

Corporate governance and the spinoff decision [☆]

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Received 9 May 2005; received in revised form 8 March 2006; accepted 18 March 2006

Available online 3 May 2006

Abstract

Using a sample of 102 spinoffs in the period 1981 to 1997, we investigate the relation between corporate governance and the spinoff decision. Diversified firms conducting a spinoff have characteristics previously hypothesized to be associated with more effective corporate governance, such as greater ownership by outside board members, more heterogeneous boards, and fewer board members, in comparison to a set of peer firms. Post spinoff, relative valuation measures increase a significantly greater extent than for peer firms. These findings are consistent with the view that agency problems are a contributing factor in firms maintaining value destroying diversification strategies.

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JEL classification: G34

Keywords: Diversification discount; Corporate spinoff; Corporate governance; Agency problem

1. Introduction

Previous evidence suggests that the decision to spinoff a division is a value-increasing event if the spinoff decreases the firm's industrial scope (Daley et al., 1997). The sources of this value increase include non-mutually exclusive explanations such as improved efficiency of capital allocation subsequent to the spinoffs (Ahn and Denis, 2004), tax and regulatory benefits (Schipper

[☆] We thank David Denis, Diane Denis, Huseyin Gulen, Charles Knoeber, Keven Yost, Jeffrey Netter (the editor), an anonymous referee, seminar participants at Concordia, McMaster, North Carolina State, Southern Illinois, Waterloo, York, and participants at the 2005 Northern Finance Association meeting for helpful comments. We acknowledge financial support for the project from Fonds Quebecois De La Recherche Sur La Societe Et La Culture (FQRSC).

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and Smith, 1983), improved contracting (Schipper and Smith, 1983), and decreased information asymmetry (Krishnaswami and Subramaniam, 1999).²

Using a sample of 102 spinoffs in the period 1981 to 1997, we investigate the relation between corporate governance and the spinoff decision as an alternate way to examine the diversification discount controversy. One stream of literature has argued that, in aggregate, diversification destroys value.³ This view suggests that firms with broad scope tend to reduce value either through inefficient investment policies due to agency conflicts at the divisional level or due to other issues such as managerial focus and lack of expertise in multiple areas. In order for an inefficient structure to be maintained for any length of time, the manager must prefer to control a larger firm with a broader scope despite the structure not being value maximizing and the external market must not expeditiously remove this inefficiency. If agency issues are a contributing factor to the diversification discount, then firms with more effective governance will be more likely to spinoff a division under the circumstances when diversification is destroying value.

Agency theory provides multiple reasons why managers are reluctant to shed divisions, preferring larger firms with broader scopes, even if the conglomerate structure is not value maximizing. These reasons include empire building (Jensen, 1986), risk reduction (Amihud and Lev, 1981), overconfidence (Roll, 1986), increased value of manager's human capital (Shleifer and Vishny, 1989), and inertia (Bertrand and Mullainathan, 2003). These rent-seeking theories imply that some firms that would benefit from increasing their focus choose not to do so due to agency conflicts.

Another stream of literature suggests that the observed lower valuations for conglomerates as compared to portfolios of single segment peer firms, can be explained by endogenous firm characteristics and evidence of inefficient investment by diversified firms is due to measurement error.⁴ This literature implies that the observed increased valuations after a focus increasing transaction reflect the firm optimizing its structure at all points. In other words, firms spinoff operations decreasing the diversity of the firm as soon as they can improve their value by doing so. If the diversification discount can be explained by a self-selection bias, then we expect to find that the decision to spinoff a division and corporate governance characteristics are unrelated.

Prior empirical studies on the relation of corporate governance and diversification strategies have yielded mixed results. Denis et al. (1997) and Berger and Ofek (1999) find evidence consistent with the view that agency conflicts are an important factor in firms maintaining value-destroying diversification strategies. Other studies, such as Campa and Kedia (2002), argue that the observed lower valuations, on average, are not due to systemic corporate governance failures but rather can be explained by efficient self-selection.

We choose to examine spinoffs because they do not involve ownership or capital changes allowing a more straightforward examination of the relation between increasing firm focus and corporate governance. When a conglomerate spins off a segment, each equity-holder receives a pro-rata share of the newly-formed, publicly-traded firm. Other potentially diversification-decreasing transactions such as divestitures or carve-outs may include capital infusions and changes in ownership.

We begin our analyses by examining the non-governance characteristics of firms that engage in spinoffs between 1981 and 1997. We investigate characteristics that have been previously suggested to be related to the observed value increase associated with a spinoff. We find that firms that have greater scope and appear to have less efficient investment are more likely to

² An increase in wealth for the firm's equity holders can be partially attributable to a wealth transfer from bondholders (Maxwell and Rao, 2002).

³ See Rajan et al. (2000) and Stowe and Xing (in press).

⁴ See Graham et al. (2002), Campa and Kedia (2002), and Villalonga (2004).

engage in a spinoff. Based on these non-governance characteristics, we generate propensity scores in order to identify a set of firms that appear to be able to benefit from a spinoff. We then investigate the differences in corporate governance characteristics of the spinoff firms relative to their matched counterparts.

The propensity score matching method reduces the possibility of finding a spurious result due to any potential self-selection bias, which has not been done in previous studies on the intersection of corporate governance and restructuring. It is controversial whether agency issues are an important factor in firms maintaining value-destroying diversification strategies but it is not controversial that for a subset of firms, diversification is not associated with lower valuations (Rajan et al., 2000; Villalonga, 2004). By using a propensity score matching technique, we identify a set of firms that appear to be able to benefit from a spinoff but have chosen to remain diversified. It is in these firms that we should observe less effective corporate governance characteristics if corporate governance failures are a causal factor in firms maintaining value-destroying diversification strategies.

Our findings suggest that there are significant differences in the corporate governance characteristics for spinoff firms as compared to their matched peer firms. The evidence indicates that firms are more likely to engage in a spinoff if they have higher percentage of ownership by outside board members. The size of a conglomerate's board and the average age of the board's members are both inversely related to the probability of the firm engaging in a spinoff. We also find evidence that more heterogeneous boards are more likely to spinoff a division: the number of board members that are not directly in the corporate community and the standard deviation of the ages of the board members are positively related to the likelihood of a spinoff.

Finally, if corporate governance failures do inhibit firms from moving to their optimal structure expeditiously, then we expect to see superior performance from the spinoff firms relative to their matched firm peers. In the year subsequent to the spinoff, we find that spinoff firms significantly increase their relative valuations, as measured by market-to-book ratios and excess values, to a greater extent as compared to their matched firm counterparts. The matched firms exhibit little evidence of valuation increases.

The relations between corporate governance characteristics and firms undertaking value-increasing actions that might conflict with managerial preferences are still not well understood. Our findings suggest that the relative effectiveness of a firm's corporate governance, particularly board structure and ownership, does play an important role in the decision to undertake a value-increasing, refocusing transaction. Specifically, firms that engage in spinoffs have characteristics previously hypothesized to be associated with more effective corporate governance, such as greater ownership by outside board members, more heterogeneous boards, and fewer board members, relative to firms with similar size, scope, and investment efficiency.

The rest of the paper is organized as follows. In Section 2, we describe the data, report descriptive statistics, and explain our matching procedure. In Section 3, we discuss the governance variables selected and report univariate statistics of corporate governance characteristics in spinoff firms and the matched firms. In Section 4, we report the results of our multivariate analyses. Section 5 discusses the results and Section 6 concludes.

2. Data and descriptive statistics

2.1. Spinoff sample

Our initial sample of spinoffs is drawn from the Security Data Corporation's (SDC) Mergers and Acquisitions Database. We identify all completed spinoffs between 1981 and

1997.⁵ We confirm that each transaction is indeed a spinoff (rather than a divestiture or carve-out) by examining descriptions of the transaction as reported on Dow Jones Interactive. We also limit the sample to tax-free spinoffs, as identified by the CCH Capital Change Reports.⁶ This leaves us with 219 completed tax-free spinoffs over the sample period.

We restrict the sample to firms having financial data on Compustat at both the firm level and the business segment level, exclude firms with segments operating in the financial and regulated industries (SIC 4900–4999, 6000–6999), and require the firm to have a proxy statement available in the year preceding the spinoff. We also require spinoff firms to have more than one segment, as defined by Compustat's segment database, operating in at least two different industries (defined at the three-digit SIC level) for two consecutive years in order to use lagged variables.

We limit the sample to firms that report multiple segments because we are interested in understanding the interaction of increasing focus and corporate governance. Previous research on the relation between diversification and value has generally found that unrelated diversification appears to influence value negatively as compared to a less clear relation for related diversification and value.⁷ Over 90% of our sample reports a decline in segments subsequent to the spinoff. After imposing these restrictions, we are left with a final sample of 103 spinoffs over the period 1981 to 1997.

In order to confirm that the spinoff sample did increase value by refocusing we conduct an event study around the announcement of the firms' intentions to spinoff. We find a 3.16% positive abnormal return.⁸ The most straightforward explanation for this value increase is that the market favorably views the firms' choice to refocus; however, it is possible that there is an alternative explanation for the value increase.

Table 1 compares characteristics of spinoff firms to a panel dataset of non-spinoff diversified firms. The non-spinoff diversified firms include all firms over the time period that have multiple segments reported on Compustat in at least 2 industries defined at the 3-digit SIC level with no segments in the financial or regulated industries with the following exceptions. We require the firms to be diversified for at least two years in order to use lagged variables and we exclude all firm-years for the non-spinoff diversified firms if they conducted a spinoff within a (–5, +5) year window. This provides 12,205 firm-years of non-spinoff diversified firms.

Panel A reports the financial characteristics of the spinoff firms and the non-spinoff diversified firms. Firms that engage in a spinoff are significantly larger as measured by both assets and sales. The median spinoff firm in the sample also has a higher interest coverage ratio and a higher payout ratio (Dividend/Net Income).

Panel B reports the performance characteristics. The median spinoff firm has a higher market-to-book ratio and a higher market-to-sales ratio. Spinoff firms have significantly higher sales

⁵ We end our sample in 1997 to maintain consistency within our sample since reporting requirements for segments changed in 1998. In 1998, there is a 49.8% increase in diversification by our definition reflecting the changes.

⁶ According to Section 335 of the Internal Revenue Code, to be eligible for tax-exempt status: (1) a parent firm must distribute at least 80% of the outstanding shares of a subsidiary to its existing shareholders and any shares retained by the parent firm must not constitute practical control of the subsidiary, (2) the separating subsidiary should have been in active operation for at least five years and have been owned, directly or indirectly by the parent firm for at least five years, and (3) the parent firm and the separated subsidiary should each be engaged in the active conduct of a trade or business immediately after the distribution.

⁷ See, Daley et al. (1997), Rajan et al. (2000), and Villalonga (2004).

⁸ We report a market model CAR (cumulative abnormal return) of the day of the announcement of the firm's intention to spinoff a division and the day preceding the announcement. The market model parameters are estimated over days (–250, –50) using the CRSP equally weighted market index. The magnitude of the abnormal returns is similar to previous findings for spinoffs such as Daley et al. (1997).

Table 1

Characteristics of spinoff firms and other non-spinoff diversified firms

	Spinoff firms	Non-spinoff diversified firms	P-value
<i>Panel A. Financial characteristics</i>			
Assets	2682.20 [1932.46]	970.44 [208.08]	<0.0001 [<0.0001]
Sales	2811.76 [2032.12]	991.24 [238.23]	<0.0001 [<0.0001]
Book leverage	0.2827 [0.2717]	0.2773 [0.2688]	0.7477 [0.6933]
Interest coverage ratio	5.0659 [3.9116]	4.9859 [2.7828]	0.9169 [0.0113]
Debt service	0.0273 [0.0248]	0.0288 [0.0253]	0.4315 [0.8871]
Dividend/net income	0.2930 [0.3449]	0.2445 [0.1256]	0.1440 [0.0071]
<i>Panel B. Performance characteristics</i>			
Market-to-book	1.3759 [1.2570]	1.2979 [1.1351]	0.1114 [0.0061]
Market-to-sales	1.3850 [1.2635]	1.3748 [1.0264]	0.9160 [0.0346]
Sales margin	0.1379 [0.1314]	0.1136 [0.1025]	0.0099 [0.0010]
ROA	0.1404 [0.1447]	0.1177 [0.1245]	0.0034 [0.0074]
CF/S	0.1680 [0.1385]	0.1179 [0.1031]	0.0008 [<0.0001]
CE/S	0.0927 [0.0635]	0.0893 [0.0454]	0.8422 [0.0008]
<i>Panel C. Diversification related characteristics</i>			
EV	-0.1484** [-0.1126]**	-0.1756*** [-0.1883]***	0.7275 [0.3206]
RVA	-0.0022*** [-0.0005]***	-0.0010*** [-0.0001]***	0.1095 [0.0978]
RINV	-0.0069*** [-0.0048]***	-0.0022** [-0.0018]***	0.1358 [0.0967]
Range of q	1.8577 [0.8225]	1.6143 [0.7979]	0.1956 [0.4561]
SEGN	3.2912 [3.0000]	2.8744 [3.0000]	0.0001 [<0.0001]
STD of q	0.9559 [0.4344]	0.9093 [0.4581]	0.6490 [0.8914]
Max q	1.7416 [1.6516]	1.6485 [1.5128]	0.0614 [0.0375]
Asset-based Herfindahl	0.4825 [0.4755]	0.5528 [0.5314]	<0.0001 [<0.0001]
N	103	12,205	

All variables are the latest annual data preceding the spinoff for the spinoff firms. Panel A presents the financial characteristics of spinoff firms and non-spinoff diversified firms. Assets are the total book assets. Sales are sales revenue. Book leverage is long-term debt plus the short term portion of long-term debt divided by total assets. Interest Coverage ratio is operating income before depreciation divided by interest expense. Debt service is the interest expense divided by book value of assets. Dividend/net income is common dividends divided by net income.

Panel B presents the performance characteristics of spinoff firms and non-spinoff diversified. Market-to-book is the market value of assets divided by book assets; where book value of debt proxies for market value of debt. Market value of assets is the total book assets minus book value of equity minus deferred tax plus the year end stock price times the number of shares outstanding. Market-to-sales is the market value of assets divided by sales. Sales margin is operating income before depreciation divided by sales. ROA is operating income before depreciation divided by book assets. CF/S is cash flow (operating income before depreciation) to sales rate. CE/S is capital expenditure to sales rate.

Panel C presents the diversification related characteristics of spinoff firms and non-spinoff diversified. Excess Value (EV) is measured using the method of [Rajan et al. \(2000\)](#). EVs are sales-based excess value that is the market-to-sales ratio of the sample firm minus the sales-weighted sum of the median market-to-sales of industry matched single segment firms. All statistics that require Tobin's q are the median industry market-to-book for single segment firms at the 3-digit SIC level. RVAs are the measure of investment efficiency by [Rajan et al. \(2000\)](#). RVA is defined as firm-and-industry adjusted investment rate weighted by segment sales and the difference between industry median Tobin's q for the segment and the sales-weighted average q for the firm. RINV is the measure of investment efficiency as developed by [Ahn and Denis \(2004\)](#). Range of q is the range of industry median q for a firm. SEGN is the number of segments in a firm. STD of q is standard deviation of the segments' q . Max q is the highest industry q of a firm's segments. Asset-based Herfindahl index is Herfindahl index based on the segment assets.

Last column reports p -values from t -tests and signed rank tests for the significance of differences for means and medians between spinoff firms and the other diversified firms, respectively. In panel C, we use a two-tailed t -test and signed-ranks test for EVs, RVA and RINV relative to 0, where ***, **, and * note significance at the 1%, 5% and 10% levels respectively. All variables are winsorized at the 5th and 95th percentiles.

margin, ROA, and cash flow to sales (CF/S). The median spinoff firm also has a higher proportion of capital expenditures relative to sales (CE/S), as compared to the median for non-spinoff diversified firms.

Panel C shows that spinoff firms have a statistically similar level of excess value (EV) compared to the non-spinoff diversified firms. Excess values are calculated similarly to Rajan et al. (2000) as the difference between the actual value of the firm and its imputed value. The magnitude of the negative excess values is generally consistent with previous findings of a diversification discount.

Relative value added (RVA) that is described in Rajan et al. (2000) and relative investment ratio (RINV), as described by Ahn and Denis (2004) are our two proxies for investment efficiency. Both measures calculate the relative level of investment for each segment interacted with their respective growth opportunities, where an industry median Tobin's q is used as a proxy for each segment's growth opportunities, but utilizes different weighting schemes. The median spinoff firm invests less efficiently as compared to the non-spinoff diversified firms by both of these measures.

The evidence suggests that firms that engage in spinoffs have greater industrial scope than non-spinoff diversified firms. Spinoff firms have 3.29 segments compared to 2.87 for non-spinoff diversified firms. Spinoff firms have a higher Max q than for non-spinoff firms where Max q is defined as the highest q for any segment in the firm. The asset-based herfindahl index also indicates that spinoff firms are more diverse. However, the range of q and the standard deviation of q (STD of q) are statistically similar between the two groups. In summary, the evidence generally suggests that spinoff firms are larger, more diverse, and have less efficient investment policies as compared to non-spinoff diversified firms.

2.2. Matching algorithm of diversified firms

In this section we investigate the non-governance characteristics that are associated with the spinoff decision and use these characteristics to create a matched set of firms that we will use to compare governance characteristics. The results of the probit models that generate the propensity scores are reported in Table 2. We compare the financial, performance, and diversification characteristics of the spinoff firms and the matched firms in order to confirm that our matched firms are statistically similar to our spinoff firms. Our method is used to identify a subset of firms that have similar characteristics to the spinoff sample in order to minimize the possibility of finding a spurious result due to the endogenous nature of the spinoff decision. Our matching algorithm selects firms that we argue are good representatives for the broader group of firms that have characteristics that indicate that they are able to increase their value by engaging in a spinoff but choose not to do so.

We select variables for our matching probit model that previous theory and empirical evidence suggest are important to the spinoff decision. Rajan et al. (2000) find evidence that greater diversity in growth opportunities among segments in conglomerates are associated with less efficient investment policy. Ahn and Denis (2004) provide evidence that firms tend to have an improvement in investment efficiency and excess value subsequent to a spinoff. Moreover, broader firm scope can exacerbate the information gap between the external market and the firm, and increases the managerial complexity facing the CEO. Therefore, we include variables that proxy for excess value, investment efficiency, and industrial diversity.

These variables include sales-based excess value (EV), relative value added (RVA), asset-based herfindahl index (Herfindahl), number of segments (SEGN), and standard deviation of segment q (STD of q). Some of the variables that we report in Table 1 are highly correlated to each

Table 2
Propensity score estimation

	(1)	(2)	(3)
Intercept	−2.6969 (−11.98)	−2.7226 (−14.45)	−2.6565 (−11.29)
EV	0.0115 (0.20)		0.03502 (0.56)
RVA	−9.8494* (−1.76)		−10.4463* (−1.78)
Log (Herfindahl)	−53.6793** (−2.20)		−30.4802* (−1.67)
SEGN	0.0879** (2.82)		0.0177 (0.51)
STD of q	−0.0157 (−0.36)		0.0031 (0.07)
MtoB	0.0507 (0.60)		−0.0154 (−0.15)
ROA		0.8540 (1.30)	0.7184 (0.92)
S		0.0001*** (8.13)	0.0001*** (6.74)
CE/S	−0.3772 (−0.91)	−0.1289 (−0.33)	−0.1915 (−0.48)
CF/S	0.5997* (1.82)	−0.1200 (−0.36)	−0.1984 (−0.59)
χ^2 (Prob. > χ^2)	68.76***	98.65***	112.08***
Pseudo R^2	0.058	0.084	0.095
N	12,126	12,158	12,126

Dependent variable is spinoff dummy, which has value of 1 if the observation is a spinoff, otherwise it is 0. EV is sales-based excess value that is the market-to-sales ratio of the sample firm minus the sales-weighted sum of the median market-to-sales of industry matched single segment firms. All statistics that require Tobin's q are the median industry median market-to-book for single segment firms at the 3-digit SIC level. RVA is the measure of firm-level investment efficiency by [Rajan et al. \(2000\)](#). RVAs are defined as firm-and-industry adjusted investment rate weighted by segment sales and the difference between industry median Tobin's q for the segment and the sales-weighted average q for the firm. Herfindahl index is Herfindahl index based on the segment assets. SEGN is the number of segments in a firm. STD of q is standard deviation of the firm's segments q . MtoB is the market value of assets divided by book assets; where book value of debt proxies for market value of debt. ROA is operating income before depreciation divided by book assets. S is sales revenue. CE/S is capital expenditure to sales. CF/S is cash flow (operating income before depreciation) to sales. The propensity score for each firm is calculated as the predicted probability of a spinoff from model (3). Year dummies are included in all models, but they are not reported. The number in the parenthesis is robust z-stat. *, **, and *** indicate statistical significance at 10%, 5% and 1%, respectively. All variables are winsorized at the 5th and 95th percentiles.

other, such as Range of q , STD of q , and Max q . The choice among these variables does not significantly alter the results. This is also the case for our choice of RVA relative to RINV.

We also include variables that proxy for the firm's growth opportunities, and operating performance. We include the market-to-book ratio (MtoB), ROA, firm size as measured by sales (S), capital expenditures-to-sales (CE/S), and cash flow-to-sales (CF/S). All of these variables are arguably related to the firm performance and all of these variables have been previously hypothesized to have a relation with growth opportunities.

We do not include financing variables and dividend policy since it is unclear why these variables might be related to whether a firm's scope or size is optimal. Moreover, we do not want to control for financing policy since debt and dividend policy can serve as governance mechanisms. We investigate debt and dividend policies in the context of the corporate governance variables in Sections 3 and 4.

Using these ten variables, we estimate the probability of a spinoff with a probit model using the procedure as described in [Dehejia and Wahba \(2002\)](#). The propensity score matching method provides a flexible method for matching using a variety of variables. This method overcomes the dimensionality problem in matching on more than two characteristics and the weights for each variable are derived from the data through the coefficients estimated from the probit model.

Table 2 reports the results from the probit models. Models 1 and 2 are included to show the relative influence of size, as size influences the significance and in some cases the sign of the

other coefficients. Model 3 includes all ten variables and is used to determine our propensity scores. The coefficients suggest that firms with less efficient investment (RVA) and greater diversity (smaller values for the Herfindahl index) are positively associated with the probability of a spinoff. We also find that size is positively associated with spinoffs, which is not surprising as firms presumably have an optimal size as well as an optimal scope.

The significance and signs of these variables are consistent with rent-seeking theories, such as Scharfstein and Stein (2000) and Rajan et al. (2000). These models predict that greater scope, specifically diversity in growth opportunities, is related to less efficient allocation of capital. The negative coefficient for RVA suggests that inefficient capital allocation within the conglomerate's internal capital market is related to the decision to spinoff a division. To the extent that RVA does not fully capture investment inefficiency we expect measures of firm scope to be related to the spinoff decision. Our measure for diversity of growth opportunities does not have a significant coefficient (STD of q); however, the negative coefficient for the herfindahl index does suggest that firms with broader scope are more likely to spinoff a division. These findings are consistent with the conjecture that poorly functioning internal capital markets, and by extension, agency problems between the firm's headquarters and its divisions, are important factors in a spinoff. Additionally, the finding that broader scope is related to the spinoff decision is consistent with the conjecture that greater transparency to the external market and reducing managerial complexity are motives for increasing firm focus.

For each spinoff firm and all non-spinoff diversified firms, a predicted value (propensity score) is calculated from probit model 3. For each spinoff firm, we identify the diversified firm that has the closest propensity score in the same year of the spinoff announcement year, excluding firms that are beyond the common support area of the probit model.⁹ In unreported results, we compare the characteristics of spinoff and matched firms to determine whether the matched set of firms is similar in terms of non-governance characteristics. The univariate results suggest that our initial propensity matching procedure yields satisfactory matched results. The results indicate that the two samples have similar characteristics with respect to financial characteristics, performance, and diversification related characteristics.

Recent studies that test the effect of board structure on firm performance suggest that it is important to control for endogenous determinants of board structure (Linck et al., 2005; Boone et al., *in press*). For example, Linck et al. (2005) find that firm size and growth opportunities are important determinants of board structure. Our matching procedure yields two samples that have similar characteristics including size and growth opportunities. In this way, we effectively include the effects of size and growth opportunities on board structure to mitigate the possibility of finding a spurious result due to the endogenous nature of board structures.

It is debatable as to what are the appropriate variables to include in the probit model to generate the matched set of firms and thus, it is probable that there are many other sets of firms that also have characteristics that suggest that they could increase their value by engaging in a spinoff. Our choice of variables for the matching probit model generates a matched set that does not appear to include an obvious bias in our results for the examination of corporate governance characteristics that we present in Sections 3 and 4.

⁹ Lee and Wahal (2004) use several different propensity score matching methods in their study of IPOs. They find that the different propensity scores matching methods provide similar results. Due to the nature of governance data, we use the nearest-neighborhood propensity score matching since it provides one-to-one matching. One spinoff firm is beyond the common support area of the model so the final sample of spinoffs is 102.

3. Univariate comparison of corporate governance variables

In this section, we discuss the corporate governance variables and examine their relation with the spinoff decision.¹⁰ Our governance data is collected from the last proxy statement before the spinoff announcement date for each firm. For the matched firms, we collect the last proxy statement before the spinoff announcement date for their respective matched spinoff firm.

3.1. Ownership structure

Although there is no consensus, some previous findings indicate that ownership structure is an important determinant of some firm actions and does have a causal relation with firm value. Inside ownership has two competing effects. Inside ownership can align the interests of the shareholders and management but can also have an entrenchment effect allowing management to extract private benefits at the expense of all shareholders (Stulz, 1988). Denis et al. (1997) find evidence that the alignment effect of inside ownership is important in the case of diversified firms, in that they find that lower officer and director ownership are inversely related to value decreasing diversification policies. Although it is possible for large outside blockholders to extract private benefits from the firm, in general we expect that increasing levels of outside ownership should be related to more effective corporate governance.¹¹

Panel A of Table 3 reports univariate statistics on ownership structure for spinoff firms and matched firms. All board members and officers are required to report all of their equity holdings in the firm. Ownership variables include ownership by all officers and directors, inside directors' ownership, outside directors' ownership, top three officer's ownership, CEO ownership, and outside blockholders' ownership.¹² Inside directors are defined as current employees of the company. Affiliated directors include former employees, relatives of employees, or board members that provide significant contractual services to the company such as legal counsel. Outside directors are directors who are not classified as inside or affiliated directors.

Any owner that holds 5% of a class of a firm's outstanding equity is required to report their holdings. We use 5% of voting rights as the cutoff to describe blockholders that have large enough stock holdings to create an economic incentive to monitor and report these holdings under affiliated 5% ownership and unaffiliated 5% ownership. If a blockholder sits on the board, we report these holdings under the directors' ownership and not in the 5% categories. We classify blockholders as affiliated if they have a close relation to an insider in the company or represent holdings such as company stock for retirement benefits.

We report outside blockholdings and outside directors' ownership separately with no overlap since the motivations and abilities of these two groups to monitor are arguably distinct. In the case of the outside board members, ownership can reflect both their relative power on the board

¹⁰ We have limited our study to ownership, board, CEO, and financing characteristics. For a more complete discussion of corporate governance characteristics, see Gillan (in press).

¹¹ For examples of findings that indicate a positive relation between increasing outside block ownership and increasing measures of firm performance, see Denis et al. (1997) for decreasing value destroying diversification, Perry and Peyer (2005) for increased incentives for director monitoring, Wahal and McConnell (2000) for decreasing managerial myopia, and Claessens et al. (2002) for increased incentives associated with cash flow rights.

¹² We collect data for both voting and cash flow rights and for most firms these definitions are the same. We use voting rights in all of our reported tests as the results are substantively the same using either definition of ownership. Since we collect our data from the proxy statements, we avoid the biases in *Compact Disclosure* as described by Dlugosz et al. (in press).

and the cash flow rights that provide motivation for more engaged monitoring (Yermack, 2004). Outside blockholders that do not have a board seat have less ability to monitor than those that do and the lack of a board seat could also reflect less interest in monitoring.

Panel A of Table 3 indicates that the measures of inside ownership are not significantly different between the two groups. The mean (median) fractional ownerships by inside directors, top three positions, and the CEO are all insignificantly greater (smaller) for the matching firms as compared to the spinoff firms. Affiliated 5% ownership is insignificantly higher for the spinoff firms. The univariate results for outside ownership show significantly greater mean ownership for outside directors' ownership and an insignificant difference between outside blockholders (unaffiliated 5% ownership) for spinoff firms relative to match firms. 57.8% of the spinoff firms have higher outside directors' ownership and 4.0% have equal outside directors' ownership as compared to their match firm peers.

3.2. CEO characteristics

Panel B of Table 3 reports the univariate statistics for variables that can reflect the level of entrenchment, power, capability, and incentives in place for the CEO. The CEO variables can be difficult to interpret as many of the variables have competing interpretations as they can reflect managerial entrenchment but they can also be related to past strong performance (Hermalin and Weisbach, 1998). The influence of past performance for the firm has been included in these tests since our matching probit model includes performance variables.

We include CEO age since career concerns decline with the age of the manager. CEO age is not significantly different between the two groups. Tenure as CEO, tenure as director, a founder indicator variable, and a chairman indicator variable are included since these variables could potentially reflect CEO power and entrenchment. Additionally, Berger and Ofek (1999) find that restructuring activity often occurs subsequent to CEO turnover. All of these variables are not significantly different between the two groups.

Compensation and the number of other companies' boards for which the CEO is a member can be related to managerial discretion in two competing directions. Compensation can simply be an indication of the CEO's capability and incentives for the CEO. Compensation could also reflect the CEO's bargaining power to extract more rewards from the board and thus could indicate managerial entrenchment (Brick et al., 2005). CEOs of spinoff firms get paid significantly more in terms of salary and bonus, and of total compensation including stock options, relative to match firms. The median CEO of a spinoff firm receives \$130,000 more in total compensation as compared to their matched firm peer CEO.

The number of boards that the CEO is a member of in other companies could indicate increased outside commitments, potentially reflecting a CEO that is not fully engaged as a CEO. Conversely, the number of boards the CEO is a member of could also be a reflection of the CEO's ability and popularity in the managerial job market as well as increasing the knowledge of the CEO (Conyon and Read, in press). The number of directorships in other companies is not statistically different for CEOs of spinoff firms as compared to CEOs of matched firms.

3.3. Board of directors and financing characteristics

In panel C of Table 3, we report univariate statistics for board characteristics starting with the proportions of insiders and outsiders. Previous studies have taken two approaches investigating the relation between the proportion of outsiders on a board and firm performance. In a similar manner to this study, multiple authors have investigated the relation between board composition and a

Table 3

Univariate statistics on governance variables

	Spinoff	Matched	P-value
<i>Panel A: Ownership structure</i>			
Officers and directors' ownership	0.1234 [0.0371]	0.1133 [0.0277]	0.4952 [0.3731]
Inside directors' ownership	0.0530 [0.0082]	0.0665 [0.0053]	0.2614 [0.9960]
Outside directors' ownership	0.0387 [0.0015]	0.0149 [0.0013]	0.0167 [0.1149]
Top three officers' ownership	0.0542 [0.0086]	0.0678 [0.0059]	0.2299 [0.9130]
CEO ownership	0.0458 [0.0057]	0.0540 [0.0037]	0.4277 [0.4850]
Affiliated 5% ownership	0.0572 [0.0000]	0.0464 [0.0000]	0.6020 [0.5322]
Unaffiliated 5% ownership	0.0765 [0.0053]	0.0751 [0.0532]	0.9406 [0.7677]
<i>Panel B. CEO characteristics</i>			
CEO age	55.39 [57.00]	56.26 [57.00]	0.3986 [0.5611]
Tenure as CEO	6.86 [5.00]	7.99 [5.00]	0.1290 [0.3438]
Tenure as director	12.73 [11.00]	13.30 [10.00]	0.6548 [0.7564]
Founder dummy	10.42%	12.75%	
Chairman dummy	77.45%	76.47%	
Log (salary plus bonus/\$10,000)	4.0997 [4.1972]	4.0478 [4.0806]	<0.0001 [<0.0001]
Log (total cash compensation/\$10,000)	4.3763 [4.4598]	4.2331 [4.2005]	<0.0001 [<0.0001]
# of other boards	1.8333 [1.0000]	1.5980 [1.0000]	0.2976 [0.3792]
<i>Panel C. Board Characteristics</i>			
% of inside directors	0.2450 [0.2183]	0.2489 [0.2222]	0.7238 [0.6971]
% of outside directors	0.6785 [0.7000]	0.6651 [0.6667]	0.4547 [0.5550]
Log (# of board members)	2.3208 [2.3979]	2.3883 [2.3979]	<0.0001 [<0.0001]
Standard deviation of directors' age	8.0990 [7.4906]	7.7153 [7.2197]	0.2001 [0.2841]
% of female directors	0.0459 [0.0000]	0.0474 [0.0000]	0.9155 [0.8630]
% of non-corporate directors	0.1164 [0.0909]	0.0942 [0.0871]	0.0627 [0.0846]
# of annual meeting	7.98 [8.00]	8.15 [7.00]	0.7360 [0.5903]
Average age of directors	58.17 [59.00]	59.32 [59.90]	0.0183 [0.0090]
<i>Panel D. Financing characteristics</i>			
Debt service	0.0272 [0.0247]	0.0255 [0.0239]	0.4315 [0.5650]
Book leverage	0.2829 [0.2726]	0.2618 [0.2510]	0.2332 [0.2316]
Interest coverage ratio	5.1168 [3.9335]	6.0688 [4.0316]	0.5416 [0.7561]
Dividend/net income	0.2980 [0.3453]	0.4033 [0.3556]	0.0398 [0.0819]

specific board action. Often the action studied is the decision to replace the CEO.¹³ Another method to investigate the relation between board composition and performance is to do a cross-sectional test. These studies have found mixed evidence regarding the relation between the proportion of outsiders and performance (Hermalin and Weisbach, 1991; Landier et al., 2005). As shown in panel C, there is no significant difference in the proportion of insiders and outsiders when comparing spinoff firms and their matched peers.

We next examine board size. Previous evidence suggests that smaller boards are more effective monitors than larger boards. The intuition is that smaller boards mitigate the free rider problem and larger boards are not as conducive to open dialogue (Yermack, 1996). The mean and median size of the board for spinoff firms is smaller as compared to the boards for the matched set. The spinoff

¹³ See Dahya et al. (2002) for evidence that suggests that firms with outsider-dominated boards have higher sensitivity of CEO turnover relative to firm performance.

firms have 0.52 fewer members on average, with 65.7% of the spinoff firms having smaller boards and 6.8% having the same size board as compared to their match firm peers' boards.

The advantage of smaller boards can be in conflict with having a more diverse board. Morck (2004), among others, argues that findings in the social psychology literature suggest that more diverse boardrooms should be related to more effective monitoring. The reasoning for this is that greater diversity allows for broader viewpoints, less group thinking, and most importantly, can mitigate the human predisposition to behave in a compliant manner to an authority figure such as a CEO. Morck argues that non-executive directors provide alternative authority figures for the board and thus can decrease the board's reflexive compliant behavior to the CEO.

As measures of diversity, we include the standard deviation of directors' age, the proportion of female directors, and the proportion of non-corporate directors. The non-corporate directors are a subset of outside directors who are not directly in the corporate community including politicians, academics, members of not-for-profit organizations, as well as private investors. We find that standard deviation of directors' age and the percentage of female directors is not significantly different between the two groups. The mean and median proportion of non-corporate directors is significantly higher for spinoff firms relative to their matched firm peers.

Finally, we include measures that reflect the level of engagement for the board. We find no significant difference in the number of annual meetings. We also include the average age of the board of directors, assuming that older board members have fewer career concerns as compared to younger board members. The mean and median average age of the directors is significantly older for the match firms as compared to spinoff firms.

In panel D, we investigate financing variables. We consider financing variables since they can be methods that the board can use to exert control over the use of resources within the firm and provide incentives for managerial discipline. We do not find any significant difference in the

Panel A reports the comparison of ownership structure. Officer and director's ownership is percentage ownership of all officers and directors. Inside directors are current employees of the company. Outside directors are directors who are not classified as inside or affiliated directors; where affiliated directors include former employees, relatives of employees, or provide significant contractual services to the company such as legal council. Affiliated blockholders are outside investors who have more than 5% of voting rights and have a close relation to an insider in the company or represent holdings such as company stock for retirement benefits. Unaffiliated blockholders are outside investors who have more than 5% of voting rights, but are not classified as affiliated blockholders and do not have a seat on the board.

Panel B reports the comparison of CEO characteristics. CEO age is the age of CEO. Founder dummy equals one if the CEO founded the firm or is a part of the founding family, equals 0 otherwise. Tenure as CEO and tenure as director are years since inauguration in the respective positions. Chairman indicator variable is 1 if CEO is also chairman of the board and it is 0, otherwise. Log of salary plus bonus is natural log of the CEO's salary and bonus divided by \$10,000. Log of total cash compensation is natural log of the sum that includes salary, bonus, and option value realized divided by \$10,000. The number of other boards is the number of board membership that the CEO sits in other companies.

Panel C reports the comparison of board characteristics. % of inside (outside) directors is the percentage of directors classified as insiders (outsiders). Log of the number of board members is natural of the number of directors in the board. The number of annual meetings is the number of annual board meetings excluding committee meetings. Standard deviation of directors' age is the standard deviation of all directors' age in the board. Average age is the average age of all directors in the board. The % of female directors is the proportion of female directors in the board. The percentage of female directors is the proportion of non-corporate directors in the board. The % of non-corporate directors is the proportion of persons who are not directly in the corporate community such as politicians, academics, members of not-for-profit organizations as well as private investors.

Panel D reports the comparison of financing characteristics. Dividend/net income is common dividend divided by net income. Debt service is the interest expense divided by book value of total assets. Interest coverage ratio is operating income after depreciation divided by interest expense. Book leverage is long-term debt plus the short term portion of long-term debt divided by total assets.

Last column reports *p*-values from *t*-tests and signed rank tests for the significance of differences for means and medians between spinoff firms and matched firms, respectively. All variables are winsorized at the 5th and 95th percentiles.

variables associated with capital structure, as debt service, book leverage, and interest coverage ratio are all not significantly different between the two groups. There is a significant difference in the payout ratio (Dividend/Net Income). The spinoff firms pay significantly less dividends relative to their net income as compared to their peer matched firms.

In summary, spinoff firms have smaller boards, with younger members that include more members that are not directly in the corporate community. Spinoff firms also maintain a lower payout ratio as compared to the matched firms.

4. Corporate governance determinants of the spinoff decision

In this section we conduct multivariate analyses of the effect of governance variables on the spinoff decision. Table 4 reports results of the probit models for governance variables where a spinoff indicator is the dependent variable for all of the models.

We use inside director ownership as the measure of inside board ownership for all models that we report; however, the results are not sensitive to such other definitions of inside ownership such as CEO ownership and top three position ownership. The coefficients for inside directors' ownership are consistently negative, but insignificant in all four models.

The coefficients on outside director ownership are statistically significant at the 5% confidence level in all four models. In economic terms, the coefficient in model 4 suggests that a one standard deviation increase in outside director ownership, which represents an 8% increase in ownership, increases the likelihood of a spinoff by 11%. The coefficients for outside block ownership do not provide any evidence that this factor influences the spinoff decision.

Our findings further refine Denis et al. (1997) and Wruck and Wruck (2002). Denis, Denis, and Sarin find that officer and director ownership and outside blockholder ownership are both negatively related to the level of firm diversification. Wruck and Wruck find an increase in outside blockholder ownership precedes corporate spinoffs. They also find that spinoff firms have a higher level of officer and director ownership as compared to a broad sample of firms as reported in Denis, Denis, and Sarin. In these two studies, officer and director ownership includes inside and outside director ownership as well as officer ownership. We find that the level of ownership by outsiders is related to the spinoff decision but only if the outsider obtains a board seat.

The coefficients for CEO age and years as director are not statistically significant. We have included years as director rather than tenure as CEO due to the reporting requirements as CEO tenure is often unreported in the proxy statements while years as director are always reported. For those firms that do report tenure as CEO, the correlation coefficient for CEO tenure and years as director is 0.73. The coefficients for CEO age and years as director provide no evidence that either of these characteristics is related to corporate spinoffs.

CEO's cash compensation is positively related to the probability of a spinoff and the coefficients are significant at the 1% confidence level in all four models. The coefficient for total compensation in model 4 suggests a one standard deviation increase in compensation, equal to \$27,320, increases the probability of a spinoff by 12%. The positive coefficient reported here is consistent with the view that CEOs in spinoff firms are more competent and get paid more for their better managerial skills. We include a dummy variable equal to one if the CEO is also the chairman of the board (Chairman Dummy). The coefficients for Chairman Dummy are insignificant in all four models.

The coefficients for other board memberships are significant at either the 5% or at the 10% levels in all four models. The coefficient in model 4 implies that for every board that the CEO is a member of the probability of a spinoff increases by 5.3%. The interpretation of this coefficient to that of the compensation coefficient is similar in that these variables have two competing influences: entrenchment

Table 4
Corporate governance and the spinoff decision

	(1)	(2)	(3)	(4)
Intercept	4.0752** (2.11)	3.6732* (1.91)	3.6544* (1.84)	3.8051* (1.90)
Insider ownership	−0.7059 (−0.63)	−0.6965 (−0.62)	−1.2816 (−1.11)	−1.3905 (−1.20)
Outside director ownership	3.2088** (2.12)	3.3556** (2.22)	3.3548** (1.98)	3.4470** (1.99)
Outside block ownership	−0.3322 (−0.36)	−0.4678 (−0.49)	−0.8961 (−0.91)	−1.0046 (−1.00)
CEO age	−0.0137 (−0.66)	−0.0146 (−0.70)	−0.0113 (−0.54)	−0.0083 (−0.38)
Years as director	−0.0001 (−0.00)	−0.0012 (−0.08)	0.0006 (0.04)	−0.0004 (−0.02)
Log of CEO total comp	0.3334*** (2.86)	0.3376*** (2.84)	0.3230*** (2.66)	0.3016** (2.39)
Chairman dummy	−0.0491 (−0.20)	0.0104 (0.04)	−0.0394 (−0.15)	−0.0669 (−0.24)
Other board membership	0.1103* (1.81)	0.1328** (2.06)	0.1400** (2.17)	0.1276* (1.96)
Log of board size	−1.0220*** (−2.91)	−1.0792*** (−2.98)	−0.9988*** (−2.73)	−1.0133*** (−2.77)
% of outside director	0.6136 (0.86)	0.5848 (0.83)	0.3474 (0.47)	0.3041 (0.41)
Average of director age	−0.0592* (−1.88)	−0.0541* (−1.73)	−0.0538* (−1.69)	−0.0571* (−1.76)
Standard deviation of director age	0.0735 (1.62)	0.0831* (1.84)	0.0883** (1.98)	0.0921** (2.05)
% of female director		−1.7117 (−0.92)	−0.8885 (−0.46)	−0.8922 (−0.46)
% of non-corporate director		2.0076** (1.99)	2.4539** (2.34)	2.4803** (2.35)
Leverage			0.3590 (0.47)	0.3695 (0.49)
Dividend/net income			−0.8007** (−2.28)	−0.8148** (−2.29)
Hostile takeover threat			−0.2213 (−0.51)	−0.2790 (−0.64)
Other restructuring activities				0.1621 (0.69)
χ^2 (Prob. > χ^2)	25.56**	29.91***	34.43***	35.08***
Pseudo R^2	0.095	0.111	0.133	0.134
N	196	195	195	195

Probit model where dependent variable is 1 for firms conducting spinoff and matched firms have dependent variable equal to 0. Numbers in the parenthesis are robust z-statistics. Inside ownership is the fractional voting rights held by inside directors. Outside director ownership is the fractional voting rights hold by outside directors. Outside block ownership is the fractional voting rights held by unaffiliated blockholders that do not have a seat on the board, where blockholders are defined as having at least 5% ownership. CEO age is the age of the CEO. Years as directors are the number of years that the CEO has been a director of the firm. Log of total cash compensation is natural log of the sum that includes salary, bonus, and option value realized divided by \$10,000. Chairman dummy equals one if the CEO is the chairman of the board, 0 otherwise. Other Board Membership is the number of boards that the CEO sits on in other companies. Log of Board Size is the natural log of the number of directors on the board. % of outside director is the proportion of outside directors in the board. Standard deviation of director age is the standard deviation of all directors' ages on the board. Average of director age is the average age of all directors in the board. % of female director is the proportion of female directors in the board. % of non-corporate director is the proportion of non-corporate directors on the board. Service is the interest expense divided by book value of total assets. Dividend/net income is dividend payment divided by net income. Hostile takeover threat is a dummy variable equal to 1 if the firm has a hostile takeover threat in the three years preceding the announcement for the spinoff, equal to 0 otherwise. Other restructuring activities are dummy variables equal to 1 if the firm has had a divestiture or carve-out in the three years preceding the announcement for the spinoff, equal to 0 otherwise. Number in the parenthesis is robust z-stat. *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively. All variables are winsorized at the 5th and 95th percentiles.

and inattention, or the CEO's ability and attractiveness in the managerial job market. The mere fact that the CEO has undertaken a value-increasing action, the spinoff, is consistent with the managerial competence explanation. This finding is consistent with [Perry and Peyer \(2005\)](#) who find that outside directorships for executives can be value increasing for firms with relatively fewer agency problems.

In all four models, the log of board size is inversely related to the probability of a spinoff at the 1% confidence level. One standard deviation decrease of board size, which is equivalent to a decrease of 1.4 directors, increases the probability of a spinoff by 14% per the coefficient in the fourth model. The coefficients for the percentage of outside board members (% of Outside

Director) are insignificantly positive in all four models. The evidence indicates that it is not outside board membership alone that facilitates the spinoff decision but rather the outsider board members' ownership. The coefficients for average director age are significantly negative for all four models, which suggest that career concerns are important for board members. The coefficient for average director age in model 4 suggests that for a one standard deviation decrease in average age, equal to 3.7 years, the probability of a spinoff increases by 9%.

We also include several variables that are arguably related to a more heterogeneous board. First, we include the standard deviation of the board member's ages as a proxy for board diversity. In models 2, 3, and 4, the coefficients for standard deviation of age are significantly positive; while in model 1, significance is lost. In models 2, 3, and 4, we include the proportion of women on the board and the proportion of non-corporate directors on the board. The coefficients for proportion of female directors are insignificant, but the coefficients for non-corporate directors are significantly positive at the 5% confidence level in all three models. In economic terms, for every 10% increase in the proportion of non-corporate directors, which is equivalent to one standard deviation, this increases the probability of a spinoff by 10%. These findings suggest that greater board diversity increases the probability of a spinoff.

In models 3 and 4 we include financing variables. The coefficients on the leverage ratio are insignificant; however, the coefficients for the dividend-to-net income ratio are negative and significant. As argued by Jensen (1986), a higher payout ratio can reduce agency problems by decreasing free cash flow under management's discretion. Our evidence suggests that financial commitments provide incentives to managers to maintain the level of diversification in the firm. One plausible interpretation of this result is that increased diversification increases the ability of a firm to make consistent dividend payments as diversification reduces the volatility of the firm's cash flows. The significantly negative coefficient suggests that an affect of higher dividend payments in diversified firms is that they provide a perverse incentive to maintain diversification strategies even if greater diversification is not optimal.

Finally, we include external hostile takeover threats and other restructuring activities in the three years preceding the spinoff. We use SDC data for both of these indicator variables. It is plausible that external hostile takeover threats inspire management to move to a more optimal structure as a defensive move to fend off further attacks. The coefficient for the hostile takeover threat indicator variable is not significant. The coefficient for the other restructuring activities indicator variable does not provide any evidence that firms that have previously been reducing their scope through non-spinoff methods are more or less likely to spinoff a division.

In order to check for further robustness to mitigate the possibility that our results are due to a missing variable in the matching algorithm, and thus our match set is fundamentally different from our spinoff sample, we re-run the models in Table 4 including indicator variables for the primary industry defined at the 3-digit SIC level and the results are substantively similar. We still find significant results with the same signs for board size, compensation, measures of board diversity, and outside board ownership.

The differences in mean and median probability of spinoff between the two groups for the entire models are statistically significant at the 1% level suggesting that the overall impact of the governance variables plays a significant role in a spinoff decision. In summary, evidence from the multivariate analysis suggests that the spinoff decision is related to governance characteristics.

If corporate governance failures do inhibit firms from moving to their optimal structure expeditiously, then we expect to see superior performance from the spinoff firms relative to their matched firm peers. In Table 5 we investigate the changes in market-to-book and changes in excess value in the year preceding the spinoff relative to the year following the spinoff for both the spinoff and matched firms. We follow the procedures as discussed in Ahn and Denis (2004) to combine parent and spunoff units to calculate the market-to-book and excess values for the spinoff firms in the year after the spinoff.

Table 5

Change in market-to-book and excess value

	Year –1 before spinoff	Year +1 after spinoff	Change (–1, +1)	F [χ^2]
<i>Panel A. Change in market-to-book</i>				
Spinoff firms	1.3807 [1.2624]	1.5355 [1.3569]	0.1380*** [0.1078]***	5.67** [6.98]***
N	102	89	89	
Matched firms	1.3389 [1.1256]	1.3722 [1.1993]	0.0301 [0.0455]**	
N	102	93	93	
<i>Panel B. Change in excess value</i>				
Spinoff firms	–0.1458* [–0.1108]**	–0.0204 [0.0259]	0.1664*** [0.1043]***	3.95** [3.25]*
N	102	89	89	
Matched firms	–0.1683** [–0.1364]***	–0.1204** [–0.1511]*	0.0283 [0.0193]	
N	102	93	93	

Market-to-book is the market value of assets divided by book assets. Market value of assets is the total book assets minus book value of equity minus deferred tax plus the year end stock price times the number of shares outstanding. Excess Value (EV) is measured using the method of Rajan et al. (2000). EV is sales-based excess value that is the market-to-sales ratio of the sample firm minus the sales-weighted sum of the median market-to-sales of industry matched single segment firms. For the year +1, we follow the procedure in Ahn and Denis (2004) to calculate the combined post spinoff value for parent and spunoff units. Year 0 is defined as the fiscal year of the spinoff. Last column reports *F*-statistic and χ^2 from *t*-tests and signed rank tests for the significance of differences for mean changes and median changes between spinoff firms and matched firms, respectively. For excess values, we use a two-tailed *t*-test and signed-ranks test relative to 0. *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively. All variables are winsorized at the 5th and 95th percentiles.

The spinoff firms significantly increase their mean and median market-to-book and excess values from year –1 to year +1. The median matched firm does increase its median market-to-book but the mean market-to-book and the mean and median excess values do not significantly change. The last column in Table 5 provides test statistics for comparing the changes in market-to-book and excess value for spinoff versus matched firms. The spinoff firms have significantly greater increases in both market-to-book and excess value for both the mean and the median.¹⁴

In summary, we find evidence that suggests that corporate governance characteristics matter in the decision to refocus. Further, the firms that do refocus increase their market-to-book ratios and excess values to a greater extent than their matched firm peers. These findings are consistent with the view that agency issues are important in determining whether firms choose to increase their focus.

5. Discussion

If firms that have more effective corporate governance are more likely to unwind harmful diversification, why did these same firms engage in the diversification strategy in the first place? We offer two possibilities. First, it is possible that the diversification strategy had a positive expected net present value, ex ante, but turned out to be value destroying ex post.¹⁵ Second, if a firm with less effective corporate governance engages in harmful diversification there is evidence that suggests that firms' governance characteristics are dynamic and are responsive to poor performance.¹⁶

¹⁴ Our findings are inconsistent with Colak and Whited (2004) who do not find significantly greater increases in excess values for firms that engage in refocusing relative to a matched set of firms. Colak and Whited include some financing variables in their matching algorithm that we consider to be governance variables.

¹⁵ See Matsusaka (2001) for a theory that describes firms engaging in diversifying acquisition strategies that require some firms to refocus if the "match" is poor.

¹⁶ Denis and Sarin (1999) find that changes in board composition and ownership structure are common. Berger and Ofek (1999) find that incentive-altering events often precede refocusing.

A caveat to our study is that it is possible that our findings are specific to the time period studied. We investigate whether the older portion of our sample drives our results. In fact, we find that the relations that we report in our main findings in Table 4 are more significant during the 1990s as compared to the earlier part of our sample. This is consistent with the view that internal corporate governance has become more important over time. Chhaochharia and Grinstein (in press) study changes in board and ownership structure from 1997 to 2003. For some variables they do find significant changes in the governance characteristics, but they find little or no change in several variables that are important to our study such as outside ownership and board size.

6. Conclusion

This study provides further evidence on the effectiveness of corporate governance characteristics, such as board and ownership structure, on the firm's choice to undertake a value-increasing, refocusing transaction. The evidence suggests that firms that have characteristics that are associated with more effective corporate governance have a greater probability of engaging in a spinoff. Specifically, ownership by outside board members has a positive relation with the probability of a spinoff and board size has an inverse relation with the probability of a spinoff. Boards with members that are younger and boards that are more diverse, regarding age and the proportion of non-corporate members, are more likely to engage in a spinoff. Finally, the spinoff firms exhibit significantly greater improvements in their market-to-book ratios and in their excess values as compared to their matched firm peers.

The relation between corporate governance characteristics and firm behavior remains controversial. Spinoffs are a value-increasing corporate action where the main purpose is to decrease the size and generally the scope of the firm. The findings in this study, taken at face value, suggest that there are diversified firms that are maintaining value destroying diversification strategies that do not eliminate this inefficiency due to less effective corporate governance structures.

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