

Decoupling CEO Wealth and Firm Performance: The Case of Acquiring CEOs

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ABSTRACT

We explore how compensation policies following mergers affect a CEO's incentives to pursue a merger. We find that even in mergers where bidding shareholders are worse off, bidding CEOs are better off three quarters of the time. Following a merger, a CEO's pay and overall wealth become insensitive to negative stock performance, but a CEO's wealth rises in step with positive stock performance. Corporate governance matters; bidding firms with stronger boards retain the sensitivity of their CEOs' compensation to poor performance following the merger. In comparison, we find that CEOs are not rewarded for undertaking major capital expenditures.

THE SEPARATION OF OWNERSHIP AND CONTROL leads to many potential conflicts of interest between shareholders and corporate management. Since Jensen and Meckling (1976), the literature has focused much attention on how managerial ownership and compensation design can be used to align manager and shareholder interests. The bulk of the empirical evidence supports the hypothesis that managers with greater ownership or managers with more equity-based incentives are less likely to take value-destroying actions.

Partly as a consequence of this finding, the 1990s witnessed explosive growth in the grants of equity-based incentives (option and restricted stock grants) to corporate managers (Murphy (1999)). This raises the possibility that the value of a manager's annual flow of new grants is of the same order of magnitude as

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the value of the incentive effect of his existing portfolio. That is, if compensation increases following an acquisition, this dynamic compensation effect may offset the alignment normally provided by the CEO's existing portfolio, where the existing portfolio is, of course, the aggregation of (past) compensation flows. It is this dual nature of compensation flows that we study here.

Specifically, this paper asks whether the compensation policies adopted in the 1990s have altered the relationship between a manager's existing ownership and his acquisition decisions. A large literature argues that many acquisitions destroy value for the acquirer (see, for example, Loughran and Vijh (1997) and Moeller, Schlingemann, and Stulz (2004)). While shareholders might assume that their CEOs' large portfolios of stock and options provide the necessary incentives to discourage them from making bad acquisitions, our results show how this intuition could be wrong in the presence of dynamic compensation changes following acquisitions. In many cases, the value of the flow of new grants after an acquisition can swamp any incentive effect provided by the CEO's pre-acquisition portfolio.

We focus our study on acquisition events and on the incentives of bidding firm CEOs in particular for several reasons. First and foremost, acquisition decisions may be the most significant corporate resource allocation decisions that managers make and the potential wealth destruction to firm shareholders is large, as Moeller, Schlingemann, and Stulz (2005) document. Thus, it is important to understand managers' incentives in corporate takeovers because of their impact on both shareholders' wealth and the organization of assets in the economy. Further, by increasing the size of the firm and changing its scope of operations, acquisitions provide a natural opportunity for the CEO and the board to restructure his compensation. For instance, the increased size and complexity of the integrated firm could lead the CEO to argue for more pay and for pay that is less sensitive to performance for the first few years of the acquisition, or it could result in the board arguing for more sensitivity to ensure efficient integration. We investigate how the acquiring CEO's compensation changes and whether his wealth and compensation become more or less sensitive to the performance of the firm following the acquisition.

The data set we employ links acquisitions and compensation and overlaps with both the most recent merger wave and the massive shift in the composition of compensation contracts for top executives. Our study therefore enables us to assess the applicability of extant results to the new compensation environment in the 1990s as well as answer new questions related to current compensation structures. These questions include whether acquisition decisions generate additional information that is used by a board to reward or punish its CEO. For example, in the event of a poorly performing acquisition, do changes in the flow of new grants offset or magnify the negative effect of the acquisition on the personal wealth of the acquiring CEO? We show how the sensitivity of CEO pay and wealth to firm performance changes following an acquisition. Evidence of the costs and benefits to bidding firm CEOs sheds light on the forces that determine when and why takeovers are initiated. Furthermore, our results on how new grants of equity affect the efficacy of existing portfolio incentives

have general implications for compensation policy and research on agency problems.

We find that bidding firm CEOs are richly rewarded for growth through acquisitions with substantial new stock and option grants. In fact, large grants to CEOs of poorly performing firms offset the negative effect of poor merged-firm stock performance on their pre-acquisition portfolio of own-firm stock and options. Consequently, CEO's pay and wealth are completely insensitive to poor post-acquisition performance, but CEO's wealth remains sensitive to good post-acquisition performance. Bidding firms with stronger boards retain the sensitivity of their CEOs' compensation to poor performance following the acquisition. Our results bring into question the efficacy of existing equity portfolio incentives in the face of continuous flows of large new grants, and show that the strength of a firm's board affects the degree to which the new grants counter the incentives of the CEO's existing portfolio.

We compare our findings for CEO pay changes following acquisitions to those following large capital expenditures. We find that compensation changes around major capital expenditures are much smaller and more sensitive to performance than those following acquisitions. These findings suggest that the board and the CEO treat internal investment and acquisitions differently and that the incentives to undertake each differ as well. They also add to the growing evidence of fundamental differences between internal and external investment (see Andrade and Stafford (2004), for example). We suggest that the uncertainty and information environment surrounding an acquisition allow the CEO more leeway in arguing for downside protection with a partially captured board. Further, an acquisition provides a natural point for compensation renegotiation and increase, while a large capital expenditure does not. Finally, unlike capital expenditures, acquisitions tend to follow a period of superior performance, when the CEO has a stronger hand to bargain with the board.

The time trend of increasing compensation is a potential cause for concern in our tests. We therefore conduct a number of robustness tests. First, we confirm our results using nonacquiring control samples matched on various dimensions (size, industry and performance). Second, we examine the impact of corporate acquisition programs on CEO pay and incentives. Our findings show that poor post-merger performance serves as a natural check on a CEO's ability to embark on a series of self-serving deals, and we conclude that the perverse settling-up for CEOs after stand alone acquisitions does not continue to the same extent in acquisition programs. We next check our results by controlling for whether the merger is diversifying, the method of payment, and the announcement return. The results are robust to all of these controls. Finally, we examine the subset of CEOs who did not survive at the acquiring firm following the completion of the merger, and find that the turnover frequency is not abnormal for CEOs making acquisitions.

This study contributes to the recent empirical literature examining the relation between managerial incentives and corporate acquisitions. On the one hand, Datta, Iskandar-Datta, and Raman (2001) document a strong positive relation between acquiring managers' equity-based compensation and merger

performance. Also, Lehn and Zhao (2006) conclude that CEOs who make value-destroying acquisitions are more likely to be replaced subsequently. On the other hand, Bliss and Rosen (2001) show that CEO compensation and wealth typically increase after large bank mergers even if the bidder's stock price declines. Grinstein and Hribar (2004) find that acquiring CEOs who have more power to influence board decisions receive significantly larger M&A bonuses. Each of these studies focus on managerial incentives around acquisitions. In contrast, ours is the first to compare compensation policies implemented in firms that undertake either acquisitions or capital expenditures (external vs. internal investment). Moreover, our paper examines the tension between the incentives derived from existing equity ownership and those derived from expected new grants immediately after an acquisition. We carefully address the dual nature of grants of stock and options on CEO incentives in the current period and in the future. Finally, we track the acquiring CEO wealth change post-merger to demonstrate the long-run CEO wealth effect of corporate acquisitions.

Consistent with Bliss and Rosen (2001), we find that CEOs are financially better off from making acquisition decisions. However, we extend their analysis to show that the cumulative grants made if an acquirer exhibits poor long-run performance are critical to assessing the full wealth impact of the merger; the post-merger steady-state compensation level that Bliss and Rosen employ is insufficient. In fact, both equity-based compensation and managers' own career tenure considerations suggest that a long-term perspective is required to fully evaluate the success of a specific merger deal. Further, we show how the CEO's exposure to poor long-run performance depends on the strength of the board. By documenting CEOs' asymmetric exposure to performance following acquisitions, our paper is related to Garvey and Milbourn's (2006) general finding of asymmetric benchmarking in CEO pay. In fact, our tests show that the asymmetry uncovered by Garvey and Milbourn is much stronger following an acquisition, suggesting that acquisitions are a very important channel through which CEOs can achieve this asymmetry. Finally, this study illustrates how differently internal and external investments are treated when compensation is set. Explaining this difference is an interesting challenge for future theoretical and empirical research.

The plan of the paper is as follows. We present our hypotheses and empirical design in Section I. Section II describes the acquisition sample. Section III examines the change in CEO pay and wealth around acquisitions, and Section IV compares the evidence from acquisitions with the change in CEO pay and wealth around major capital expenditures. Section V conducts additional investigations and some robustness checks on our results. Section VI concludes.

I. Hypotheses and Empirical Design

The empirical analyses in this study are designed to test the incentive alignment hypothesis. If CEO compensation schemes ensure that acquisitions

improve or do not diminish the link between CEO and shareholder wealth, then the incentive alignment hypothesis is supported.

We start by showing that if the long-run post-merger performance measure (instead of the 3-day abnormal announcement period return) is used to compute the effect of an acquisition on CEO wealth, then the Bliss and Rosen (2001) result that CEO wealth is higher after mergers does not hold. As a result, all our subsequent analyses employ the long-run post-merger performance, and we pay particular attention to how compensation responds dynamically during the interim.

Next, we compute the sensitivity of CEO pay and long-run wealth to the impact of the acquisition on the wealth of shareholders, differentiating between positive vs. negative acquisition performance. If acquisitions are associated with improved managerial incentives, both the amount of pay CEOs receive and also their total wealth should become more sensitive to firm (either positive or negative) performance after acquisitions. We also explore the role of governance, examining how the strength of the board affects the sensitivity of CEO compensation to post-acquisition performance. Finally, we investigate how the specific pay-performance relationship associated with our sample of acquirers is related to the general phenomenon of asymmetric benchmarking in pay shown by Garvey and Milbourn (2006). Overall, the tests are designed to determine whether acquisitions improve or reduce CEO incentives, and exactly how changes in compensation around the acquisition achieve the incentive change. We follow that analysis by contrasting the results with those from similar analysis performed on capital expenditures.

II. Sample Formation

We begin with all completed U.S. mergers with announcement dates between January 1, 1993 and December 31, 2000 as identified from the Mergers and Acquisitions database of Securities Data Company (7,076 deals).¹ We then require that bidders have available stock prices from the CRSP files, accounting information from Compustat, and executive compensation data from Standard and Poor's ExecuComp. The data availability requirement leads to 1,508 mergers over the sample period.

If acquisitions have any impact on executive compensation, the likelihood of capturing this effect will be increasing in the size of the acquisition. As a result, we require that the ratio of the transaction value relative to the bidder (as measured by the market value of total assets at the fiscal year-end prior to the announcement) be at least 10%. Our relative size requirement leads to 622 sample mergers.

To clearly delineate the effect of each acquisition on executive compensation, in cases where a sample firm makes multiple acquisitions, we include only those

¹ The reason we start our corporate acquisition sample in 1993 is that we require information on CEO compensation in the year prior to the acquisition and the Standard and Poor's ExecuComp data starts in 1992.

acquisitions that do not overlap. We define an overlap to occur if the gap between the completion of one merger and the announcement of a second is no greater than 2 years (so that we have at least one whole fiscal year between consecutive mergers by the same acquirer). The nonoverlapping requirement eliminates 252 acquisitions. The final acquisition sample consists of 370 completed merger deals made by 361 firms. The mean (median) deal size relative to the market value of bidder assets is 0.51 (0.31).

Two event years are important in our analyses. First, year *ayr* is the fiscal year in which the announcement of a merger bid takes place. Second, year *cyr* is the fiscal year in which the merger is consummated. Of the 370 mergers in our sample, 244 close in the same year they are announced, 121 close in the following year, and the remaining 5 close within 3 years of being announced. The fact that two-thirds of our mergers close in the same fiscal year as they are announced is consistent with Grinstein and Hribar's (2004) concurrent sample of mega deals, for which the median time to completion is 4 months.

Our main measure of CEO compensation is total direct compensation from ExecuComp. Total direct compensation is the sum of salary, annual bonus, value of restricted stock granted, value of stock option granted,² long-term incentive payouts, and any other remuneration.

III. Results

Table I presents descriptive statistics of our sample of 370 completed acquisitions. Panel A reveals that acquisitions tend to be highly cyclical, as the total number of acquisitions closely follows the business cycle expansion over most of the 1990s. The evidence suggests strong time-series clustering of merger activity; indeed, our sample period coincides with the latest aggregate merger wave. Panel B gives an industry breakdown of corporate acquisitions in our sample. The industries with the largest number of transactions are banking and business services, consistent with the finding in Bliss and Rosen (2001) that the banking industry experiences massive consolidation over the sample period.

² Core and Guay (2002) estimate the grant date value of options granted during the year using a modified version of the Black and Scholes (1973) model. To account for the fact that executives view the life of the option (i.e., time to maturity) as being less than their expected time to exercise, and that they frequently exercise early, Core and Guay assume that the expected time to exercise is 70% of the option's stated maturity and they replace time to maturity with time to exercise in the Black-Scholes model. The expected stock return volatility is measured as the annualized standard deviation of daily stock returns over the 120 trading days preceding the end of the fiscal year in which the grant was made. Expected dividend yield is estimated as cash dividends paid in the fiscal year the grant is made divided by year-end stock price, and the Treasury bond yield corresponding to the option's remaining time to maturity is used to estimate the risk-free rate. All these option pricing parameters are updated every year in our computation. We correct ExecuComp's compensation measure by replacing its option grant value with the value computed using Core and Guay's procedure. We find that using either the Core and Guay measure or ExecuComp's measure (BLK.VALUE) for the value of stock and option grants during the year has no material effect on our conclusions (the correlation between the two measures in our sample is 0.97).

Table I
Distribution of Corporate Acquisitions across Time and Industries,
1993–2000

The sample consists of 370 completed acquisitions (transaction value greater than 10% of the bidder's market value of total assets) announced during the period January 1, 1993 to December 31, 2000. The bidders are listed in Securities Data Company's Mergers and Acquisitions database and have executive compensation data in Standard and Poor's ExecuComp database. The industry classification follows Fama and French (1997).

Panel A: Distribution by Year		
	Frequency	Percent
1993	12	3.24
1994	33	8.92
1995	57	15.41
1996	55	14.86
1997	66	17.84
1998	71	19.19
1999	55	14.86
2000	21	5.68
Total	370	100%

Panel B: Distribution by Industry		
Aircraft	6	1.62
Apparel	2	0.54
Automobiles and Truck	3	0.81
Banking	55	14.86
Business Services	41	11.08
Business Supplies	8	2.16
Candy & Soda	1	0.27
Chemicals	13	3.51
Coal	1	0.27
Communication	7	1.89
Computers	10	2.7
Construction	3	0.81
Construction Material	8	2.16
Consumer Goods	4	1.08
Defense	2	0.54
Electrical Equipment	4	1.08
Electronic Equipment	18	4.86
Entertainment	5	1.35
Food Products	4	1.08
Healthcare	6	1.62
Insurance	18	4.86
Machinery	16	4.32
Measuring and Control	4	1.08
Medical Equipment	10	2.7
Miscellaneous	2	0.54
Mining	2	0.54
Personal Services	2	0.54
Petroleum	12	3.24
Pharmaceutical	8	2.16

(continued)

Table I—*Continued*

Panel B: Distribution by Industry		
	Frequency	Percent
Precious Metals	2	0.54
Printing and Publishing	5	1.35
Restaurants, Hotels, etc.	5	1.35
Retail	16	4.32
Rubber and Plastic	2	0.54
Steel Works, etc.	7	1.89
Textiles	2	0.54
Tobacco Products	1	0.27
Trading	8	2.16
Transportation	9	2.43
Utilities	24	6.49
Wholesale	14	3.78

A. Sample Characteristics

Table II, panel A reports financial and operating characteristics and CEO pay and incentives measured both at the fiscal year-end prior to the announcement of acquisitions (year *ayr*−1), and the first year after the acquisition (year *cyr*+1). All dollar amounts are in inflation-adjusted 2002 dollars. The median acquiring firm is quite large; in the year prior to the acquisition, the market value of assets is \$4.3 billion. Bidding firms are performing well, with median market-to-book of assets (M/B) of 1.5, sales growth of 8%, return on assets (ROA) of 16%, and a median annual stock return of 25%, which is significantly greater than the contemporaneous market return.

The 3-day bidder cumulative abnormal announcement return (not tabulated) has a mean of -1.3% and a median of -1.1%. These returns are larger in magnitude than Datta, Iskandar-Datta, and Raman's sample, but are comparable to those of Grinstein and Hribar's sample of large deals. The method of payment in 79% of our sample is bidder equity, which generally results in lower average abnormal returns (Travlos (1987)). Finally, 31% of our sample deals are diversifying in the sense that the bidder and the target are not members of the same Fama–French 48 industry group.

The descriptive statistics for CEO pay and incentives in the year prior to the acquisition show that the median cash payment to CEOs of bidding firms is slightly above \$1 million, which (since 1993) is the limit for fully deductible nonperformance-based cash compensation since 1993 (Hall and Lieberman (2000)). Almost equal in magnitude, the median grants of stock and options for the pre-acquisition year is \$0.90 million. Median total pay is \$2.4 million. We also compute the market value of the CEO's existing holdings of stock and options in the firm as a measure of the amount of personal wealth that the CEO has tied to the equity performance of the firm. Prior to the acquisition, bidding firm CEOs have a median portfolio value of equity incentives of \$23 million, about 10 times annual total pay.

Table II
Descriptive Statistics of Acquiring Firms

In Panel A, the sample starts with the 370 completed acquisitions announced during the period January 1, 1993 to December 31, 2000, as summarized in Table I. All variable values are obtained at the fiscal year-end either before the merger announcement (year $ayr - 1$) or after the merger completion (year $cyr + 1$). All dollar values are measured in constant 2002 dollars (millions for firm characteristics, thousands for CEO compensation and portfolio value). We report the median as well as the 5th and 95th percentile values. To make the compensation comparison before and after the merger meaningful, we require that the CEO be the same between year $ayr - 1$ and year $cyr + 1$, leaving 306 acquiring firms for analysis in the table. MV Equity is the product of the number of shares outstanding and the stock price as of the fiscal year-end. MV Assets is book value of total assets minus book value of equity plus market value of equity. Leverage is captured by the ratio of book value of long-term debt and either market or book value of total assets. M/B is the ratio of MV Assets and book value of total assets. Sales Growth is the difference in log sales from year $t - 1$ to t . ROA is the accounting return on assets, obtained as the ratio of earnings before interest and taxes to total assets. Return is the annual stock return during the fiscal year. Abnormal Return is the annual firm stock return adjusted for the contemporaneous annual return on the market portfolio. Cash Pay is the sum of salary and annual bonus. Grants is the total value of all restricted stock and options granted during the year. Total Pay is the sum of salary, bonus, other annual compensation, value of restricted stock granted, value of new stock options granted during the year, long-term incentive payouts, and all other compensation. Portfolio Value of Equity Incentives is the market value of the CEO's existing holdings of stock and options at the fiscal year-end. Panel B gives the size of the acquisition, relative to the bidder's market value of total assets in the final column. The sample is split into quintiles based on the relative size of the acquisition. For each acquisition size quintile, we present the average percentage change in cash pay, grants, and total pay from year $ayr - 1$ to year $cyr + 1$ for CEOs in that acquisition size quintile.

Panel A: Sample Overview						
	$ayr - 1$			$cyr + 1$		
	5 th Pct	Median	95 th Pct	5 th Pct	Median	95 th Pct
Firm Characteristics						
MV Equity	266	1949	27313	273	3119	52457
MV Assets	408	4312	71465	653	6690	129456
Book Assets	184	2431	46905	338	3956	75120
Sales	161	1299	13544	293	2202	28777
Debt/MV Assets	0.001	0.131	0.362	0.002	0.167	0.458
Debt/Book Assets	0.004	0.206	0.491	0.004	0.244	0.515
M/B	1.013	1.517	4.535	0.970	1.425	4.391
Sales Growth	-0.172	0.082	0.465	-0.317	0.131	0.618
ROA	0.029	0.163	0.378	0.023	0.135	0.354
Return	-0.277	0.248	1.025	-0.539	0.052	0.820
Abnormal Return	-0.465	0.034	0.803	-0.661	-0.120	0.705
CEO Compensation						
Cash Pay	410	1144	3643	352	1167	5189
Grants	0	893	12385	0	1425	17663
Total Pay	558	2449	16579	722	3464	22087
Portfolio Value of Equity Incentives	2273	23235	342172	3751	33167	367097

(continued)

Table II—*Continued*

Panel B: The Relation between Acquisition Size and Change in CEO Compensation				
Quintile	Change in			
	Cash Pay	Grants	Total Pay	Relative Size
1	11.4%	51.0%	21.0%	13.0%
2	15.1%	46.1%	29.5%	20.6%
3	21.3%	77.3%	42.0%	34.4%
4	24.5%	51.2%	42.8%	63.0%
5	22.0%	63.6%	47.6%	116.7%

Following the acquisition, by any measure the size of the acquiring firm increases significantly. However, firm performance suffers: M/B, ROA, and stock return all decrease, and leverage increases. At the same time, CEO compensation and wealth increase substantially. In the year after the completion of the acquisition, the median cash payment to CEOs remains the same, but the median grants of stock and options for the year increase to one-and-a-half times the pre-acquisition level, to \$1.4 million. These numbers indicate that from an incentive perspective, CEOs of bidding firms are rewarded with substantially more equity-based compensation. As a result, total pay also increases considerably to a median value of \$3.5 million. After the merger completion, the median total wealth of bidding firm CEOs increases to \$33 million. The \$10 million change in wealth comes from a combination of new equity grants from year *ayr*–1 to year *cyr*+1 and an average 45% stock return over that period. We provide a more precise breakdown and analysis of the components of the change in CEO wealth later in Table VI.

Table II, panel B presents a clear picture of how the size of an acquisition is related to the change in acquiring CEO pay. Sorting the size of the acquisition scaled by the bidding firm's market value of total assets into quintiles, for each size quintile we report the average change in CEO pay. Several noteworthy features stand out in panel B. First, there is wide dispersion in the size of acquisitions undertaken by the sample firms. Second, there is a clear, monotonically increasing relationship between the change in the acquiring CEO's pay, particularly total pay, and the size of the transaction.

In summary, Table II shows that bidding firms are performing very well prior to the acquisition and their CEOs are highly compensated as well. After the completion of acquisitions, acquiring CEOs experience large increases in all three measures of compensation, suggesting that acquiring CEOs clearly have direct financial incentives to undertake mergers. In the next subsection, we investigate how CEO pay and wealth evolve subsequent to an acquisition.

B. Changes in CEO Pay and Wealth after an Acquisition

Using a sample of bank mergers, Bliss and Rosen (2001) show that CEO pay increases after a merger and that the increase in pay appears to offset

the negative wealth effect of the merger announcement. It is well established that long-run underperformance following mergers is common (see Loughran and Vijh (1997) and Rau and Vermaelen (1998)), making the announcement effect an insufficient statistic for the wealth effect of the merger. Moreover, the bidding CEO's horizon should extend beyond the announcement effect as well, as his unvested equity-based compensation and career consideration call for a long-term evaluation of the outcome of an acquisition. As a result, we start by replicating Bliss and Rosen's analysis with our own acquisition sample (including both the banking sector and nonbanking sectors of the economy), using both their merger performance metrics, namely, 3-day abnormal announcement period return (CAR3), and the 3-year industry-adjusted buy-and-hold return (BHAR3), to compute the pay and wealth effects of a merger. Table III presents our results.

We obtain relatively similar results (untabulated) to Bliss and Rosen (2001) when we estimate their Table 5 regression on our sample (or on a subsample that excludes banks). To obtain the change in pay and wealth 3 years after the merger, Bliss and Rosen multiply the coefficient on assets acquired in a merger and the coefficient on firm-specific return by the actual assets acquired and CAR3, respectively. Note that actual assets acquired are cumulatively measured over a 3-year period, while the firm-specific return is computed over a 3-day period (although the coefficient is estimated using a 3-year return). The disparity leads to their finding that bidding firm CEO pay increases 3 years

Table III
Estimated Changes in CEO Pay and Wealth after an Acquisition

Estimated changes in CEO pay and wealth are based on the regression model replicating Bliss and Rosen's (2001) Table 5 using our own sample of acquisitions. First, we run a regression of CEO total pay against changes in firm value due to general market movement in returns, firm-specific stock price changes, changes in asset size due to mergers, changes in asset size not related to mergers, and other control variables. We then estimate the expected change in CEO pay for each acquisition by multiplying the first-stage coefficients on firm-specific stock price change and merger-related change in asset size by the corresponding changes in firm-specific stock price and in asset size due to mergers, respectively. Departing from Bliss and Rosen (2001), we measure the firm-specific stock price changes over both the bid announcement period (the 3-day abnormal announcement period return (CAR3)) and the 3-year post-merger period (the buy-and-hold industry-adjusted 3-year return (BHAR3)). Finally, the effect of the acquisition on CEO wealth is computed for each acquisition using the firm-specific stock price changes (either CAR3 or BHAR3) multiplied by the CEO's portfolio delta. All dollar values are in thousands.

	Based on CAR3		Based on BHAR3	
	Mean	Median	Mean	Median
Effect from Firm-Specific Stock Price Change	-46	-3	-245	-7
Effect from Assets Acquired over Three-Year Period	1111	257	1111	257
Change in CEO Total Pay	1065	249	866	145
CEO Wealth Change	-540	-19	-5195	-559
Total = Change in Pay + Wealth Change	525	159	-4329	-403

after the merger and that this increase overwhelms the usual negative return effect from the bid announcement on his wealth. The first two columns in Table III show that using our sample of acquisitions, CEO pay increases 3 years after the merger and his overall wealth increases as well. In the last two columns of Table III, we modify Bliss and Rosen's empirical design by multiplying the 3-year change in firm value by the corresponding firm-value change coefficient. Our results differ from those of Bliss and Rosen: The total wealth effect is negative at the mean and median.

In sum, Table III demonstrates that Bliss and Rosen's analysis comes to the opposite conclusion when taking long-run wealth effects into account. This has two implications. First, long-run post-merger stock performance is the appropriate metric to use to capture the change in firm value and to assess the CEO pay and wealth effects of mergers. Second, the 3-year post-merger steady-state compensation level is insufficient to capture how compensation responds dynamically during the interim (underperforming) period. Thus, in the analyses below in which we examine the pay and wealth effects of acquisitions, we focus on long-run effects, paying particular attention to the accumulation of new grants of stock and options during the period of poor performance.

C. Changes in CEO Pay–Performance Sensitivity after an Acquisition

Next, we examine changes in how compensation is set after an acquisition. A priori, there is no reason to believe that pay and wealth sensitivities will be symmetric for positive and negative performance (a conjecture confirmed in Garvey and Milbourn (2004)). Therefore, our test allows for different pay sensitivities to positive and negative performance. Specifically we estimate the regression,

$$\begin{aligned} \text{Pay}_{it} = & \alpha_0 + f_{\text{industry}} + f_t + \beta_1 \text{Sales}_{it} + \beta_2 M/B_{it} + \beta_3 \text{SalesGrowth}_{it} \\ & + \beta_4 \text{ROA}_{it} + \beta_5 \sigma_{\text{ROA}_{it}} + \beta_6 \sigma_{\text{Ret}_{it}} + \beta_7 \text{Acq}_{it} + \beta_8 \text{PositiveReturn}_{it} \\ & + \beta_9 \text{NegativeReturn}_{it} + \beta_{10} (\text{Acq}_{it} * \text{PositiveReturn}_{it}) \\ & + \beta_{11} (\text{Acq}_{it} * \text{NegativeReturn}_{it}) + e_{it}. \end{aligned} \quad (1)$$

The left-hand-side variable is the logarithm of CEO total pay in year t , and the right-hand-side variables are firm characteristics identified in the compensation literature (see, for example, Murphy (1985), Agrawal and Walkling (1994), Yermack (1995), Core, Holthausen, and Larcker (1999), and Grinstein and Hribar (2004)). We estimate the model based on a panel data set that includes all ExecuComp firms over the entire sample period. The estimation has industry and year fixed effects and uses standard errors that are robust to clustering at the firm level.

We expect that larger firms and firms with more growth opportunities will demand higher quality managers and thus will offer higher pay. We proxy for firm size with sales. We proxy for growth opportunities in the firm's investment

opportunity set with the firm's year-end market-to-book ratio averaged over the previous 5 years. We include 48 Fama–French industry dummies (Fama and French (1997)) to control for industry differences in the demand for managerial talent.

Agency theory suggests that the level of executive pay should be an increasing function of firm performance (Murphy (1985)). We employ three metrics for firm performance: sales growth, ROA (computed as the ratio of earnings before interest and taxes to total assets), and the annual stock market return (computed as the 12-month raw return of the firm's stock in the fiscal year prior to the acquisition announcement).

Firm risk captures both the firm's information environment and operating environment and is shown to be an important determinant of executive pay (see for example, Core et al. (1999)). We have two total variance measures of firm risk, the *SD* of ROA and the *SD* of common stock returns. The latter is obtained as the *SD* of annual percentage stock returns for the prior 5 years.

To capture the pay differential that acquiring CEOs realize in the year after the acquisition, we introduce the indicator variable *Acq*, which takes the value of one in year $cyr + 1$, and zero otherwise. The coefficient on this variable captures any pure level reward that CEOs reap for completing an acquisition after controlling for expected changes in pay. Interaction terms are denoted by Acq^* and represent the interaction of the acquisition indicator variable and the identified variables.

Positive (Negative) Return is the holding period fiscal year return from year $t - 1$ to t if that return is positive (negative), and zero otherwise. To capture possible differential sensitivity of pay to performance for sample firms after the acquisition, we interact the return variables with the acquisition indicator variable. If the coefficient on the negative return interaction variable is negative, then through mergers, acquiring CEOs are able to detach their pay from any poor performance by their companies.

Table IV presents the results of the estimation. From the first column in Table IV, we see that there is no simple level effect of corporate acquisitions on CEO pay as the coefficient on the acquisition indicator variable is not statistically significant. Splitting stock returns into positive and negative returns shows that changes in CEO pay are more strongly related to negative returns than to positive returns. Thus, CEO pay is more likely to be lowered after poor returns. However, the negative coefficient on the interaction of negative post-acquisition stock returns ($Acq * Negative\ Return$) counters the positive baseline link between poor stock performance and changes in compensation: The sum of the two coefficients (*Negative Return* and $Acq * Negative\ Return$) is statistically insignificantly different from zero. Thus, while (nonacquiring) CEOs normally are penalized for poor performance, acquiring CEOs are not penalized in the post-merger period; the acquisition and subsequent changes in pay sever the link between performance and CEO pay. Expecting this, a CEO would be less concerned about undertaking a questionable acquisition that would enlarge his base pay.

Table IV

Changes in CEO Pay-Performance Sensitivity after the Merger

This table reports regression results examining the changes in CEO pay-performance sensitivities subsequent to acquisitions. The dependent variable is the logarithm of a CEO's total pay for year t . Sales is measured as in natural log form. M/B is the firm's mean market-to-book ratio of assets from the prior 5 years. Sales Growth is the difference in log sales from year $t - 1$ to t . ROA is the accounting return on assets from year $t - 1$ to t . σ_{ROA} and σ_{Ret} are the standard deviations of ROA and the stock return, computed over the prior 5 years. *Acq* is an indicator variable set equal to one in the year after the completion of an acquisition, and zero otherwise. Positive (Negative) Return is set equal to the prior fiscal year stock return if it is positive, and zero otherwise. Negative (Positive) Return is analogously set equal to the prior fiscal year stock return if it is negative, and zero otherwise. Interaction terms are denoted by *Acq** and represent the interaction of the acquisition indicator variable and the identified variables. Strong Board is an indicator variable set equal to one for firms whose CEOs have below-median years serving as the CEO, and zero otherwise. *Strong Board * Acq * NegReturn* captures the effect of a strong board on the post-acquisition sensitivity of pay to negative performance. Industry dummies are employed to control for industry compensation practices, and year dummies are employed to account for economy-wide shocks. The model is estimated using all ExecuComp firms over the entire sample period 1993 to 2000. Corresponding p -values from Huber-White robust standard errors are reported in brackets. Boldface type indicates significance at the 10% level or better.

	Total Pay	Total Pay
Intercept	3.760 [<.001]	3.797 [<.001]
Sales	0.435 [<.001]	0.431 [<.001]
M/B	0.090 [<.001]	0.089 [<.001]
Sales Growth	0.072 [0.261]	0.073 [0.253]
ROA	-0.203 [0.180]	-0.203 [0.180]
σ_{ROA}	0.485 [0.094]	0.479 [0.100]
σ_{Ret}	0.115 [0.005]	0.114 [0.005]
Acq	0.037 [0.534]	0.042 [0.480]
Positive Return	0.075 [0.007]	0.075 [0.007]
Negative Return	0.313 [<.001]	0.312 [<.001]
Acq * Positive Return	-0.110 [0.841]	-0.107 [0.845]
Acq * Negative Return	-0.351 [0.187]	-0.728 [0.020]
Strong Board		-0.050 [0.098]
Strong Board * Acq * Neg Return		0.897 [0.049]
Industry and Year Dummies?	YES	YES
Adj R^2	0.395	0.396
Number of Observations	10342	10342

D. Corporate Governance and Post-Acquisition Pay-for-Performance

The results thus far show that pay becomes detached from performance after an acquisition. However, it could be the case that the downside protection afforded to the CEO is optimally chosen by a board seeking to provide risk-taking incentives through convexity in pay with respect to performance. In particular, the board may simply be compensating managers for attempting risky, but ex ante good acquisitions that are ex post (perhaps due to unforeseen factors) value-decreasing. To explore this issue, we divide sample firms by strong vs. weak board bargaining position and try to relate the degree of dampening of the downside effect to this split. If the insensitivity of pay to performance when making an acquisition is optimal from a contracting perspective, then we should observe the same insensitivity in compensation policy irrespective of the negotiating strength of the board vis-à-vis the CEO.

The corporate governance literature has not settled on any one measure of board strength (see Hermalin and Weisbach (2003) for a review), as specific measures of governance are relevant for different aspects of firm behavior. For board strength, we turn to the results of Hermalin and Weisbach (1998), who show that a measure based on CEO tenure is a robust proxy for the overall strength of the board vis-à-vis the CEO. Thus we construct our strong board indicator variable as follows: *Strong Board* is set equal to one for firms whose CEOs have below ExecuComp median years serving as the CEO, and zero otherwise (this measure is recalculated each year). In the second column of Table IV, we include both the strong board indicator variable by itself, and an interaction variable *Strong Board * Acq * NegReturn* to allow the post-acquisition pay-for-negative performance sensitivity to be different for firms with stronger boards.

The negative and significant coefficient on the strong board indicator variable shows that ceteris paribus, CEO pay is lower in the presence of strong boards.³ The coefficient on the interaction *Strong Board * Acq * NegReturn* is large and positive, countering the opposite coefficient on the post-acquisition negative return interaction term (*Acq * Negative Return*). Thus, for bidding firms with strong boards, there remains an incentive-consistent relation between pay and negative performance after the acquisition (an *F*-test confirms that the total effect, $0.31 - 0.73 + 0.90 = 0.48$, is positive). This effect is absent for firms with weak boards, suggesting that the downside protection we observe is the result of captured boards rather than an attempt to provide CEOs optimal risk-taking incentives with regard to acquisitions.

Overall, our results cast doubt on the hypothesis that boards optimally choose to provide downside protection following acquisitions, and are consistent with

³ An alternative and plausible interpretation of the negative effect of a strong board on CEO pay is that CEO pay is positively related to CEO tenure (Murphy (1999)), in which case our Strong Board indicator variable might simply be capturing the tenure effect on CEO pay. However, while the above interpretation does not apply to the interaction term involving the Strong Board indicator variable, it does emphasize the importance of including the indicator variable by itself in the CEO pay regression to pull the tenure effect out.

Garvey and Milbourn (2006), who show that only firms with weak shareholder protection exhibit strong asymmetry in compensation benchmarking.⁴ The results add to the body of research (e.g., Brickley, Coles, and Terry (1994), Core et al. (1999), and Grinstein and Hribar (2004)) that suggests that the strength of the board vis-à-vis the CEO is critical for shareholders trying to estimate the likelihood of successful expropriating actions by their CEO.

E. Do Acquisitions Drive Overall Asymmetric Benchmarking in Pay?

Garvey and Milbourn (2006) show in a broad setting that there is an asymmetry in executive compensation benchmarking: There is significantly less pay-for-luck when luck is down than when it is up. This result begs the question of whether our findings are simply a manifestation of the normal asymmetry in pay-for-performance, whether acquisition events are driving their results, or whether acquisitions produce an enhanced asymmetry. To address this question, we estimate an expanded specification of Garvey and Milbourn's baseline model

$$\begin{aligned} \Delta Pay_{it} = & \alpha_0 + f_i + f_t + \beta_1 Luck_{it} + \beta_2 Skill_{it} + \beta_3 Luck_{it} * Luck\ Is\ Down_{it} \\ & + \beta_4 Luck_{it} * Luck\ Is\ Down_{it} * Acq_{it} + \beta_5 Skill_{it} * Skill\ Is\ Down_{it} \\ & + \beta_6 Skill_{it} * Skill\ Is\ Down_{it} * Acq_{it} + \beta_7 Luck_{it} * CDF\ Variance\ of\ Luck_{it} \\ & + \beta_8 Skill_{it} * CDF\ Variance\ of\ Skill_{it} + \beta_9 \sigma_{Ret_{it}} + \beta_{10} CEO\ Tenure_{it} + e_{it}, \end{aligned} \quad (2)$$

where the left-hand-side variable is the change in CEO total pay in year t , and the right-hand-side variables are firm characteristics that Garvey and Milbourn (2006) identify as capturing the asymmetry in pay-performance sensitivity. Specifically, we first regress the firm's raw calendar-year stock returns on its equal-weighted and value-weighted industry returns and year dummies. Garvey and Milbourn refer to this regression's predicted and residual values as the "luck" and "skill" portions of the firm's return. To capture the idea that there will be less pay for luck when luck is down, we follow Garvey and Milbourn by interacting luck with an indicator variable that captures years in which luck is negative. To confirm that luck and skill are treated differently, skill also takes an analogous interaction term.

To address the question of whether acquisitions drive the general Garvey and Milbourn finding of asymmetric compensation benchmarking, we add to their baseline specification two interaction terms involving our acquisition indicator variable Acq (defined in Table IV) and the interaction terms $Luck * Luck$

⁴ Garvey and Milbourn (2006) suggest one specific channel through which asymmetric payoffs to CEOs relative to firm performance could take place. They show that firms use a fixed-number granting policy when the stock price is driven up by exogenous forces, but they attempt to maintain the value of the option grant when firm performance is poor by increasing the number of option granted. Other possible mechanisms include the compensation committee tending to have a limited memory in setting CEO compensation, and/or the adoption of multiple performance measures that in the limit leads to the incentive to grow the firm through corporate acquisitions (Hall (1999) and Murphy (1999)).

Table V

Do Acquisitions Drive Overall Asymmetric Benchmarking in Pay?

Garvey and Milbourn (2006) show in a broad setting that there is an asymmetry in executive compensation benchmarking; there is significantly less pay-for-luck when luck is down than when it is up. We examine what role acquisitions play in creating this asymmetry. Specifically, we run a regression of changes in CEO total pay on the contribution of exogenous factors on the performance of the firm's dollar returns (luck), the contribution of firm-specific performance (skill), interactions of both luck and skill with dummy variables (*Luck Is Down* and *Skill Is Down*) that indicate whether luck or skill are negative, and further interactions of the above two interaction terms with the dummy variable *Acq*, which takes the value of one in year *cyr*+1, and zero otherwise. Other control variables in the regression are the CDF of the dollar variance of firm returns and CEO tenure. The first two columns of the table contain the regressions replicating Garvey and Milbourn's (2004) Tables 4A and 5 using a sample of ExecuComp firms with at least two consecutive years of data for each CEO during our sample period. In the third column, we estimate our extended model with the two new interaction terms *Luck * Luck Is Down * Acq* and *Skill * Skill Is Down * Acq*. The last column reports the estimates from the same specification as in the second column, but estimated on a sample that removes all firm-years for large acquirers from the closing year (year *cyr*) onward. Corresponding *p*-values are reported in brackets. Boldface type indicates significance at the 10% level or better.

	Δ Total Pay	Δ Total Pay	Δ Total Pay	Δ Total Pay
Luck	1.502 [0.002]	1.613 [0.001]	1.638 [0.001]	1.365 [0.009]
Skill	1.354 [<.001]	1.321 [<.001]	1.322 [<.001]	1.521 [<.001]
Luck * Luck Is Down		−0.214 [0.001]	−0.193 [0.004]	−0.076 [0.291]
Luck * Luck Is Down * Acq			−0.252 [0.040]	
Skill * Skill Is Down		0.104 [0.009]	0.102 [0.012]	0.111 [0.016]
Skill * Skill Is Down * Acq			0.136 [0.029]	
Luck * CDF Variance of Luck	−1.496 [0.002]	−1.564 [0.001]	−1.591 [0.001]	−1.315 [0.013]
Skill * CDF Variance of Skill	−1.370 [<.001]	−1.396 [<.001]	−1.403 [<.001]	−1.575 [<.001]
Fixed Effects and Year Dummies?	Yes	Yes	Yes	Yes
Adj R^2	0.210	0.213	0.216	0.138

Is Down, and *Skill * Skill Is Down*. The coefficients on these two new interaction variables *Luck * Luck Is Down * Acq* and *Skill * Skill Is Down * Acq* capture whether the asymmetric benchmarking in pay is stronger for firms that have undergone mergers.

Table V presents our results. The first two columns of Table V provide the baseline results while the third column reveals that in the year following the close of a large acquisition, the CEO's total pay is even less sensitive to bad luck than normal. The CEO of the median-risk firm normally has exposure of \$0.84 ($1.64 - 1/2 \times 1.59$) per \$1,000 of good luck and only \$0.65 ($\$0.84 - \0.19) per \$1,000 of bad luck, a reduction of 23%. In the year following an acquisition,

exposure to bad luck drops to \$0.40 (\$0.65–\$0.25) per \$1,000, more than doubling the total reduction to 52%. Thus, we conclude that what happens around the acquisition is not “normal” in the sense that it is a much stronger asymmetry than is normally found.

We verify the importance of acquisitions to the overall finding of asymmetric benchmarking by dropping all firm-years as of the year of the acquisition’s closing and report the results in the last column of Table V. The coefficient on the interaction term *Luck * Luck Is Down* becomes insignificant, indicating that acquisitions are important in helping CEOs create asymmetry in performance benchmarking. We also drop all firm-years for firms that engage in large acquisitions and find similar results (untabulated). Because the sample of firms making large acquisitions is a nonrandom sample, we hesitate to attribute the sole source of benchmarking asymmetry to acquisitions, but the results suggest that they play a substantial role.

The results thus far show that CEO pay becomes particularly insensitive to poor post-merger performance (except for acquiring firms with strong boards). We now turn to the question of how the changes in compensation practices interact with the effect of the CEO’s existing portfolio to determine the total net impact of the acquisition on his wealth.

F. Long-run Effect of an Acquisition on CEO Wealth

Our firm-specific CEO wealth–performance sensitivity measure captures the long-run change in the value of the CEO’s equity portfolio to a change in firm value. As such, it is a measure of how closely associated CEO and shareholder wealth are over time.

Our analysis starts with the total value of the CEO’s portfolio of equity incentives (stock and options) in the year prior to the bid announcement (year *ayr-1*) and then examines the effect of long-run firm performance on the value of that portfolio. This represents the expected wealth effect to a CEO contemplating an acquisition bid. Specifically, we start by measuring the pre- to post-acquisition change in the total value of the CEO’s portfolio. This includes the effect of firm performance on the value of the equity portfolio and the addition of any new grants to the portfolio during the period. Next, we account for the CEO’s trading activities, adding back the value of any shares sold or options exercised during the same period. For any year in which his shareholdings in the firm decrease, we multiply the decrease in the number of shares by the midpoint of the share price that year to estimate his income from selling shares in that year. ExecuComp reports the value realized each year when a CEO exercises his options. We add this value to our estimate of the value gained from selling his shares in the firm to produce an estimate of the CEO’s income from trading activities for that year. We cumulate the CEO’s income from trading activities and add that back to the total value of the CEO’s remaining portfolio at the end of the measurement period. Finally, we cumulate cash compensation to the CEO and add it to his total wealth. This approach tracks the total impact of

firm performance and any changes in compensation on the CEO's firm-specific wealth.⁵

Table VI, panel A presents the long-run association between CEO wealth and the stock performance of the acquiring firm. The first three rows give the median acquiring CEO's starting portfolio and its breakdown into stock and options. The division between stock and options in the CEO's personal portfolio only slightly favors stock.

The first two columns report the average wealth change both in dollar terms and as a fraction of the CEO's starting portfolio wealth (% of SW) over the investment period (year $ayr-1$ to year $cyr + 1$). On average the acquiring firms realize a raw stock return of 45% over the 3-year measurement period, underperforming the market by about 5%. However, the acquiring CEOs enjoy an average wealth increase of 121%, over one-quarter of which comes from new grants of stock and options. (Note that we use means here so that the percentages will sum to one.) Compared to Table II, the mean values presented in Table VI suggest that the distribution of wealth change is very positively skewed, a fact confirmed in panel B of Table VI.

To provide further evidence on the sensitivity of CEO wealth to post-acquisition performance, in the remainder of Table VI, panel A, we separate acquiring firms based on their performance relative to the market. The middle two columns show that positive performance is very richly rewarded, yielding acquiring CEOs an average wealth increase of \$47 million at the end of the year following the merger completion (doubling their starting wealth in year $ayr - 1$). About two-thirds of these increases are driven by the strong performance of the underlying stock, which translates into more valuable option exercises and stock holdings. Much of the rest comes from new grants of stock and options.

The last two columns of panel A show that while shareholders who invest in the underperforming acquiring firms experience almost no growth in their wealth, the CEOs of these same firms experience a net wealth *increase* of 70%. Offsetting the effect of below-market stock performance are new grants of stock and options with a value equivalent to almost 30% of their starting wealth.⁶ In fact, the median raw stock performance of the underperforming sample is -3%,

⁵ If a CEO ceases to be employed, we set future compensation equal to zero and make a rough estimate of how the value of his portfolio would evolve by multiplying the last known total portfolio delta by the stock return over each succeeding year. We do this rather than dropping the CEOs who are no longer employed in order to avoid biasing our results upward by removing CEOs who are potentially fired for poor performance. We also perform the test without including CEOs who do not survive the acquisition and find that our inferences are unchanged.

⁶ It is important to note that the cumulative grant date value of grants made over the period cannot be simply aggregated with the other components of the change in CEO wealth. This value is implicitly part of the raw change in the CEO's portfolio value, which is driven by changes in the composition of the portfolio, changes in the factors affecting the value of the option portion of the portfolio, and the stock price performance. In particular, the value of the options in his portfolio at the end of year $cyr + 1$ will differ from their value when granted. We track not only the total change in the value of the portfolio, but the value of the options when granted as a measure of the cost to the firm of these compensation flows.

so the effect of pre-existing incentives would be to actually reduce the CEO's wealth in the event of the poor performance, if not for the large, offsetting additions to the CEO's portfolio after the acquisition.

Another way to look at the results is to note that the difference in firm performance between the outperforming subsample and the underperforming

Table VI
Long-run CEO Wealth Sensitivity to Firm Performance

Panel A presents the composition of the median acquiring CEO's equity-based starting portfolio wealth (SW) in the year prior to the bid announcement (year $ayr - 1$) and average changes in CEO wealth from the year before the bid announcement to the year after the deal completion (year $cyr + 1$, usually 3 years). The wealth effects are also presented for performance subsamples. Performance is defined as the return from the fiscal year before the merger announcement (year $ayr - 1$) to the fiscal year after the merger completion (year $cyr + 1$), adjusted for the market return. The panel shows the decomposition of a CEO's total wealth change, which is the sum of the change in the portfolio value, the effect of any stock sales or option exercises over the period, and his cash pay over the same period. The cumulative grant date value of any option or restricted stock grants made over the period is also presented. This value is implicitly part of the raw change in the portfolio value, which is driven by changes in the composition of the portfolio, changes in the factors affecting the value of the option portion of the portfolio, and the stock price performance. If a CEO departs the firm, he is assigned zero compensation after the year of departure and we multiply the last known total portfolio delta by the stock return over each succeeding year. The final two rows show raw and market-adjusted returns that shareholders of the acquiring firm earned over the same period. The "% of SW" column scales the value column by the CEO's starting portfolio wealth before the acquisition. Panel B presents the distribution of the acquiring CEO's total wealth change as a fraction of his starting portfolio wealth for the full sample and performance subsamples. The wealth change is computed as in Panel A. Panel C presents the results of a regression explaining the acquiring CEO's total wealth change between year $ayr - 1$ and year $cyr + 1$ as a fraction of his starting portfolio wealth in year $ayr - 1$. If a CEO departs the firm, he is assigned zero compensation after the year of departure and we multiply the last known total portfolio delta by the stock return over each succeeding year. Abnormal Return is the cumulative abnormal (market-adjusted) return between year $ayr - 1$ and year $cyr + 1$. Negative Abnormal Return Indicator is set equal to one if the cumulative abnormal stock return is negative, and zero otherwise. The interaction term *Negative Indicator * Abnormal Return* takes the value of Abnormal Return when it is negative, and zero otherwise. Corresponding p -values are reported in brackets. Boldface type indicates significance at the 10% level or better.

Panel A: Decomposition of Changes in Long-run CEO Wealth						
	All		Outperforming		Underperforming	
	Value	% of SW	Value	% of SW	Value	% of SW
+ Starting Stock Value	12802	55%	13662	57%	10560	54%
+ Starting Option Value	10433	45%	10306	43%	9069	46%
= Starting Wealth	23235	100%	23698	100%	19629	100%
+ Raw Change: Portfolio Value	15990	69%	33665	140%	3934	20%
+ Cumulative Stock Sales	3729	16%	3995	16%	3066	16%
+ Cumulative Option Exercise	2600	11%	3696	15%	1631	8%
+ Cumulative Cash Pay	5823	25%	5577	23%	3934	26%
= Total Wealth Change	28140	121%	46934	194%	13789	70%
Cumulative Grants	7788	34%	9918	41%	5529	28%
Return	45.0%		109.1%		1.4%	
Abnormal Return	-5.2%		64.0%		-52.3%	
Number of Observations	316		128		188	

(continued)

Table VI—Continued

Panel B: Empirical Distribution of Changes in Long-run CEO Wealth					
	Percentile				
	10 th	25 th	50 th	75 th	90 th
All	−5.8%	22.2%	85.9%	186.3%	307.7%
Outperforming	55.2%	112.6%	171.6%	250.6%	376.9%
Underperforming	−15.2%	5.3%	42.6%	107.7%	202.8%

Panel C: The Long-run CEO Wealth-Performance Sensitivity	
	Total Wealth Change
Intercept	1.307 [<.001]
Abnormal Return	1.014 [<.001]
Negative Abnormal Return Indicator	−0.396 [0.036]
Negative Indicator * Abnormal Return	−0.615 [0.018]
Adj R^2	0.334
Number of Observations	316

subsample is extreme (almost 110%), while the difference in stock and option grants for the CEOs of the two subsamples is only about 10% of starting wealth. The fact that underperforming CEOs receive new grants almost as large as those of outperforming CEOs is even more striking when one considers that underperforming CEOs exercise considerably fewer options (8% vs. 15%). It is likely that part of the grants to the outperforming CEOs replace exercised options. While it is clear that CEOs still have an incentive to undertake good acquisitions, the key point here is that they do not have an incentive to avoid poor ones. Presented with two acquisitions, the CEO will clearly choose the better one. However, presented with the choice of pursuing an acquisition that may be questionable, vs. no acquisition at all, the CEO will choose to do the acquisition. This evidence is inconsistent with the incentive alignment hypothesis that CEOs' conjectures only undertake those acquisitions that are in the interests of both themselves and their shareholders.

Bliss and Rosen (2001) focus on the steady-state increase in the level of pay 3 years after a merger, concluding that the increase in pay is enough to counter the negative wealth effect caused by the announcement of the merger. However, we demonstrate that the cumulative stock performance over that 3-year window creates a large negative wealth effect that is not offset by the higher level of pay. Thus, nonrecurring grants during the initial post-merger period (before the steady-state) will determine whether the CEO is better or worse off from the merger. The analysis in panel A shows that during the initial post-merger period, acquiring CEOs receive large new grants to their equity portfolio that

are remarkably insensitive to performance. On average, these grants largely insulate them from the wealth effects of poor performance.

Table VI, panel B presents the empirical distribution of change in long-run CEO wealth for the full and performance subsamples. The CEOs of acquiring firms that underperform the market do not experience any wealth loss on average. Despite average stock underperformance of -52% , offsetting grants leave the median underperforming CEO 43% richer in the year following the merger.⁷ In fact, these large new grants are so pervasive that 78% of the CEOs of *underperforming* firms are better off following the merger.

Overall, these univariate results suggest that when the acquiring firm does well, the CEO enjoys exposure to the rising stock price and is additionally rewarded by new stock and option grants. Conversely, when the acquiring firm performs poorly, the CEO is left relatively unexposed to the stock performance by virtue of offsetting stock and option grants.

In panel C of Table VI, we employ a regression model to more directly examine the association between post-merger CEO wealth and stock performance. The dependent variable is the percentage wealth change of the acquiring CEO from year $ayr - 1$ to year $cyr + 1$. The estimation result reveals a large positive intercept with an additional one-for-one increase in wealth for increases in stock return. However, the negative coefficient on the interaction term capturing negative stock performance largely negates any sensitivity the CEO's wealth has to downside performance. Thus, acquiring CEOs are generously rewarded for positive performance, but barely punished for poor performance. This asymmetric wealth change profile makes acquisitions an attractive corporate strategy from a CEO's standpoint. Overall, these results are not consistent with the incentive alignment hypothesis.⁸

IV. Extensions

A priori, there is no reason to restrict our analysis to acquisitions. Thus, we explore whether other size-enlarging corporate actions (such as capital

⁷ Note that panel A of Table VI refers to the wealth effect of the CEO of the average underperforming firm (average underperformance), while panel B contains the median wealth effect of the underperforming subsample (the distribution presented is that of the wealth effect conditional on performance).

⁸ We estimate an expanded regression model with a *Strong Board* interaction term similar to the final specification in Table IV. The coefficient on the *Strong Board* interaction variable is insignificant, indicating that even firms with strong boards are unable to fully make their CEO wealth sensitive to negative performance. We attribute the difference between the results on CEO pay in Table IV and those on CEO wealth in Table V to the fact that CEO pay is completely under the control of the board while CEO firm-specific wealth is not (as it is affected by CEO trading decisions, etc.). In fact, when we estimate a similar regression using the scaled cumulative grants instead of total wealth change as the dependent variable, we find that cumulative grants given in firms with strong corporate governance mechanisms are sensitive to negative performance. Finally, defining the negative return indicator variable using the cumulative raw return instead of the cumulative abnormal return makes no material difference for our estimation results in panel C.

investments) lead to the same perverse incentives for CEOs as we document for acquisitions. Recent evidence by Titman, Wei, and Xie (2004) shows that there is poor long-run abnormal performance following large capital expenditures, similar to the evidence following acquisitions. Consequently, we examine the CEO pay and wealth change around major capital expenditures, requiring that investing firms have available stock prices from the CRSP files, accounting information from Compustat, and executive compensation data from Standard and Poor's ExecuComp.

The decision to acquire is inherently a lumpy one. That is, acquisitions are discrete, unusual events for a firm. Therefore, to better compare the acquisition and capital investment decisions of firms, we need a discrete measure of unusual capital investment. Following Titman, Wei, and Xie (2004), we construct a measure of abnormal capital investment, as the difference between the current period capital expenditure (Compustat data item 128) scaled by sales and the last 3-year average capital expenditures. To identify abnormal capital investment from the initial capital expenditure sample, we require that the above measure be positive.

We further require that the size of capital expenditures relative to the firm's market value of total assets be greater than 10%. Finally, we require at least 1 year apart between consecutive large capital investments by the same firm. The final capital expenditure sample consists of 242 large investments made by 211 firms. The mean (median) capital expenditure size relative to the investing firm is 0.14 (0.12). The industries with the largest number of transactions are petroleum, electronic equipment, and restaurants and hotels.

We find (untabulated) that our capital expenditure sample firms are much smaller and their pre-investment stock market performance is substantially worse than their acquiring peers; stock and option grants are not as large a fraction of total compensation for these CEOs as they are in our acquisition sample, and CEO total pay and firm-specific portfolio wealth only increase slightly after the capital investment.

Table VII, panel A presents a clear picture of how the size of capital investment is related to the change in CEO pay. We sort the size of the investment scaled by the investing firm's market value of total assets into quintiles. Then, for each size quintile, we report the average change in CEO pay from the year before (year $inv-1$) to the year after the investment (year $inv+1$). While we find a monotonic relation between the size of acquisition and the increase in pay in Table II, panel B, there is no relationship between the change in CEO pay and the size of capital expenditures. In fact, CEOs of firms undertaking the largest capital expenditures actually realize lower stock and option grants and slower growth in total pay. It is clear from the outset that the board views acquisitions and capital expenditures as very distinct corporate investments in evaluating the performance of the CEO, implying that the CEO should view them differently as well.

In Table IV, we find that the total pay of acquiring CEOs is completely insensitive to poor post-merger performance, unless the CEO is overseen by a strong board. Repeating the analysis for the capital expenditure sample, we find much

less downside protection and no relation between the strength of the board and the sensitivity of the investing CEO's pay to performance.

Table VII, panel B presents the long-run association between CEO wealth and the stock performance of the investing firm, analogous to the analysis in Table VI, panel A for acquiring CEOs. The first two columns show that on average the investing firms experience a raw stock return of 26% over the 3-year period, underperforming the market by 12%. Nonetheless, on average the investing CEOs realize a wealth increase of 90%, about one-third of which comes from new stock and option grants.

Table VII
CEO Pay and Wealth Change after Major Capital Expenditures

The table presents an analysis of the capital expenditure sample. The sample consists of 242 large, unexpected capital investments (the difference between current capital expenditure scaled by sales and past 3-year average is positive, and the investment is greater than 10% of the investing firm's market value of total assets) during the period January 1, 1993 to December 31, 2000. We require that there be at least 1 year between consecutive, large capital investments by the same firm. All firms in the sample must have executive compensation data in Standard and Poor's ExecuComp database. Panel A presents an analysis of CEO pay charges following these expenditures. The size of the capital expenditure relative to the investing firm's market value of total assets is given in the final column. The sample is split into quintiles based on the relative size of the investment. For each investment size quintile, we present the average percentage change in cash pay, grants, and total pay from the year before the investment (year $inv - 1$) to the year after the investment (year $inv + 1$) for CEOs in that investment size quintile. Panel B presents the composition of the median investing CEO's equity-based starting portfolio wealth (SW) in the year prior to the major capital expenditure (year $inv - 1$) and average changes in CEO wealth from the year before to the year after a large capital expenditure is made (3 years). The wealth effects are also presented for performance subsamples. Performance is defined as the return from the fiscal year before the major investment (year $inv - 1$) to the fiscal year after completion of the investment (year $inv + 1$), adjusted for the market return. The panel shows the decomposition of a CEO's total wealth change, which is the sum of the change in the portfolio value, the effect of any stock sales or option exercises over the period, and his cash pay over the same period. The cumulative grant date value of any option or restricted stock grants made over the period is also presented. This value is implicitly part of the raw change in the portfolio value, which is driven by changes in the composition of the portfolio, changes in the factors affecting the value of the option portion of the portfolio, and the stock price performance. If a CEO departs the firm, he is assigned zero compensation after the year of departure and we multiply the last known total portfolio delta by the stock return over each succeeding year. The final two rows show the raw and market-adjusted returns that shareholders of the investing firm earned over the same period. The "% of SW" column scales the value column by the CEO's starting portfolio wealth before the capital expenditure.

Panel A: The Relation between Investment Size and Change in CEO Pay				
Quintile	Change in			
	Cash Pay	Grants	Total Pay	Relative Size
1	8.9%	31.5%	23.4%	10.3%
2	15.7%	3.0%	27.6%	11.2%
3	7.2%	57.1%	13.2%	12.4%
4	8.9%	11.6%	14.0%	14.7%
5	17.5%	-24.8%	12.5%	21.3%

(continued)

Table VII—Continued

Panel B: Decomposition of Changes in Long-run CEO Wealth						
	All		Outperforming		Underperforming	
	Value	% of SW	Value	% of SW	Value	% of SW
+ Starting Stock Value	6749	57%	8486	65%	5561	54%
+ Starting Option Value	5092	43%	4569	35%	4738	46%
= Starting Wealth	11841		13055		10299	
+ Raw Change: Portfolio Value	4507	38%	14626	112%	15	0%
+ Cumulative Stock Sales	1294	11%	2196	17%	815	8%
+ Cumulative Option Exercise	1141	10%	2168	16%	624	6%
+ Cumulative Cash Pay	3698	31%	3995	31%	3250	32%
= Total Wealth Change	10642	90%	22985	176%	4706	46%
Cumulative Grants	3275	28%	5268	40%	2178	21%
Return	25.9%		96.3%		−10.2%	
Abnormal Return	−12.1%		73.1%		−55.8%	
Number of Observations	242		82		160	

We also separate the capital expenditure sample into performance subsamples. The middle two columns show that positive performance is very generously rewarded, yielding an average wealth increase for the investing CEOs of \$23 million 1 year after the completion of the investment (about 1.8 times their starting wealth in year $inv - 1$). About two-thirds of these increases are driven by the strong performance of the underlying stock and much of the rest comes from new grants.

The last two columns show that while shareholders of the underperforming firms experience an average 10% reduction in their wealth, the CEOs of these same firms experience a net wealth *increase* of 46%. Offsetting the downward pressure of the falling stock price on their wealth are new grants with a value equivalent to 21% of their starting wealth.

We see the performance differential between the outperforming and underperforming investing firms in the range of 110%, while the stock and option grants to the CEOs of these firms differ only by 19%. Although the table exhibits some of the insensitivity of CEO wealth to performance that we find in the acquisition sample, further analysis shows that the wealth of CEOs undertaking capital expenditures is fairly sensitive to performance. While 78% of underperforming acquiring CEOs are better off, only 61% of underperforming investing CEOs are. Further, repeating the regression in panel C of Table VI for the capital expenditure sample reveals that the positive relation between performance and the wealth change of investing CEOs remains even if the firm underperforms.

We also repeat the above analyses with cash acquisition and stock acquisition subsamples. The long-run wealth effect from the cash and stock acquisitions are quite similar. Comparing this finding to the results for capital expenditures, we conclude that it is not simply the case that all cash investments are treated

the same by the board in setting CEO pay. Capital expenditures and cash acquisitions do not lead to similar wealth effects.

Our general finding that internal and external expansions are treated differently from a compensation standpoint echoes the view of Andrade and Stafford (2004) that the two forms of investment are different. They analyze industry patterns in acquisitions and internal investments and find them to be driven by different factors, concluding that they are not substitutes. Our results on CEO pay and incentives imply that the board views growth through acquisitions vs. growth through capital investment very differently in setting CEO compensation. We conclude that the uncertainty and information environment surrounding an acquisition allow the CEO more leeway in achieving downside protection from a partially captured board. Further, an acquisition provides a natural point for compensation renegotiation and increase, while a large capital expenditure does not. Finally, CEOs undertaking acquisitions are coming off a period of very strong performance, while those undertaking large capital expenditures are not. It is likely that this history of strong performance helps the CEO bargain for downside protection following an acquisition. Overall, these results are not consistent with the incentive alignment hypothesis.

V. Additional Investigation

A. Control Sample

Due to the strong time trend in compensation during most of our sample period, we need to ascertain that the pay and wealth changes in Table II, panel A are indeed abnormal. As a check on the regression control approach we employ throughout, we also adopt the control sample approach. Our control sample of nonbidding firms is obtained by first identifying the set of all ExecuComp firms that were neither targets nor bidders in acquisitions with relative size of at least 10% during our entire sample period (1993 to 2000). This forms the base set of potential control firms. For each bidder in our sample, we select a control firm with the closest market value of total assets to that of the sample firm at the fiscal year-end after the merger is consummated. Matching is done without replacement, so a control firm is matched to only one sample firm. When compared to the pay and wealth changes in the control sample, it is clear that the pay and wealth changes experienced by acquiring CEOs are abnormal. We also use the stock performance of control sample firms to benchmark the acquiring firms and replicate the analysis in Table VI and find that our results remain. Our results are robust to whether matching is done on size, industry, or prior stock performance.

B. Bid Characteristics

We also examine whether interactions that account for the characteristics of the bid or the abnormal stock price reaction to the announcement of the bid have any effect on compensation and wealth changes. We separate bids

based on whether they are diversifying and based on the method of payment (cash or stock). We also control for whether the bidder announcement return is positive or negative. Our finding that compensation changes made following a merger largely insulate the acquiring CEO from the effects of long-run performance on his wealth is robust to all of these controls. Further, there is no significant correlation between long-run performance and the announcement reaction.

C. Acquisition Programs

Our analysis thus far focuses on stand alone acquisitions. A natural question, particularly for investing shareholders, is whether by making multiple acquisitions their CEO continues to reap large increases in pay and wealth. To address such a question, we retain all the large acquisitions in the sample (10% relative size filter applied) allowing for acquisitions that occur in consecutive years.

Table VIII, panel A shows the time trend of the starting year of acquisition programs by our sample firms. Acquisition programs are highly cyclical, and for our sample firms, the number of acquisition programs peaked in 1995 when the U.S. economy was in the course of full recovery from the recession in the early 1990s. In total, we identify 58 acquisition programs initiated by the sample firms.

In untabulated results, we repeat the analysis in Table VI including the acquisition programs and find that the change in CEO firm-specific wealth after the program has a wider spread and somewhat larger mean gains across the board. However, the general picture is unchanged. In particular, the empirical distribution in panel B of Table VI would look very similar, as would the regression in panel C using the larger sample including acquisition programs.

Table VIII, panel B provides a parallel comparison of the pay change experienced by the program acquiring CEO and his nonprogram acquiring counterpart. The compensation variable is the ratio of CEO total pay in the year following the last acquisition in the program to his total pay in the year prior to the start of the program. The “years” column gives the length of the program from the start to end. For the nonprogram acquiring CEOs, for comparison, we compute the ratio of CEO total pay at the same number of years after his first and only acquisition to his total pay in the year prior to that acquisition. The contemporaneous average cumulative returns are computed for the program and nonprogram samples.

We find that total pay continues to increase very briskly for CEOs who complete follow-on acquisitions. For example, at the end of the 4-year program, the average program acquiring CEO has total pay equal to 2.3 times his starting compensation, and over the same measurement period, his firm experiences a cumulative stock return of 123%. In contrast, 4 years after the average nonprogram acquiring CEO's only acquisition, his total pay is 169% of his starting compensation and his firm's cumulative return over the same period is only 38%.

Table VIII
Acquisition Programs

Multiple acquisitions by the same firm are called acquisition programs. Panel A presents the year in which the first acquisition within a program is made. Panel B presents CEO compensation and cumulative returns for program and nonprogram acquiring firms. CEO Pay is the ratio of a CEO total pay in the year following the last acquisition in the program to his total pay in the year prior to the start of the program. Cumulative Return is the contemporaneous cumulative stock return on the acquiring firm. The years column gives the length of the program from the start to end. The nonprogram columns give average pay ratios and cumulative returns for nonprogram acquiring firms after the same number of years since the first and only acquisition. For example, acquisition programs in our sample take either 4 or 5 years. At the end of the 4-year program, the average program acquiring CEO has total pay equal to 2.3 times his starting compensation and his firm has earned a cumulative stock return of 123%. For the average nonprogram acquiring CEO 4 years after his only acquisition, his total pay is 169% of his starting compensation and his firm's cumulative return is only 38%.

Panel A: Frequency Distribution of Acquisition Programs, 1993–2000				
Acquisition Program Starts			Percent of Sample	
1993	4		6.90	
1994	8		13.79	
1995	20		34.48	
1996	10		17.24	
1997	8		13.79	
1998	7		12.07	
1999	1		1.72	
Total	58		100%	

Panel B: CEO Pay and Stock Performance in Program and Nonprogram Acquiring Firms				
CEO Pay	Cumulative Return	CEO Pay	Cumulative Return	Years
Programs		Nonprograms		
2.267	1.225	1.686	0.382	4
3.492	1.614	2.207	0.411	5

It is a well-established fact that bidders tend to be firms with strong pre-bid stock price performance (Roll (1986), Harford (1999), and Shleifer and Vishny (2003)). Of course, a completely entrenched CEO could ignore stock performance in pursuing empire-building acquisitions. However, we do not believe that our results or the results of prior studies such as those cited above suggest that completely entrenched CEOs are common. Rather, as we argue, partially entrenched CEOs with a sympathetic board can exert influence on compensation decisions to protect themselves following bad acquisitions. Nonetheless, the inference to be drawn from panel B is that merger programs do not continue in the face of poor equity performance, providing a natural check on a CEO's ability to string together a series of deals that only benefit himself. Even if the board fails to penalize the CEO for a bad merger, the poor stock performance and perhaps

slow learning by the board remove his ability to engage in another acquisition. Only those firms that have extremely good post-merger stock performance embark on additional acquisitions.⁹ Therefore, the perverse settling-up that we document for stand alone acquisitions does not persist to the same extent in acquisition programs.

D. CEO Turnover

The first part of our analysis is limited to the sample of bidding firms whose CEOs remained in place through at least 1 year following the acquisition. However, our analysis of CEO wealth in Table VI treats a nonsurviving CEO as one who gets no compensation at all after leaving the firm. Thus, if poor performance leads to CEO dismissal, we are being conservative in estimating the wealth of a dismissed CEO and yet we still find that on average CEOs of poorly performing firms are far better off than their shareholders.

Nonetheless, the possibility of being terminated may carry incentive effects that are not captured by a purely financial analysis. In 64 of the 370 acquisitions, the acquiring CEO turns over by the end of the year following the merger. We estimate a turnover probit using the universe of ExecuComp firms, which controls for firm, industry, and performance characteristics (not tabulated). *Ceteris paribus*, acquiring CEOs have no greater or smaller chance of turning over following the acquisition than do nonacquiring CEOs. Thus, it does not appear that we are missing an aspect of incentives due to turnover.

E. Alternative Explanations

One possible mechanism through which even CEOs of poorly performing firms are able to get large post-merger grants could be that the board fixates on a set percentage of the firm's stock to give as an option grant.¹⁰ This type of fixation appears to be common when the board is concerned about dilution. To explore this possibility further, we compute the target grant ratio by dividing the number of options granted in the year before the bid announcement by the contemporaneous number of shares outstanding. A board fixated on a set percentage of shares outstanding would continuously issue the same target ratio each time it makes a grant of options. The fixation story predicts the number of options granted in the year after the merger as the product of the number of shares outstanding that year and the target ratio (computed before the merger). Abnormal grants are computed as the deviation from this number.

There is some evidence of board fixation in our sample. While more than 90% of our firms increase their shares outstanding from before to after the merger, the mean and median abnormal grants in the year after the merger

⁹ Our evidence is consistent with the finding in Klasa and Stegemoller (2005) that acquisition programs rarely continue when the performance of the acquiring firm weakens.

¹⁰ We thank the referee for suggesting this mechanism.

are both close to zero. This holds also for the cumulative grants and in the outperforming and underperforming subsamples. However, there is a negative correlation between the abnormal cumulative grants and the performance of the firm. That is, for the underperforming subsample, the worse the acquiring firm performs, the larger is the abnormal amount of grants (more than would be due to pure dilution fixation). Thus, fixation appears to be part of the mechanism that allows poorly performing CEOs to increase their option grants (after stock-swap mergers), but it is not the whole story.

Another alternative explanation of our finding in the paper is that CEOs are being rewarded for using overvalued equity to acquire less overvalued firms, as Shleifer and Vishny (2003) would suggest. In this case, the results would still be consistent with incentive alignment; the acquiring CEOs were simply taking advantage of their overpriced shares, in the interest of long-term shareholders. It is true that under the overvaluation story, CEOs who use overvalued shares to buy target assets will be rewarded. However, if, as this story would require, the board knows that pre-merger performance was due to overvaluation rather than true value creation, then they should let the CEO's (inflated) wealth decrease to the true value along with the rest of the firm. Thus, the assumption that the CEO and the board know that the post-merger poor performance is simply due to the correction of pre-merger overpriced shares means that the board also knows that the CEO enjoyed unwarranted increases in his wealth prior to the merger. Rather than adjusting compensation to maintain these unjustified increases, the board and the CEO should allow them to reverse along with the stock performance. Instead, we find the opposite. Nonetheless, our evidence does not completely dispose of this alternative explanation if one believes that the board chooses to increase the CEO's pay as a bribe to encourage him to undertake acquisitions with overvalued equity.

VI. Discussion and Conclusion

In the past, CEOs suffered along with shareholders through the effect of their actions on their stock portfolios. However, the common practice of supplementing CEO cash compensation with large grants of new options and restricted stock has perversely changed that relation. We find that current compensation practices give CEOs incentives to undertake an acquisition as their post-acquisition total pay and overall wealth increase substantially. More importantly, we show that, except in the best-governed firms, a CEO's pay following a merger becomes markedly insensitive to performance, with large new grants of options and restricted stock coming even if the merged firm underperforms. Thus, the net effect is that a CEO's wealth actually increases even if he makes a poor acquisition decision. The experience is quite different for the shareholders of the firm; the acquisition arrests what had been superior stock performance and, on average, leads to underperformance, clearly making them worse off.

We compare the acquisition evidence to the experience of CEOs making large capital expenditures. These firms are smaller and have poor stock performance

prior to the investment. We find that compensation changes after large internal investments are much smaller than those after acquisitions. We also find less evidence that CEOs are able to limit the downside exposure of their pay and wealth following an internal investment. Overall, we conclude that CEOs and boards treat internal and external investment very differently. Acquisitions provide a natural impetus for CEOs to renegotiate their compensation whereas large capital expenditures do not. The evidence suggests that when CEOs are in a strong bargaining position relative to their boards, they are able to use this renegotiation opportunity to eliminate any downside risk from the performance of the acquisition.

The paper documents an important, systematic, and probably perverse feature of executive compensation: Current compensation schemes may actually be less effective in controlling the agency conflict than previously thought. This is because the expected flow of new incentives following an acquisition can actually reduce the effectiveness of existing incentives. Thus, our results consistently reject the incentive alignment hypothesis.

These results also complement and extend recent research by Garvey and Milbourn (2004), who find in a broad setting that there is an asymmetry in executive compensation benchmarking; there is significantly less pay-for-luck when luck is down than when it is up. Our investigation fleshes out the asymmetric benchmark puzzle and finds that this asymmetry is stronger following acquisitions and that acquisitions are an important channel through which CEOs achieve asymmetry overall. Our study also sheds light on why firms continued to pursue value-destroying mergers in the 1990s despite the apparent explosion in equity-based compensation: The way it was put into practice, equity-based pay may have actually made the problem worse. Together, these results suggest that compensation research should begin to focus on how the flow of new compensation in reaction to an event or change in performance impacts the *ex ante* perceived incentive effect of pre-event executive portfolios. Our results highlight the fact that the strength of the board vis-à-vis the CEO is a key consideration for an investing shareholder concerned about the kind of perverse *ex post* settling-up documented here or for a CEO evaluating his potential payoffs from undertaking a questionable acquisition.

Finally, our results on compensation agree with the conclusion drawn by Andrade and Stafford (2004) that internal and external investments are different. Future research needs to explain why compensation changes so much and so favorably after acquisitions, regardless of performance, but does not do so after large internal capital expenditures. One potential explanation stems from the uncertainty and information asymmetry during the first few years of a merger integration. It is plausible that a CEO that has the trust of his board could convince the board that despite the performance of the stock, the merger will be successful and the performance will reverse in the longer-run. This type of argument would be harder for CEOs to make with respect to internal investments. Such research would help us understand not only the determinants of executive compensation, but also the tradeoffs between internal and external investment.

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