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MANAGERIAL COMPENSATION AND CORPORATE SPINOFFS

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Research summary: *This article investigates how corporate spinoffs affect managerial compensation. These deals are found to improve the alignment of spinoff firm managers' incentive compensation with stock market performance, especially among spinoff firm managers that used to be divisional managers of the spun-off subsidiary, and particularly when the spun-off subsidiary performs better than or is unrelated to its parent firm's remaining businesses. By contrast, incentive alignment does not improve for the parent firm managers running the divesting companies. This finding appears to be driven by a significant post-spinoff increase in these managers' incentive compensation, the magnitude of which is inversely related to governance quality in their firms. Together, these results elucidate how spinoffs influence managerial compensation in diversified firms and the companies they divest.*

Managerial summary: *This article explores how spinoffs affect incentive alignment: the correlation between incentive compensation and stock market performance. The incentive alignment of spinoff firm managers improves following these deals. These gains are the largest when spinoff firm managers used to be divisional managers of the spun-off subsidiary and when the spun-off subsidiary performs better than or is unrelated to the other businesses in the parent firm. By contrast, incentive alignment does not improve for parent firm managers. Instead, the level of these managers' incentive compensation rises significantly post-spinoff, and the magnitude of this increase is inversely related to governance quality in these firms. Together, these results shed light on the ways in which spinoffs influence managerial compensation in diversified firms and in the companies they divest.*

"The spinoff will enable AOL to create incentives for its management and employees that are more closely tied to its business performance and shareholder expectations. Separate compensation arrangements should more closely align the interests of AOL's management and employees with the interests of its shareholders."

Source: AOL Inc.'s Registration Statement (Form 10-12b), filed with the Securities and Exchange Commission (SEC) on July 27, 2009, to effectuate its separation from Time Warner Inc.

INTRODUCTION

Corporate spinoffs are a type of divestiture in which a "parent firm" distributes shares in one of its businesses *pro-rata* to its shareholders, resulting in the creation of an independent, publicly-traded "spinoff firm." These deals are thought to create shareholder value in a number of ways—by

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separating unrelated businesses and reducing complexity (Cusatis, Miles, and Woolridge, 1993; Daley, Mehrotra, and Sivakumar, 1997; Desai and Jain, 1999; Krishnaswami and Subramaniam, 1999), by improving the focus of managerial and financial resources (Gertner, Powers, and Scharfstein, 2002; Hambrick and Stucker, 1999; Miles and Woolridge, 1999; Schipper and Smith, 1983), and by reducing information asymmetry and clarifying capital market perceptions (Bergh, Johnson, and DeWitt, 2008; Feldman, 2015; Feldman, Gilson, and Villalonga, 2014; Gilson *et al.*, 2001; Zuckerman, 2000).

The introductory anecdote points to an additional benefit that could be associated with spinoffs: their ability to improve (relative to pre-spinoff levels) the alignment of spinoff firm managers' incentive compensation with stock market performance. For example, the above description of one of the key advantages of AOL-Time Warner's 2009 spinoff of AOL suggests that the incentive compensation of AOL's managers was expected to be more closely aligned with AOL's performance after the spinoff than it had been with AOL-Time Warner's performance before the spinoff. A few studies have theorized that the incentive compensation of the "spinoff firm managers" (who run a spinoff firm after it has been divested) should be more closely aligned with spinoff firm performance than the incentive compensation of the "divisional managers" (who ran the spun-off subsidiary before it was divested) was with parent firm performance (Aron, 1991; Seward and Walsh, 1996). However, existing research has yet to test this possibility empirically.

In addition to undertaking this task in this study, I extend the idea that spinoffs might improve the incentive alignment of spinoff firm managers in two novel directions. First, I argue that the predicted improvement in spinoff firm managers' incentive alignment should be the greatest among the spinoffs that most clarify how the effort these managers put into running their companies determines the incentive compensation they receive. Second, I explore, as an empirical question, whether or not spinoffs produce a parallel improvement (relative to pre-spinoff levels) in the incentive alignment of the "parent firm managers" who run the divesting parent firms before and after the spinoffs they undertake, as well as the reasons why this might or might not be the case.

Using proprietary panel data on 228 spinoffs that were undertaken from 1995 to 2010, I find that the alignment of spinoff firm managers' incentive compensation with stock market performance improves post-spinoff, especially when one or more divisional managers of the spun-off subsidiary become spinoff firm managers, when the spun-off subsidiary performs better than the remaining businesses within its parent firm, and when the spun-off subsidiary is unrelated to its parent firm's primary operations, all of which represent spinoffs that clarify the link between these managers' effort and their incentive compensation. By contrast, I find no post-spinoff improvement in the incentive alignment of parent firm managers. Further investigation of these results reveals that the *level* of parent firm managers' incentive compensation rises significantly post-spinoff, and that the magnitude of this compensation increase is inversely related to governance quality. This provides one potential explanation for why the incentive alignment of parent firm managers does not improve post-spinoff.

In sum, this study investigates a predicted benefit of spinoffs, an improvement in the alignment of spinoff firm managers' incentive compensation with stock market performance, and sheds light on the mechanisms that may be driving these expected gains. Interestingly, however, although spinoffs appear to improve incentive alignment among spinoff firm managers, they fail to do so for parent firm managers, potentially because these deals facilitate opportunistic behavior on the part of these individuals. Together, these findings yield important insights into the consequences of spinoffs for managerial compensation in diversified firms and the companies they divest.

THEORY AND HYPOTHESES

Incentive compensation in diversified firms

Executive compensation packages are typically comprised of a fixed (salary and bonus) and a variable (incentive-based) component (Finkelstein and Hambrick, 1988). The incentive-based component of compensation packages has received much attention in the literature, in large part, due to its motivational properties (Devers *et al.*, 2007). The logic behind this benefit is that in firms in which ownership and control are separate, the interests of managers may not match those of shareholders (Berle and Means, 1932), leading managers to make decisions that maximize their own earnings

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rather than shareholder value (Jensen and Meckling, 1976). However, when incentive compensation is aligned with firm performance—that is, when a manager's incentive-based pay is set to increase in proportion to the stock market performance of the firm he oversees—managers bear the full costs of any perquisites they consume through a deterioration in the value of their incentive compensation. Thus, managers will be motivated to take actions that maximize shareholder value, since doing so maximizes the value of their own earnings as well (Gabaix and Landier, 2008; Hall and Liebman, 1998; Jensen and Murphy, 1990). Incentive compensation that is aligned with firm performance is therefore an efficient means of compensating managers.

While setting managers' compensation packages is a complex process in most companies, the challenges it poses in diversified firms are even more significant because the task of aligning incentive compensation with firm performance must be undertaken for the "divisional managers" who run the company's divisions. Divisional managers' incentive compensation consists of two components: one based on divisional profitability, and one linked to the firm's overall stock market performance (Wulf, 2002, 2007). The higher a divisional manager sits within his or her divisional hierarchy, the greater is the share of his or her incentive compensation that is based on corporate (rather than divisional) performance (Eisenreich, 2014).

Divisional managers face two challenges due to this two-part incentive compensation scheme. First, the fact that part of divisional managers' incentive compensation is linked to divisional performance might lead to distortions in behavior. As Aron (1991: 507) notes:

> "The difficulty with compensating a manager as a function of the accounting value of his division is that as long as net cash flows differ from accounting income, the manager's incentives will differ from the desires of shareholders. For example, suppose the manager knows that it is an appropriate time to build a new plant . . . . The effect of the investment may well be to increase the value of the firm but to depress the current accounting return because of the large expenditure. A manager with a short expected tenure at the firm relative to the life of the investment may choose not to make the investment at all."

Second, and even more importantly, the part of divisional managers' incentive compensation that is linked to the company's overall stock market performance may not appropriately motivate divisional managers to act in the best interests of shareholders. As noted by Seward and Walsh (1996: 28), "the motivational property of market-based contracts for the division manager is suspect since too many factors beyond the manager's control are responsible for the firm's performance (Hill, Hitt, and Hoskisson, 1992). Such a market-based compensation contract … would be based upon the relative financial performance of all of the parent's operations. As such, it would be a noisy indicator of the division manager's performance." Aron (1991: 506) comes to a similar conclusion: "When a division is part of a multiproduct corporation, the stock value of the firm is a noisy signal of the market's evaluation of any one divisional manager's productivity. Loosely speaking, the more noise there is in the signal, the costlier it is to properly motivate the manager." This has been shown to result in divisional managers taking actions that are not necessarily in line with shareholder interests, such as reducing research and development (R&D) or capital expenditures below their optimal levels (Hoskisson, Hill, and Kim, 1993a; Hoskisson, Hitt, and Hill, 1993b).

A spinoff results in the creation of two publicly-traded companies, one consisting of the assets that pertain to the division that is spun-off into the "spinoff firm" (run by "divisional managers" pre-spinoff and "spinoff firm" managers'' post-spinoff), and one consisting of the remaining assets that are left behind within the divesting "parent firm." As legally-independent entities, spinoff firms now have their own stock market performance, as well as the right to set their own managers' incentive compensation. This means that the spinoff firm managers' incentive compensation can now be based more directly on the performance of the actual entity that they oversee. As a result, spinoff firm managers should be better motivated to take actions that maximize shareholder value for the spinoff firms. Seward and Walsh (1996: 27, *emphasis* added) came to this exact conclusion: "the creation of separately traded equity claims allows for the opportunity to design *more efficient* market-based incentive

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compensation contracts." These points offer the following baseline hypothesis:

> *Baseline Hypothesis 1: Spinoff firm managers' incentive compensation will be more closely aligned with spinoff firm performance post-spinoff than divisional managers' incentive compensation had been with parent firm performance pre-spinoff.*

While the foregoing discussion suggests that spinoffs would be expected to improve spinoff firm managers' motivation to maximize shareholder value, an important question remains outstanding: under what conditions will the improvement in the alignment of spinoff firm managers' incentive compensation with stock market performance be most pronounced? I use the literatures on diversified firms and spinoffs to elucidate this issue.

Spinoff firm managers' incentive compensation

Why might spinoffs result in improved incentive alignment for spinoff firm managers? Existing research points to three potential explanations, all having to do with the possibility that certain spinoffs may more significantly clarify the link between the effort spinoff firm managers put into running their firms and the incentive compensation these managers earn.

The first of these explanations concerns spinoff firm managers' career histories. In theory, the managers of a newly-created spinoff firm could originate from one of five pre-spinoff employment positions: (1) they could be divisional managers of the spun-off subsidiary; (2) they could be divisional managers of subsidiaries of other companies; (3) they could be corporate managers of the divesting parent firm that is undertaking the spinoff; (4) they could be corporate managers of other companies; or (5) they could come from non-corporate backgrounds. Existing research indicates that spinoff firm managers typically originate from the first, third, and fourth of these categories. For example, Seward and Walsh (1996) found that 61 percent of spinoff firm CEOs used to be divisional managers of the spun-off subsidiary, 21 percent were former CEOs of the divesting parent company, and 15 percent were CEOs of other companies. Similarly, Wruck and Wruck (2002) found that 56 percent of spinoff firms have managers who used to be divisional managers of the spun-off subsidiaries, 22 percent of spinoff firms have managers who used to be executives of the divesting parent firms, and 32 percent of spinoff firms have managers who used to be top executives of other companies. However, according to these two studies, spinoff firm managers do not typically originate as divisional managers of subsidiaries of other companies, or from non-corporate backgrounds, the second and fifth categories.[1] Thus, for the purposes of the discussion that follows, the incentive alignment of spinoff firm managers originating from three types of pre-spinoff employment positions is considered: divisional managers of spun-off subsidiaries, managers of parent firms, and managers of other companies.

For spinoff firm managers who used to be the divisional managers of spun-off subsidiaries, overseeing a subsidiary within a diversified firm may not carry the same reputational prestige or financial remuneration as running a publicly-traded company. As a result, divisional managers may perceive themselves as being under-rewarded, a tendency that may be heightened by their incentive compensation being linked to overall firm performance. Spinoffs can resolve this problem by promoting the divisional managers who ran the spun-off subsidiaries to become CEOs and top executives of the spinoff firms. As noted by Seward and Walsh (1996: 27–28):

> "A spinoff represents a powerful promotion-based motivation for incumbent divisional or subsidiary managers. That is, the former SBU or divisional manager may have been implicitly or explicitly promised that he or she might be the CEO of a free-standing company one day. A corporate spinoff allows managers of the formerly combined entity to fulfill that promise and install an insider as the CEO of the new firm."

Divisional managers who become spinoff firm managers face an entirely new set of responsibilities

[1] This point is corroborated by the data in the sample of spinoffs I analyze in this study. Of the 1,208 managers of the spinoff firms in my sample in the effective years of those deals, 930 of them (77%) were divisional managers of the spun-off subsidiary, 209 of them (17%) were former top managers of the divesting parent firm, 52 of them (4%) were former top managers of other companies, 10 of them (0.8%) were partners or principals of financial services firms, and 7 of them (0.6%) were divisional managers of subsidiaries of other companies.

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and requirements. Wruck and Wruck (2002: 5186) provide several examples:

> "Rather than being 'governed' by and reporting to headquarters staff, the top manager of a spun off business is governed by and reports to a board of directors elected by shareholders; rather than becoming skilled at requesting resources from headquarters through an internal capital market, the top manager must raise funds externally; rather than being constrained by, or subjected to, the internal control systems and policies of the parent corporation, the top manager can choose a set of systems and practices that best suit the purposes of the newly independent company; and rather than relying on (providing) cross-subsidization from (to) other business units in hard times, the company must be organized and managed to be self-sufficient, which requires developing capital acquisition and/or payout policies."

Given the newfound functions with which divisional managers who become spinoff firm managers are tasked, these individuals' incentive compensation must reflect the increase in responsibility and duties associated with their new positions. Aligning these managers' incentive compensation with spinoff firm performance should accomplish this aim. As such, the foregoing discussion suggests that the incentive compensation of divisional managers who become spinoff firm managers will be more closely aligned with spinoff firm performance post-spinoff than it had been with parent firm performance pre-spinoff.

By comparison, for spinoff firm managers who used to be corporate executives of the divesting parent firms or of other companies, the alignment of their incentive compensation with firm performance is unlikely to change post-spinoff. As top-level executives of the original companies they ran pre-spinoff, these managers' incentive compensation would have been aligned with those firms' stock market performance. Analogously, as top-level executives of the spinoff firms they run post-spinoff, these managers' incentive compensation will be aligned with the spinoff firms' stock market performance. Thus, for this group of managers, incentive compensation would be expected to be well-aligned with stock market performance in both the pre- and post-spinoff time periods. Taken in conjunction with the earlier prediction of a post-spinoff improvement in incentive alignment among divisional managers who become spinoff firm managers, this point implies the following hypothesis:

> *Hypothesis 1a: The post-spinoff improvement in spinoff firm managers' incentive alignment will be greater when one or more divisional managers of the spun-off subsidiary become spinoff firm managers than when this is not the case.*

Second, multi-business firms frequently use the cash flows generated by their better-performing divisions to cross-subsidize their worse-performing divisions (Duchin and Sosyura, 2013). For example, Lamont (1997) presents evidence that oil firms took advantage of the 1986 decline in the price of oil to fund increased capital investments in their non-oil divisions (e.g., chemicals, mining, etc.). Along these lines, Stein (1997) and Scharfstein and Stein (2000) respectively theorized that corporate headquarters engage in "winner picking" and "corporate socialism" in deciding how to allocate funds across their divisions.

One challenge that this set of issues poses for divisional managers is that cross-subsidization is linked to undervaluation in diversified firms' stock market performance (Rajan, Servaes, and Zingales, 2000). This suggests that aligning divisional managers' incentive compensation with overall corporate performance is likely to under-reward divisional managers who run a division that performs better than the firm's remaining businesses since the metric to which these managers' incentive compensation is linked is lower than it would be if the division operated as a pure-play firm (Berger and Ofek, 1995). Another problem is that cross-subsidization may induce shirking among divisional managers, since the returns to their effort may be used to support worse-performing divisions (Nickerson and Zenger, 2008; Zenger and Marshall, 2000). Thus, when a division that performs better than its peers is spun off, the spinoff firm managers can be more directly rewarded for their efforts, suggesting:

> *Hypothesis 1b: The post-spinoff improvement in spinoff firm managers' incentive alignment will be greater when the spun-off subsidiary performs better than the remaining businesses in its parent firm than when this is not the case.*

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Third, multi-business firms are often undervalued because their operations are difficult for investors and analysts to understand (Feldman *et al.*, 2014), which typically occurs when these firms run businesses that are unrelated to their primary operations (Gilson *et al.*, 2001; Zuckerman, 1999). As a result, diversified firms frequently spin off (and otherwise divest) unrelated divisions (Bergh, 1995, 1998; Bergh *et al.*, 2008; Zuckerman, 2000), thereby reducing their complexity (Cusatis *et al.*, 1993). Furthermore, spinoffs of unrelated businesses are associated with greater improvements in stock market performance than spinoffs of related businesses (Daley *et al.*, 1997; Desai and Jain, 1999; Krishnaswami and Subramaniam, 1999).

Divisional managers who run unrelated subsidiaries face two problems because of these issues. For one thing, when a division is unrelated to the main business in which its parent company operates, the drivers of performance for each of the two entities, as well as the horizons over which positive returns may be earned, are likely to be totally different from one another (Jones and Hill, 1988; Rumelt, 1974; Thompson, 1967), making stock market performance a particularly "noisy" measure of productivity for these managers (Aron, 1991: 506). For another thing, the fact that firms that operate in unrelated businesses may be under-valued in the stock market should under-reward divisional managers for their work, since the metric to which these managers' incentive compensation is linked is again lower than it would be if the division operated as a pure-play firm (Berger and Ofek, 1995). As a result, managers of unrelated divisions may not be adequately remunerated for their efforts. Thus, when a diversified firm spins off an unrelated division, the spinoff firm managers of that new company can be rewarded solely on the basis of their own firm's independent performance, suggesting:

> *Hypothesis 1c: The post-spinoff improvement in spinoff firm managers' incentive alignment will be greater when the spun-off subsidiary is unrelated (rather than related) to the parent firm's primary operations.*[2]

METHODS

Sample and data

The sample employed in this article is the universe of 228 spinoffs undertaken by Fortune 500 firms between 1995 and 2010. SDC Platinum's Mergers and Acquisitions database was used to compile a list of all of the spinoffs that were announced and completed by Fortune 500 firms between January 1, 1995 and December 31, 2009. There were 260 such spinoffs. Thirty-two of these deals were eliminated because SDC had mis-classified tracking stock issuances as spinoffs (e.g., Applera's 1999 tracking stock issuance for Celera Genomics) or because the spinoff firm lost its independence through acquisition, bankruptcy, or some other deal immediately following the completion of the spinoff (e.g., Cargill's acquisition of Agribrands International immediately following its 1998 spinoff from Ralston Purina).

Spinoff firm data were gathered from registration and proxy statements, accessible from the Securities and Exchange Commission (SEC). When a company undertakes a spinoff, it is required to disclose fairly extensive backward-looking information on the pre-spinoff operations of the business unit it will spin off, providing otherwise inaccessible data about the functioning of that subsidiary within its diversified parent company. The registration statements include pre-spinoff data on the financial characteristics of the spun-off subsidiaries and on the compensation earned by the divisional managers who ran them. The proxy statements provide analogous post-spinoff data on these spinoff firms' executive compensation and financial characteristics. Thus, these data were gathered for the three years before each spinoff, the year in which each deal took place, and the three years after each spinoff, resulting in a seven-year panel for each spinoff firm.

[2] A noteworthy nuance to Hypothesis 1c emerges from Hill *et al.*'s (1992) and Hoskisson *et al.*'s (1993b) arguments that relatedly-diversified firms are more likely to align divisional managers' incentive compensation with corporate profitability to foster cooperation, while unrelatedly-diversified firms are more likely to align divisional managers' incentive compensation with divisional profitability to foster autonomy. These studies imply that Hypothesis 1c is more likely to be supported in relatedly-diversified firms. These firms set their divisional managers' incentive compensation on the basis of corporate performance, suggesting that in these companies, the post-spinoff improvement in spinoff firm managers' incentive alignment will be greater among unrelated (rather than related) spinoffs. By contrast, the predicted effect of Hypothesis 1c should be smaller in unrelatedly-diversified firms, in which divisional managers are already compensated on the basis of divisional performance. While this nuance is not formalized as a hypothesis, it will be tested later in the article.

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Modeling approach

Jensen and Murphy's (1990) model facilitates an analysis of the alignment of incentive compensation with firm performance by predicting changes in incentive compensation (Compensation) based on changes in stock market performance (Market Capitalization):

$$\text{Compensation}_{it} = \alpha + \beta_1 \text{Market Capitalization}_{it} + \Sigma_{j=2}^{n} \beta_j \text{Control}_{jit} + \varepsilon_{it}, \quad (1)$$

where β_1 represents the dollar change in incentive compensation that is associated with a 1,000-dollar change in market capitalization, reflecting the overall alignment of incentive compensation with stock market performance.

Baseline Hypothesis 1 predicts an improvement in the alignment of spinoff firm managers' incentive compensation with stock market performance following the completion of a spinoff. This post-spinoff improvement can easily be represented by interacting Market Capitalization with an indicator variable (Post) that takes the value 1 in years after a spinoff, and 0 in the years prior. Thus, Equation 1 can be re-written as follows:

$$\text{Comp}_{it} = \alpha + \beta_1 \text{Market Cap}_{it} + \beta_2 \text{Post}_{it} + \beta_3 \text{Post} \times \text{Market Cap}_{it} + \Sigma_{j=4}^{n} \beta_j \text{Control}_{jit} + \varepsilon_{it}, \quad (2)$$

where β_3 represents the post-spinoff change in the alignment of incentive compensation with stock market performance. This coefficient is the key test of Baseline Hypothesis 1, measuring the dollar change in incentive compensation that is associated with a 1,000-dollar change in post-spinoff market capitalization.

Hypotheses 1a–c consider how the magnitude of the post-spinoff change in the alignment of incentive compensation with stock market performance might vary depending on the characteristics of the spun-off subsidiary. To test these contingencies, variables representing these characteristics (Subsidiary Characteristic) are interacted with Post × Market Capitalization. Accordingly, Equation 2 can be modified as follows:

$$\text{Comp}_{it} = \alpha + \beta_1 \text{Market Cap}_{it} + \beta_2 \text{Post}_{it} + \beta_3 \text{Post} \times \text{Market Cap}_{it} + \beta_4 \text{Subsidiary Characteristic}_{it} + \beta_5 \text{Post} \times \text{Market Cap} \times \text{Subsidiary Characteristic}_{it} + \Sigma_{j=6}^{n} \beta_j \text{Control}_{jit} + \varepsilon_{it}, \quad (3)$$

where β_5 represents the post-spinoff change in the alignment of incentive compensation with stock market performance when the spun-off subsidiary exhibits a hypothesized characteristic. This coefficient serves to test Hypotheses 1a–c by measuring the dollar change in incentive compensation that is associated with a 1,000-dollar change in post-spinoff market capitalization for spinoffs that exhibit the hypothesized characteristics.

Given that this modeling approach compares the pre- and post-spinoff incentive alignment of spinoff firm managers, the appropriate empirical methodology is first-differences regressions. To account for the potential biasing effects of non-random selection on these first-differences results, I also use differences-in-differences regressions to compare the pre- and post-spinoff incentive alignment of spinoff firms to a benchmark set of control firms.

Variables

Dependent variable

Consistent with both the theoretical development and the empirical setup of this article, the dependent variable in the upcoming regressions must measure incentive compensation, that is, the portion of an executive's total compensation that is linked to stock market performance. Under ExecuComp's definition, total compensation consists of seven components: salary, bonus, other annual compensation, the total value of restricted stock granted, the total value of stock options granted, long-term incentive payouts, and other long-term compensation. Salary and bonus are the only two of these components that are not somehow equity-linked. Accordingly, following Jensen and Murphy (1990), and Zajac and Westphal (1994), incentive compensation is calculated as the difference between an executive's total compensation and the sum of his salary and bonus.

Thus, in the post-spinoff years, Spinoff CEO Compensation is the incentive compensation earned by the CEO of a spinoff firm, while in the pre-spinoff years, Spinoff CEO Compensation is the incentive compensation of the divisional

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president of a spun-off subsidiary. Analogously, in the post-spinoff years, Spinoff Executive Compensation is the average incentive compensation earned by the top management team of a spinoff firm, whereas in the pre-spinoff years, Spinoff Executive Compensation is the average incentive compensation earned by the divisional management team that ran a spun-off subsidiary.

Key independent variables

Spinoff Market Capitalization is defined as (1) the spinoff firm's end-of-year market capitalization in the spinoff's effective year and the three years thereafter, and (2) the parent firm's end-of-year market capitalization in the three years before the spinoff (since divisional managers' incentive compensation is aligned with the *parent firm's* stock market performance pre-spinoff). Post is an indicator variable taking the value 1 in the effective year and three years after a spinoff, and 0 pre-spinoff.

To test Hypothesis 1a, Divisional Managers to Spinoff Firm is an indicator variable that takes the value 1 if one or more divisional managers of the spun-off subsidiary become top managers of the spinoff firm, and 0 otherwise. To test Hypothesis 1b, Cross-Subsidization is defined as an indicator variable that takes the value 1 if (a) a spun-off division has positive operating income (a good proxy for cash flows (Lamont, 1997)), and (b) at least one of the parent firm's remaining businesses has negative operating income. Finally, to test Hypothesis 1c, Unrelated is an indicator variable taking the value 1 if a division does not share a three-digit SIC code with its parent firm, and 0 otherwise.

Control variables

Several control variables are also included in the upcoming regressions. For example, ln(Total Assets), measuring firm size, is calculated as the natural log of total assets. Leverage, measuring a firm's relative debt level, is defined as the sum of short- and long-term debt, scaled by market capitalization. Negative Net Income, representing financial distress, is an indicator variable that takes the value 1 if a firm has negative net income in a given year, and 0 if not. Number of Segments, measuring a firm's diversification level, is a count of the total number of business segments in which a spinoff firm operates in the post-spinoff years; in the pre-spinoff years, Number of Segments takes the value 1, under the assumption that subsidiaries operating within diversified firms only consist of one business segment. Finally, Total Executives, representing the size of a top management team, is a count of the total number of top executives running a firm or a division. Table 1 presents descriptive statistics for all of the variables described in this subsection of the article.

RESULTS

First-differences results

Tables 2 and 3 present the results of first-differences regressions testing how the alignment of spinoff firm managers' incentive compensation with firm performance changes following the completion of a spinoff. Table 2 presents these results for CEO compensation, and Table 3 presents analogous results for average top management team compensation. All models include deal and year fixed effects with robust standard errors clustered by deal.

In both tables, Regression (1) is the baseline regression testing the overall relationship between incentive compensation and firm performance. The coefficients on Market Cap are not statistically significant, indicating that incentive compensation is not aligned with firm performance overall. While the coefficients on Market Cap are still not significant in Regression (2), the coefficients on Post × Market Cap are both positive and highly significant. These findings provide support for Baseline Hypothesis 1, indicating that the alignment of spinoff firm managers' incentive compensation with firm performance improves following the completion of a spinoff. Economically, the coefficient estimates on Market Cap and Post × Market Cap in Table 2 reveal that overall, spinoff firm CEOs lose about 50 cents for every 1,000-dollar increase in market capitalization, whereas post-spinoff, they earn about 12 dollars for every 1,000-dollar increase in market capitalization. Similarly, from Table 3, while executives of spinoff firms earn, overall, about 47 cents for every 1,000-dollar increase in market capitalization, post-spinoff, they earn about 3 dollars for every 1,000-dollar increase in market capitalization.

Regressions (3), (4), and (5) test whether this improvement in the alignment of incentive compensation with firm performance is greater when spinoffs exhibit the characteristics

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Table 1. Descriptive statistics, spinoff firms

Variable	Mean	Std. dev.	Min	Max
Spinoff CEO compensation ($000)	314.794	681.494	0.000	6,894.635
Spinoff executive compensation ($000)	107.283	233.611	0.000	2,832.408
Market cap ($000)	14,339.760	32,781.760	5.106	310,218.700
Post	0.571	0.495	0.000	1.000
Post × market cap ($000)	1,728.679	7,486.997	0.000	199,279.800
Divisional managers to spinoff	0.939	0.240	0.000	1.000
Cross-subsidization	0.374	0.407	0.000	1.000
Unrelated	0.923	0.266	0.000	1.000
ln(total assets)	7.309	1.760	0.000	13.736
Negative net income	0.751	0.433	0.000	1.000
Leverage	0.229	0.216	0.000	1.264
Number of segments	2.355	1.506	1.000	8.000
Total executives	5.276	2.182	1.000	19.000

Table 2. First-differences regressions, spinoff firm CEOs

DV: Spinoff CEO compensation	(1)	(2)	(3)	(4)	(5)
Hypothesis	–	1	1a	1b	1c
Market cap	0.001	−0.000	−0.000	−0.000	−0.001
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
Post		86.112	94.284	85.954	82.466
		(105.548)	(106.690)	(104.440)	(106.229)
Post × market cap		0.012***	0.014	0.000	0.011
		(0.002)	(0.012)	(0.023)	(0.012)
Post × mkt cap × div mgrs to spinoff			0.026**		
			(0.013)		
Post × mkt cap × cross-subsidization				0.012***	
				(0.004)	
Post × mkt cap × unrelated					0.024**
					(0.012)
ln(total assets)	41.996	27.438	28.525	27.432	29.463
	(46.469)	(44.553)	(44.848)	(44.613)	(43.965)
Negative net income	11.589	18.941	17.292	18.931	21.167
	(97.120)	(95.932)	(95.962)	(95.650)	(95.761)
Leverage	−74.994	−116.529	−125.275	−116.563	−107.253
	(188.931)	(178.068)	(179.797)	(176.647)	(177.523)
Number of segments	44.174	38.748	38.037	38.752	39.384
	(57.403)	(57.189)	(57.189)	(57.304)	(57.019)
Total executives	33.923*	25.126	25.664	25.121	27.200
	(18.459)	(20.035)	(20.078)	(20.134)	(19.695)
Constant	−443.548	−220.872	−256.499	−220.746	−248.786
	(336.906)	(527.153)	(531.539)	(524.745)	(524.686)
Observations	577	577	577	577	577
R^2	0.074	0.094	0.097	0.094	0.098

***p < 0.01; **p < 0.05 (not mentioned in this table); *p < 0.1
All regressions include deal and year fixed effects. Robust standard errors clustered by deal in parentheses.

identified in Hypotheses 1a–c. These hypotheses are tested by interacting Post × Market Cap with Divisional Managers to Spinoff Firm, Cross-Subsidization, and Unrelated. In Regressions (3), (4), and (5), the coefficients on these interaction terms are positive and significant (except for Post × Market Cap × Unrelated in Table 3). Additionally, Figures 1–3 show that the post-spinoff improvement in the alignment of incentive compensation with firm performance is greater when spinoffs exhibit the hypothesized characteristics than when they do not. Together,

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Table 3. First-differences regressions, spinoff firm executives

DV: Spinoff executive compensation Hypothesis	(1) –	(2) 1	(3) 1a	(4) 1b	(5) 1c
Market cap	0.001	0.000	0.000	0.000	0.000
	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Post		17.114	19.007	19.009	17.081
		(38.769)	(38.802)	(37.932)	(38.908)
Post × market cap		0.003**	0.003	0.002	0.003
		(0.000)	(0.002)	(0.006)	(0.003)
Post × mkt cap × div mgrs to spinoff			0.006**		
			(0.002)		
Post × mkt cap × cross-subsidization				0.003**	
				(0.001)	
Post × mkt cap × unrelated					0.000
					(0.003)
ln(total assets)	2.621	−0.944	−0.702	−0.836	−0.929
	(11.087)	(10.178)	(10.243)	(10.277)	(10.174)
Negative net income	12.219	10.093	9.518	10.103	10.095
	(21.832)	(21.797)	(21.751)	(21.788)	(21.823)
Leverage	−23.674	−31.303	−33.336	−30.987	−31.253
	(50.032)	(47.860)	(47.782)	(47.858)	(48.037)
Number of segments	11.570	10.125	9.954	10.082	10.128
	(12.329)	(12.106)	(12.101)	(12.147)	(12.106)
Total executives	1.536	−0.837	−0.738	−0.772	−0.825
	(5.771)	(7.140)	(7.146)	(7.163)	(7.205)
Constant	121.914	186.267*	197.045*	195.084*	193.410*
	(94.773)	(98.736)	(101.333)	(100.543)	(101.327)
Observations	604	604	604	604	604
R^2	0.060	0.077	0.079	0.078	0.077

**p < 0.01; *p < 0.1
All regressions include deal and year fixed effects. Robust standard errors clustered by deal in parentheses.

these findings provide support for Hypotheses 1a–c.[3]

[3] In the Theory and Hypotheses section, I argued that Hypothesis 1c was more likely to be supported in relatedly-diversified firms than in unrelatedly-diversified firms (Hill *et al.*, 1992; Hoskisson *et al.*, 1993b). To confirm this intuition, I created two sub-sample: unrelatedly-diversified firms (defined as having more than half of their business segments operating in three-digit SIC codes that are different than their firms' primary SIC codes) and relatedly-diversified firms (defined as having less than half of their business segments operating in three-digit SIC codes that are different than their firms' primary SIC codes). In the relatedly-diversified sub-sample, the coefficient on Post × Market Cap × Unrelated is positive and highly significant, indicating that the improvement in the post-spinoff alignment between incentive compensation and firm performance is greater when unrelated (rather than related) divisions are spun off. By contrast, in the unrelatedly-diversified sub-sample, the coefficient on Post × Market Cap × Unrelated is not significant. A Wald test reveals that the coefficients on Post × Market Cap × Unrelated are significantly different from one another across these two regressions. Accordingly, these findings confirm the intuition that the post-spinoff improvement in the alignment of incentive compensation with stock market performance among unrelated spinoffs should be greater in relatedly-diversified firms than in unrelatedly-diversified firms.

Differences-in-differences results

The results presented thus far indicate that spinoffs improve the incentive alignment of spinoff firm managers. However, the incentive compensation of the divisional managers running the spun-off subsidiaries (rather than those firms' remaining divisions) could have been the most misaligned pre-spinoff. While the purpose of this study is not to establish conclusively that spinoffs *cause* improvements in the alignment of spinoff firm managers' incentives, it is nevertheless important to determine whether the above results hold using methods that account for non-random selection. This subsection of the article endeavors to do this using a propensity score matching model. The first-stage regression in this model predicts the likelihood that a given firm is or is not involved in a spinoff, facilitating the identification of a control group against which to benchmark the changes in incentive alignment that occur among the spinoff firms. Differences-in-differences regressions are then run

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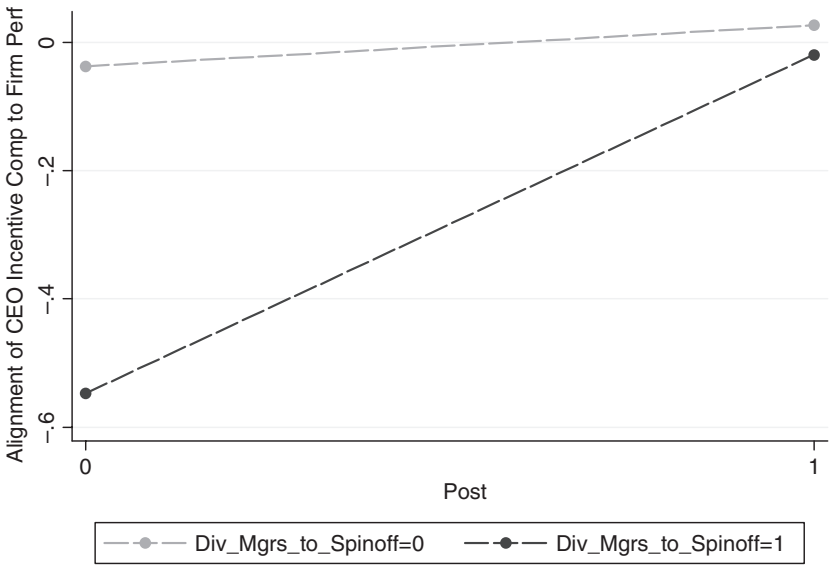

Figure 1. Improvement in the alignment of the spinoff firm's CEO incentive compensation with firm performance when one or more divisional managers become spinoff firm managers

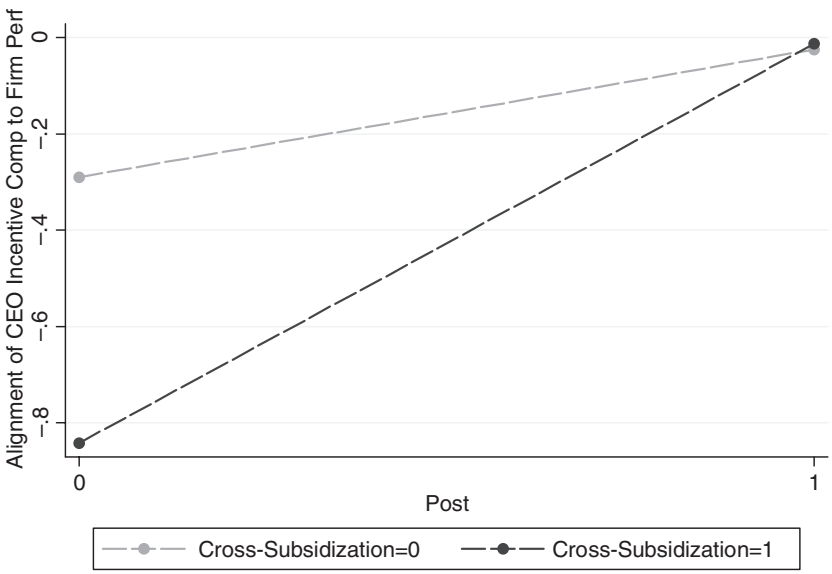

Figure 2. Improvement in the alignment of the spinoff firm's CEO incentive compensation with firm performance when a division may have been used to cross-subsidize other businesses

to test how incentive alignment changes pre- to post-spinoff, for the spinoff firms versus the control group.

To implement this model, compensation data were initially gathered for the entire ExecuComp universe, except for the spinoff and parent firms, from 1995 through 2009. The firm-year pairs in this universe of companies were then combined with the observations pertaining to the spinoff firms. The first-stage probit regression of the above-referenced propensity score matching model predicts the likelihood that a given company is involved in a spinoff. As such, its dependent variable takes the value 1 if a firm was involved in a spinoff (i.e., if it is one of the spinoff firms), and 0 if it was not (i.e., if it is a non-spinoff company from the remaining ExecuComp universe). To ensure that this regression is matching comparable firms over the same

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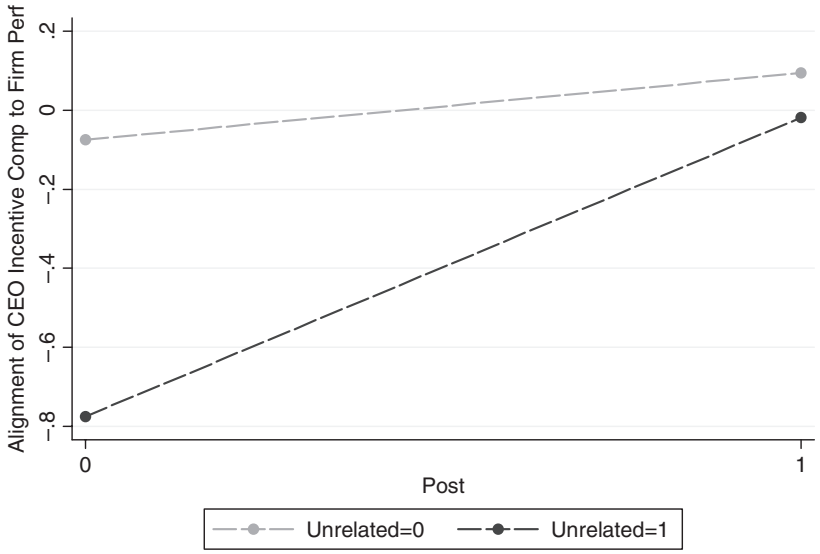

Figure 3. Improvement in the alignment of the spinoff firm's CEO incentive compensation with firm performance when a division is unrelated to its parent firm's primary operations

time periods and within the same industries, the independent variables in this probit regression are total assets, total sales, net income, market capitalization, year fixed effects, and three-digit SIC code fixed effects. The five "nearest-neighbors" to each spinoff firm, as predicted by the propensity scores generated by this probit model, are then identified as the control group.

From there, Treated is defined as an indicator variable taking the value 1 if a firm-year observation pertains to one of the spinoff firms, and 0 if the observation pertains to one of the firms in the control group. Treated is used to implement differences-in-differences regressions testing how the alignment of managerial compensation with firm performance changes pre- to post-spinoff, for the spinoff firms in the sample versus the control group. Building on Equation 2, presented earlier in the article, Treated is interacted with each of the key independent variables in this equation, as follows:

$$\begin{aligned}\text{Comp}_{it} = \alpha + \beta_1 \text{Market Cap}_{it} + \beta_2 \text{Post}_{it} + \beta_3 \text{Post} \times \text{Market Cap}_{it} + \beta_4 \text{Treated}_{it} \\ + \beta_5 \text{Post} \times \text{Market Cap} \times \text{Treated}_{it} + \Sigma_{j=6}^{n} \beta_j \text{Control}_{jit} + \varepsilon_{it}. \end{aligned} \quad (4)$$

In this equation, Post × Market Cap × Treated is the key construct, whose coefficient, β_5, measures the post-spinoff change in incentive alignment for the spinoff firms relative to the control group. Table 4 presents results of these differences-in-differences regressions.

In Regressions (1) and (2), the coefficients on Post × Market Cap × Treated are positive and significant, indicating that for the spinoff firms (relative to the control group), the alignment of incentive compensation with firm performance improves following the completion of a spinoff (relative to pre-spinoff alignment). However, the coefficients on Post × Market Cap are not significant, indicating that the post-spinoff improvement in the alignment of incentive compensation with firm performance is concentrated solely among the spinoff firms and not the control group. This pair of findings provides further support for Baseline Hypothesis 1, indicating that the alignment of spinoff firm managers' incentive compensation with stock market performance improves once spinoffs are complete.

Figure 4 plots the ratio of CEO compensation to market capitalization over time for the spinoff firms and the control group. The average incentive compensation earned by the CEOs of the control group exceeds that of the divisional presidents up through the effective year of the spinoffs. However, in the

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Table 4. Differences-in-differences regressions, spinoff firms

Dependent variable: Variable	Spinoff CEO compensation (1)	Spinoff executive compensation (2)
Market cap	0.003	0.002
	(0.009)	(0.001)
Post	1.007	−14.502
	(111.807)	(41.931)
Post × market cap	−0.000	0.008
	(0.002)	(0.007)
Post × market cap × treated	0.025**	0.012**
	(0.013)	(0.005)
ln(total assets)	216.258**	291.727***
	(98.497)	(23.362)
Negative NI	−25.204	−17.948
	(229.390)	(74.257)
Leverage	−1,443.277***	−90.002
	(488.770)	(150.708)
Constant	1,885.625*	−1,040.339**
	(1,098.279)	(436.768)
Observations	6,279	6,635
R^2	0.059	0.146

***p < 0.01; **p < 0.05; *p < 0.1
All regressions include firm and year fixed effects. Robust standard errors clustered by firm in parentheses.

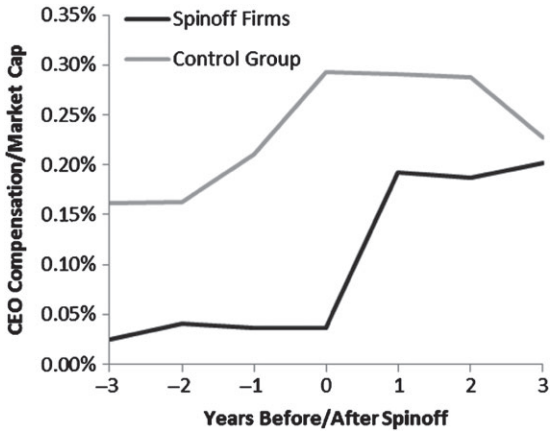

Figure 4. CEO compensation of spinoff firms and control group over time

years thereafter, the incentive compensation of the spinoff firms' CEOs becomes statistically identical to that of the control group's CEOs. This equalization reflects the positive and significant coefficients on Post × Market Cap × Treated in Table 4.

Empirical extension: parent firm results

Having theorized about and explored the conditions under which spinoffs result in improved incentive alignment for spinoff firm managers, an important question remains outstanding: how, if at all, would spinoffs be expected to affect the incentive alignment of the parent firm managers who undertook these deals? Despite the clarity of the prediction that spinoffs would be expected to improve spinoff firm managers' incentive alignment, the same is not necessarily true for parent firm managers. Accordingly, in this subsection of the article, I first outline the two possible arguments for how spinoffs might affect parent firm managers' incentive alignment, and then go on to test these arguments empirically.

On the one hand, aligning parent firm managers' incentive compensation with stock market performance may not directly or adequately reward these managers for the attention that overseeing certain divisions might demand of them (Holmstrom and Milgrom, 1991). Stock market performance reflects the work that parent firm managers put into running that company's operations in the aggregate, but diversified firms are highly complex organizations with multiple divisions, some of which might demand more of parent firm managers' scarce attention than others (Ambos and Birkinshaw, 2010; Bouquet and Birkinshaw, 2008; Joseph, 2014; Joseph and Ocasio, 2012). Spinoffs could resolve this issue by removing businesses that consume a great deal of parent firm managers' attention, allowing parent firm managers' incentive compensation to reward them more directly for allocating their attention to a smaller and more focused set of operations. Thus, one possible argument for how spinoffs might affect parent firm managers' incentive alignment is that (conditional on weak pre-spinoff incentive alignment) parent firm managers' incentive compensation will be more closely aligned with parent firm performance post-spinoff than it had been pre-spinoff.

On the other hand, it could equally be the case that spinoffs might not improve the alignment of parent firm managers' incentive compensation with parent firm performance. Firms often undertake spinoffs in conjunction with other corporate scope-altering strategies, such as mergers and acquisitions, alliances and joint ventures, and even internal development into new areas (Capron, Mitchell, and Swaminathan, 2001; Chang, 1996; Helfat and Eisenhardt, 2004). Additionally, the implementation of spinoffs itself requires a great deal of managerial attention and effort, in that these deals necessitate the separation of previously-integrated assets, capabilities, and human capital

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(Corley and Gioia, 2004; Gilson, 2000; Semadeni and Cannella, 2011; Seward and Walsh, 1996; Woo, Willard, and Daellenbach, 1992). As a result, even if spinoffs do remove businesses that consume a great deal of parent firm managers' attention, the link between these managers' incentive compensation and their firm's stock market performance may still be blurred by these (and possibly other) alternative demands. Thus, the other possible argument for how spinoffs might affect parent firm managers' incentive alignment is that there will be no post-spinoff improvement in the alignment of parent firm managers' incentive compensation with parent firm performance.

To test which of these two opposing arguments is at play empirically, I re-ran all of the spinoff firm results presented previously for the parent firms in my sample. I gathered pre- and post-spinoff data on the parent firm managers' executive compensation from ExecuComp, and financial data from Compustat. The core variables used in my regressions are constructed analogously to their spinoff firm counterparts: Parent CEO Compensation is the incentive compensation earned by the CEOs of the parent firms; Parent Executive Compensation is the average incentive compensation earned by the top management teams of the parent firms; and Parent Market Capitalization is the parent firm's market capitalization, measured on the last trading day of each fiscal year. The same control variables used in the spinoff firm regressions, measured for the parent firms, are also included in my models. Table 5 presents descriptive statistics for all of the parent firm variables.

Table 6 presents the results of first-differences regressions testing how the alignment of parent firm managers' incentive compensation with parent firm performance changes following the completion of a spinoff. Panel A presents these results for CEO compensation, and Panel B presents analogous results for average top management team compensation. All models include deal and year fixed effects with robust standard errors clustered by deal.

In both panels, Regression (1) is the baseline regression testing the overall relationship between parent firm managers' incentive compensation and firm performance. The coefficients on Market Cap are positive and significant, suggesting that the incentive compensation of parent firm managers is well-aligned with firm performance in both the pre- and post-spinoff time periods. The magnitude of these coefficients indicates that for every 1,000-dollar increase in a firm's market capitalization, CEO compensation rises by about 22 dollars, and average executive compensation rises by about 6 dollars. By contrast, the coefficients on Post × Market Cap are not significant in Regression (2) in either panel, indicating that even though parent firm managers' incentive compensation appears to be well-aligned with firm performance overall, there is no incremental post-spinoff improvement in this relationship. As noted above, the finding that there is no post-spinoff improvement in parent firm managers' incentive alignment is not too surprising, given that there is no empirical evidence that these managers' incentive alignment was weak pre-spinoff.

Table 7 presents the results of differences-in-differences regressions testing how the alignment of parent firm managers' incentive compensation with stock market performance changes pre- to post-spinoff, for the parent firms in the sample versus their control group of comparable companies (which were identified using the same propensity score matching procedure that was employed to construct the control group for the spinoff firms). In Regressions (1) and (2), the coefficient on Market Cap is positive and significant, meaning that incentive compensation is aligned with stock market performance overall for managers of both the parent firms and the control group. By contrast, however, the coefficients on Post × Market Cap × Treated are not significant in either regression, indicating that for the parent firms (relative to the control group), the alignment of incentive compensation with firm performance does not improve following the completion of a spinoff (relative to pre-spinoff alignment).

In sum, both the first-differences and differences-in-differences results indicate that there is no post-spinoff improvement in the alignment of parent firm managers' incentive compensation with parent firm stock market performance. To shed additional light on why this might be the case, Figure 5 plots the ratio of CEO incentive compensation to market capitalization over time for the parent firms and the control group. The compensation levels of the parent firms' and the control group's CEOs are statistically identical through the effective year of the spinoffs. However, the compensation of the parent firms' CEOs jumps dramatically in the year following the completion of these deals, returning to its normal levels thereafter. This increase in parent firms' CEO compensation

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Table 5. Descriptive statistics, parent firms

Variable	Mean	Std. dev.	Min	Max
Parent CEO compensation ($000)	1,002.041	2,308.415	0.000	25,197.160
Parent executive compensation ($000)	451.143	886.389	0.000	9,698.665
Market cap ($000)	20,785.280	39,144.590	0.034	310,218.700
Post	0.571	0.495	0.000	1.000
Post × market cap ($000)	8,324.137	26,238.160	0.000	276,428.600
ln(total assets)	8.993	1.683	3.025	14.593
Negative net income	0.176	0.381	0.000	1.000
Leverage	0.276	0.187	0.000	1.477
Number of segments	3.565	1.821	1.000	12.000
Total executives	5.186	2.889	0.000	12.000

Table 6. First-differences regressions, parent firm CEOs and executives

Dependent variable:	**Panel A** Parent CEO comp		**Panel B** Parent exec comp	
Variable	(1)	(2)	(1)	(2)
Market cap	0.022**	0.022**	0.006**	0.006**
	(0.009)	(0.009)	(0.003)	(0.003)
Post		241.827		118.921
		(268.455)		(86.975)
Post × market cap		0.005		0.001
		(0.007)		(0.003)
ln(total assets)	135.055	134.330	3.328	25.423
	(231.596)	(256.630)	(79.178)	(85.322)
Negative net income	71.917	87.920	−0.087	−3.286
	(159.656)	(156.965)	(54.979)	(55.821)
Leverage	−326.435	−379.558	−33.035	−42.217
	(1,137.187)	(1,154.987)	(232.982)	(235.464)
Number of segments	−96.204	−102.610	−42.862*	−41.245
	(69.023)	(67.297)	(25.477)	(25.128)
Total executives	26.885	30.062	8.798	9.686
	(50.089)	(49.472)	(17.871)	(18.119)
Constant	97.230	−623.375	199.050	−255.752
	(1,916.442)	(2,333.685)	(664.608)	(820.272)
Observations	979	979	1,174	1,174
R^2	0.107	0.112	0.064	0.066

**p < 0.05 (not mentioned in this table); *p < 0.1
All regressions include deal and year fixed effects. Robust standard errors clustered by deal in parentheses.

above "peer" levels could explain the lack of significance of the coefficients on Post × Market Cap × Treated in Table 7.

Implicitly, there are two possible explanations for this pattern of results. The first is that parent firm managers deserved this increased level of pay because the spinoffs they undertook created shareholder value (Daley *et al.*, 1997; Desai and Jain, 1999; Krishnaswami and Subramaniam, 1999). The second is that parent firm managers behaved self-interestedly, using their spinoffs as an opportunity to temporarily boost their compensation above normal levels. The latter interpretation is consistent with results produced by Pathak, Hoskisson, and Johnson (2014), who established that CEO compensation increases following refocusing events, as a sort of *ex post* settling up for reducing firm scope. To determine which of these explanations is at play, Table 8 presents the results of regressions testing the relationship between the post-spinoff change in compensation and two new variables: CAR, measuring the stock market's

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Table 7. Differences-in-differences regressions, parent firms

Dependent variable: Variable	Parent CEO comp (1)	Parent exec comp (2)
Market cap	0.014**	0.033***
	(0.006)	(0.008)
Post	252.098**	70.232
	(100.917)	(117.442)
Post × market cap	0.004	0.003
	(0.003)	(0.005)
Post × market cap × treated	−0.011	−0.004
	(0.008)	(0.008)
ln(total assets)	349.773***	733.974***
	(118.612)	(158.698)
Negative NI	−350.983***	−169.595*
	(88.370)	(91.854)
Leverage	−1,395.473***	−1,317.518***
	(448.175)	(317.278)
Constant	−252.766	−4,133.686***
	(1,110.349)	(1,438.676)
Observations	5,577	5,936
R^2	0.124	0.163

***p < 0.01; **p < 0.05; *p < 0.1
All regressions include firm and year fixed effects. Robust standard errors clustered by firm in parentheses.

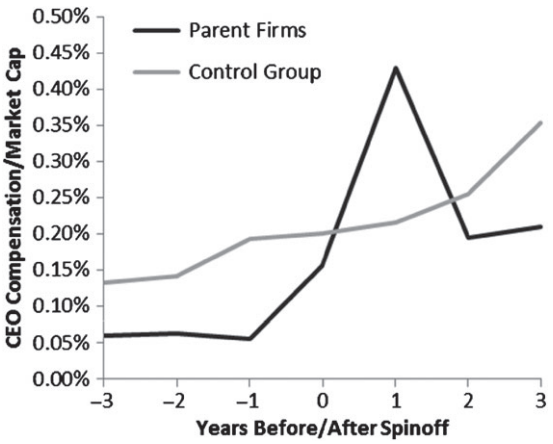

Figure 5. CEO compensation of parent firms and control group over time

reaction to spinoff announcements, and G-Index, measuring the quality of corporate governance within the parent firms (Gompers, Ishii, and Metrick, 2003).

In Panel A, the dependent variable is the change in the ratio of parent firm CEO compensation to market capitalization between the effective year of the spinoff and the year thereafter. The dependent variable in Panel B is the analogous change in the ratio of mean parent firm executive compensation to market capitalization.

CAR is defined as the cumulative abnormal returns to spinoff announcements, generated using an event study that measures the shareholder value created by these deals. Following Anand and Singh (1997), normal returns are predicted from firms' daily stock returns and the stock market's returns during a 250-day estimation window [-800, -551] before each spinoff's announcement date. Abnormal returns are then predicted on the basis of these normal returns within a three-day event window [-1, +1] surrounding these announcement dates. Finally, cumulative abnormal returns are calculated as the cumulative sum of abnormal returns within the event window. If the argument is correct that the post-spinoff pay increase enjoyed by parent firm managers is a reward for creating shareholder value, CAR should be positively associated with the change in CEO and executive compensation.

G-Index is Gompers *et al.*'s (2003) index of governance quality, which awards firms a point for each of the 16 provisions they have in place that restrict shareholder rights (e.g., poison pills, staggered boards, etc.). Accordingly, higher values of G-Index reflect worse corporate governance. If the argument is correct that parent firm managers behave self-interestedly by using spinoffs as an opportunity to raise their compensation, G-Index should be positively associated with the change in CEO and executive compensation.

The coefficient on CAR is not significant in Table 8, suggesting that the increase in compensation earned by parent firm managers following the completion of their spinoffs is not a reward for creating shareholder value.[4] However, the positive and significant coefficient on G-Index reveals that the parent firms in which the quality of governance is the worst experience the largest increases in CEO and executive compensation following the completion of those spinoffs. Because the firms in which the quality of governance is the worst may be run by the most opportunistic or self-serving managers, this finding provides some evidence that parent firm managers may use spinoffs to temporarily boost their compensation levels.

[4] This non-result is unchanged when alternate estimation ([-515, -366]) and event windows ([0, +1] and [-2, +2]) are employed, or when shareholder value is measured using the parent firms' annual returns.

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Table 8. Post-spinoff changes in parent firm executive compensation

	Panel A DV: Δ(CEO comp)			Panel B DV: Δ(Exec comp)		
Variable	(1)	(2)	(3)	(1)	(2)	(3)
CAR	0.466		0.751	1.244		2.847
	(1.405)		(1.630)	(5.481)		(6.807)
G-index		0.108**	0.110**		0.456**	0.464**
		(0.045)	(0.046)		(0.189)	(0.195)
ln(total assets)	−0.116*	−0.251***	−0.250***	−0.461*	−1.063***	−1.058***
	(0.065)	(0.083)	(0.086)	(0.277)	(0.351)	(0.362)
Leverage	0.908	1.438*	1.493*	3.475	6.057*	6.250*
	(0.666)	(0.803)	(0.830)	(2.813)	(3.374)	(3.491)
Negative NI	−0.252	−0.571*	−0.562*	−0.803	−2.446*	−2.403*
	(0.258)	(0.312)	(0.326)	(1.079)	(1.318)	(1.380)
Total executives	0.403***	0.509***	0.510***	1.630***	2.181***	2.189***
	(0.075)	(0.086)	(0.089)	(0.314)	(0.365)	(0.375)
Constant	−1.580*	0.065	0.701	−5.569	2.821	2.783
	(0.928)	(1.264)	(1.121)	(3.585)	(4.562)	(4.706)
Observations	215	215	215	206	206	206
R^2	0.307	0.392	0.396	0.295	0.394	0.397

***p < 0.01; **p < 0.05; *p < 0.1
All regressions include year fixed effects. Standard errors in parentheses.

DISCUSSION AND CONCLUSION

Summary of results

This study has investigated how the alignment of spinoff and parent firm managers' incentive compensation with stock market performance changes following corporate spinoffs.

For spinoff firm managers, the alignment of incentive compensation with stock market performance improves post-spinoff, both in absolute terms and relative to a matched sample of companies that were not involved in these deals. This improvement is even larger when one or more of the spun-off subsidiary's divisional managers move to the spinoff firm, when the spun-off subsidiary performed better than the remaining businesses within its parent firm, and when the spun-off subsidiary is unrelated to its parent firm's primary operations. However, there is no analogous post-spinoff improvement (either in absolute or relative terms) in the alignment of parent firm managers' incentive compensation with stock market performance.

Further analysis of the parent firm results reveals that the level of parent firm managers' incentive compensation rises significantly in the year immediately following the completion of their spinoffs, relative to a matched sample of firms that did not undertake these deals. The firms in which parent firm managers' incentive compensation rises most dramatically are found to have the lowest quality corporate governance, yet their shareholders do not enjoy significantly higher returns from their firms' spinoffs than the shareholders of firms in which parent firm managers' incentive compensation increases more modestly.

Theoretical contributions

The core conceptual insight to emerge from this study is that spinoffs would be expected to, and do, improve the incentive alignment of spinoff firm managers. A major challenge experienced by divisional managers in diversified firms is that aligning their incentive compensation with overall stock market performance may not properly motivate them to maximize shareholder value. The root cause of this challenge is that aligning incentive compensation with stock market performance may obscure the link between the effort these managers put into running their division and the incentive compensation they receive, since the metric on which their incentive compensation is based is influenced by the performance of the other divisions within their firm. Spinoffs would be expected to resolve this problem because these deals permit the spinoff firm managers' incentive compensation to be based directly on the performance of the actual entity that they

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oversee, clarifying the link between effort and outcomes for these managers. Together, these points suggest that divisional managers face significant challenges in doing their jobs in diversified firms, and that spinoffs resolve these difficulties, with important implications for the efficiency with which spinoff firm managers are compensated.

Building on these insights, a key finding that comes out of this study is that although spinoffs are associated with improvements in the alignment of spinoff firm managers' incentives with stock market performance, the same benefits do not appear to accrue to parent firm managers. On the one hand, this finding is somewhat counterintuitive: managerial attention and corporate scope are at odds with one another, and given that spinoffs reduce firm scope, these deals should forge a closer link between the attention that parent firm managers devote to their firms' remaining operations and corporate outcomes. On the other hand, the reason why incentive alignment may not improve is that the level of compensation earned by parent firm managers jumps post-spinoff, and the magnitude of this compensation increase is inversely related to governance quality (but uncorrelated with shareholder returns to the spinoff). The juxtaposition of these points suggests that a tension may exist between spinoffs improving the focus of parent firm managers' attention and spinoffs facilitating opportunistic behavior among parent firm managers. When it comes to parent firm managers' incentive alignment, the cost outweighs the benefit, but an interesting direction for future research might be to explore other outcomes in which the opposite may or may not true.

Finally, this article highlights an interesting empirical context in which to study the conditions under which the alignment of spinoff firm managers' incentive compensation with firm performance changes pre- to post-spinoff. One important reason why existing research has not quantified the implications of spinoffs for spinoff firm managers' incentive alignment is that detailed data about the management, compensation, and performance of spun-off subsidiaries is not available electronically. However, when a firm undertakes a spinoff, it must disclose pre-spinoff data about the business unit it is divesting to the SEC. Additionally, because the spinoff firm trades publicly following its separation from its corporate parent, identical post-spinoff data is necessarily available for the same entity. Thus, spinoffs facilitate a nearly-exact comparison of the functioning of the same entity in two different "states of the world": as a division within a diversified firm, and as an independent, publicly-traded company. For the purposes of this article, this empirical context facilitated the study of how the alignment of incentive compensation with firm performance changes following the completion of spinoffs, but it could easily be leveraged by future studies seeking to investigate changes in other key operational and performance metrics that may follow spinoffs.

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