that increase the firm's focus enhance firm performance. Moreover, Parrino (1997b), who studies the 1993 Marriott spinoff, shows a decline in the total value of the firm following the spinoff announcement. Parrino argues that transaction costs and inefficiencies resulting from the spinoff, explain much of the decline. Given this literature, it is not ex-ante clear whether spinoffs increase shareholder wealth. In fact, it is possible that none of the corporate deals we study increase firm value.

In order to estimate the expected value of the deals, in Table V, we report investor reactions arising from the joint venture, strategic alliance, SEO, and spinoff announcements. To ensure that the announcements are not contaminated by other major events and that the abnormal returns we estimate are not the result of confounding events such as dividend or earning announcements, executive resignations, patent approvals, or lawsuit filings, we search the Lexis/Nexis data retrieval system for contemporary news that may affect our sample firms.⁹ We use a standard event-study methodology (Dodd and Warner, 1983) to compute abnormal returns (*ARs*) for the deal announcement date and for the two days preceding and following the event.¹⁰

⁹ Very few announcements are confounded by other events. The exclusion of these announcements does not alter our results.

¹⁰ The announcement returns are estimated over the (-2,+2) window immediately surrounding the announcement date. We compute daily abnormal returns (*AR*) and cumulative abnormal returns (*CAR*) as:

Panel A of Table V reports the results of separate market reactions for each type of event. The results indicate that announcements of joint ventures elicit a generally muted market reaction, which suggests that joint ventures are not expected to significantly affect shareholder wealth. When we disaggregate the 450 announcements, we find that the overwhelming majority of announcements, 394 or about 87 percent, are not significantly different from zero at conventional levels. Only 56 announcements are statistically significant, 31 are positive and 25 are negative.

Announcements of strategic alliances have a statistically significant positive market reaction on average, but both the mean and median are very small in value, again suggesting generally muted market reactions. Similarly, announcements of SEOs are met with a small negative market reaction, on average, that is only marginally significant. In contrast, the announcements of spin offs are met with positive market reactions that are both economically and statistically significant. Investors appear to find these CEO activities as significantly value-increasing, on average.

In an informationally efficient market, the fact that a firm is about to execute specific deals might be anticipated by market participants. Therefore, the potential effect of any deal on firm value should be probabilistically incorporated into securities prices prior to the announcement of the deal. This fact might explain the relatively muted reaction we estimate when certain deals, such as joint ventures, are announced. In order to purge the *CARs* of bias arising from anticipations and to establish the relevance of prior anticipations across the deal sub-samples, we estimate a two-stage *CAR* analysis similar to that in

$$AR_t = \ln(1 + RET_t) - \ln(1 + VWRETD_t)$$

$$CAR = \sum_{t=-2..+2} AR_t$$

where RET_t and $VWRETD_t$ are the daily stock and CRSP Value Weighted Index holding period returns, respectively. We determine the significance of each observation's cumulative abnormal return by computing the Patel's (1976) test statistic as

$$\text{Patel's } t = \frac{CAR / \sqrt{n_{CAR} \times \sigma^2}}{\sqrt{n_{est} - 2 / n_{est} - 4}}$$

where n_{CAR} is the number of days in the announcement window, σ^2 is the daily *AR* variance estimate computed from the 250-day (-290, -41) estimation window, and n_{est} is the number of days in the estimation window. Patel's t is distributed as a standard normal. Prior year stock returns are the sum of the log daily abnormal stock returns for the 250-day window ending forty days prior to the announcement date.

Shivdasani and Yermack (1999). In the first stage, we estimate the probability that a specific deal will take place. We use these probabilities to adjust the *CARs* in Panel A of Table V by a factor of $1/(1 - p)$, where p is the estimated probability of the deal. Hence, each probability-adjusted *CAR* represents an estimate of what the stock price reaction would have been if the deal announcement had not been anticipated.

We report the results for the two-stage *CARs* estimation in Panel B of Table V. The results of this analysis lend support to the idea that the *CARs* across the deal sub-samples in Panel A are generally not caused by anticipation bias. Moreover, the magnitude and significance of the two-stage *CARs* is similar to the regular *CARs*. One exception is the two-stage *CARs* related to strategic alliances. The strategic alliance results suggest that the magnitude of investor reactions to this deal type may be larger if the investors' anticipation is factored in. However, the larger effect is marginally significant for the mean and has relatively small magnitude for the median. In subsequent tests we use both measures of *CAR* to proxy for each deal's expected performance and find no qualitative difference between the two. Consequently, we report the results for the first specification.

In general, the results from Table V suggest that the average announcements for the CEO deal-making activities of joint ventures and SEOs do not indicate that the prospects for these deals are value-increasing for the shareholders, the average effects for strategic alliances appear to be only slightly value-increasing, and, the average announcements for spin offs appear to be value-increasing to some extent.¹¹

In the next section, we consider the determinants of CEO compensation in light of the market reaction to the CEO activities.

¹¹ We find that some of the deals we study, joint ventures; strategic alliances; and seasoned equity offerings, fail to trigger meaningful market reactions at their announcement and argue that, on average, these deals do not substantially enhance shareholder wealth. Nonetheless, there might be alternative explanations for the muted reactions we estimate. For example, it is possible that the deals are value increasing but that the market under-reacts to their announcements. Under these circumstances, one would expect the long-run performance of deal-making firms to improve. To consider this possibility, we construct equal- and value- weighted portfolios of all Execucomp firms and of deal-making firms tracking their performance for 120 months. We benchmark these portfolios by the Carhart (1997) 4-factors. Overall, we find the alphas associated with the portfolios of deal-making firms yield statistically insignificant coefficients. These findings are in line with those in the event study tests reported in Table V, and indicate that the deals studied do not, for the most part, increase firm value.

B. Corporate governance, deal performance, and CEO compensation

As discussed earlier, we can potentially differentiate between our hypotheses by examining measures of the quality of the firm's board monitoring. The active CEO hypothesis can hold only if the monitoring is deficient. Thus, we now turn our attention to whether the differences in governance structures for boards are related to the compensation increases, controlling for the deal announcement effect.

We consider three different variables as proxies for effective corporate governance and attentive boards. Our first proxy is based on measuring whether the board appears to be attentive based on the findings in Fich and Shivdasani (2006). They show that firms with busy boards, those in which 50 percent or more of the outside directors hold three or more directorships, exhibit poor performance. We construct an indicator that is "1" if the board is busy and is "0" if it is not. Our second proxy for board monitoring is an indicator that is "1" if 50 percent of the board's outside directors are appointed while the current CEO is in office. We refer to this variable, which is partially based on the findings of Shivdasani and Yermack (1999) and Coles, Daniel, and Naveen (2007), as a "hand-picked board." If hand-picked boards are loyal to their appointing CEOs, they are more likely to go along with the CEO and less likely to be strict monitors. Our third proxy is a managerial power index constructed similar to that in Grinstein and Hribar (2004). They construct an index of managerial power by adding the following three (0,1) indicator variables: (1) whether the CEO is also the chairman of the board, (2) whether the CEO is on the nominating committee, and (3) whether the board's size is smaller than the median size in the sample. Thus, the managerial power index can range from zero (least managerial power), to three (greatest power).

Using these variables, we run Tobit models of total CEO compensation on governance for our deal-making firms. All regressions control for firm size, stock returns during the previous year, and the deal's expected performance as proxied by its announcement return. In addition, all regressions control for year and industry effects. An important issue in estimating the relations between CEO compensation, governance and deal announcement effects is the endogeneity we encounter due to self-selection. That is,

the decision to undertake a deal has its own determinants, which we estimate separately and for each individual deal using the entire Execucomp database. We use the results of the separate estimations to construct an inverse Mill's ratio for each deal type to control for self selection. This two-stage approach follows the procedure outlined in Heckman (1979).¹²

Table VI provides the results of these regressions for joint ventures in Panel A, strategic alliances in Panel B, SEOs in Panel C, and spinoffs in Panel D. The key independent variable is the busy board indicator in Model 1 and the handpicked board indicator in Model 2. In the interest of space we omit the results for the managerial power index because the coefficient on this index is not statistically significant in any of the regressions. The results in all four panels indicate that busy boards are associated with higher levels of total CEO compensation. For example, Panel A shows that companies with new joint ventures and busy boards pay their CEOs an additional \$20.7 million in compensation. Similarly, estimates in Model (1) of Panel B indicate that busy boards give CEOs of strategic alliance deals over \$10 million in additional total compensation during the year. These additional compensation levels related to busy boards are over 50 percent larger than the \$5.5 million pay earned by the median CEO in the entire Execucomp database during our sample period, which suggests that busy boards overpay their CEOs. This interpretation of our finding is similar to that in Core, Holthausen, and Larcker (1999). They also find that busy boards likely overpay their CEOs.

The results in Table VI also indicate that hand-picked boards overpay their CEOs that implement joint ventures, strategic alliances and SEOs. For example, Model 2 of Panel A shows that hand-picked boards reward their CEOs with additional total compensation worth almost \$14 million.

Also noteworthy is that the deal-making CEOs receive these hefty pay levels despite the apparent lack of association between their compensation and the expected deal performance. Indeed, in all the regressions in Table VI, expected deal performance, measured by the investors' reaction to the deal

¹² The first stage model is a function of firm size, market-to-book, cash-to-assets, leverage, ROA, number of same type of deals in the prior two years, CEO age, industry-adjusted compensation, tenure, ownership, industry dummies, and year dummies. This specification augments that in Grinstein and Hribar (2004).

announcement, is unrelated to CEO pay. This result is robust to numerous controls, including the firm's stock performance during the previous year. We interpret the results in Table VI as evidence indicating that weak monitors, which we proxy with busy and hand-picked boards, do not tie deal performance with CEO pay, resulting in total pay packages granted to CEOs that are larger than their contemporaries.

In summary, the results that consider the expected performance of the deal and the quality of board monitoring are supportive of the active CEO hypothesis. They do not support the CEO quality signaling hypothesis.

IV. Motivations for CEO Deal-making Activities

A. Monitoring quality

Our evidence to this point has somewhat supported the active CEO hypothesis over the CEO quality signal hypothesis. If the active CEO hypothesis is valid, then an implication is that firms which engage in more deal-making activities should display certain characteristics, namely that their governance structures should be weaker in monitoring than other firms and the weaker monitoring should be related to the existence or number of deals. To test the determinants of deal-making activities across firms, we employ our entire sample of 9,587 firm-year observations from Execucomp and estimate two types of regressions. First, we estimate a logit regression in which the independent variable is “1” if the firm makes any type of deal during the year (joint venture, strategic alliance, seasoned equity offering or spinoff) and “0” otherwise. Second, we estimate a Poisson regression in which the dependent variable is the number of deals a firm completes in a given year. The logit regression in Model (1) of Table VII thus considers whether a CEO entered into at least one deal in a given year but does not consider the number of deals that the CEO undertakes. The Poisson regression in Model (2) of Table VII takes the number of deals into consideration.

The results of the logit regression show that the managerial power index is strongly related to the likelihood of deal-making activity, suggesting that CEOs with more power are more likely to enter into

such deals as are CEOs of firms with busy boards. The marginal effects implied by our coefficient estimates indicate that busy boards increase the probability of deal-making by 3.81 percentage points in any given year whereas a one standard deviation in ownership for the average CEO reduces it by 1.07 percentage points. The results for the Poisson regression in Model (2) are very similar to those for the logit regression in Model (1). The results further show that CEOs with more tenure and more ownership are less likely to enter into such activities. CEOs of older, larger firms with more cash and higher book to market value, are more likely to enter these deals and enter into more deals than CEOs of other firms. Not surprisingly, having larger past stock returns contributes to more deals.

In general, the findings of Table VII suggest that CEOs' deal-making is related to the lack of strong monitoring in the firm, which supports the active CEO hypothesis over the CEO quality signaling hypothesis. CEOs of firms who are more entrenched, have greater managerial power, and weaker, less attentive boards, are more likely to engage in deal-making activities.

B. Deal-making and CEO turnover

One further question with relation to CEOs who engage in deal-making is whether such deal-making activity influences the tenure of the CEO. We address this question by examining whether there exist any differences in the relation between CEO turnover and firm performance across deal-making versus non-deal-making firms. Table VIII provides the results of logit regressions of CEO turnover in which we use the entire Execucomp database during our sample period. In the estimation, the dependent variable takes a value of "1" if the CEO leaves office during the year and the value of "0" otherwise. We use two proxies for the CEO deal-making activities. In Panel A, we use an indicator variable that takes a value of "1" if the CEO engages in at least one deal-making activity during the year and a value of "0" otherwise. In Panel B, we use the actual count of the number of deals that the CEO completes during the year. Model (1) of Panel A and Model (4) of Panel B show the results from a simple regression of CEO turnover against firm performance as measured by the return on assets for the previous year. Consistent with previous evidence on CEO turnover, e.g. Weisbach (1988) and Parrino (1997a), we find that CEO

turnover is significantly negatively related to the firm's performance. Poorly performing CEOs are more likely to leave their jobs. In Model (2) of Panel A and Model (5) of Panel B we add control variables as well as the proxies for CEO deal-making activities in the current year. These regressions suggest that CEO deal-making has no direct effect on CEO turnover probabilities. However, in Model (3) of Panel A and Model (6) of Panel B, we include an interaction term between the firm's return on assets and the proxies for CEO deal-making activities. The results show that engaging in deal-making activities significantly lowers the probability of being fired because of poor performance. In fact, the deal-making activities appear to make the CEO turnover insensitive to firm performance. In terms of the marginal effects implied by our coefficient estimates, for all firms, a one standard deviation decrease in ROA increases the probability of CEO turnover by 1.45 percentage points. In contrast, for deal-making firms, a similar decline in performance insignificantly increases the probability of turnover by only 0.21 percentage points.¹³ The implication of these results is that CEOs would be motivated to engage in deal-making activities in order to lower their turnover risk. Such activities appear to be particularly important for CEOs of poorly performing firms.

These results appear to be more consistent with the active CEO hypothesis than the CEO signaling quality hypothesis. Although neither hypothesis as developed has direct implications for the relation between CEO turnover and firm performance, the implications of this last test would appear to be more consistent with a CEO engaging in activities for personal gain.

V. Conclusions

Principal-agent theories predict that, under moral hazard, agents (CEOs) might take actions that maximize their own utility, but not necessarily that of the principals (shareholders). Other theories

¹³ To assess the robustness of these marginal effects, we utilize the methodology proposed by Ai and Norton (2003) which estimates the interaction term's marginal effect at each point in the distribution of the sample data. The marginal effects implied by their methodology indicate that, for deal-making firms, a one standard deviation decline in ROA insignificantly decreases the probability of turnover by 0.71 percentage points. Overall, the marginal effects arising from the Ai and Norton (2003) method are in line with those we report.

indicate that to alleviate the moral hazard problem, boards should write and enforce compensation contracts that effectively align the incentives of CEOs and shareholders. However, if boards are weak monitors, the moral hazard problem may persist, and self-dealing CEOs could choose actions that improve their own wealth, but not the wealth of the firms' shareholders. The questions we address in this paper are rooted in these hypotheses.

We investigate the effects of CEO deal-making activities on the compensation of the CEO, considering whether the activities appear to enhance firm value. We propose two hypotheses for the relation between CEO compensation and CEO deal-making activities: the *active CEO hypothesis* and the *CEO quality signaling hypothesis*. The active CEO tenet predicts that deal-making CEOs will be rewarded even if the deals they execute do not raise shareholders' wealth. That is, the CEO engages in the deals in the interest of increasing his or her compensation. The CEO quality signaling premise predicts that CEO deal-making activities are signals of higher quality CEOs. Under this view, the CEO engages in the deals in the interest of the shareholders. The hypotheses are not mutually exclusive, which implies that we cannot completely differentiate between them. We have designed empirical tests to determine which hypothesis has more support.

We conduct our analyses in firms that engage in a variety of corporate deals: joint ventures, strategic alliances, seasoned equity offerings, and spinoffs. Our findings indicate that total CEO pay increases in firms executing any of these deals, even when the deal fails to increase firm value. In addition, we also find that pay increases for CEOs of deals that do not enhance shareholder wealth are dispensed by weak monitors, as proxied by busy or hand-picked boards. These results are consistent with the idea that weak or inattentive boards do not link CEO compensation to deal performance. Although certain aspects of our findings support both the active CEO hypothesis and the CEO quality signaling hypothesis, the totality of our results provide more support for the active CEO hypothesis.

Moreover in terms of the motivations of the CEO, we find that CEOs with more managerial power and less attentive boards are more likely to engage in deal-making activities. Further, we show that deal-

making activities remove the impact of the relation between CEO turnover probability and firm performance, providing further motivation for CEOs, particularly those with poor performance, to engage in deal-making activities, even if they are not value-increasing for the firm.

Our findings are in line with the theoretical predictions in Dow and Raposo (2005). Their model predicts that CEO compensation influences the kinds of strategies firms adopt. Our results show that CEOs adopt strategies that increase their compensation, but not necessarily their firms' value. Our findings related to compensation increases being dispensed by weak boards also provide support for – and conform to – the theories in Hermalin and Weisbach (1998) that the power of CEOs increases when boards are weak monitors, and with the argument of Bebchuk and Fried (2003) that CEO power is a significant driver of CEO compensation.

Our findings indicate that self-dealing by CEOs and the lack of attentive monitoring can have non-trivial economic effects. For instance, we show that regardless of the deal-making activity we study, CEO pay increases, on average, even when firm value does not. In fact, we find that CEO pay goes up even after executing deals that appear to cause firm value to severely decrease, as in the case of joint ventures that trigger average market reactions of -9.23%. At best, the evidence we present is consistent with CEOs choosing activities that maximize their own wealth rather than shareholder value. At worst, the CEO compensation and shareholder wealth patterns we uncover could represent unjustified rent extraction by CEOs and unchecked firm value destruction by the firms' monitors.

References

- Ahn, S., and Denis, D.J., 2004. Internal capital markets and investment policy: Evidence from corporate spinoffs, *Journal of Financial Economics* 71, 489-516.
- Ai, C., and Norton, E.C., 2003, Interaction terms in logit and probit models, *Economics Letters* 80, 123-129.
- Asquith, P., and Mullins, D.W., 1986. Equity issues and offering dilution, *Journal of Financial Economics* 15, 61-89.
- Altinkilic, O., and Hansen, R.S., 2003. Discounting and underpricing in seasoned equity offers, *Journal of Financial Economics* 69, 285-323.
- Baker, J., 1939. Executive compensation payments by large and small industrial companies, *The Quarterly Journal of Economics* 53, 404-434.
- Bebchuk, L.A., and Fried, J.M., 2003. Executive compensation as an agency problem, *Journal of Economic Perspectives* 17, 71-92.
- Blanchard, O.J., Lopez De Silanes, F. and Shleifer, A., 1994. What do firms do with cash windfalls? *Journal of Financial Economics* 36, 337-360.
- Bliss, R.T. and Rosen, R.J., 2001. CEO compensation and bank mergers, *Journal of Financial Economics* 61, 107-138.
- Brickley, J.A., Linck, J.S., and Coles, J.L., 1999. What happens to CEOs after they retire? New evidence on career concerns, horizon problems, and CEO incentives, *Journal of Financial Economics* 52, 341-377.
- Burch, T.R., and Nanda, V., 2003. Divisional diversity and the conglomerate discount: evidence from spinoffs, *Journal of Financial Economics* 70, 69-98.
- Carhart, M.M., 1997, On persistence in mutual fund performance. *Journal of Finance* 52, 57-82.
- Coles, J.L., Daniel, N.D., and Naveen, L., 2007. Co-opted boards, costs, benefits, causes, and consequences, *Working Paper*, Arizona State University.
- Core, J., Guay, W., and Larcker, D. 2008. The power of the pen and executive compensation, *Journal of Financial Economics* 88, 1-25.
- Core, J., Holthausen, R., and Larcker, D. 1999. Corporate governance, chief executive officer compensation, and firm performance, *Journal of Financial Economics* 51, 371-406.
- Datta, S., Iskandar-Datta, M. And Raman, K., 2001. Executive compensation and corporate diversification decisions, *Journal of Finance* 56, 2299-2336.
- Denis, D.J., Denis, D.K. and Sarin, A., 1997. Agency problems, equity ownership, and corporate diversification, *Journal of Finance* 52, 135-160.
- Desai, H., and Jain, P.C., 1999. Firm performance and focus: long-run stock market performance following spinoffs, *Journal of Financial Economics* 54, 75-101.
- Dodd, P., and Warner, J.B. 1983. On corporate governance: A study of proxy contests. *Journal of Financial Economics* 11, 401-438.
- Dow, J., and Raposo, C.C., 2005. CEO compensation, change, and corporate strategy, *Journal of Finance* 60, 2701-2727.
- Fama, E., and French, K.R., 1997. Industry costs of equity. *Journal of Financial Economics*, 43, 153-193
- Fich, E.M., and Shivdasani, A., 2006. Are busy boards effective monitors? *Journal of Finance* 61, 689-724.
- Fich, E.M., and White, L.J., 2005. Why do CEOs reciprocally sit on each other's boards? *Journal of Corporate Finance* 11, 175-195.

- Frydman, C., and R. Saks, 2007, Executive compensation: A new view from a long-term perspective, working paper, MIT and Federal Reserve Board.
- Fudenberg, D., and Tirole, J., 1990. Moral hazard and renegotiation in agency contracts, *Econometrica* 58, 1279-1319.
- Garvey, G.T., and Milbourn, T.T. 2006. Asymmetric benchmarking in compensation: Executives are paid for (good) luck but not punished for bad. *Journal of Financial Economics* 82, 197-225.
- Grinstein, Y., and Hribar, P. 2004. CEO compensation and incentives: Evidence from M&A bonuses, *Journal of Financial Economics* 73, 119-143.
- Grossman, S. and Hart, O., 1983. An analysis of the principal agent problem. *Econometrica* 51, 7-45.
- Hallock, K.F., 1997. Reciprocally interlocking boards of directors and executive compensation. *Journal of Financial and Quantitative Analysis* 32, 331-344.
- Harford, J. and Li, K., 2007. Decoupling CEO wealth and firm performance: The case of acquiring CEOs. *Journal of Finance*, 62, 917-949.
- Hartzell, J.C., and Starks, L.T., 2003. Institutional investors and executive compensation, *Journal of Finance* 58, 2351-2374.
- Heckman, J. 1979. Sample selection bias as a specification error, *Econometrica* 47, 153-61.
- Hermalin, B. and Weisbach, M., 1998. Endogenously chosen boards of directors and their monitoring of the CEO, *American Economic Review* 88, 96-118.
- Hölmstrom, B., 1979. Moral hazard and observability, *Bell Journal of Economics* 10, 74-91.
- Jensen, M., and Meckling, W., 1976. Theory of the firm: Managerial behavior, agency costs, and ownership structure, *Journal of Financial Economics* 3, 360-395.
- Jensen, M., and Murphy, K., 1990. Performance pay and top-management incentives, *Journal of Political Economy* 98, 225-264.
- Loughran, T., and Ritter, J.R., 1995. The new issues puzzle, *Journal of Finance* 50, 23-51.
- Murphy, K. J., 1985, Corporate performance and managerial remuneration: An empirical analysis, *Journal of Accounting and Economics* 7, 11-42.
- Murphy, K.J., 1998, "Executive Compensation," *Handbook of Labor Economics*, Ashenfelter, O. and Card, D. (Editors), Vol. 3, North Holland.
- Parrino, R., 1997(a). CEO turnover and outside succession: a cross-sectional analysis. *Journal of Financial Economics* 46, 165-197.
- Parrino, R., 1997 (b). Spinoffs and wealth transfers: The Marriott case, *Journal of Finance* 43, 241-274.
- Rose, N.L., and Shepard, A., 1997. Firm diversification and CEO compensation: Managerial ability or executive entrenchment? *Rand Journal of Economics* 28, 489-514.
- Safieddine, A., and Wilhelm, W.J., 1996. An empirical investigation of short-selling activity prior to seasoned equity offerings, *Journal of Finance* 51, 729-749.
- Shivdasani, A., and Yermack, D. 1999. CEO involvement in the selection of new board members: An empirical analysis, *Journal of Finance* 54, 1829-53.
- Weisbach, M., 1988, Outside directors and CEO turnover. *Journal of Financial Economics* 20, 431-460.

Table I
Sample Description

Our sample consists of firms executing one or more joint venture, strategic alliance, seasoned equity offering, and or spinoff. Data on these deals are collected from the Thomson Financial database from January 1, 1996 to December 31, 2004. We require that each observation has complete governance, compensation, stock market, and accounting data from IRRC, Execucomp, CRSP, and Compustat, respectively. Panel A provides the sample's temporal distribution. Panel B presents sample statistics for key variables. Firm size is total assets (Compustat item 6), ROA is operating income before depreciation (Compustat item 13) plus the decrease in receivables (Compustat item 2), the decrease in inventory (Compustat item 3), the increase in current liabilities (Compustat item 72) and the decrease in other current assets (Compustat item 68). We scale this measure by the average of beginning- and ending-year book value of total assets (Compustat item 6). Equity-Based pay is the sum of the Black-Scholes value of options granted, restricted stock grants, and any long-term incentive payouts. Perquisites sum all other annual pay the firm reports. Total pay adds all the above pay categories. The managerial power index is based on Grinstein and Hribar (2004) and sums the following three (0,1) indicator variables: (1) whether the CEO also chairs the board, (2) whether the CEO is on the nominating committee, and (3) whether the board's size is smaller than the median size in the sample. Independent directors are those are not relatives of corporate officers, do not have a business relationship with the firm, and are those whose board seat is their only link with the firm. The Hand Picked Board dummy follows Shivdasani and Yermack (1999) and Coles, Daniel, and Naveen (2007) and is "1" if 50 percent of the board's outside directors are appointed while the current CEO is in office. The Busy Board indicator follows Fich and Shivdasani (2006) and is "1" if 50 percent or more of the outside directors hold three or more directorships.

Panel A: Temporal Distribution by Deal Type

Year	Joint Ventures		Strategic Alliances		Seasoned Equity Offerings		Spinoffs		All Deals	
	Count	% Sample	Count	% Sample	Count	% Sample	Count	% Sample	Count	% Sample
1996	67	14.89%	243	7.72%	23	4.90%	8	5.67%	341	8.11%
1997	113	25.11%	490	15.57%	33	7.04%	16	11.35%	652	15.50%
1998	65	14.44%	521	16.56%	42	8.96%	18	12.77%	646	15.36%
1999	42	9.33%	593	18.84%	51	10.87%	25	17.73%	711	16.90%
2000	82	18.22%	352	11.19%	53	11.30%	40	28.37%	527	12.53%
2001	33	7.33%	249	7.91%	51	10.87%	9	6.38%	342	8.13%
2002	23	5.11%	222	7.05%	75	15.99%	12	8.51%	332	7.89%
2003	15	3.33%	275	8.74%	68	14.50%	10	7.09%	368	8.75%
2004	10	2.22%	202	6.42%	73	15.57%	3	2.13%	288	6.85%
Total	450	100.00%	3,147	100.00%	469	100.00%	141	100.00%	4,207	100.00%

Panel B: Sample Statistics for All Deals

	Mean	Std. Dev	Min	Median	Max
<i>Financial and Deal Characteristics (t-1)</i>					
Market Value	40,015.49	98,722.05	35.68	9,215.00	1,264,032.00
EBITDA	4,114.80	7,036.81	-3,695.00	1,271.40	61,188.00
Return on Assets	15.60%	10.34%	-99.82%	14.93%	82.11%
Previous Year Return	15.88%	45.06%	-285.63%	17.95%	323.54%
<i>Governance Characteristics (t-1)</i>					
Managerial Power Index	1.87	0.88	0.00	2.00	3.00
Board Size	10.89	3.29	4.00	11.00	29.00
Percent Independent Directors	65.57%	16.45%	7.69%	66.67%	100.00%
Hand-picked independent directors (0,1)	0.36	0.48	0.00	0.00	1.00
Busy Board (0,1)	0.09	0.29	0.00	0.00	1.00
<i>Compensation Characteristics (t)</i>					
Salary and Bonus	2,509.99	2,775.19	0.00	1,697.61	30,000.00
Equity-Based Pay	10,101.06	27,147.30	0.00	3,316.71	600,347.36
Perks	1,055.70	3,013.70	0.00	160.95	37,291.56
Total Pay	13,666.75	28,279.14	0.00	6,318.93	600,347.36
<i>CEO Characteristics (t)</i>					
Age	55.20	6.93	34.00	56.00	86.00
Ownership (% of common)	1.78%	5.37%	0.00%	0.00%	42.77%
Tenure (years)	7.28	6.58	0.00	5.00	48.03

Table II
Joint Venture Activity and CEO Compensation for the Entire Execucomp Universe

In this table we analyze all of the firms in the Execucomp database from 1996 to 2004 and estimate CEO-compensation regressions using (1) salary and bonus, (2) equity-based pay, (3) perks, and (4) total compensation, as separate dependent variables. Our sample of Execucomp firms consists of 9,587 firm-year observations with complete governance, stock-market, and accounting data. The key independent variable in each of these regressions is an indicator that is “1” if the firm is involved in a Joint Venture during the year and is “0” otherwise. We use two different econometric specifications to estimate our compensation regressions. Since executive compensation is a left-censored variable with a lower bound at zero, for the regressions in Panel A, we use a Tobit specification that controls for industry and calendar year effects. For the regressions in Panel B, we use a fixed-effects specification in order to account for unobservable attributes of each firm in our panel. The fixed-effects regression assigns a unique intercept to each firm in the sample. All variables are defined in Table I.

Panel A: Tobit Models								
	(1)		(2)		(3)		(4)	
	Salary and Bonus		Equity-Based Pay		Perks		Total Pay	
	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value
Intercept	880.75	0.00	2,810.09	0.15	-219.05	0.48	4,411.11	0.01
Joint Venture (0,1)	652.00	0.00	4,208.58	0.00	594.01	0.00	5,252.88	0.00
CEO Age	12.79	0.00	-78.26	0.00	20.10	0.00	-6.02	0.73
CEO Ownership (% of common)	-2,080.34	0.00	-25,820.91	0.00	-2,414.87	0.00	-11,522.98	0.00
CEO Tenure (years)	11.14	0.00	-6.22	0.76	0.06	0.99	23.15	0.20
Firm Size (t-1)	0.01	0.00	0.03	0.00	0.00	0.00	0.04	0.00
Return on Assets (t-1)	1,005.45	0.00	5,269.46	0.00	178.94	0.51	6,115.64	0.00
ROA Growth	46.44	0.59	-653.66	0.27	-91.26	0.36	-817.86	0.13
Previous Year Stock Return	422.10	0.00	501.99	0.09	112.65	0.02	655.37	0.01
Return on Sales (t-1)	-4.58	0.66	298.88	0.34	48.69	0.35	-2.65	0.97
ROS Growth	-1.15	0.99	1,125.95	0.08	116.83	0.27	1,186.37	0.04
Industry Dummies	Yes		Yes		Yes		Yes	
Year Dummies	Yes		Yes		Yes		Yes	
Likelihood Ratio p-value	0.00		0.00		0.00		0.00	
Panel B: Fixed Effects Models								
	(1)		(2)		(3)		(4)	
	Salary and Bonus		Equity-Based Pay		Perks		Total Pay	
	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value
Joint Venture (0,1)	107.02	0.08	2,289.36	0.00	198.98	0.05	2,595.35	0.00
CEO Age	5.88	0.08	-7.60	0.80	17.23	0.00	15.50	0.61
CEO Ownership (% of common)	-554.21	0.21	-5,244.52	0.17	-534.00	0.46	-6,332.73	0.11
CEO Tenure (years)	15.65	0.00	-19.81	0.55	8.46	0.18	4.30	0.90
Firm Size (t-1)	0.00	0.00	-0.02	0.00	0.00	0.47	-0.02	0.00
Return on Assets (t-1)	1,664.25	0.00	9,312.03	0.00	1,069.99	0.02	12,046.27	0.00
ROA Growth	-42.31	0.48	-751.19	0.15	-134.60	0.17	-928.10	0.08
Previous Year Stock Return	341.86	0.00	-92.04	0.72	111.70	0.02	361.51	0.18
Return on Sales (t-1)	-4.13	0.66	13.32	0.87	-1.52	0.92	7.67	0.93
ROS Growth	56.12	0.38	819.36	0.14	126.06	0.23	1,001.55	0.08
Industry Dummies	No		No		No		No	
Year Dummies	Yes		Yes		Yes		Yes	
F-Statistic p-value	0.00		0.00		0.00		0.00	

Table III
Effect of Strategic Alliances and Seasoned Equity Offerings on CEO Compensation

This table presents results on the relation between entering into strategic alliances and seasoned equity offerings and CEO compensation. Our sample selection process, which is described in the text, yields SA and SEO samples consisting of 3,147 and 469 observations, respectively. We present two sets of compensation regressions for each sample. We evaluate SEO and SA firms against companies in the Execucomp universe, a total of 9,587 firm-year observations. In models (1) and (2) we use an indicator variable that is “1” whenever a strategic alliance is completed. In models (3) and (4) our key independent variable is a (0,1) dummy that is “1” if an SEO takes place. Variable definitions appear in Table I.

	Strategic Alliances				Seasoned Equity Offerings			
	Equity-Based Pay		Total Compensation		Equity-Based Pay		Total Compensation	
	(1)	(2)	(3)	(4)	(3)	(4)	(3)	(4)
	Parameter	p-value	Parameter	p-value	Parameter	p-value	Parameter	p-value
Intercept	3,050.52	0.11	4,680.56	0.01	2,964.42	0.13	4,703.63	0.01
Completed SA (0,1)	3,394.89	0.00	3,767.58	0.00				
Completed SEO (0,1)					1,808.54	0.00	1,985.60	0.00
CEO Age	-79.95	0.00	-6.95	0.69	-76.88	0.00	-5.04	0.77
CEO Ownership (% of common)	-25,056.32	0.00	-10,850.65	0.00	-26,194.93	0.00	-11,840.76	0.00
CEO Tenure (years)	-1.59	0.94	28.24	0.11	-8.43	0.68	21.36	0.23
Firm size (t-1)	0.03	0.00	0.04	0.00	0.03	0.00	0.05	0.00
Return on Assets (t-1)	4,132.72	0.01	5,119.84	0.00	5,311.64	0.00	6,145.52	0.00
ROA Growth	-675.97	0.25	-818.42	0.13	-522.43	0.38	-666.33	0.22
Previous Year Stock Return	487.07	0.09	635.52	0.02	503.62	0.09	658.54	0.01
Return on Sales (t-1)	421.22	0.23	3.45	0.96	303.62	0.33	-0.69	0.99
ROS Growth	1,209.06	0.06	1,252.00	0.03	1,017.16	0.11	1,067.90	0.07
Industry Dummies	Yes		Yes		Yes		Yes	
Year Dummies	Yes		Yes		Yes		Yes	
Likelihood Ratio p-value	0.00		0.00		0.00		0.00	

Table IV
Spinoff Activity

This table analyzes our spinoff firms together with all firms in the Execucomp database during the sample period for a total of 9,587 firm-year observations. We run Tobit compensation regressions. The key independent variable is a (0,1) indicator for spinoffs. We construct the spinoff sample by identifying these transactions in the Thomson Financial database from January 1, 1996 to December 31, 2004. After removing observations without data in Execucomp, Compustat, IRRC, or CRSP, we arrive at a final sample of 141 spinoffs. All variables are defined in Table I.

	Equity-Based Pay		Total Compensation	
	(1)		(2)	
	Parameter	<i>p</i> -value	Parameter	<i>p</i> -value
Intercept	3,244.30	0.09	4,987.40	0.00
Completed Spinoff (0,1)	4,414.11	0.00	4,225.01	0.00
CEO Age	-78.02	0.00	-6.32	0.72
CEO Ownership (% of common)	-26,201.51	0.00	-11,886.95	0.00
CEO Tenure (years)	-6.81	0.74	22.87	0.20
Firm size (t-1)	0.03	0.00	0.05	0.00
Return on Assets (t-1)	5,100.89	0.00	5,913.73	0.00
ROA Growth	-563.23	0.34	-723.17	0.18
Previous Year Stock Return	534.67	0.07	692.52	0.01
Return on Sales (t-1)	291.07	0.34	0.60	0.99
ROS Growth	1,056.99	0.10	1,129.32	0.05
Industry Dummies	Yes		Yes	
Year Dummies	Yes		Yes	
Likelihood Ratio <i>p</i> -value	0.00		0.00	

Table V
Deal-Making Announcement Returns and Executive Compensation

This table reports investor reactions arising from announcements of deals for our sample firms. We search the Lexis/Nexis data retrieval system for contemporary news that may affect our sample firms and eliminate observations that may be contaminated by other major events such as dividend or earning announcements, executive resignations, patent approvals, or lawsuit filings. We use the standard event-study methodology (Dodd and Warner, 1983) to compute abnormal returns (*ARs*) for the announcement date of the deal and for the two days preceding and following the event. Market model parameters are computed from one year of trading data preceding the event window. We report a two-tailed *t*-statistic (*Z*-statistic) as a parametric (non-parametric) way to assess the statistical significance of the mean (median) *CARs*.

Panel A: Market-Adjusted <i>CARs</i>			
Activity	<i>N</i>	Mean <i>CARs</i>	Median <i>CARs</i>
Joint Ventures	450	0.15% (0.55)	0.11% (0.91)
Strategic Alliances	3,147	0.24% (0.02)	0.19% (0.01)
Seasoned Equity Offerings	469	-0.44% (0.17)	-0.89% (0.02)
Spinoffs	141	1.76% (0.02)	2.11% (0.01)
Panel B: Two-stage <i>CARs</i>			
Activity	<i>N</i>	Mean <i>CARs</i>	Median <i>CARs</i>
Joint Ventures	450	-0.18% (0.82)	0.14% (0.93)
Strategic Alliances	3,147	1.74% (0.07)	0.45% (0.01)
Seasoned Equity Offerings	469	-0.57% (0.12)	-0.95% (0.02)
Spinoffs	141	1.83% (0.02)	2.13% (0.01)

Table VI
Performance on Strategic Alliance, SEO, Spinoff Deals and Total CEO Compensation

Tobit models of CEO compensation on governance for our 450 joint venture, 3,147 strategic alliance, 469 SEO, and 141 spinoff firms. The dependent variable in all regressions is the total compensation for the year. The key independent variable in Model 1 is a busy board indicator and in Model 2, a hand-picked board indicator. All regressions control for firm size, stock return during the previous year, the deals' performance as proxied by its announcement return, year and firm effects as well as for self-selection. The self-selection control is estimated separately using the entire Execucomp database. We use the results of the separate estimation to construct the inverse mill's ratio to control for self selection. This two-stage approach follows the procedure outlined in Heckman (1979). The first stage model is a function of firm size, market-to-book, cash-to-assets, leverage, ROA, number of same type of deals in the prior two years, CEO age, industry-adjusted total compensation, tenure, ownership, industry dummies, and year dummies. This specification augments that in Grinstein and Hribar (2004). All variables are defined in Table I.

Panel A: Joint Ventures				
	(1)		(2)	
	Parameter	p-value	Parameter	p-value
Intercept	2,415.43	0.88	2,871.23	0.86
Firm Size	0.13	0.00	0.12	0.00
Announcement CAR	-36,433.12	0.20	-43,606.33	0.12
Return on Assets	-4,434.69	0.83	-10,662.87	0.60
Previous Year Stock Return	21,580.03	0.00	22,565.73	0.00
Busy Board	20,702.23	0.00		
Hand-Picked Boards			13,934.74	0.00
Heckman Correction	1,780.04	0.55	569.00	0.85
Likelihood Ratio p-value	0.00		0.00	

Panel B: Strategic Alliances				
	(1)		(2)	
	Parameter	p-value	Parameter	p-value
Intercept	8,624.19	0.00	7,561.15	0.00
Firm Size	0.07	0.00	0.08	0.00
Announcement CAR	12,441.16	0.14	11,495.32	0.17
Return on Assets	9,485.31	0.06	10,249.97	0.05
Previous Year Stock Return	6,067.68	0.00	6,118.83	0.00
Busy Board	10,331.59	0.00		
Hand-Picked Boards			4,019.96	0.00
Heckman Correction	636.96	0.09	279.99	0.45
Likelihood Ratio p-value	0.00		0.00	

Panel C: Seasoned Equity Offerings				
	(1)		(2)	
	Parameter	p-value	Parameter	p-value
Intercept	-2,639.87	0.31	-2,935.69	0.26
Firm Size	0.02	0.06	0.02	0.06
Announcement CAR	-7,936.03	0.29	-8,773.24	0.25
Return on Assets	18,436.44	0.00	19,030.40	0.00
Previous Year Stock Return	-587.66	0.64	-624.01	0.62
Busy Board	5,463.91	0.05		
Hand-Picked Boards			2,226.14	0.04
Heckman Correction	4,008.50	0.00	3,707.51	0.01
Likelihood Ratio p-value	0.00		0.00	

Panel D: Spinoffs

	(1)		(2)	
	Parameter	<i>p</i>-value	Parameter	<i>p</i>-value
Intercept	3,870.54	0.52	5,233.44	0.39
Firm Size	0.03	0.11	0.04	0.09
Announcement CAR	-17,950.66	0.42	-15,873.07	0.48
Return on Assets	31,857.78	0.20	32,093.84	0.21
Previous Year Stock Return	1,976.65	0.67	2,622.20	0.58
Busy Board	14,773.25	0.03		
Hand-Picked Boards			2,527.92	0.56
Heckman Correction	599.76	0.79	53.81	0.98
Likelihood Ratio <i>p</i> -value	0.05		0.13	

Table VII
Determinants of Deal-Making

In this table we estimate the determinants of deal-making for a sample of 9,587 firm-year observations from the Execucomp database from 1996 to 2004. To be included in the sample observations must have complete governance, stock-market, and accounting data from IRC, CRSP, and Compustat, respectively. We use two different econometric specifications to estimate the determinants of deal-making. Model (1) estimates a logit regression in which the key independent variable is “1” if the firm makes any deal during the year and is “0” otherwise. Model (2) estimates a Poisson regression in which the dependent variable counts the number of deals a firm completes in a given year. The deals considered are Joint Ventures, Strategic Alliances, Seasoned Equity Offerings, and Spinoffs. Variable definitions are similar to those in Table I.

	(1) Logit		(2) Poisson	
	Parameter	<i>p</i> -value	Parameter	<i>p</i> -value
Constant	-2.537	0.46	-2.401	0.00
Managerial power index (t-1)	0.294	0.00	0.236	0.00
Busy board (t-1)	0.248	0.03	0.197	0.00
Hand-picked board (t-1)	-0.011	0.85	0.029	0.43
CEO tenure (years as CEO) (t-1)	-0.007	0.11	-0.005	0.06
CEO ownership (% of common)	-1.057	0.03	-0.892	0.01
Cash to Assets (t-1)	0.443	0.03	0.396	0.00
Market to Book (t-1)	0.011	0.01	0.002	0.00
Firm Age (t-1)	0.012	0.00	0.009	0.00
Firm size (t-1)	0.000	0.00	0.000	0.00
Return on assets (t-1) (ROA)	0.079	0.80	-0.015	0.94
ROA growth (t-1)	-0.137	0.25	-0.090	0.23
Return on sales (t-1) (ROS)	0.012	0.53	0.010	0.47
ROS growth (t-1)	0.168	0.19	0.122	0.13
Previous Year Stock Return	0.114	0.06	0.084	0.03
Industry Dummies	Yes		Yes	
Year Dummies	Yes		Yes	
Likelihood Ratio <i>p</i> -value	0.00		0.00	

Table VIII
Deal-Making and CEO Turnover

Logit coefficient estimates of CEO turnover. The dependent variable takes the value of “one” if the CEO leaves office during the year and the value of “zero” otherwise. A board is classified to be independent if 50 percent or more of its directors are independent, thus, we construct an indicator that is “one” in these cases and is “zero” otherwise. Firm size is total sales (Compustat item 12). Board size is the natural log of board size. Ownership for the CEO, institutions is measured as a percentage of common. All other variables are defined as in Table I. The sample consists of 9,587 CEO-year observations drawn from the Execucomp database from 1996 to 2004. In Panel A (regressions 1–3), the key independent variable is a deal-making (0,1) indicator that is “one” if the firm completes a JV, SA, SEO, or spinoff during the year. In Panel B (regressions 4–6), the key independent variable counts the number of deals completed during the year. P-values are reported next to each coefficient estimate.

Panel A: Using Deal-Making (0,1) indicator

	(1)		(2)		(3)	
	Parameter	p-value	Parameter	p-value	Parameter	p-value
Constant	-2.303	0.59	-7.842	0.07	-7.834	0.07
ROA (t-1)	-0.664	0.03	-0.877	0.01	-1.933	0.00
Firm size			0.016	0.58	0.020	0.51
Independent board (t-1)			0.259	0.01	0.254	0.01
Board size (t-1)			0.316	0.04	0.303	0.04
CEO Age (t-1)			0.079	0.00	0.080	0.00
CEO ownership (t-1)			-4.083	0.00	-4.093	0.00
Deal-making firm (0,1)			-0.083	0.32	-0.160	0.08
ROA (t-1) x Deal-making firm (0,1)					2.163	0.02
Interaction term + ROA (t-1)					0.2299	0.77
Industry Dummies	Yes		Yes		Yes	
Year Dummies	Yes		Yes		Yes	
Likelihood Ratio p-value	0.00		0.00		0.00	

Panel B: Using Deal Count

	(4)		(5)		(6)	
	Parameter	p-value	Parameter	p-value	Parameter	p-value
Constant	-2.303	0.59	-7.839	0.07	-7.835	0.07
ROA (t-1)	-0.664	0.03	-0.876	0.01	-1.755	0.00
Firm size			0.015	0.60	0.018	0.55
Independent board (t-1)			0.258	0.01	0.255	0.01
Board size (t-1)			0.315	0.04	0.305	0.04
CEO Age (t-1)			0.079	0.00	0.080	0.00
CEO ownership (t-1)			-4.079	0.00	-4.099	0.00
Deal Count (0,4)			-0.054	0.43	-0.113	0.12
ROA (t-1) x Deal Count (0,4)					1.602	0.01
Interaction term + ROA (t-1)					-0.1530	0.75
Industry Dummies	Yes		Yes		Yes	
Year Dummies	Yes		Yes		Yes	
Likelihood Ratio p-value	0.00		0.00		0.00	

