

MANAGERIAL COMPENSATION AND FIRM PERFORMANCE: EVIDENCE FROM CORPORATE SPINOFFS

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Abstract

In this paper, we study changes in the incentive structure of the CEOs in both parent and spun-off companies, and the effect of managerial incentives on operating performance due to an improved agency relationship between shareholders and managers of both firms after the spinoff. We construct a unique dataset that covers corporate spinoffs between 1992 and 2004. We find a certain level of increase in pay-performance sensitivity of the CEOs of spun-off firms as compared to the CEOs of parent firms. We find that pay-performance sensitivities of both parent and spun-off firms' CEOs are positively related to the operating performance improvement after the spinoff. Overall, our study provides evidence that improved managerial incentive is a source of gains in spinoffs.

Keywords: Executive Compensation, Corporate Spinoffs, Pay-performance Sensitivity

JEL Classification: G34, G35, J33, L14

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1. Introduction

A corporate spinoff is a restructuring event that divides a company (referred to as a parent company) into two (and sometimes more) independent firms. After a spinoff, existing shareholders receive a pro rata distribution of equity in the newly created firm. A number of studies have documented the value-enhancing impact of spinoffs (e.g., Hite and Owers (1983), Slovin, Sushka, and Ferraro (1995), Berger and Ofek (1999), Burch and Nanda (2003)). Possible explanations for the benefits of spinoffs have also been offered by several studies. For example, improved capital allocation efficiency (Gertner, Powers, and Scharfstein (2002)), investment efficiency (Ahn and Denis (2004)), and top management structure (Wruck and Wruck (2002)) are among the sources of gains of spinoffs that have been explored.

Theoretically, spinoffs are considered to be a remedy for agency conflict and information asymmetry problems. This stems from the fact that after spinoff, the division becomes an independent public company, and therefore more information

about the division, including its stock price and performance, becomes observable to the public. Krishnaswami and Subramaniam (1999) find that firms engaging in spinoffs have higher levels of information asymmetry compared to their counterparts, and that information problems decrease significantly after the spinoffs. Charoenwong, Ding and Pan (2008) also document that information asymmetry significantly decreases for sample firms following spinoffs.

This improvement in information transparency can potentially improve the design of a managerial compensation package and more efficiently connect managerial compensation with the new firm's performance and stock price. Also, managers of spun-off divisions can be more effectively monitored after the spinoff. In other words, spinoff improves information transparency for the newly created firms and provides an opportunity for shareholders and the boards of directors to improve monitoring and governance mechanisms (Krishnaswami and Subramaniam (1999)). Therefore, it is asserted that a spinoff "often creates the need for major surgery on executive compensation programs" (Ochsner (1991)). In

addition, Aron (1991) argues that the spinoff event itself can serve as an incentive for managers who will become spun-off firms' executives. Ahn and Walker (2007) support this hypothesis by showing that diversified firms conducting a spinoff are associated with more effective corporate governance (such as greater ownership by outside board members, more heterogeneous boards, and fewer board members). They also show that after spinoffs, these firms' values improve significantly. However, very limited empirical research has directly looked at spun-off firms' management to see whether a better managerial incentive mechanism is indeed established after the spinoff, or whether the two new firms (parent and spun-off firm) perform better after the spinoff as a consequence of improved agency relationships between shareholders and managers.

In this paper, we study spinoffs from the perspective of managerial compensation and incentives. In a review of related literature, Seward and Walsh (1996) find that CEOs of the newly created firms are mostly former managers from parent firms (insiders), that they are usually given a compensation plan that includes stock options, and that a majority of their pay is performance-based. Wruck and Wruck (2002) argue that spinoff events provide an opportunity for management restructuring, and they find evidence that value created in a spinoff announcement is significantly associated with characteristics of the spun-off firm's top management team. But overall very few researchers have further investigated further the managerial incentives and efficiency of the incentive mechanism in parent and spun-off firms. Therefore, in this paper we study the managerial incentives in parent and spun-off companies with a focus on pay-performance sensitivity (PPS) of equity-based compensation and the effect of managerial incentives on the change of pre- and post-spinoff performance of both parent and spun-off firms.

To our knowledge, this paper is most similar to Pyo (2007), which also looks at changes in managerial compensation and managerial incentives after spinoffs. We share Pyo's finding that there is an increase in PPS in the spun-off companies, but no significant increase in PPS for parent companies. Pyo also concludes that changes in PPS are consistent with changes in operating performance in both parent and spun-off companies. However, Pyo's conclusion on operating performance is based on a set of univariate analyses of differences in operating performance across subgroups, without controlling for important factors that may affect firm performance, such as firm size, leverage, and PPSs of parent and spun-off firms. In this paper we conduct a more thorough multivariate analysis to

investigate the impact of change in incentives on the change in firm performance.

Our sample consists of 107 spinoff events announced and completed in the U.S. between 1992 and 2004. Our univariate test results provide some evidence of significant increase in CEOs' pay-performance sensitivity in the spun-off firms compared to the CEOs of the (both pre- and post-spinoff) parent firms. We do not observe any significant change in the pay-performance sensitivity of the parent CEO after the spinoff event. When we divide the sample into subgroups, the pay-performance sensitivity of the spun-off firm's CEO dominates the pay-performance sensitivity of the parent firm mainly in the subgroups of insider CEOs, focus-increasing spinoffs, and spinoffs that bring positive abnormal return to parent firms.

We also investigate the impact of improved managerial incentives after spinoff on the operating performances of both parent and spun-off firms. In our regression analysis, we find a positive relationship between the change in the combined operating performance of the parent and the spun-off firms and the pay-performance sensitivities of the CEOs of these firms after spinoff, whereas the pay-performance sensitivity of the CEO before spinoff does not seem to affect this performance change. Overall our results support the argument that spinoff can benefit firms when the managerial incentive mechanism improves after spinoffs.

This paper is organized as follows: In Section 2 we explain our data sources and the sample selection process. In Section 3 we present our results. Section 4 briefly concludes the paper.

2. Data Collection and Sample Construction

We draw our initial sample of spinoff events from the Security Data Corporation's (SDC) Merger and Acquisition database. First we identify spinoff events that were announced and completed between 1992 and 2004 in the U.S. market, a total of 467 deals. After removing spun-off financial and utility firms, we are left with 357 observations. Based on the brief deal synopsis provided by SDC, we remove a deal from our sample set if

- a) it occurred because of parent company's pressure from a lawsuit or being acquired/takenover,
- b) it occurred because the parent company was acquiring another company,
- c) either the parent or the spun-off company merged with (or was acquired by) another company within one year after spinoff,
- d) it was classified as a reverse spinoff,
- e) the parent company holds more than 50% of the shares of the spun-off firm, or

f) One person was the CEO of both the parent and the spun-off firm.

This procedure leaves 303 observations in our sample. We then restrict our sample to firms that have financial and CEO compensation data available. For parent companies, we require two years of data: one year before the spinoff (year -1) and one year after the spinoff (year +1). For spun-off companies, we require one year of data (year +1). Financial and CEO compensation data is initially obtained from Standard and Poor's Compustat and ExecuComp databases. If either the spun-off or the parent company's data is not available directly from the above databases, we supplement it by manually collecting data from the company's 10-K and proxy statements. We also crosscheck the spinoff deals with media coverage, such as the *Wall Street Journal*, local newspapers, or the company's own website. Sources such as 10-K, proxy statements, and company websites also provide information about the spinoff event, spun-off company, and CEOs' job histories. We further remove an observation if (a) we cannot find any information about the spinoff or about the company from Compustat, ExecuComp, 10-K, proxy statements, or media coverage or (b) the information disclosed in 10-K or proxy statements reveals that either the spun-off or the parent company ceased to exist after the spinoff (due to merger/acquisition activities or bankruptcy). Overall, after an intensive search, we construct a final sample with 107 observations with financial and CEO compensation data for both spun-off and parent companies.

Our variable of interest, the CEO's equity-based incentive, is measured by the pay-performance sensitivity of the CEO's portfolio in the firm's equity. This incentive arises from the executive compensation component, which is tied to the stock price of the firm and is cumulative over years. Consistent with Aggarwal and Samwick (2003), we define PPS as the sum of stock and option sensitivities, each computed per \$100 change in shareholders' wealth.

Specifically,

$$\text{PPS} = [\text{percentage of shares held by CEO} + (\text{delta of options} \times \text{number of options held by CEO} / \text{total number of shares outstanding})] \times 100 \quad (1)$$

Since the delta for stocks is one, for the stock portion of the CEO's equity portfolio, we use the percentage of stock ownership at the beginning of the year for each CEO in our sample. For option holdings, we first obtain the number of options held by the manager at the beginning of the year, which are option grants made in prior years. We use the Black-Scholes formula to determine the delta of options held. The proxy statement does not provide the exercise prices and time to maturities for these options but provides their intrinsic value if they are

in the money. We follow Murphy (1999) to determine an average exercise price for all previously granted options (exercisable and unexercisable), assuming that the intrinsic value is based on the year-end stock price, and we treat all options that are held at the end of the fiscal year as a single grant with a five-year time to maturity. We obtain the risk-free rate using data from the five-year treasury bills constant maturity series available from the Federal Reserve Bank's official website, and the dividend yield and stock volatility from ExecuComp. For the observations that are not in the ExecuComp database, we use the average values of dividend yield and stock volatility of all observations in the ExecuComp database for the sample year.⁹

3. Empirical Results

3.1. Descriptives

In Table 1, we report the descriptive statistics of executive compensation components for the CEOs of sample firms. The median level of total compensation earned by the CEO of the parent companies is \$3.9 million before the spinoff and \$5.4 million after the spinoff. The median CEO earnings of the spun-off companies is \$1.8 million. The large difference in total compensation between the parent and spun-off firm's CEOs is consistent with the difference in the sizes of the parent and spun-off firms presented in Table 2. The median PPS of the parent firms' CEOs is \$0.76 per \$100 of change in total shareholders' wealth for the year prior to the spinoff and \$1.17 for the year after the spinoff, whereas the median PPS of the spun-off firms' CEO is \$1.70 per \$100 of change in total shareholders' wealth.

We present descriptive statistics for major financial variables in Table 2. It is clear that the spun-off firms are much smaller than the parent firms. On average, a spun-off firm's total assets in year +1 are about 13% of its parent firm's assets before the spinoff (year -1), and this ratio is about 19% for sales comparison. The median values of operating return on assets (OROA) measured as operating income before depreciation over total assets do not seem to vary significantly over subsamples of parent and spun-off firms. The median OROA for parent firms at year -1 is 13.9% and at year +1 is 13.4%. The median OROA for spun-off firms at year +1 is 14.4%, slightly higher than the median values of OROA of parent firms. Spun-off companies seem to be slightly less leveraged, compared to the parent companies before or after the spinoffs.

Table 3 presents the distribution of the sample based on deal and CEO characteristics. We define

⁹ For more details of PPS calculation, see Kale, Reis, and Venkataswaran (2009).

“insiders” as those who have worked in the parent company for at least one year before the spinoff. Among the 107 new CEOs of the spun-off companies, 89 of them are “insiders” (83%) and 18 (17%) of them are “outsiders.” Overall, these statistics are consistent with the findings in the literature (Seward and Walsh (1996), Wruck and Wruck (2002), and Pyo (2007)). In addition to CEO characteristics, we also examine certain deal characteristics. Empirical works such as Daley et al. (1997) and Desai and Jain (1999) document that stock market performance as well as operating performance is positively related to increase in focus around spinoffs. We classify a spinoff deal as “focus increasing” if the spun-off division is in a different industry than the parent company with the industry defined by 2-digit SIC code. In other words, if the spun-off division and parent company have different 2-digit SIC codes, we consider the spinoff to be an effort of the parent company to refocus and reduce the negative impact of diversification. In our sample, we have 66 deals (62%) that are labeled “focus increasing,” while in the remaining 41 deals (38%) spun-off divisions share the same 2-digit SIC code as the parent company and therefore are considered to be the outcome of non-focus-increasing spinoffs.

To determine if the spun-off company is a badly performing division before the spinoff event, we compute the cumulated abnormal return (CAR) for parent firms for an event window of day (-1, +1) around the spinoff announcements, with the announcement date being day 0. Stock return and return data for parent companies are obtained from CRSP (The Center for Research in Security Prices). CARs are computed as the sum of the differences between the actual return of the parent company's stock and its expected return, while the expected return is computed following a standard market model. The CRSP value-weighted index is used as market return in the market model to estimate betas. In our sample, six parent firms do not have their stock return data available from CRSP and therefore have to be excluded from our CARs computation. Mean value of CARs for our sample firms is 4.29%, and it is significantly positive at the 5% level. This is consistent with the literature about the overall positive stock market response to spinoff events (Hite and Owers (1983), Miles and Rosenfeld (1983), and Veld and Veld-Merkoulova (2004)). However, not all parent firms enjoyed positive announcement effects from their spinoff events. In the 101 sample parent firms, 66 (65%) of them had positive CARs, while the other 35 (35%) firms experienced negative abnormal returns after spinoff announcements.

3.2. Univariate Analyses

In Table 4, we present a set of univariate test results for the level of pay-performance sensitivity around spinoffs. First we test the difference in the mean and median values of CEO PPSs for our full sample. Both t-tests and Wilcoxon tests are conducted to compare the difference in (a) the spun-off firms in year +1 versus the parent firms in year -1 and (b) the parent firms in year -1 versus the parent firms in year +1. According to the Wilcoxon sign-rank test results, spun-off firms demonstrate significantly higher pay-performance sensitivity compared to pre-spinoff (with sign-rank test value $s = 848.5$) parent firms. However t-test results do not give us the same conclusion ($t = -0.66$). This suggests a skewness in our sample data. For parent firms, there is no significant difference in CEO pay-performance sensitivity between the pre- and post-spinoff periods, according to both t-test and Wilcoxon test results.

To address the skewness issue, we investigate which group(s) of firms induces changes in CEO incentives. We divide our sample into four subgroups according to the quartiles in pre-spinoff parent firms' PPS levels; [0%, 25%), [25%, 50%), [50%, 75%), and [75%, 100%]. We then report our t-test and Wilcoxon test results for differences in PPS in the second part of Table 4. As seen from the table, only spinoffs that come from parents in the highest quartile (above 75%) show significantly decreased PPS in spun-off firms: the t-test value for the difference in the PPS between spun-off firms and pre-spinoff parent firms is -3.22 ($p < 0.01$) and Wilcoxon sign-rank test value is -121 ($p < 0.01$). In the other three quartiles, the PPS of the spun-off firms is significantly higher than the PPS in pre-spinoff parent firms. Therefore our results in Table 4 suggest a higher level of CEO PPS in spun-off firms compared to CEO PPS of parent firms for the majority of the firms in our sample. Our results may also indicate that firms that already provide high equity incentives to their CEOs do not necessarily provide a similar compensation package design in their spun-off firms.

To further study the impact of deal characteristics and CEO characteristics on changes in pay-performance sensitivity, we break down our sample into several sets of subsamples according to whether the spinoff announcement brings positive CARs to parent firms, whether the spun-off firm's CEO is an insider or outsider, and whether the spinoff is considered to be a refocusing effort. These results are reported in Table 5. The upper part of Table 5 reports the mean and median values of CEO PPS in spun-off firms at year +1 and in parent firms at both year -1 and year +1. The lower part of Table 5 reports t-test and Wilcoxon sign-rank test results for the difference in CEO PPS in various subgroups. While we do not observe any statistical

significance from our t-test results, the Wilcoxon sign-rank test results show that the differences in PPS between spun-off firms and pre-spinoff parent firms are generally positive and significant (at a 5% level) if the spinoff firm's CEO is an insider, if the spun-off firm is a bad performer measured using positive stock price reaction to spinoff announcement or if the spinoff is focus increasing for the parent firm. Neither t-test nor Wilcoxon test results indicate a significant difference in CEO PPS for parent firms themselves after spinoff.

To summarize, our univariate tests present some evidence that in our overall sample spun-off firms present a higher level of pay-performance sensitivity, and this PPS improvement prevails in

subsamples based on certain CEO and deal characteristics.

3.3. Multivariate Analysis

In this section, we describe our findings on the relationship between the equity incentives of CEOs and the change in firm performance around spinoffs. If spinoffs reduce information asymmetry and mitigate agency problems between the shareholders and the CEOs, the positive impact should translate into improvement in firm performance after spinoffs. Therefore we hypothesize a positive relationship between the change in operating performance of firms and the improved equity incentives of the CEOs. The regression model is:

$$\Delta Performance = \alpha + \beta_1 * PPS_{spino\text{ff},1} + \beta_2 * PPS_{parent,-1} + \beta_3 * PPS_{parent,1} + \beta_4 * TA_{spino\text{ff},1} + \beta_5 * TA_{parent,1} + \beta_6 * TA_{parent,-1} + \beta_7 * Leverage_{spino\text{ff},1} + \beta_8 * Leverage_{parent,1} + \beta_9 * Leverage_{parent,-1} + \beta_{10} * Asset\ Ratio + \beta_{11} * Insider + \beta_{12} * Focus + \varepsilon \quad (2)$$

Here, as independent variables, $PPS_{parent,1}$, $PPS_{parent,-1}$, and $PPS_{spino\text{ff},1}$ are the pay-performance sensitivity measures for the parent company in year 1, parent company in year -1, and the spun-off company in year +1, respectively. Standard control variables include total assets (TA) and leverage ratios (Leverage), also for the parent company in year +1, parent company in year -1, and the spun-off company in year +1, respectively. To control for the size effect, we also include an Asset Ratio (the ratio between spun-off company's assets and the parent company's assets after the spinoff). In addition, we include two dummy variables, Insider and Focus, to control for the impact of deal characteristics on the change in performance.

Since it is difficult, if not impossible, to identify the performance of the spun-off firms prior

$$Combined\ performance = \frac{OROA_{parent,1} * TA_{parent,1} + OROA_{spino\text{ff},1} * TA_{spino\text{ff},1}}{TA_{parent,1} + TA_{spino\text{ff},1}} \quad (3)$$

$$\Delta Performance = Combined\ performance\ in\ year\ 1 - ROA_{parent,-1} \quad (4)$$

Here, $TA_{parent,1}$ and $TA_{spino\text{ff},1}$ stand for the total assets in year +1 for the parent company and the spun-off company, respectively. $OROA_{parent,-1}$, $OROA_{parent,1}$, and $OROA_{spino\text{ff},1}$ stand for the operating return on assets for the parent company in year -1, the parent company in year +1, and the spun-off company in year +1, respectively. By definition, combined performance after spinoff essentially is the asset-weighted average of OROA of the spun-off company and the post-spinoff parent company. The difference between this variable and the OROA of the parent company before spinoff captures the overall impact of the spinoff on operating performance of both firms. For our sample firms, the mean value of the combined performance one year after spinoff is 12.95%, while

to the spinoff when the divisions' performance is not reported separately, our dependent variable ($\Delta Performance$) is computed by an imputed measure. We first compute the combined operating performance of the parent and the spun-off firm one year after the spinoff year, and weighted by their respective total assets. We then use the difference between this combined operating performance one year after spinoff and the operating performance of the parent firm one year before spinoff as a proxy for the improvement or deterioration of operating performance due to spinoff. This measure is illustrated in the following two equations:

the median value is 13.35%. The mean value of the variable $\Delta Performance$ is -0.58%, while the median is 0.46%. Considering the fact that spun-off firms and parent firms may not be in the same industry anymore after the spinoff, to make sure that the performance measures can be comparable, we also compute the industry-adjusted operating performance for both spun-off and parent firms by subtracting the median value of OROA in their 2-digit SIC industries.

Our main set of independent variables are the CEO PPS for the spun-off firm ($PPS_{spino\text{ff},1}$), for the post-spinoff parent firm ($PPS_{parent,1}$), and for the pre-spinoff parent firm ($PPS_{parent,-1}$). Control variables include log value of total assets for parent

firms and spun-off firms, and the leverage ratios of the spun-off firms and parent firms before and after spinoff. We also include an *Asset Ratio* variable, which measures the ratio between a spun-off firm's total assets at year 1 and the parent firm's total assets at year 1 to control for the size differences of spun-off and post-spinoff parent firms. In addition, we also include *Insider* and *Focus* dummy variables in the regression to explore the impact of CEO and deal characteristics on the potential performance improvement.

We report our findings in Table 6. In the first model in Table 6, we look at the relationship between the change in combined operating performance and the PPS of the spun-off firm's CEO. The coefficient estimate is positive (0.0058) and statistically significant ($t = 2.00$) at the 5% level. In the second model, in addition to the PPS of the spun-off firm's CEO, we also include the PPS of the parent firm's CEO before and after spinoff as two separate variables. In this specification, the coefficient of the PPS of the parent firm at year 1 is positive and significant. However, the coefficient of the PPS of the spun-off firm is not significant at conventional levels ($t\text{-value} = 1.54$), though it remains positive. Models 3 and 4 essentially replicate the first two models with the industry-adjusted measure of performance as the dependent variable instead of the raw value of performance. Coefficients of the PPS of the spun-off firms are positive and significant in both Model 3 and Model 4, while in Model 4, the coefficient of the PPS of the parent firms at year +1 is also positive and significant. These OLS regression estimations offer some support for the conjecture that PPSs of both spun-off firm's CEO and a post-spinoff parent firm's CEO positively affect the combined operating performance of spun-off and parent firms after the spinoff event. Pre-spinoff PPS for the parent firms does not seem to be a significant factor in the change in combined operating performance. Moreover, we do not find any statistical evidence of the effect of deal characteristics on the change of operating performance after spinoff, since all coefficients on *Asset Ratio*, *Insider*, and *Focus* are statistically insignificant in all models in Table 6.

4. Conclusion

In this paper we investigate the change of managerial incentives after spinoff in both parent and spun-off companies and the effect of managerial incentives on the operating performance of spinoff firms due to improved agency relationships between shareholders and managers of both firms. We argue that after the spinoff, the effectiveness of equity-based compensation of the new CEO of the spun-off firm is directly linked to the performance of the spun-off division. We find a certain level of increase in pay-performance

sensitivity of the CEOs of spun-off firms compared to the CEOs of parent firms. However, we find no systematic change in the equity-based incentives of CEOs of parent firms after the spinoff event. We also show that pay-performance sensitivity of both spun-off firm's CEO and parent firm's CEO are positively related to the operating performance difference between the combined (parent and spun-off) firm one year after the spinoff and the parent firm one year prior to the spinoff. Overall, our paper provides evidence that improved managerial incentive is one of the sources of gains in spinoffs.

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Table 1. Descriptive Statistics of CEO Compensation

The sample consists of parent and spun-off firms that were involved in completed spinoffs between 1992 and 2004. "Spinoff (yr +1)" stands for variable information for spun-off companies one year after the spinoff. "Parent (yr -1)" stands for variable information for parent companies one year before the spinoff. "Parent (yr +1)" stands for variable information for parent companies one year after the spinoff. Dollar amounts for salary, bonus, options grants and total compensation are in thousands, and have been converted to 2005 dollars. PPS (pay-performance sensitivity) is the dollar change in CEO's equity portfolio per \$100 change in total shareholders wealth (SHW).

Variable	Spinoff (yr +1) n =107		Parent (yr +1) n =107		Parent (yr -1) n =107	
	Mean	Median	Mean	Median	Mean	Median
Salary (\$ 000)	563.88	549.03	825.76	786.33	882.18	851.22
Bonus (\$ 000)	460.67	231.29	911.94	545.95	1,129.30	558.27
Option grants(\$000)	2,668.27	481.24	3,914.17	1,892.68	4,567.24	1,523.06
Total compensation(\$000)	3,817.04	1,759.91	8,122.37	5,439.09	6,986.93	3,864.59
Stock ownership (%)	1.04	0.27	1.64	0.16	2.00	0.23
PPS(\$ per \$100 of SHW)	2.66	1.70	2.74	1.17	3.00	0.76

Table 2. Descriptive Statistics of Major Financial Variables

The sample consists of parent and spun-off firms that were involved in completed spinoffs between 1992 and 2004. All dollar amounts are in millions and have been converted to 2005 dollars. "Spinoff (yr +1)" records the spun-off company's financial data one year after the spinoff. "Parent (yr -1)" and "Parent (yr +1)" are for parent companies one year before and after the spinoff event, respectively. OROA is operating income before depreciation (OIBD) standardized by total assets. Leverage is computed as total long-term liabilities over total assets.

Variables	Spinoff (Yr +1) n =107		Parent (Yr +1) n = 107		Parent (Yr -1) n = 107	
	Mean	Median	Mean	Median	Mean	Median
Assets (\$)	1,725.26	751.32	11,657.69	3,085.55	12,950.85	3,280.17
Sales (\$)	1,889.86	738.28	9,160.15	2,381.73	10,214.00	2,914.72
OIBD (\$)	268.85	114.58	1,291.36	320.34	1,731.22	427.70
OROA (%)	9.11	14.40	12.72	13.35	13.52	13.86
Leverage (%)	21.09	17.42	22.60	22.06	20.93	19.18

Table 3. Deal and CEO Characteristics

A spun-off firm's CEO is labeled an insider if he/she has been working in the parent firm (at either the corporate or divisional level) for at least one year before the spinoff. Otherwise, he/she is considered an outsider. Positive AR equals 1 if the sum of CARs of the spinoff event is positive over the (-1, +1) event window, and 0 otherwise. Focus equals 1 if the spun-off firm has a different 2-digit SIC code than the parent firm, and equals 0 if the two firms share the same 2-digit SIC code.

Dummy Variable		1	0
Insider	07	CEO is an insider 89 (83.3%)	CEO is an outsider 18 (16.7%)
Positive AR	01	Positive abnormal return 66 (65.4%)	Nonpositive abnormal return 35 (34.6%)
Focus	07	Focus increasing 66 (62%)	Non-focus increasing 41 (38%)

Table 4. Univariate Tests of Pay-Performance Sensitivity

Table 4 presents t-test and Wilcoxon test results for the change in PPS in the full sample as well as in subsamples. "Spinoff (yr+1) vs. Parent (yr -1)" stands for the difference in PPS between the spun-off company one year after the spinoff and the parent company one year before the spinoff. "Parent (yr+1) vs. Parent (yr -1)" stands for the change in PPS for parent companies between one year after the spinoff and one year before the spinoff. Subsamples are drawn according to quartile classification of the PPS in parent firms one year before spinoff. ***, **, and * represent statistical significance at the 1%, 5%, and 10% levels, respectively.

	Spinoff (yr+1) vs. Parent (yr -1)		Parent (yr+1) vs. Parent (yr -1)	
	t-test	Wilcoxon	t-test	Wilcoxon
	<i>Full Sample</i>			
PPS	-0.66 (0.51)	848.5*** (<0.01)	-0.43 (0.67)	273 (0.40)
<i>Parent Firm PPS (Yr -1)</i>				
Very low PPS [<25%]	3.51*** (<0.01)	202*** (<0.01)	3.36*** (<0.01)	157.5*** (<0.01)
Low PPS [25%-50%]	3.92*** (<0.01)	146*** (<0.01)	2.40** (0.02)	73** (0.03)
High PPS [50% - 75%]	2.41** (0.02)	88** (0.03)	0.95 (0.35)	5 (0.91)
Very high PPS [>75%]	-3.22*** (<0.01)	-121*** (<0.01)	-1.64 (0.11)	-84** (0.04)

Table 5. Univariate Tests by CEO Origin, Abnormal Return, and Focusing Effort

Table 5 presents mean and median statistics for PPS in subsamples by various CEO and deal characteristics, as well the t-test and Wilcoxon-test statistics for the difference in PPS. PPS is computed as the stock price sensitivity of the executive's stock and stock option portfolio. "Parent (yr -1)" and "Parent (yr +1)" stand for parent companies one year before and after the spinoff, respectively. "Spinoff (yr +1)" stands for the spun-off companies one year after the spinoff. "CEO Insider" represents spinoffs where the new CEO of the spun-off firm was employed by the parent company at least one year prior to the spinoff. "Positive (Negative) Abnormal Return" represents the spinoff events where the sum of CARs of spinoff announcement is positive (negative) over (-1, +1) event window. "Focusing" represents spinoffs that are considered to be a refocusing effort by the parent companies (where the parent firm and spun-off firm do not share the same two-digit SIC code).***, **, and * represent statistical significance at the 1%, 5%, and 10% levels respectively.

	CEO Insider	CEO Outside	Positive Abnormal Return	Negative Abnormal Return	Focusing	Non- Focusing
No. of Observations	89	18	66	35	66	41
<i>Mean PPS</i>						
Spinoff (yr +1)	2.50	3.05	2.23	3.53	2.71	2.29
Parent (yr -1)	2.88	3.30	3.23	2.85	2.74	3.30
Parent (yr +1)	2.68	2.88	2.54	3.30	3.02	2.23
<i>Median PPS</i>						
Spinoff (yr +1)	1.66	1.85	1.58	2.15	1.63	1.86
Parent (yr -1)	0.73	1.04	0.82	1.13	0.71	0.98
Parent (yr +1)	1.13	1.29	1.16	1.37	1.17	1.26
<i>Difference Tests</i>						
<i>t-test statistics</i>						
Spinoff (yr+1) minus Parent (Yr -1)	-0.69	-0.14	-1.23	0.94	0.05	-1.01
Parent (yr+1) minus Parent (Yr-1)	-0.44	-0.17	-0.96	0.42	0.40	-1.13
<i>Wilcoxon test statistics</i>						
Spinoff (yr+1) minus Parent (Yr -1)	571.5**	22.5	317.5**	94	377.5**	99
Parent (yr+1) minus Parent (yr-1)	243.5	-0.5	72.5	22	194.5	-25.5

Table 6. Operating Performance and Pay-Performance Sensitivity of Spinoff CEOs

Table 6 presents OLS regression results for the relation between the change of operating performance and the CEO incentives around spinoffs. Operating Performance is the ratio of operating income to total assets. "Parent, yr -1" and "Parent, yr +1" stand for one year before and after the spinoff, respectively. "Spinoff, yr +1" stands for one year after the spinoff event. "PPS" is the stock price sensitivity of the executive's stock and stock option portfolio. "Total Assets" variable is the log of firm's total assets. Leverage is computed as total long-term liabilities over total assets. Asset ratio is the ratio of total assets of spun-off firm to total assets of post-spinoff parent firm. "Insider" equals 1 if the new CEO of the spun-off firm was employed at least one year prior to the spinoff, and equals 0 otherwise. "Focus" equals 1 if the parent firm and spun-off firm do not share the same two-digit SIC code, and equals 0 otherwise.

Dependent Variable	Δ Combined Operating Performance			
	Raw returns		Industry-adjusted returns	
Coefficient	Model 1	Model 2	Model 3	Model 4
PPS (Spinoff, yr +1)	0.0058** (2.00)	0.0046 (1.54)	0.0069** (2.24)	0.0055* (1.78)
PPS (Parent, yr -1)		-0.0018 (-1.01)		-0.0018 (-0.99)
PPS (Parent, yr +1)		0.0035** (2.13)		0.0043** (2.49)
Total Assets (Spinoff, yr +1)	0.0042 (0.40)	0.0012 (0.11)	0.0067 (0.60)	0.0036 (0.32)
Total Assets (Parent, yr -1)	0.0595*** (3.12)	-0.0662*** (3.30)	0.0625*** (3.09)	0.0660*** (3.32)
Total Assets (Parent, yr +1)	-0.0678*** (-3.90)	-0.0662*** (-3.85)	-0.0732*** (-3.96)	-0.0714*** (-3.94)
Leverage (Spinoff, yr +1)	0.0805** (2.13)	0.0884** (2.35)	0.6677* (1.69)	0.0778* (1.97)
Leverage (Parent, yr -1)	0.1452** (2.14)	0.1306* (1.93)	0.1754** (2.43)	0.1590** (2.23)
Leverage (Parent, yr +1)	-0.0914* (-1.70)	-0.0890* (-1.69)	-0.1201** (-2.10)	-0.1173** (2.09)
Asset Ratio	-0.0029 (-0.31)	-0.0005 (-0.06)	-0.0077 (-0.79)	-0.0050 (-0.52)
Insider	0.0228 (1.07)	0.0216 (1.03)	0.0296 (1.31)	0.0283 (1.28)
Focus	-0.0138 (-0.84)	-0.0175 (-1.07)	-0.0178 (-0.79)	-0.0223 (-1.30)
Constant	-0.0322 (-0.65)	-0.0450 (-0.77)	-0.0289 (-0.54)	-0.0511 (-0.83)
Adjusted R ²	0.20	0.22	0.20	0.23
No. of Observations	103	103	103	103