The Long-Run Performance of Sponsored and Conventional Spin-offs

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Abstract

Unlike a conventional spin-off, a sponsored spin-off takes place when the subsidiary to be divested sells an equity stake to an outside investor before going public, thereby receiving a substantial capital infusion. We find that the stock return performance of a sample of 57 sponsored spin-offs from 1994 through 2005 is significantly negative over a three-year period following the spin-off date. In contrast, 182 conventional spin-offs over same interval record an average return performance. The parent firms' stock performance for the year preceding (following) the spin-off date is below-average (average), suggesting that their earlier performance was adversely affected by the subsidiary and motivated the parent to spin it off. In support of this contention, we find that parent firms tended to under-invest in the subsidiary prior to the spin-off, due to the subsidiary's limited growth opportunities. This under-investment, in turn, could have motivated the subsidiary to seek outside funding sources before going public.

I.   Introduction

A spin-off occurs when a firm distributes at least 80% of its shares in a wholly-owned subsidiary to its existing shareholders on a pro-rata basis, thereby creating a separate publicly-traded company. In general, spin-offs are accompanied by positive short-run and long-run stock performances for both the parent and spun-off firm (see Veld and Veld-Merkoulova (2006) for a review of papers). However, recent studies show that these stock returns depend on various factors such as whether the spin-off is focus-increasing or focus-decreasing to the parent (Daley, Mehrotra and Sivakumar (1997); Desai and Jain (1999)), the spin-off's subsequent operating performance (Daley, Mehrotra and Sivakumar (1997); Desai and Jain (1999)), and the growth opportunities of the spun-off division prior to the spin-off (Siddiqui and Warganegara (2003)).

We examine a different aspect of spin-offs – whether or not an outside investor purchases a substantial equity stake in the newly-created firm at or around the spin-off date. We compare these "sponsored" spin-offs to "conventional" spin-offs in terms of long-run stock performances, return on assets, growth opportunities, capital expenditures and earnings per share.[1]

Our motivations for separating spin-offs into sponsored and conventional spin-offs are two-fold. First, we find that parent firms increasingly are seeking substantial equity infusions from outside investors to help facilitate the separation of the spun-off division's net assets from the parent's net assets. From 1994-1998, the first five years of our sample, only 16 of the 119 spin-offs are sponsored, accounting for just 13.4 percent of total spin-offs. In contrast, sponsored spin-offs comprise 34.2 percent of total spin-offs (41 out of 120) from 1999–2005. This dramatic growth in sponsored spin-offs demonstrates that parent firms and their bankers perceive advantages to these capital infusions.

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[1] We borrow the term "sponsored" spin-off from the *Wall Street Journal* (10/17/00). We call all other types of spin-offs "conventional" spin-offs.

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Second, we expand on the literature concerning the influence of large stakeholders on the return and operating performances of the companies in which they invest. An examination of the identities of the blockholders reveals they primarily are sophisticated investors, such as Warren Buffett, the Gabelli Fund, Morgan Stanley and Forstmann Little. The finance literature offers competing views on how large blockholders may affect future performances of spun-off firms.

Bethel, Liebeskind and Opler (1998) find that large blockholders are more likely to target firms with relatively low returns on assets (ROA) and poor growth opportunities, the latter proxied by the firms' market-to-book ratios. Brav et al. (2008) and Klein and Zur (2008) examine hedge fund activists and find that these large blockholders tend to target high performing firms. All three studies report significantly positive abnormal returns surrounding the filing of the initial SEC Schedule 13D, as well as long-run improvements in ROA and/or subsequent positive stock returns Therefore, these papers suggest that sponsored spin-offs should have positive, long-run abnormal stock returns following the spin-off.

Hertzel, Lemmon, Linck, and Rees (2002) examine the long-run stock and operating performances following private placements of equity from 1980 to 1996.[2] Unlike Bethel, Liebeskind and Opler (1998), they find that firms with private equity placements have relatively high market-to-book ratios, as well as high capital expenditures prior to the private placement. They also report significantly negative long-run stock returns and operating performances following the private placement. Thus, their study suggests that sponsored spin-offs should have negative long-run abnormal stock returns following the spin-off.

In this paper, we examine the causes and consequences of sponsored spin-offs for a sample of 57 firms from 1994 through 2005. As a comparison, we also perform the same set of analyses on

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[2] A "private equity placement" describes a company's cash sale of its securities made in reliance upon exemptions from registration requirements contained in the applicable securities legislation. Private placement investments often are limited to institutional investors, accredited/sophisticated investors, hedge funds, venture capitalists, and corporate insiders. The assumption is made that these investors are better positioned to assess and manage the risks associated with these investments.

182 conventional spin-offs over the same time period. Our main result is that sponsored spin-offs differ from conventional spin-offs in several dimensions.

Using the Carhart (1997) four factor model, we find significantly negative one-, two- and three-year post-event alphas for the sponsored spin-offs. These results are robust to both equally weighted and value weighted portfolios. In contrast, we find no evidence that conventional spin-offs under-perform the market. Further, the announcement-day effect on sponsored spin-offs is negligible while, similar to earlier event studies, the conventional spin-offs' two-day response is significantly positive.

We also examine stock return performances for the parent firms. For the one-year period *prior* to the spin-off, we find insignificant alphas for the parent firms of conventional spin-offs; whereas, we find a significantly negative alpha for the parent firms of the sponsored spin-offs. Neither group of spin-offs records statistically significant post-event one-, two-, or three year alphas. These results suggest that sponsored spin-offs might be responsible for the parents' sub-par pre-event performance that, in turn, could have motivated the parent to divest itself of the subsidiary.

To examine this possibility, we calculate operating performances, the amounts that were invested in the subsidiaries, and the subsidiaries' growth opportunities both prior to and after the sponsored spin-off. Our findings on all three factors support the view that sponsored spin-offs were and remain poor performers. In the one-year period prior to the spin-off, the ROA for the sponsored spin-offs and their parent firms are each significantly lower than their respective matched group of firms. For each of the three years following the spin-off date, the sponsored spin-offs record lower return on assets (ROAs), while the parent firms' ratios are similar to a portfolio of matched firms. When examining capital expenditures and Tobin's q for the sponsored spin-offs, we find similar

patterns. In contrast, conventional spin-offs' ROAs, capital expenditures and Tobin's q ratios, for the most part, are not significantly different from their control samples.

Finally, we bring together the poor long-term operating and stock return performances by comparing analysts' EPS forecasts to the divested subsidiary's reported EPS following the spin-off. We find evidence that the market does not fully anticipate these sub-par operating results.

Overall, the results support the view that sponsored spin-offs are different from conventional spin-offs. They also suggest that the parent's low ROA and under-investment in the subsidiary are partially motivated by the subsidiary's lack of growth opportunities. This under-funding by the parent firm might help explain the subsidiary's decision to seek outside funding sources, via a sponsor, prior to the spin-off. We conclude that despite the equity infusion at the time of the spin-off, the market slowly recognizes the newly-minted firm's limited investment opportunities.

The remaining structure of the paper is as follows. Section II describes the sample selection process, Section III describes the research design, and Section IV presents the empirical results. Summary and conclusions are presented in the final section.

II.   Sample Selection and Description

An initial listing of 336 possible spin-offs over the period January 1994 through December 2005 was obtained from the Thomson Financial Security Database.[3] *The Wall Street Journal Index* and EDGAR database were jointly used to confirm which of these firms qualified as a spin-off, the date of the spin-off, and the name of the parent firm. We eliminate 97 firms either because we could find no mention of them in either the WSJ Index or EDGAR database or their stock prices were not available in the CRSP Daily Master File. This process reduced the final sample to 239 spin-offs. This sample size is comparable to Danielova (2008), who identify 164 spin-offs between 1991 and

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[3] Our sample period begins January 1994 because this is the earliest period covered by the EDGAR database, which was used to identify the sponsored spin-offs.

2002.

The EDGAR database was further used to identify those spin-offs that were investor sponsored. Any person or group of persons who purchases 5 percent or more of the subsidiary's outstanding shares (either before or after the spin-off) must file either a Schedule 13G or a Schedule 13D statement with the Securities and Exchange Commission (SEC) within ten business days following the date of purchase.[4] The filed statement was then reviewed to determine the identity of the investor, the date that the shares were purchased, and the percentage of shares that were purchased. If the purchase date preceded the spin-off date, it was classified as a sponsored spin-off.

Of the 239 spin-offs, we classify 57 firms (23.8 percent) as sponsored spin-offs and 182 (76.2 percent) as conventional spin-offs. Appendix A lists the names of the 57 sponsored spin-off firms, the parent company of each spin-off, and the identity of the sponsor(s) including their percentage ownership in the subsidiary. The ownership stake ranges from 5.0 percent (Sabre Holding and Transpro) to 51.8 percent (Packaging Dynamics). There are 15 spin-offs that have two or more sponsors by the date of the spin-off.

Table I gives a yearly breakdown of the spin-off activity for both the full sample of spin-offs and sponsored spin-offs. From 1994-1998, just 16 of the 119 spin-offs (13.4 percent) are sponsored spin-offs. In contrast, from 1999 through 2005, 34.2 percent of all spin-offs (41 out of 120) are investor sponsored. These statistics show that the sponsored spin-off became relatively more prevalent over time. The year-by-year breakdown also demonstrates that sponsored spin-offs were not an artifact of the "market bubble" that ended in 2000.

Table II presents financial and market data at the time of the spin-off on four sample groups: sponsored spin-offs, conventional spin-offs, parents of sponsored spin-offs, and parents of conventional spin-offs. To calibrate the relative size of the sponsored spin-off vis-à-vis its parent,

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[4] A Schedule 13G is filed if the investor is a passive investor. A Schedule 13D is filed if the investor intends to influence the firm's policies, or if the investor is unwilling to give up the option of affecting the firm.

we present both accounting data in Panel A and market-based data in Panel B. The total assets and net sales data in Panel A are available for the spin-offs from their post-spin-off financial statements; the data for the parents are on Compustat. The market value of equity in Panel B is taken from CRSP and is the closing price on the spin-off date. The book value of equity is at the end of the fiscal year preceding the spin-off date.

As Panel A shows, the median values for the two spin-off (parent) groups prior to the spin-offs are comparable in terms of total assets and net sales.[5] These findings suggest that in terms of size, whether measured as assets or revenues, there are no discernible differences between sponsored and conventional spin-offs.

As each panel shows, the subsidiary comprises a significant part of the firms' operations. For example, in Panel A, the sponsored spin-offs' median value of total assets is $605.9 million compared to $1,481.3 million for their parents. This indicates that the sponsored spin-offs' median asset value is 40.9 percent as large as their parents' corresponding value. In terms of net sales, the sponsored spin-offs also accounted for a fairly large percentage of the parents' revenues ($486.5 million verus $1,543.4 million, or 31.5 percent). Because sponsored spin-offs are large relative to their parents, their annual operating performance in the year preceding the spin-off date should have a material influence on the parents' same-year performance. This issue is examined in Section IV-B, when we focus on the parent firms' stock performances over the periods preceding and following the spin-off date.

Regarding the book value-to-market value of equity ratios in Panel B, sponsored spin-offs record median (mean) values of 0.89 (0.62), compared to 0.63 (0.43) for conventional spin-offs, a difference that is statistically significant at the 0.05 (0.05) level. The median (mean) book-to-market ratio for the sponsored spin-offs is also considerably higher than their parent firms'

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[5] Using mean values, both the sponsored spin-offs and their parents are significantly smaller than the conventional spin-offs and their parent firms. However, because the accounting data is highly skewed, we consider the median values to be a more reliable measure of central tendency.

corresponding ratio of 0.48 (0.44) (not tabulated). These findings provide preliminary evidence that sponsored spin-offs face somewhat limited investment opportunities compared to their counterparts.

III.   Research Design

Our first series of tests measure the degree of success experienced by our sample of sponsored spin-offs by documenting their return performances following the spin-off date. We also compute the return performances for the conventional spin-offs as well as the parent firms for both groups of spin-offs. Consistent with recent studies conducting long-run performance tests [e.g., Hertzel et al. (2002)], we use the Carhart (1997) four-factor model as our main model of performance measurement:

$$R_{it} - R_{ft} = \alpha_i + b_i(R_{mt} - R_{ft}) + s_i SMB_t + h_i HML_t + m_i UMD_t + \varepsilon_{it} , \tag{1}$$

To calculate long-run abnormal returns we use the calendar-time portfolio approach first used by Jaffee (1974) and Mandelker (1974) and strongly advocated by Fama (1998) and Mitchell and Stafford (2000). Specifically, we construct post-event, calendar-time portfolios each month and include those stocks that have a spin-off within a one-, two- and three-year window prior to the month in question. The motivation for using the calendar-time approach is to account for the positive cross-correlation of abnormal returns. Specifically, because there is considerable overlap in the sample firms' performance windows, individual alphas will be cross-sectionally dependent. The calendar-time approach is designed to address this statistical problem.

Next, we examine the financial characteristics of spin-offs and their parent firms over periods preceding and following the spin-off. The firm-specific characteristics we investigate are operating performance, defined as return on assets, capital expenditures and Tobin's q ratio. We compare these measures with the corresponding statistics from a matched portfolio of firms. The Compustat database is used to identify the portfolio of matched firms. Specifically, for each sample

firm, we find control firms on Compustat that are in the same industry using the Fama and French (1997) 48 industry classification. We then identify all firms with a market value of equity within ten percent of the sample firm's market value equity as of the spin-off date. If there are less than five control firms with a market value of equity within ten percent of the sample firm's size, we also include those control firms with a value within 20 percent of the sample firm's size. From this set of firms, we choose the firm with the book-to-market ratio closest to that of the sample firm.[6] Finally, we compare analysts' EPS forecasts made within 60 calendar days after the spin-off with their reported EPSs for the three subsequent fiscal years, including the year of the spin-off.

IV.   Empirical Results

A. Return Performances of Sponsored Spin-offs and Conventional Spin-offs

Table III presents the abnormal returns for the spun-off subsidiaries over the post-spin-off period using one-, two- and three-year windows. As Panel A shows, the post-spin-off alphas using equally weighted portfolios are all significantly negative at the 0.05 significance level. Specifically, the one-, two-, and three-year alphas are -0.0133 (t-stat = -2.0691), -0.0161 (t-stat = -2.2776) and -0.0151 (t-stat = -2.3141), respectively. This translates to cumulative abnormal returns of -15.96%, -38.64% and -54.22% over the one-, two- and three-year intervals. The corresponding statistics using value weighted portfolios are consistent with these results. Specifically, the one-, two- and three year alphas are -0.0108 (t-stat = -1.8652), -0.0121 (t-stat = -1.9932) and -0.0133 (t-stat = -2.1844), the latter two periods significant at the 0.05 level. These results strongly suggest that sponsored spin-offs perform poorly in the long run.[7]

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[6] Barber and Lyon (1997) argue that the use of "reference portfolios" (i.e., a portfolio of matched firms) to calculate buy-and-hold abnormal returns can yield biased test statistics and argue that using a single matched firm (i.e., "control firm") eliminates these sources of bias.

[7] Cusatis, Miles and Woolridge (1993) find that their spin-off sample's significantly positive return performance is driven entirely by the subsample of firms that were acquired by another party during the three-year, post-event period. Since sponsored spin-offs are underperformers rather than overperformers, removing the acquired firms from our

To further examine these negative alphas, we separate the sponsored-spin-offs into those that are "focus-increasing" and "non-focus-increasing" based on their four-digit S.I.C. codes. Desai and Jain (1999) report that focus-increasing spin-offs (the subsidiary is in a different industry code than the parent firm) experience significantly positive abnormal returns over one-, two- and three-year periods following the spin-off. In contrast, non-focus-increasing spin-offs (the subsidiary is in the same industry code as the parent) record negative, but not statistically significant, abnormal returns over a three-year period. From our sample of 57 sponsored spin-offs, we find that 40 are focus-increasing while only 17 are non-focus-increasing. This finding suggests that the negative performance by the sponsored spin-offs cannot be attributed to the preponderance of non-focus-increasing spin-offs. In fact, they suggest that the negative performance we document would have been even worse if not for the high percentage of focus-increasing spin-offs in our sample.

The negative alphas in Panel A are consistent with the Hertzel et al. (2002) performance tests on private equity placements. Sponsored spin-offs are similar to private equity placements in that both provide the subsidiary/firm with a capital infusion from a private investor. There are, however, a number of important differences between the two strategies. For a sponsored spin-off to be a tax-free exchange, the blockholders' voting rights (economic interest) cannot exceed 19.9 percent (50.0 percent), while private equity placements are not accorded any such tax advantages. Further, all of the capital provided by the investor in a sponsored spin-off goes directly to the subsidiary because the parent firm is not part of the contractual agreement,[8] whereas in a private equity placement all of the proceeds go to the parent. But perhaps the major difference between the two is that investors in a private equity placement usually receive a substantial discount from the stock's market price, typically

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sample should, at the very least, not change our basic inferences. When we run the performance tests on the unacquired sponsored spin-offs, using both equally weighted and value weighted portfolios, the alphas remain significantly negative. When we remove the acquired firms from the conventional spin-off sample, all of the alphas remain positive, but none are statistically significant at conventional levels.

[8] However, this does not prevent the subsidiary from transferring part, or all, of this capital back to the parent firm if a prior arrangement existed between the two parties.

in the 15-20 percent range. In contrast, investors in sponsored spin-offs do not receive a discount from the issuer. Hertzel et al. (2002) argue that due to the private equity placement's negative post-issue abnormal returns, this discount might be necessary to compensate potential investors, who apparently anticipate this negative performance. In the case of sponsored spin-offs, by definition, we cannot make the same argument.

We next perform our tests on the conventional spin-offs to see if sponsored spin-offs and conventional spin-offs experience different long-run return performances. By examining conventional spin-offs, we address two questions. First, are sponsored spin-offs similar or different from spin-offs that do not have large blockholders? Second, is the sub-par performance for the sponsored spin-offs an artifact of the time period used in this study? Cusatis, Miles and Woolridge (1993) report significantly positive two- and three-year, post-spin-off abnormal returns for a sample of spin-offs over 1965-1988. In contrast, McConnell, Ozbilgin and Wahal (2001) and Desai and Jain (1999) report insignificant positive long-run abnormal returns for spin-offs over 1989-1995 and 1975-1991, respectively. Thus, it appears that spin-off performances are influenced by the time period under evaluation.

Panel B of Table III reports the findings for the conventional spin-offs. For the equally weighted portfolios, the alphas for all three windows are positive, but statistically insignificant at conventional levels. The value-weighted results are stronger with alphas of 0.0161 and 0.0151 over the two- and three- year windows, respectively, both significant at the 0.05 level. Because of these mixed results, it is not clear whether we can classify the conventional spin-off as above-average performers. Nevertheless, the results in Table III support the conclusion that the long-run

performance of sponsored spin-offs are different from that of conventional spin-offs, and that these differences cannot be attributed to the time period studied.[9]

B.   Return Performance of Parent Firms of Sponsored and Conventional Spin-offs

The finding that the sponsored spin-offs are under-performers suggests that one possible motivation for the parent's decision to divest itself of the subsidiary is to eliminate a division whose operating performance is having a negative effect on the value of the parent's common stock. To investigate this possibility, we compute alphas for both groups of parents over the year *preceding* the spin-off date, as well as for the three-year period following the spin-off.

The results for the parents of sponsored spin-offs are shown in Panel A of Table IV. Over the year preceding the spin-off, the equally weighted alpha is -0.0092 (t-value = -1.8923) while the value-weighted measure is -0.0085 (t-value = -1.7488), both significant at the 0.10 level. In contrast, none of the post-event alphas, whether equally weighted or value weighted, are statistically significant. Together, these results provide preliminary evidence that parent firms divest the subsidiaries because they are a drag on the parents' stock performances.

The performance tests for the parents of conventional spin-offs over the same sample period are reported in Panel B of Table IV. In contrast to the parents of sponsored spin-offs, the equally weighted (value weighted) alphas for the one-year interval preceding the spin-off date is 0.0129 (0.0041) and not statistically significant. These results suggest that the negative pre-event abnormal returns by the parents of the sponsored spin-offs is not time specific, but rather due to the below average performance of the sponsored spin-offs. For each of the periods following the spin-off, none of the alphas are statistically significant at conventional levels.

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[9] As a robustness check, we redid the performance tests using the buy-and-hold abnormal return (BHAR) approach by comparing the sponsored spin-offs' returns with those of a portfolio of firms matched by industry, size and book-to-market ratio. The results are just as strong. For example, the mean BHAR for the one- two- and three-year intervals following the spin-off are –24.81, -37.64 and –48.21 percent, respectively, and all are statistically significant at the 0.01 level.

C. *Announcement-Day Returns for Sponsored and Conventional Spin-offs*

Prior studies on the spin-off announcement-day effect report a significantly positive market response to this event. Similarly, Wruck (1989) and Hertzel and Smith (1993) find that the announcement of a private equity placement results in a significantly positive abnormal return over the announcement period. Because Hertzel et al. (2002) show that firms with private equity placements *under-perform* the market over a three-year window following the event, they contend that the positive direction of the announcement-day effect is inconsistent with the under-reaction hypothesis and is, therefore, an "incorrect" response.

We find that the sponsored spin-offs' two-day abnormal return is just 0.21 percent with an insignificant t-value of 0.26. This finding contrasts with the significantly positive announcement-day abnormal returns reported by Wruck (1989) and Hertzel and Smith (1993), further indicating differences between sponsored spin-offs and private equity placements.

In contrast, the abnormal return for the conventional spin-offs is 2.80 with a corresponding t-value of 3.00, statistically significant at the 0.01 level. The latter result is very similar to those reported in earlier studies on spin-off announcements.[10] The difference between the two samples' announcement-day results is statistically significant of the 0.05 level (t-value = 2.11), suggesting that the market responds differently to sponsored spin-offs when compared to conventional spin-offs.

D. *Operating Performances of Spin-offs and Their Parent Firms*

The preceding analysis shows that over the three years following the divestiture, sponsored spin-offs, unlike conventional spin-offs, are under-performers. We also find evidence that the parents of sponsored spin-offs are under-performers over the year preceding the spin-off, while the

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[10] Veld and Veld-Merkoulova (2006) report that the weighted average abnormal return for a number of spin-off studies is 3.31 percent.

parents of conventional spin-offs record an average performance. To further investigate these phenomena, we measure the operating performances of both spin-off groups and their parents over the fiscal year preceding the spin-off date and each of the three full fiscal years following the event. We then compare these results with those of their corresponding matched firms with the same fiscal year as the sample firm. Similar to Bethel, Liebeskind and Opler. (1998), Klein and Zur (2008) and Brav et al. (2008), we measure operating performance as the return on assets (ROA), computed by dividing each firm's EBITDA by its total year-end assets. EBITDA and total assets are taken from Compustat. Annual reports supplement the data for some of the spin-offs.

Panel A of Table V reports the results for the sponsored spin-offs. For the fiscal year preceding the spin-off date (year -1), the median ROA is 7.80 percent versus 11.52 percent for their matched firms, a difference that is statistically significant at the 0.05 level. The parametric mean tests also support the findings (8.28 percent versus 12.15 percent, statistically significant at the 0.05 level). For the first full fiscal year after the spin-off date (year +1), the sponsored spin-offs' median ROA is 6.12 percent compared to 12.11 percent for the matched firms, a difference that is statistically significant at the .05 level. For the second and third years following the divestiture, the sponsored spin-offs' ROA also under-performs relative to their matched firms. While these results are in contrast to those of Bethel, Liebeskind and Opler (1998), who report modest improvements in ROAs over this time span, they are not inconsistent with the significantly negative alphas recorded by the sponsored spin-offs over the post-event intervals.

Panel B of Table V shows that the parent firms' median ROA for year -1 is significantly lower than the matched firms (8.83 percent versus 11.28 percent, significant at the 0.10 level). It should be noted that this ROA includes the operating performance of the soon-to-be-spun-off subsidiary. For the three post-spin-off years, the parents have median and mean ROAs that are not significantly different from those of their matched firms. These findings are in line with the parent

firms' average stock return performance over the post-event periods following the spin-off and provide additional evidence that the parents' under-performance in year -1 can be attributed to their spun-off subsidiaries.

E.   Spun-off Subsidiaries' Capital Expenditures and Investment Opportunities

We next investigate the degree to which the parent invests resources in the subsidiary prior to the spin-off. As a division within the parent's organization, the subsidiary must, in most cases, rely on the parent firm to finance its capital investments. If the parent perceives the subsidiary as either having performed below expectations and/or has limited growth opportunities, it might be more prone to under-invest in the subsidiary and, instead, put more resources into its more profitable divisions. One way to investigate this possibility is to examine the subsidiary's capital expenditures-to-sales ratio before and after the spin-off.[11] We then compare this ratio to the capital expenditures-to-sales ratio of their corresponding matched firms used in our earlier performance tests. Data are from annual reports and the Compustat database.

The results are reported in Table VI, Panel A. For year -1, the median (mean) capital expenditures/sales ratio for the sponsored spin-offs is 4.74 (7.08) percent versus 6.68 (12.32) percent for the matched firms, a difference that is statistically significant at the 0.05 (0.01) level. For year +1, the sponsored spin-offs' median and mean ratios remain lower than their matched firms, but the differences are not statistically significant. However, for years +2 and +3, both median and mean ratios are significantly lower than those of the matched firms. These results are in direct contrast to the findings of Hertzel et al. (2002), who document above-average capital expenditures for several years preceding as well as following the year of the private equity

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[11] This approach has been used in a number of studies to examine a parent firm's relative investment allocation among its divisions [e.g., Dittmar and Shivdasani (2001)].

placement.[12] They argue that this is evidence that these firms were overly optimistic about the potential of their internal investments. Our finding that parent firms constrain the capital expenditures of sponsored spin-offs prior to the spin-off suggests they act more rationally when setting the subsidiaries' capital budget.

The fact that the parents limit their subsidiaries' capital expenditures raises the question of why this occurred. One obvious candidate would be limited investment opportunities for the subsidiary. Accordingly, we estimate Tobin's q, defined as total market value of equity plus book value of debt divided by the book value of assets, as a proxy for each sample's growth opportunities. Panel B of Table VI shows that for year -1, the sponsored spin-offs record a median (mean) q ratio of 0.78 (1.23) versus 1.27 (2.02) for the matched firms, a difference statistically significant at the 0.05 (0.05) level. These results are also consistent with the relatively high book-to-market ratios reported in Table II and, again, are in contrast to those found by Hertzel et al. (2002), who show that firms with private placements have significantly low book-to-market ratios in the fiscal year prior to the equity placement. For each of the three fiscal years following the spin-off date, the sponsored spin-offs' Tobin's q ratios remain significantly lower than the matched firms, suggesting little or no improvement in their investment opportunities.

Overall, these results show that the parent's decision to under-invest in sponsored spin-offs before the divestiture is at least partially motivated by the subsidiary's below-average growth opportunities. They could also explain why the subsidiary sold a substantial stake in its equity before it was spun-off to the parent's shareholders. That is, it was a strategy to raise needed capital for the subsidiary before going public.

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[12] To measure the level of capital expenditures, they add research and development expenditures to capital expenditures and divide the sum by total assets.

F.   Operating Performance, Capital Expenditures and Tobin's q: Conventional Spin-offs and

Parents

We now turn our attention to conventional spin-offs. As Panel A of Table VII shows, the median and mean ROAs for the conventional spin-offs for year -1 are not significantly different than those found for their matched samples. Overall, the same is true for the post-spin-off years. These results are in contrast to the sponsored spin-offs' negative ROA comparisons reported in Panel A of Table V and support the view that conventional spin-offs are different than its sponsored counterparts.

.   For the parent firms, shown in Panel B, the ROA for year-1 is not significantly different from their matched firms.   This finding differs from the sponsored spin-offs' parents, which experienced a negative ROA in year -1. Similar to our findings in Table V, however, we find no over- or under-performance by the parents of conventional spin-offs in the post-spin-off period.

In Table VIII, we present capital expenditures and Tobin's q ratio for the conventional spin-offs. As Panel A shows, we find no meaningful differences in capital expenditures between the conventional spin-offs and their matched firms during the pre-event and post-event years. From Panel B we find that the conventional spin-offs' Tobin's q for the pre-and post-event years, is, on balance, not statistically different from the matched firms' Tobins' q.   These results differ from those reported for sponsored spin-offs, and illustrate further the differences between the two types of transactions.

G.   Forecasted EPS versus Actual EPS

In the preceding sections, we find that the sponsored (conventional) spin-offs' operating performances and investment opportunities are below-average (average) compared to a portfolio of matched firms. In order to argue that these results are consistent with their post-spin-off stock performances documented in Section A, we have to show that the market had *not* fully anticipated

these operating statistics at the time of the sponsored spin-off, whereas it did anticipate the same statistics for the conventional spin-offs.

We test this assertion by comparing the spun-off subsidiaries' earnings per share (EPS) with analysts' projections following the spin-off date. Specifically, using the IBES database, we compare EPS of the sponsored (conventional) spin-offs with their consensus analysts' forecasted EPS for each of the three fiscal years including and following the year of the spin-off. We define the consensus forecast as either the mean or the median of all initial forecasts made by individual analysts within 60 calendar days after the spin-off date.

The results for the sponsored spin-offs are shown in Panel A of Table IX. For all three years, reported EPS is significantly lower than the forecasted EPS by a considerable margin. For year 0, the fiscal year surrounding the spin-off date, the mean (median) forecasted EPS is $0.429 ($0.725) compared to $0.268 ($0.561), statistically significant at the 0.05 (0.10) level. For the following two years, these differences continue to widen, with both the mean and median forecasts significantly higher than the actual EPS at the 0.01 level. Panel B reports the corresponding statistics for the conventional spin-offs. In contrast to the results in Panel A, we find only scant evidence that there is a statistical difference between reported EPS and analysts' forecasts.

V. Summary and Conclusions

Whereas in a conventional spin-off neither the parent nor subsidiary raises capital, sponsored spin-offs receive a cash inflow from outside investors before going public. We examine the influence of these large stakeholders on the long-run return and operating performances of the sponsored spin-offs and compare their performance with those of conventional spin-offs.

We identify 57 sponsored spin-offs that occurred between January 1994 and December 2005 and conduct performance tests on their stock returns over one- two- and three year windows

following the spin-off. The sponsored spin-offs abnormal performance measure (alpha) is significantly negative using both equally weighted and value weighted portfolios. In contrast, 182 traditional spin-offs that take place over the same 12-year period record an average return performance over the same windows. Furthermore, unlike the conventional spin-offs significantly positive announcement-day effect, the sponsored spin-offs' two-day abnormal return is not statistically significant.

We also find that parent firms under-perform over the one-year period preceding the spin-off and are average performers after the spin-off. These results suggest that the subsidiary's pre-spin-off operating performance may have acted as a drag on the parent's stock performance. This, in turn, could have motivated the parent to divest themselves of the subsidiary via a spin-off.

To examine these issues, we first compute the ROAs for both the sponsored spin-offs and their parents for the fiscal year preceding the spin-off as well as for the three fiscal years following the spin-off date and compare their ratios with those of their corresponding matched firms. While both sponsored spin-offs and their parents record below-average performances for the year preceding the spin-off, only the sponsored spin-offs continue to be under-performers over each of the three full fiscal years after the spin-off. In contrast, the ROAs of the conventional spin-offs are higher but not statistically different from their matched firms. We also find that analysts' EPS forecasts for the sponsored spin-offs are consistently higher than their reported EPS over the various post-event intervals. Together, these results are consistent with the evidence that sponsored spin-offs are under-performers over the post-event periods. The sponsored spin-offs' ROA results also suggest that the pre-event, negative stock performance of the parent-firms is due, at least in part, to the sub-par operating performance of the (soon-to-be) spun-off subsidiary.

We also examine the capital expenditures and investment opportunities of the spin-offs both prior to and after the spin-off. Sponsored spin-offs' capital expenditures-to-sales ratios are

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significantly lower than those of a portfolio of matched firms over the fiscal year preceding the spin-off date. Sponsored spin-offs' Tobin's q is also significantly lower than its matched portfolios' Tobin's q, supporting the view that the subsidiaries' limited pre-spin-off capital budget was driven by an absence of investment opportunities. In contrast, Hertzel et al. (2002) report significantly higher capital expenditure ratios and lower book-to-market ratios prior to the private placement and attributes the private placements' negative return performance to investor over-optimism. We find no such evidence and attribute the subsidiary's decision to seek an outside sponsor to a lack of resources provided by the parent.

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Table I

Spin-off Activity from January 1994 through December 2005: Total Spin-offs Versus Sponsored Spin-offs

This table reports the distribution by year of completion of the total sample of 239 spin-offs and 57 sponsored spin-offs. In a sponsored spin-off, the subsidiary sells-off a portion of its outstanding equity to an outside investor (sponsor) before going public. All proceeds from the sale accrue to the subsidiary rather than the parent firm. The initial listing of spin-offs was obtained from the Security Data Corporation's Mergers and Acquisitions database. The Wall Street Journal Index and EDGAR database were jointly used to confirm those firms that qualify as a spin-off, the date of the spin-offs, the name of the parent firm, and whether or not a spin-off can be classified as a sponsored spin-off.

Summary

(1) Year	(2) Total Spin-offs	(3) Sponsored Spin-offs	(4) % of Total Spin-offs
1999-2005	120	41	34.2
1994-1998	119	16	13.4
TOTAL	239	57	23.8

Yearly

(1) Year	(2) Total Spin-offs	(3) Sponsored Spin-offs	(4) % of Total Spin-offs
2005	13	5	38.5
2004	14	6	42.9
2003	18	5	27.8
2002	25	7	28.0
2001	8	1	12.5
2000	17	6	35.3
1999	25	11	44.0
1998	24	6	25.0
1997	24	6	25.0
1996	21	1	4.8
1995	27	2	7.4
1994	23	1	4.6
TOTAL	239	57	23.8

Table II

Descriptive Statistics

This table reports the medians and means of several firm characteristics for four sample groups: sponsored spin-offs, conventional spin-offs, parents of sponsored spin-offs, and parents of conventional spin-offs. Panels A and B show the total assets, net sales, market value of equity and book value of equity-to-market value of equity for the fiscal year preceding the spin-off date and the spin-off date. For the spin-off date, the market value of equity is based on each sample firm's closing share price on the spin-off date, while book values are based on the fiscal year preceding the spin-off date. Financial data were obtained from annual reports and the Compustat database. The statistical tests are for differences between the means or medians.

Panel A: Fiscal year preceding the spin-off date

SPIN-OFFS	N	Total Assets ($ mill.)		Net Sales ($ mill.)	
		Median	*Mean*	*Median*	*Mean*
Sponsored	57	605.9	1421.1***	486.5	1230.7**
Conventional	182	521.6	2904.8	465.7	1878.4

PARENTS

	N	*Median*	*Mean*	*Median*	*Mean*
Sponsored	57	1481.3	4004.7***	1543.4	3214.6***
Conventional	182	1815.0	9716.5	1480.6	6165.1

Panel B: Spin-off date

SPIN-OFFS	N	Market Value of Equity ($ mill.)		Book Value To Market Value	
		Median	*Mean*	*Median*	*Mean*
Sponsored	57	402.2**	1018.8	0.89**	0.62**
Conventional	182	207.8	1190.4	0.63	0.43

PARENTS

	N	*Median*	*Mean*	*Median*	*Mean*
Sponsored	57	2145.0	2591.4**	0.48*	0.44
Conventional	182	1859.6	5065.3	0.37	0.41

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  * statistically significant at the 0.10 level
 ** statistically significant at the 0.05 level
*** statistically significant at the 0.01 level

Table III

**Stock Performances of Sponsored Spin-offs and Conventional Spin-offs
over the 1994-2005 Sample Period**

This table reports the one-two- and three-year performance measures (alphas) for the sponsored and conventional spin-offs using the calendar-time portfolio approach. Both equally weighted and value weighted monthly returns are used to compute the parameter estimators over the sample period. RMRF is the value-weighted market return on all NYSE/AMEX/Nasdaq firms (RM) minus the risk-free rate (RF), which is the one-month treasury bill rate. SMB (small minus big) is the difference each month between the return on small firms and big firms. HML (high minus low) is the difference each month between the return on a portfolio of high book-to-market stocks and the return on a portfolio of low book-to-market stocks. UMD (up minus down, or momentum) portfolios for month t (formed at the end of month t-1) are based on returns over month -13 through month -2 and are constructed monthly. White-robust t-statistics are reported in parentheses below the parameter estimates. Levels of significance are shown only for the intercept estimates.

Panel A: Sponsored Spin-offs (n=57)

	1-Year		2-year		3-year	
	EWT	VWT	EWT	VWT	EWT	VWT
Alpha	-0.0133**	-0.0108*	-0.0161**	-0.0121**	-0.0151**	-0.0133**
	(-2.0691)	(-1.8652)	(-2.2776)	(-1.9932)	(-2.3141)	(-2.1844)
RMRF	0.0109	0.0102	0.0125	0.0104	0.01105	0.0117
	(3.1200)	(3.1250)	(6.3271)	(5.6261)	(7.8643)	(7.0453)
SMB	0.0095	0.0052	0.0136	0.0057	0.01160	0.00090
	(2.8888)	(1.5939)	(6.2945)	(3.0570)	(8.2206)	(5.3815)
HML	0.0042	0.0008	0.0076	0.0042	0.0080	0.0045
	(1.0059)	(0.1876)	2.9670	(1.7555)	(4.4710)	(2.1395)
UMD	-0.0092	0.0072	-0.0066	-0.0042	-0.0055	-0.0023
	(-4.0847)	(-3.2206)	-4.8074	(-3.3382)	(-5.7138)	(-2.0141)
R^2	0.267	0.223	0.500	0.362	0.626	0.498

Panel B: Conventional Spin-offs (n=182)

	1-Year		2-year		3-year	
	EWT	VWT	EWT	VWT	EWT	VWT
Alpha	0.0108	0.0133	0.0050	0.0161**	0.0084	0.0151**
	(0.865)	(1.069)	(0.658)	(2.277)	(1.236)	(2.314)
RMRF	0.0071	0.0057	0.0095	0.0092	0.0099	0.0118
	(1.3707)	(1.8817)	(7.0232)	(6.0821)	(9.9880)	(8.1369)
SMB	0.01250	0.0032	0.0058	0.0011	0.0057	0.0024
	(2.5790)	(1.1406)	(4.5259)	(0.7743)	(6.0827)	(1.7048)
HML	0.0226	0.0073	0.0066	0.0010	0.0069	0.0060
	(2.8395)	(1.5966)	(3.7771)	(0.5175)	(5.5185)	(3.2774)
UMD	0.0007	-0.0009	-0.0001	0.0002	-0.0006	-0.0005
	(0.1476)	(-0.3062)	(-0.01481)	(0.638)	(-0.8768)	(-0.5902)
R^2	0.143	0.069	0.512	0.497	0.683	0.555

  *   statistically significant at the 0.10 level
 **   statistically significant at the 0.05 level
***   statistically significant at the 0.01 level

Table IV

Stock Performances of the Parent Firms of Sponsored and Conventional Spin-offs
over the 1994-2005 Sample Period

This table reports the one-two- and three-year performance measures (alphas) for the parent firms of the sponsored and conventional spinoffs using the calendar-time portfolio approach. Both equally weighted and value weighted monthly returns are used to compute the parameter estimators over the sample period. RMRF is the value-weighted market return on all NYSE/AMEX/Nasdaq firms (RM) minus the risk-free rate (RF), which is the one-month treasury bill rate. SMB (small minus big) is the difference each month between the return on small firms and big firms. HML (high minus low) is the difference each month between the return on a portfolio of high book-to-market stocks and the return on a portfolio of low book-to-market stocks. UMD (up minus down, or momentum) portfolios for month t (formed at the end of month t-1) are based on returns over month -13 through month -2 and are constructed monthly. White-robust t-statistics are reported in parentheses below the parameter estimates. Levels of significance are shown only for the intercept estimates.

Panel A: Parents of Sponsored Spin-offs (n=54)

	Pre-12 month		1-Year		2-Year		3-Year	
	EWT	VWT	EWT	VWT	EWT	VWT	EWT	VWT
Alpha	-0.0092*	-0.0085*	-0.0057	0.0029	0.0024	0.0061	-0.0030	0.0087
	(-1.8923)	(-1.7488)	(-1.0905)	(0.3262)	(0.3156)	(1.1759)	(-0.5894)	(1.5129)
RMRF	0.0144	0.0126	0.0100	0.0079	0.0129	0.0114	0.0122	0.0096
	(7.8139)	(6.7890)	(4.2820)	(3.3610)	(6.4163)	(5.3067)	(9.3204)	(5.8418)
SMB	0.0084	0.0040	0.0049	0.0021	0.0039	-0.0031	0.0061	-0.0029
	(4.5357)	(2.1447)	(2.1051)	(0.8685)	(1.9322)	(-1.4646)	(4.6345)	(-1.7290)
HML	0.0054	0.0018	0.0019	-0.0065	0.0019	-0.0060	0.0059	-0.0047
	(2.2295)	(0.4809)	(0.6401)	(-2.1358)	(0.7224)	(-2.1777)	(3.5424)	(-2.2484)
UMD	-0.0016	-0.0014	-0.0038	-0.0035	-0.0042	-0.0029	-0.0039	-0.0028
	(-1.1005)	(-0.9682)	(-2.3664)	(-2.1411)	(-3.0536)	(-1.9813)	(-4.3328)	(-2.5235)
R^2	0.480	0.412	0.265	0.305	0.408	0.382	0.595	0.453

Panel B: Parents of Conventional Spin-offs (n=173)

	Pre-12 month		1-Year		2-Year		3-Year	
	EWT	VWT	EWT	VWT	EWT	VWT	EWT	VWT
Alpha	0.0129	0.0049	0.0118	0.0132	0.0008	0.0062	-0.0008	0.0075
	(1.4355)	(0.7548)	(1.6135)	(1.6902)*	(0.1545)	(0.6238)	(-0.1741)	(0.8628)
RMRF	0.0122	0.0139	0.0133	0.0128	0.0115	0.0136	0.0112	0.0123
	(4.9276)	(7.8053)	(6.2280)	(5.7411)	(8.1770)	(5.3225)	(10.1542)	(6.0877)
SMB	0.0074	0.0039	0.0057	-0.0032	0.0029	0.0015	0.0046	0.0017
	(2.3616)	(1.7455)	(2.8731)	(-1.5638)	(2.1809)	0.6356	(4.3457)	(0.8957)
HML	0.0044	0.0118	0.0084	0.0053	0.0056	0.0070	0.0074	0.0070
	(1.0263)	(3.8184)	(2.5571)	(1.555)	(3.0631)	(2.1115)	(5.2136)	(2.7208)
UMD	-0.0022	-0.0020	-0.0046	-0.0011	-0.0020	0.0047	-0.0010	0.0022
	(-0.7138)	(-0.8813)	(-2.3236)	(0.5541)	(-2.3138)	(3.021)	(-1.4362)	(1.6980)
R^2	0.372	0.515	0.448	0.439	0.590	0.359	0.667	0.373

  * statistically significant at the 0.10 level
 ** statistically significant at the 0.05 level
*** statistically significant at the 0.01 level

Table V
Return on Total Assets: Sponsored Spin-offs and Parent Firms

This table reports the return on total assets for the fiscal year preceding the spin-off date and each of the three full fiscal years following the spin-off date for the sponsored spin-offs and the parents of sponsored spin-offs. The return on total assets is defined as the ratio of operating income (EBITDA) to year-end total assets. We compare each sample's performance with its respective matched portfolio's operating income return on total assets for the same fiscal year. A matched firm is defined as one in the same industry as the corresponding spin-off based on Fama and French's 48 industry classification, whose total market value of equity (TMV) is within 10% of the spin-off's TMV of equity on the date of the spin-off. If there are less than five control firms with a TMV within 10% of the sample firm's value, we also include those with a value within 20% of the sample firm's size. We then select the matched firm with the book-to-market ratio closest to that of the sample firm. We also require that it has the same fiscal year as the sample firm. Financial data are from annual reports and the Compustat database. The Wilcoxon (Z) stat. tests for differences in medians. The t-stat. tests for differences in means between the two groups. N is the number of firms.

Panel A: Sponsored Spin-offs

Year -1	*N*	*Median (%)*	*Z-stat*	*Mean (%)*	*T-stat*
Sponsored spin-offs	57	7.80	-2.11**	8.28	-2.26**
Matched firms	57	11.52		12.15	

Year +1					
Sponsored spin-offs	46	6.12	-2.48**	4.76	-2.74**
Matched firms	46	12.11		12.54	

Year +2					
Sponsored spin-offs	40	7.51	-2.31**	6.02	-2.31**
Matched firms	40	12.86		11.86	

Year +3					
Sponsored spin-offs	33	6.44	-2.62**	5.87	-2.51**
Matched firms	33	13.23		12.76	

Panel B: Parent Firms

Year -1	*N*	*Median (%)*	*Z-stat*	*Mean (%)*	*T-stat*
Parents of sponsored spin-offs	53	8.83	-1.78*	7.78	-1.84*
Matched firms	53	11.28		10.23	

Year +1					
Parents of sponsored spin-offs	53	11.63	0.31	10.83	0.23
Matched firms	53	10.92		10.43	

Year +2					
Parents of sponsored spin-offs	44	10.76	-0.54	9.62	-0.72
Matched firms	44	11.24		10.76	

Year +3					
Parents of sponsored spin-offs	37	12.21	-0.30	10.81	-0.48
Matched firms	37	12.65		11.33	

   *   significant at the 0.10 level
  **   significant at the 0.05 level
***   significant at the 0.01 level

Table VI

Capital Expenditures/Net Sales and Tobin's q: Sponsored Spin-offs

This table reports the sponsored spin-offs' capital expenditures as a percentage of net sales and Tobin's q for the fiscal year preceding the spin-off date and the first three full fiscal years following the spin-off date. We compare each sample's performance with its respective matched portfolio. A matched firm is defined as one in the same industry as the corresponding spin-off based on Fama and French's 48 industry classification, whose total market value of equity (TMV) is within 10% of the spin-off's TMV of equity on the date of the spin-off. If there are less than five control firms within 10% of the sample firm's value, we also include those with a value within 20% of the sample firm's size. We then select the matched firm with the book-to-market ratio closest to that of the sample firm. We also require that it has the same fiscal year as the sample firm. Financial data are from annual reports and the Compustat database. The Wilcoxon (Z) stat. tests for differences in medians. The t-stat. tests for differences in means between the two groups. N is the number of firms.

Panel A: Capital Expenditures/Net Sales

Year -1	N	Median (%)	Z-stat	Mean (%)	T-stat
Sponsored spin-offs	57	4.74	-2.42**	7.08	-2.91***
Matched firms	57	6.68		12.32	

Year +1	N	Median (%)	Z-stat	Mean (%)	T-stat
Sponsored spin-offs	46	6.18	-1.43	11.24	-1.18
Matched firms	46	7.71		13.38	

Year +2	N	Median (%)	Z-stat	Mean (%)	T-stat
Sponsored spin-offs	40	5.21	-2.24**	9.36	-2.33**
Matched firms	40	8.47		14.72	

Year +3	N	Median (%)	Z-stat	Mean (%)	T-stat
Sponsored spin-offs	33	4.48	-2.16***	8.29	-2.06**
Matched firms	33	8.82		14.98	

Panel B: Tobin's q

Year -1	N	Median (%)	Z-stat	Mean (%)	T-stat
Sponsored spin-offs	57	0.78	-2.47**	1.23	-2.18**
Matched firms	57	1.27		2.02	

Year +1	N	Median (%)	Z-stat	Mean (%)	T-stat
Sponsored spin-offs	46	0.69	-2.65**	1.08	-2.28**
Matched firms	46	1.35		2.10	

Year +2	N	Median (%)	Z-stat	Mean (%)	T-stat
Sponsored spin-offs	40	0.61	-2.76***	1.01	-2.15**
Matched firms	40	1.51		2.32	

Year +3	N	Median (%)	Z-stat	Mean (%)	T-stat
Sponsored spin-offs	33	0.54	-2.91***	0.85	-2.32**
Matched firms	33	1.48		2.18	

   * significant at the 0.10 level
  ** significant at the 0.05 level
*** significant at the 0.01 level

Table VII
Return on Total Assets: Conventional Spin-offs and Parent Firms

This table reports the return on total assets for the fiscal year preceding the spin-off date and each of the three full fiscal years following the spin-off date for the sponsored spin-offs and the parents of sponsored spin-offs. The return on total assets is defined as the ratio of operating income (EBITDA) to the year-end total assets. We compare each sample's performance with its respective matched portfolio's operating income return on total assets for the same fiscal year. A matched firm is defined as one in the same industry as the corresponding spin-off based on Fama and French's 48 industry classification, whose total market value of equity (TMV) is within 10% of the spin-off's TMV of equity on the date of the spin-off. If there are less than five control firms with a TMV within 10% of the sample firm's value, we also include those with a value within 20% of the sample firm's size. We then select the matched firm with the book-to-market ratio closest to that of the sample firm. We also require that it has the same fiscal year as the sample firm. Financial data were obtained from annual reports and the Compustat database. The Wilcoxon (Z) stat. tests for differences in medians. The t-stat. tests for differences in means between the two groups. N is the number of firms.

Panel A: Conventional Spin-offs

Year -1	*N*	*Median (%)*	*Z-stat*	*Mean (%)*	*T-stat*
Conventional spin-offs	169	12.86	1.01	12.27	1.46
Matched firms	169	12.40		10.77	

Year +1					
Conventional spin-offs	164	13.47	0.26	14.58	0.72
Matched firms	164	13.18		13.74	

Year +2					
Conventional spin-offs	153	13.13	1.92*	14.97	1.89*
Matched firms	153	11.62		12.49	

Year +3					
Conventional spin-offs	139	14.20	0.54	15.21	0.68
Matched firms	139	13.51		14.47	

Panel B: Parent Firms

Year -1	*N*	*Median (%)*	*Z-stat*	*Mean (%)*	*T-stat*
Parents of Conventional spin-offs	182	15.69	0.08	14.85	0.24
Matched firms	182	14.96		13.88	

Year +1					
Parents of Conventional spin-offs	173	10.96	0.76	11.87	1.50
Matched firms	173	12.73		16.34	

Year +2					
Parents of Conventional spin-offs	161	14.47	0.16	13.64	0.50
Matched firms	161	14.62		15.40	

Year +3					
Parents of Conventional spin-offs	148	9.02	0.54	11.02	0.44
Matched firms	148	10.92		8.32	

  * significant at the 0.10 level
  ** significant at the 0.05 level
*** significant at the 0.01 level

Table VIII

Capital Expenditures/Net Sales and Tobin's q: Conventional Spin-offs

This table reports the sponsored spin-offs' capital expenditures as a percentage of net sales and Tobin's q for the fiscal year preceding the spin-off date and the first three full fiscal years following the spin-off date. We compare each sample's performance with its respective matched portfolio. A matched firm is defined as one in the same industry as the corresponding spin-off based on Fama and French's 48 industry classification, whose total market value of equity (TMV) is within 10% of the spin-off's TMV of equity on the date of the spin-off. If there are less than five control firms within 10% of the sample firm's value, we also include those with a value within 20% of the sample firm's size. We then select the matched firm with the book-to-market ratio closest to that of the sample firm. We also require that it has the same fiscal year as the sample firm. Financial data were obtained from annual reports and the Compustat database. The Wilcoxon (Z) stat. tests for differences in medians. The t-stat. tests for differences in means between the two groups. N is the number of firms..

Panel A: Capital Expenditures/Net Sales

Year -1	N	Median (%)	Z-stat	Mean (%)	T-stat
Conventional spin-offs	169	5.25	0.99	9.05	0.16
Matched firms	169	5.59		9.71	

Year +1	N	Median (%)	Z-stat	Mean (%)	T-stat
Conventional spin-offs	164	4.59	0.43	8.10	0.05
Matched firms	164	4.84		0.43	

Year +2	N	Median (%)	Z-stat	Mean (%)	T-stat
Conventional spin-offs	153	4.36	1.75*	7.20	0.10
Matched firms	153	6.20		7.43	

Year +3	N	Median (%)	Z-stat	Mean (%)	T-stat
Conventional spin-offs	139	4.13	0.87	7.12	2.26*
Matched firms	139	4.62		10.52	

Panel B: Tobin's q

Year -1	N	Median (%)	Z-stat	Mean (%)	T-stat
Conventional spin-offs	169	1.46	1.32	1.68	1.16
Matched firms	169	1.15		1.36	

Year +1	N	Median (%)	Z-stat	Mean (%)	T-stat
Conventional spin-offs	164	1.52	1.38	1.95	0.92
Matched firms	164	1.18		1.59	

Year +2	N	Median (%)	Z-stat	Mean (%)	T-stat
Conventional spin-offs	153	1.64	1.78*	1.82	1.26
Matched firms	153	1.22		1.51	

Year +3	N	Median (%)	Z-stat	Mean (%)	T-stat
Conventional spin-offs	139	1.62	0.85	2.08	1.04
Matched firms	139	1.38		1.63	

  * significant at the 0.10 level
 ** significant at the 0.05 level
*** significant at the 0.01 level

Table IX

Reported Earnings Per Share Versus Forecasted Earnings Per Share of
Sponsored and Conventional Spin-offs for the Three Years Including and Following the Spin-off

This table compares the mean and median annual earnings per share (EPS) for our samples of sponsored and conventional spin-offs with analysts' EPS forecasts for the current fiscal year (year 0) and the following two fiscal years (years 1 and 2). All analysts' forecasts were made within 60 calendar days following the date of the spin-off. The t-statistic tests for differences in means between the two groups. The Wilcoxon (Z) statistic tests for differences in medians. N is the number of analysts' forecasts for each fiscal year.

Panel A: Sponsored Spin-offs

Year 0	N	Mean (%)	T-stat	Median (%)	Z-stat
Forecasted EPS	50	$0.429	2.10**	$0.725	1.84*
Reported EPS	50	$0.268		$0.561	

Year +1	N	Mean (%)	T-stat	Median (%)	Z-stat
Forecasted EPS	46	$0.868	2.75***	$0.984	4.23***
Reported EPS	46	$0.049		$0.632	

Year +2	N	Mean (%)	T-stat	Median (%)	Z-stat
Forecasted EPS	35	$0.990	3.62***	$1.068	3.33***
Reported EPS	35	$0.380		$0.515	

Panel B: Conventional Spin-offs

Year 0	N	Mean (%)	T-stat	Median (%)	Z-stat
Forecasted EPS	102	$0.523	0.64	$0.540	0.47
Reported EPS	102	$0.572		$0.613	

Year +1	N	Mean (%)	T-stat	Median (%)	Z-stat
Forecasted EPS	98	$0.712	1.08	$0.778	1.67*
Reported EPS	98	$0.796		$0.904	

Year +2	N	Mean (%)	T-stat	Median (%)	Z-stat
Forecasted EPS	86	$0.863	1.36	$0.967	1.18
Reported EPS	86	$0.731		$0.832	

   *   statistically significant at the 0.10 level
  **   statistically significant at the 0.05 level
***   statistically significant at the 0.01 level

Appendix A

Names of Sponsored Spin-offs, Spin-off Dates, Parent Firm, Sponsor and Percentage Ownership

	Sponsored Spin-off	**Spin-off Date**	**Parent Firm**	**Sponsor**	**% Stake**
1.	Abercrombie & Fitch	6/1/98	Limited Inc.	Travelers Group Invesco	19.2 13.2
2.	Agere Systems	6/3/02	Lucent Technologies	Warburg Pincus	7.0
3.	Allegheny Teledyne	11/30/99	Mego Financial	J.P. Morgan	5.2
4.	Angio Dynamics	10/29/04	E-Z-EM	H.S. Stern	15.1
5.	Arch Chemical	2/22/99	Olin Corp	Franklin Mutual Advisors	12.0
6.	Avaya	10/02/00	Lucent Technology	Warburg Pincus	8.7
7.	Aztec Technology	6/10/98	U.S. Office	Banpost Group	11.0
8.	Ben Franklin	10/3/95	Fox Meyer	FMR Corp. Wisconsin Retirement Fund	10.0 7.3
9.	BioVeris Corp.	2/13/04	Meso Scale Diagnostics	Credit Suisse F.B.	5.2
10.	Brillian Corp	9/16/03	Three-Five Systems	Oppenheimer Funds	19.5
11.	Centex Construction Products	1/30/04	Centex Corp.	Artisan Partners Ltd.	7.8
12.	Ceva	11/1/02	DSP Group Inc.	Ollaberry Ltd. Brian Long	8.4 9.3
13.	Chaparral Steel	7/29/05	TXI	Witmer Asset Mgnt.	7.1
14.	Choice Hotels	10/15/97	Starwood Hotels	Banco Corp. Boron Capital	28.0 5.8
15.	CIRCOR	10/19/99	Watts Ind.	Gabelli Fund	6.5
16.	Cognizant Technology Solutions Corp.	2/7/03	IMS Health	FMR Corp. Wasatch Advisors Inc. Pilgrim, Baxter, Greig & Assoc.	13.0 3.4 4.3
17.	CommScope	7/23/97	General Instruments	Forstmann Little	7.4
18.	Consolidated Tomoka Land	9/24/99	Baker Fentress	W. Buffet	5.7
19.	Convergys	12/31/98	Cincinnati Bell	W. Southern Life	9.1

	Sponsored Spin-off	Spin-off Date	Parent Firm	Sponsor	% Stake
20.	Delta Apparel	6/30/00	Delta Woodside	B. Rainford E. Moddrey	14.3 15.0
21.	Dover Downs Gaming & Entertainment	4/1/02	Dover Motorsports	Gabelli Funds	6.11
22.	eCost Com. Inc.	4/11/05	PC Mall	J. Kimerling F. Khulusi	7.2 14.2
23.	Genisis Health Ventures	12/2/03	Elder Trust	The Goldman Sachs Group	10.2
24.	Gentiva Health	3/16/00	Olsten	Greenhaven	9.5
25.	Hudson Highland Group	3/31/03	TMP Worldwide Inc.	Greenlight Capital Scoggin Capital Mngmt. Andrew McKelvey	9.7 14.7 11.4
26.	Huttig Bldg. Prod.	12/16/99	Crane	Rugby and RMC Crane Fund	32.0 8.4
27.	IMS Health	7/27/99	Gartner Group	Price Rowe	6.2
28.	Insignia Financial Group	9/22/98	Altiva Financial	A. Farcos	26.0
29.	Interstate Hotels	6/28/99	Patriot Amer. Hosp.	Prudential	10.0
30.	Key 3 Media	8/18/00	Ziff Davis	Morgan Stanley Invemed	9.5 6.5
31.	Levitt Corp.	1/2/04	Bankatlantic	BFC Fin. Corp	15.3
32.	Liberty Media Int'l	6/7/04	Liberty Media Corp.	Primacom AG	26.7
33.	Ladenberg, Thalman Financial Services Inc.	3/15/05	New Valley Corp.	Frost-Nevada Inv. Trust	37.3
34.	Mego Mortgage	9/3/97	Mego Financial	FBR Oppenhiemer Fund	7.0
35.	MIPS Technology	6/20/00	Silicon Graphics	T. Power Price	11.0
36.	Mirant Corp.	7/17/03	Utility Holders Trust	Vanguard Windsor Funds	7.2
37.	Mykrolis	2/27/02	Millipore Corp.	PRIMECAP Mngmt. Co.	12.5
38.	Next Level Systems	7/28/97	General Instruments	Forstmann Little	8.4
39.	Octel Corp.	5/26/98	Great Lakes Chemical	Halo Capital	6.9
40.	OMI Corp.	6/19/98	Manor Care	Equitable Life	29.5

	Sponsored Spin-off	Spin-off Date	Parent Firm	Sponsor	% Stake
41.	Omnova Solutions	10/4/99	Gencorp	Gabelli Fund	7.7
42.	Packaging Dynamics	7/1/02	Ivex Packaging Corp.	DCBS Investors	51.8
43.	Pactiv	11/5/99	Tenneco Auto.	Highland Capital	7.5
44.	Pharmacopeia Drug Discovery	4/30/04	Pharmacopeia	Wellington Mngmt. Co.	12.2
45.	PHH Corp.	1/30/05	Cendant	SAB Capital Partners	13.8
46.	RCN Corp.	10/1/97	CTec Corp	Kiewet Hldg.	48.0
47.	RJ Reynolds	6/15/99	RJR Nabisco	Ross Financial	9.9
48.	Sabre Holding	3/15/00	AMR Corp.	FMR Corp. IGI Inv. Retirement	5.0 9.0 9.0
49.	Smucker J.M. Co.	6/1/02	Proctor & Gamble	Ariel Capital Mngmt.	9.9
50.	Surebeam Corp.	8/5/02	Titan Corp.	State of Wisconsin Inv. Board Harris Assoc. Inv. Trust	13.4 9.5
51.	TCI Satellite	12/31/96	Tele-Communication	JP Morgan Assoc. Inv.	11.8 8.4
52.	Transpro	10/11/95	Allen Group	Gabelli Fund	5.0
53.	Treehouse Foods	6/27/05	Dean Foods	Highlands Capital Mngmt.	14.2
54.	UNOVA	11/3/97	Western Atlas	Unitrin Ins. Trinity	23.2 13.2
55.	Ventiv Health	9/21/99	Snyder	AMCAP Fund	17.5
56.	Western Atlas	3/17/94	Litton Ind.	FMR Corp. Hein Securities	5.4 5.2
57.	Williams Comm. Group	4/23/01	Williams Co.	Warburg Pincus	10.0