An examination of predictors of long term equity performance after corporate spinoffs in the 1990s.

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1. Introduction

Reasons for a corporate restructuring vary and might include a desire to divest of underperforming assets, generate cash for more productive (or perhaps wasteful) needs, or a desire to focus on an area of corporate competence, higher growth or improved profitability. A firm may divest itself of a line of business by restructuring through a sale, by either liquidating the assets, or selling them as part of a going concern to a competitor or investor. Alternatively, a firm can spinoff this line of business to existing shareholders, either through an equity carve-out, pure spinoff or a hybrid transaction. In an equity carveout the firm issues shares in a initial public offering for the newly created subsidiary. In a pure spinoff, shares of the new firm are granted to existing shareholders in the form of a tax-free dividend. In a hybrid transaction, there is an equity carve-out followed by a spinoff. A firm may also elect to create a tracking stock for the line of business, but this does not accomplish the goal of asset divestiture.

This study considers only pure (tax-free) spinoffs to shareholders in which a new entity is created and trades separately. We examine ex ante whether the parent firms' size, available investment opportunities, capital structure or ownership structure is a predictor for positive cumulative abnormal returns for holders of shares in either the parent, the spinoff or both.

Specifically, we hypothesize the following: *a parent firm with a greater percentage of insider ownership, a higher than average debt-to-capital ratio, with a smaller market capitalization, spinning off a greater percentage of the firm, in the face of fewer attractive investment opportunities is more likely to produce positive abnormal returns for its shareholders after a spinoff.* An argument in support of this hypothesis follows.

1.1 Ownership Structure

We hypothesize that a firm with a greater percentage of insider ownership implementing a spinoff is more likely to produce positive abnormal returns. A management team with a greater percentage of firm ownership has its interests more closely aligned with those of the firm's other shareholders, who are primarily interested in value-maximization through capital appreciation (in a growth company). Management is therefore more likely to spinoff a subsidiary in the interest of creating value for *all* shareholders, in spite of the following reasons why it might be against *management's* own interests to enact a spinoff.

A spinoff reduces agency costs in the form of information problems that can make the external monitoring of management difficult (Meyer et al., 1992). These include consolidated financial statements, cross-subsidies and transfer pricing (to mask underperforming divisions), as well as fewer trips to external capital markets (requiring a reduction in the disclosure of operating details). The diversification of cash flows in a consolidated firm reduces the overall volatility of earnings, and therefore the danger to management of being ousted by disappointed shareholders. Furthermore, a manager of a larger firm might better justify a higher salary and a greater level of corporate perks (or waste, depending on your view; for instance, a corporate jet, fancier headquarters, etc…). Lastly, a spinoff reduces the size of a firm under the responsibility of management, with

no infusion of capital to the parent firm. All of these reasons would tend to *reduce* management's interest in diminishing the size of their empire (Jensen et al., 1976).

It is therefore hypothesized that if a firm with a greater percentage of insider ownership spins off a subsidiary, it does so for reasons of value creation in the interests of all shareholders, and is therefore more likely to earn positive abnormal returns.

It is also hypothesized that the effect of the percentage of institutional ownership of a firm should also result in a similar, though likely weaker, correlation. Holders of large blocks of shares may exert their influence over management to make value-increasing decisions, even when they are against management's personal interests. This effect would be expected to be greatest when the institutional shareholders take an active role in the operational management of their investments (the measurement of which is unfortunately beyond the scope of this study).

The remaining shareholders, being large in number and small in ownership stakes, suffer from communication and holdout problems. Other factors being equal, the firms with the highest percentage of widely held shares should therefore have the lowest abnormal returns, as the reasons for which the spinoff is occurring may not be in the interests of the small shareholders, who lack the coordination to effectively monitor or influence management.

1.2 Absolute Size

We hypothesize that smaller parent firms (on an absolute market cap basis) are more likely to lead to positive abnormal returns when spinning off a subsidiary than would a larger firm. The reasoning is that smaller firms are likely to have less monitoring from the market through institutional research coverage. Since the division being spun off is a fraction of what is already a small firm, it is possibly not fully understood, and therefore mispriced when spun out. (JP Morgan, 1995)

1.3 Capital Structure

We hypothesize that a firm with a greater level of debt in its capital structure is more likely to lead to positive abnormal returns when spinning off a subsidiary than would a firm with less debt. Debt is a form of bonding between management and shareholders, which reduces some need for external monitoring. This is because interest payments are non-discretionary, unlike other forms of payment to a firm's suppliers of capital, through dividends and/or stock repurchases. Furthermore, if the firm's debt were such a burden that the firm might be nearing distress, it would likely engage in an asset sale or equity carveout (Ofek, 1993). Instead, a spinoff generates no cash for the parent company. Though there have been instances of management expropriating wealth from debtholders to equity-holders through a spinoff , such as the Marriott case (Parrino, 1997), they are not common. Our hypothesis is that a management group willing to take on debt reduces the owner/management agency problem and has interests more closely aligned with its equity shareholders, and is therefore more likely to lead to positive abnormal returns.

1.4 Relative Spinoff Size

We hypothesize that a firm spinning off a greater percentage of its assets is more likely to lead to positive abnormal returns than would a firm spinning off a smaller percentage. We argue that this act diminishes management's empire, increases the volatility of cash flows and reduces agency costs. Therefore, management's willingness to undertake this action signals their alignment with shareholders' interests.

1.5 Investment Opportunities

Lastly, we hypothesize that a firm with fewer investment opportunities is more likely to yield positive abnormal returns. We examine a firm's Tobin's Q ratio as a proxy for investment opportunities and hypothesize that a firm with a lower Tobin's Q has a greater upside potential from a spinoff than does a firm with a higher Q. We reason that if a firm has attractive investment opportunities for its capital and discloses this information to an efficient market, the market should reward it with a higher valuation, and therefore higher Tobin's Q. Similarly, firm with fewer investment opportunities is given a lower Tobin's Q, for the same asset base, as investors assume the firm will either earn the risk-free rate on its excess capital, waste in on negative NPV projects, or perhaps return it to its suppliers of capital, subjecting it to reinvestment risk. A firm with a very low Q ratio (less than one) trades for less than its replacement value of its assets. Due to the unattractiveness of the investment opportunities the firm faces, it can be expected that fewer competitors will enter its market, and thus it will face less competition. Through a successful restructuring (such as a spinoff) it may increase its profitability.

The rest of this paper is organized as follows. Section 2 describes selected findings of others on this subject. Section 3 describes the sample selection and data acquisition methods, as well as presents the summary statistics. Section 4 describes the methodology used to compute the abnormal returns and multivariate regression of abnormal performance versus the predicted independent variables. Section 5 discusses the results. Section 6 concludes the paper.

2. Previous Work

Though many studies have examined spinoff announcement period returns, comparatively few have looked at the long-run performance following spinoffs. Some of the more relevant findings are discussed below.

De Vroom & van Frederikslust in 1999 examined global data from 1990 through 1998, looking at the effect of the initial spinoff announcement on shareholder wealth. They found, consistent with other's results, a 2.6% positive return over a 3-day announcement window.

JP Morgan conducted an oft-quoted, yet remarkably elusive study in 1995 (followed on with an addendum of new samples in 1997) of the long run performance of spinoffs following a corporate restructuring. They found that spinoffs comprising a

relatively larger percentage of a firm's assets (defined as more than 10% of the parent's market capitalization), and those that were absolutely smaller (defined as less than $200MM) outperformed their peers.

Desai & Jain in 1999 conducted a study of the long-run stock market performance of spinoffs, with a sample of 155 transactions between the years 1975 and 1991, and found that focus-increasing spinoffs resulted in significantly larger cumulative abnormal returns than those for non-focus increasing spinoffs. They also confirmed that announcement period returns are significantly larger for focus-increasing firms than non-focus increasing firms.

Powers in 2000 examined potential motivations for a firm to select a spinoff versus a selloff or equity carve-out. He examined financial need, focus, managerial incentives and the prospective price for the subsidiary as potential independent variables. He found that financial need and pricing seem to play a role in the decision.

3. Data Selection

3.1 Sample Selection

The sample is gathered from the Center for Research in Security Prices (CRSP) data sets. The CRSP data sets contain Distribution Arrays, which list distribution dates, amounts and types for a firm over a period of interest. A dividend distribution code of "3753" or "3763" corresponds to a tax-free dividend in the stock of a different firm from the issuer, i.e. a spin-off. [1] Searching through the dividend distribution codes for all firms which traded publicly in the US during the years 1990-1999, with dividend codes of 3753 or 3763, yields a list of CUSIPs, corresponding to parent firms, from which this study's sample is selected.

Using the CRSP Company Name History for each CUSIP yields the parent firm's name at the time of the event, which is then used as a keyword in UMI's ProQuest service to find the corresponding Wall Street Journal (and/or other contemporary news media) articles announcing the transaction. This method is used to determine the identity of the spinoff firm, whether the transaction is a spinoff or a equity-carveout, and the distribution ratio of shares given to existing shareholders.

Through this selection methodology we obtain a non-exhaustive sample of 67 transactions, consisting of 56 distinct parent firms (some had multiple spinoffs during the sample period) and 67 spinoff firms.

3.2 Measurements

For each parent and spinoff firm, historical daily closing prices are obtained from Yahoo! (adjusted for dividends and splits). If the data is not available from Yahoo!,

[1] Dividend Distribution 3763 definition: Event type: exchange or reorganization; Payment method: an issue of a different common stock which is on the file; Dividend Frequency: year end or final; Event descriptor: non-ordinary distribution in another stock. *(Source: CRSP Data Description Guide).*

CRSP raw average daily closing prices are used, with adjustments made for splits and dividends as indicated in the firms CRSP Distribution Array.

The market capitalization for each parent firm is calculated using the number of outstanding shares given in the 10Q filed most recently prior to the ex dividend date (as represented by COMPUSTAT), and closing price two days prior to the ex dividend date (EX-2d). The market capitalization of each spinoff firm is calculated using the ratio of shares distributed to existing shareholders and the closing price two days after the ex dividend date (EX+2d). This yields the data necessary to determine the ratio of market capitalization of the parent firm that the spinoff represents.

We then examine each parent firm's capital structure, using its book debt ratio as a proxy. We refer to the most recently filed 10Q prior to the ex dividend date, and obtain this data from COMPUSTAT.

To obtain the parent firm's Tobin's Q, we use the firms market-to-book value ratio as a proxy, and again we refer to the most recently filed 10Q prior to the ex dividend date, and obtain data from COMPUSTAT.

We then examine each parent firm's ownership structure, as represented by the proportion of its traded shares in the hands of institutional investors or company insiders from the most recent 13F filing prior to the ex dividend date. This historical information is obtained from Disclosure Inc.'s Compact D-SEC electronic databases for each year. We make the assumption that shares not held by insiders or institutions can be categorized as "widely held."

3.2 Summary Statistics

The summary statistics for the sample selected can be found below in Table 3.2.1 and Table 3.2.2. Table 3.2.1 describes the market capitalization, book debt ration, Tobin's Q and ownership distribution for the average parent sample, given the most recent information available to an investor on the EX+2d date for each firm. Note that the average parent firm in our sample has a lower debt ratio, lower insider ownership and higher institutional ownership than the market averages. Table 3.2.2 describes the market capitalization of each subsidiary at the EX+2d closing share price, and what percentage of the parent's pre-spinoff market capitalization that represents.

Table 3.2.1: Sample Summary Statistics (*All dollar figures are in $millions)*

					Share Ownership	
Parent	**Market Cap**	**Debt Ratio**	**Tobin's Q**	**Insider**	**Institutional**	**Widely Held**
Average	$ 7,835.6	43.5%	5.46	5.9%	55.7%	38.4%
Median	$ 3,396.7	42.5%	2.97	1.4%	58.1%	38.4%
Std Deviation	$ 12,450.4	22.2%	8.92	9.8%	15.1%	12.9%
Minimum	$ 10.6	0.0%	0.02	0.0%	10.5%	14.6%
Maximum	$ 70,240.6	90.3%	48.09	50.4%	82.6%	73.0%
Count	64	64	64	57	57	57
Market Avg.[2]		*49.2%*		*11.4%*	*35.3%*	*53.3%*

[2] Source: Sample of 5761 firms compiled by Prof. Aswath Damodaran: www.stern.nyu.edu/~adamodar/pc/datasets/dbtfund.xls

Table 3.2.2: Sample Summary Statistics (*All dollar figures are in $millions)*

Spinoff	Market Cap	As Percent of Parent
Average	$ 860.0	15.5%
Median	$ 438.3	11.1%
Std Deviation	$ 1,036.2	14.3%
Minimum	$ 2.0	0.5%
Maximum	$ 4,845.3	57.2%
Count	57	57

Distributions of the sample statistics can be found in Exhibit 1 through Exhibit 6, in Appendix A.

4. Methodology

Abnormal returns for the parent, spinoff and pro-forma firm are measured versus the market index, as represented by the CRSP value-weighted total stock market index (NYSE + NASDAQ + AMEX), including dividend distributions, and the NASDAQ SPY index.[3]

Abnormal returns are defined as:

$$AR_{i,t} = R_{i,t} - R(MKT)_t$$

Where

$AR_{i,t}$ = abnormal return of security *i* on day *t*
$R_{i,t}$ = raw returns of security *i* on day *t*
$R(MKT)_t$ = raw return of the Index on day *t*

From the adjusted daily prices, we calculate raw returns for each parent and spinoff firm, assuming that an investor purchases a fixed dollar amount of shares in each on the second day after the spinoff ex dividend date (EX+2 days). These shares are then held, and we measure the holding period returns at six month intervals for a total of five years, providing that the data exists (e.g. some firms are acquired, some go bankrupt, some transactions take place in 1998 and therefore have fewer available data points).

We then compare these raw returns to the return an investor would receive if s/he invests the same dollar value into the aforementioned index on the same dates. The difference over this range of dates is the holding period cumulative abnormal return. A pro-forma firm's performance is also measured, reflecting how an investor would fare

[3] The SPY index was used for all dates for which it was available. For dates prior to its existence, it was indexed appropriately and chained to the CRSP value-weighted total stock market index.

buying shares of both the parent and spinoff firm, in the proportion of the spinoff distribution, starting two days after the ex dividend date (EX+2d).

The results from this stage are summarized in Table 5.1.1, and discussed in Section 5.1.

This data is then tested against the hypothesized explanatory variables, using multivariate regression. The following variables are tested:

$$AR_{i,t} = a + b_1(MVP)_i + b_2(PCT)_i + b_3(BDR)_i + b_4(TBQ)_i + b_5(INT)_i + b_6(INS)_i + b_7(WID)_i$$

Where

MVP = the market value of the parent firm
PCT = the percent of the parent being spun off
BDR = the book debt ratio of the parent
TBQ = the parent firm's Tobin's Q
INT = the parent firm's percent of institutional shareholders
INS = the parent firm's percent of insider shareholders
WID = the parent firm's percent of shares that are widely held

This test is run for each holding period, and for each group of firms: parents, spinoffs and pro-forma. A backwards stepwise multivariate regression is then run on the data, but does not reveal significant differences from the initial regression results, and the results are not included. A univariate regression series is run on those variables with the greatest explanatory power and statistical significance. As the relationships between the all of the independent variables and the returns are most easily visualized through the initial multivariate regression data provided herein, the univariate results are also omitted.

The results from this stage are summarized in Tables 5.2.1, Table 5.2.2, and Table 5.2.3.

5. Results

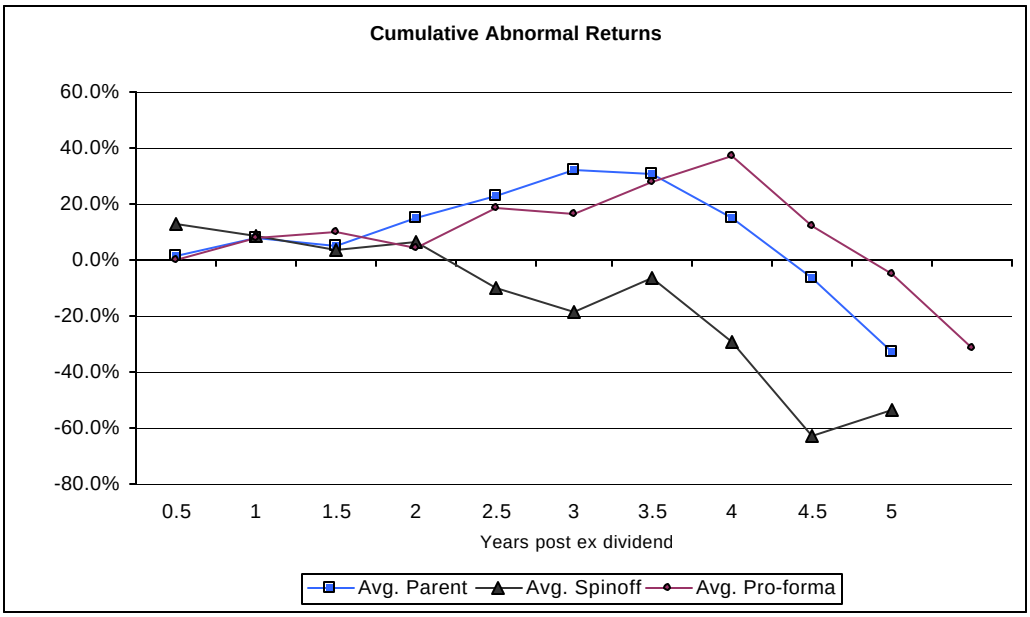
5.1 Abnormal Returns

The results of the calculations that yield the average abnormal returns for the parent, spinoff and pro-forma firm are shown below in Figure 5.1.1 as well as detailed in Table 5.1.1.

An examination of Table 5.1.1 reveals that the average parent firm's abnormal returns stem from a few outliers which skew the data. For instance, a firm which produces fiber-optic products saw tremendous abnormal returns in 1999 (with a positive holding period abnormal return of over 1,100% after 3 years), at the height of the Internet investing bubble, and has since given up all of those gains. Note that the percent of all firms with positive abnormal returns in any one year never exceeds 46%.

The average spinoff does show a positive abnormal return for the first two years (consistent with the findings of JP Morgan's study of 1997). The pro-forma firm, not surprisingly, shows a benefit of diversification, with reduced volatility.

Figure 5.1.1: Parent, Spinoff and Pro-forma Firm Performance After Spinoff



5.2 Regression Results

The results of the multivariate regression are detailed in Tables 5.2.1, 5.2.2 and 5.2.3, and discussed below.

5.2.1 Ownership Structure Regression Results

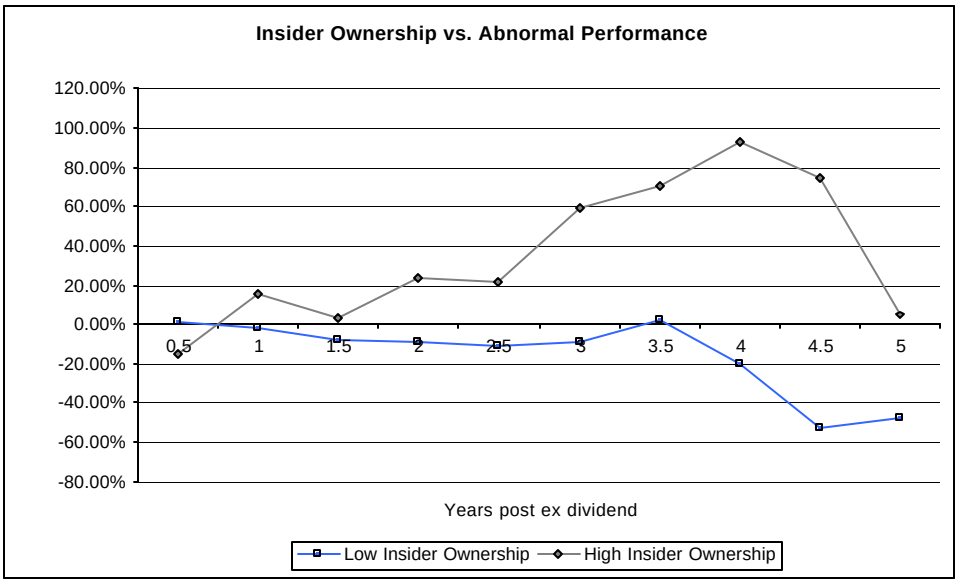
For both parents and spinoffs during the first 2.5 years post ex dividend date there is an inverse relationship between the percentage of insider ownership and positive abnormal returns, but it is never statistically significant at the 5% level using a two-tailed t-test. The same holds true for the parent firm's performance versus the percentage of institutional and widely held shares. For the spinoff firm, the relationship changes from measurement to measurement, and is only once statistically significant. We therefore reject the hypothesis that there is a relationship between the percentage of a firm that is either widely held or institutionally held and positive abnormal returns for either the parent of spinoff.

For the parent firm, however, at the EX+3y, EX+3.5y and EX+4 year intervals, there is a positive correlation between the percentage of the firm owned by insiders and abnormal returns, statistically significant at the 1% level. This result supports our

hypothesis that there is a positive relationship between the percentage of inside ownership of a firm and the parent firm's long term performance relative to the market.

Figure 5.2.1 shows the results of plotting the parent firms' ownership structure versus their abnormal returns, when divided into two groups by their percentage of insider ownership: "low insider ownership" (defined here as less than the market average, or 11.4%) or "high insider ownership" (greater than the market average, or 11.4%).

Figure 5.2.1: Parent Firm Performance After Spinoff



5.2.2 Absolute Size Regression Results

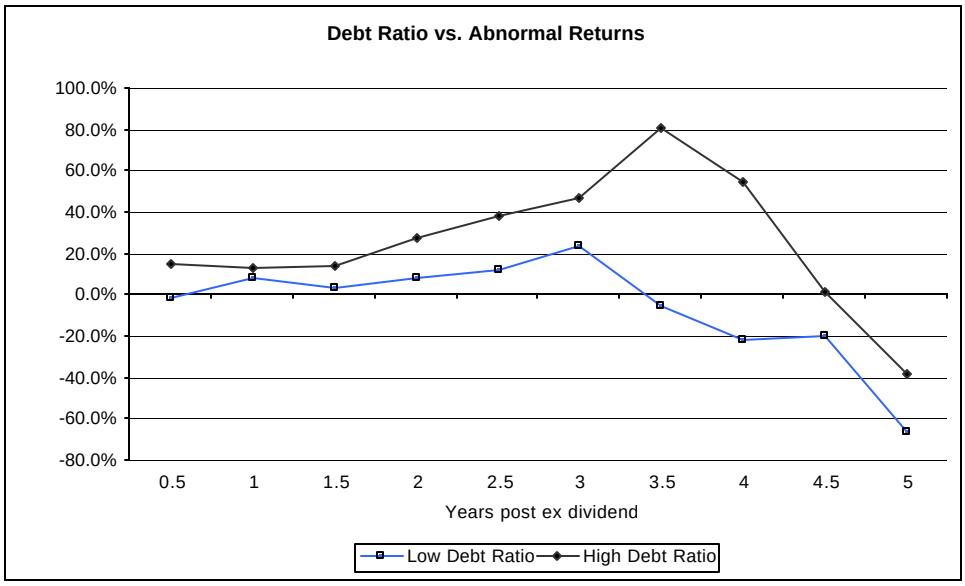
The sample yields no statistically significant relationship between the market value of the parent and the performance of either the parent of spinoff. We therefore reject the hypothesis.

5.2.3 Capital Structure Regression Results

Examining the parent firm's performance versus the firm's capital structure, we see that at EX+0.5y there is a positive relationship between a firm's book debt ratio and positive abnormal performance, statistically significant at the 5% level. This holds true as well for the spinoff firm at EX+1.5y, EX+2y and EX+2.5y, and supports our hypothesis.

If we compare, in Figure 5.2.3, those parent firms with lower debt ratios (defined here as less than the market average of 49.5%) and those with higher debt ratios (defined here as greater than or equal to the market average of 49.5%) against their abnormal returns, we see this relationship more clearly.

Figure 5.2.3: Parent Firm Performance After Spinoff



5.2.4 Relative Spinoff Size Regression Results

There are no statistically significant (at the 5% level) results from the regression of relative spinoff size versus performance. At EX+2y and EX+2.5 years there is a positive correlation between the size of the spinoff as a percentage of the parent and the parent's positive abnormal returns (at the 10% level). For the spinoff we see a relationship between size and performance, but here it is inversely related after one year (and significant only at the 10% level). We find that the relationship is not robust and reject the hypothesis.

5.2.5 Investment Opportunities Regression Results

There is no statistically significant relationship between the performance of the parent firms and their Tobin's Q prior to the spinoff ex divided date. There is a one-period negative relationship between abnormal performance of the spinoffs and the parent's Tobin's Q at EX+2.0y, significant at 5% level. We find that the relationship is not robust and reject the hypothesis.

6. Conclusions

We examine the performance of 67 pairs of parent and spinoff firms versus the market in the 1990s. We try to explain abnormal returns of the parent or spinoff firm by way of the absolute size of the parent, the relative size of the spinoff, the capital structure,

the ownership structure and the availability of attractive investment opportunities to the parent.

Overall, our results are mixed. We find that parent firms with a higher than average percentage of insider ownership yield greater positive abnormal returns than do their peers. Similarly, those parent firms with a greater than average book debt ratio yield greater positive abnormal returns than do their peers. We hypothesized that two ways of aligning managements interest with those of the shareholders are through an increased book debt ratio or increased management ownership stake in the firm. Our results confirm our hypotheses that a management team with interests more closely aligned with those of their shareholders are more likely to take actions that are value-increasing for the benefit of all shareholders. However, the ownership and capital structure information we examined is available to all investors prior to the spinoff, and our results therefore conflict with notions of market efficiency. Further research into this relationship is warranted.

We find that there is no statistically significant or longitudinally robust relationship between the absolute size of the parent, the size of the parent relative to the spinoff, the percentage of shares held either widely or by institutions, or the parent firm's Tobin's Q and the performance of the parent firm.

We also find that there is no statistically significant or longitudinally robust relationship between any of the hypothesized predictors and the performance of the spun off subsidiaries. This suggests that the performance of the spinoff is dependent on exogenous factors and is consistent with market efficiency.

Table 5.1.1: Holding Period Cumulative Abnormal Return

		Years post ex dividend									
		0.5	**1**	**1.5**	**2**	**2.5**	**3**	**3.5**	**4**	**4.5**	**5**
Parent	Average	1.5%	7.8%	5.0%	15.2%	22.8%	32.4%	30.4%	14.8%	-6.2%	-33.1%
	Median	-2.4%	-4.0%	-7.1%	-7.6%	-18.7%	-19.2%	-40.0%	-34.70%	-57.3%	-72.9%
	Std Deviation	36.8%	53.4%	71.0%	101.6%	159.4%	190.8%	188.4%	162.2%	161.6%	147.4%
	Minimum	-98.6%	-108.2%	-132.3%	-169.7%	-143.1%	-179.0%	-228.8%	-268.9%	-287.1%	-256.9%
	Maximum	171.3%	235.4%	291.2%	548.1%	966.7%	1130.7%	639.7%	539.0%	540.7%	515.0%
	% Positive	43.3%	43.9%	39.4%	45.9%	43.1%	44.4%	40.0%	39.6%	34.2%	24.2%
	Count	67	66	66	61	58	54	50	48	38	33
Spinoff	Average	12.9%	8.8%	3.5%	6.6%	-10.0%	-18.8%	-6.1%	-29.5%	-62.6%	-53.7%
	Median	1.2%	2.1%	-3.4%	4.4%	-24.4%	-31.9%	-32.2%	-55.4%	-70.7%	-110.0%
	Std Deviation	60.4%	74.5%	82.2%	104.5%	108.8%	113.4%	159.3%	150.1%	127.5%	174.3%
	Minimum	-71.2%	-100.9%	-117.5%	-130.9%	-148.6%	-187.0%	-213.1%	-263.3%	-271.0%	-321.8%
	Maximum	252.2%	305.1%	387.6%	563.4%	631.8%	562.9%	627.9%	465.9%	149.1%	313.0%
	% Positive	52.2%	51.5%	49.2%	50.0%	36.5%	31.3%	37.2%	32.5%	32.3%	36.0%
	Count	67	66	63	58	52	48	43	40	31	25
Pro-forma	Average	8.1%	9.9%	4.5%	18.8%	16.6%	27.8%	37.5%	12.2%	-4.7%	-31.6%
	Median	-1.0%	3.1%	-6.5%	1.2%	-23.1%	-29.8%	-33.8%	-50.3%	-33.9%	-64.4%
	Std Deviation	52.4%	68.8%	83.8%	123.1%	181.1%	219.2%	212.9%	195.4%	199.2%	202.8%
	Minimum	-109.2%	-105.9%	-140.3%	-176.8%	-169.2%	-201.0%	-264.2%	-279.3%	-332.5%	-319.7%
	Maximum	169.1%	265.0%	335.2%	660.8%	1093.1%	1243.2%	629.2%	563.5%	586.5%	690.8%
	% Positive	46.8%	54.1%	42.6%	50.0%	39.6%	44.9%	40.0%	39.5%	38.2%	33.3%
	Count	62	61	61	56	53	49	45	43	34	30

Table 5.2.1: Parent Regression Parameter Estimates

		Regression Variable									
		Intercept	**Spinoff as Percent of Parent**	**Debt Ratio**	**Pct Insider**	**Pct Institutional**	**Pct Widely Held**	**Tobin's Q**	**Parent MV**	**R^2**	**Obs**
Years post ex dividend	**0.5**	1.008	0.205	0.447**	-1.541	-1.166	-1.185	-0.004	0.000	19.0%	48
		(1.008)	(0.935)	(2.381)	-(1.541)	-(1.166)	-(1.185)	-(0.852)	-(0.905)		
	1.0	0.564	0.082	0.239	-0.179	-0.664	-0.676	-0.005	0.000	5.3%	48
		(0.564)	(0.238)	(0.811)	-(0.179)	-(0.664)	-(0.676)	-(0.738)	-(0.387)		
	1.5	1.191	0.387	0.207	-1.123	-1.460	-1.195	-0.003	0.000	9.2%	48
		(1.191)	(0.842)	(0.528)	-(1.123)	-(1.460)	-(1.195)	-(0.307)	-(1.298)		
	2.0	0.637	1.175*	0.622	-1.445	-1.322	-0.672	-0.012	0.000	20.7%	44
		(0.637)	(1.885)	(1.253)	-(1.445)	-(1.322)	-(0.672)	-(0.968)	-(0.568)		
	2.5	-0.051	1.512*	0.995	-1.436	-0.913	-0.145	-0.018	0.000	23.0%	43
		-(0.051)	(1.905)	(1.573)	-(1.436)	-(0.913)	-(0.145)	-(1.122)	-(0.240)		
	3.0	-0.122	0.660	1.233	3.027***	-1.080	0.288	-0.031	0.000	22.8%	39
		-(0.122)	(0.541)	(1.245)	(3.027)	-(1.080)	(0.288)	-(1.278)	-(0.139)		
	3.5	0.417	-1.044	2.092	5.401***	-1.596	-0.419	-0.038	0.000	13.5%	35
		(0.417)	-(0.407)	(0.968)	(5.401)	-(1.596)	-(0.419)	-(0.684)	-(0.096)		
	4.0	-0.624	-0.796	2.652	6.676***	-0.538	-0.452	-0.043	0.000	22.6%	33
		-(0.624)	-(0.376)	(1.411)	(6.676)	-(0.538)	-(0.452)	-(0.941)	-(0.281)		
	4.5	0.762	0.635	0.562	6.148	-2.028	-1.259	-0.034	0.000	21.1%	27
		(0.000)	(0.266)	(0.282)	(0.000)	(0.000)	(0.000)	-(0.707)	(0.377)		
	5.0	0.899	1.161	0.206	-5.873	-1.750	-0.994	-0.020	0.000	6.9%	23
		(0.000)	(0.478)	(0.093)	(0.000)	(0.000)	(0.000)	-(0.425)	(0.113)		

*** = significance at 1% level ** = significance at 5% level * = significance at 10% level

Table 5.2.2: Spinoff Regression Parameter Estimates

		Regression Variable									
		Intercept	**Spinoff as Percent of Parent**	**Debt Ratio**	**Pct Insider**	**Pct Institutional**	**Pct Widely Held**	**Tobin's Q**	**Parent MV**	**R^2**	**Obs**
Years post ex dividend	**0.5**	0.466	-0.454	0.004	-1.655	-0.646	0.514	-0.003	0.000	13.4%	49
		(0.466)	-(0.810)	(0.008)	-(1.655)	-(0.646)	(0.514)	-(0.264)	-(1.316)		
	1.0	0.233	-0.790*	0.260	-1.991*	-0.099	-0.146	-0.007	0.000	16.9%	48
		(0.233)	-(1.796)	(0.694)	-(1.991)	-(0.099)	-(0.146)	-(0.697)	-(1.156)		
	1.5	-0.747	-1.012	1.202**	-1.831*	0.806	0.208	-0.024*	0.000	20.0%	48
		-(0.747)	-(1.589)	(2.213)	-(1.831)	(0.806)	(0.208)	-(1.740)	-(0.475)		
	2.0	-0.325	-0.567	1.586**	-2.880	0.596	-0.858	-0.034**	0.000	24.7%	43
		(0.000)	-(0.693)	(2.451)	(0.000)	(0.000)	(0.000)	-(2.084)	-(0.772)		
	2.5	-0.257	-0.336	1.175**	-2.583	0.012	-0.459	-0.025*	0.000	19.7%	41
		(0.000)	-(0.465)	(2.059)	(0.000)	(0.000)	(0.000)	-(1.737)	-(0.914)		
	3.0	0.088	-0.373	0.789	-3.475	-0.358	-0.202	-0.022	0.000	17.0%	37
		(0.000)	-(0.403)	(1.061)	(0.000)	(0.000)	(0.000)	-(1.212)	-(1.385)		
	3.5	1.765	0.321	0.073	-4.987***	-2.341**	-0.334	-0.022	0.000	10.2%	33
		(1.765)	(0.182)	(0.050)	-(4.987)	-(2.341)	-(0.334)	-(0.600)	-(0.862)		
	4.0	-1.160	0.032	0.713	-2.049	-0.238	2.400	-0.025	0.000	12.8%	30
		(0.000)	(0.017)	(0.437)	(0.000)	(0.000)	(0.000)	-(0.616)	-(0.501)		
	4.5	-1.089	2.561	-0.339	-1.877	-0.520	2.357	-0.026	0.000	30.5%	22
		(0.000)	(1.106)	-(0.220)	(0.000)	(0.000)	(0.000)	-(0.763)	-(0.268)		
	5.0	1.538	3.516	-5.269*	-10.238	-1.915	3.582	0.013	0.000	46.8%	18
		(0.000)	(0.981)	-(1.794)	(0.000)	(0.000)	(0.000)	(0.267)	(0.265)		

*** = significance at 1% level ** = significance at 5% level * = significance at 10% level

Table 5.2.3: Pro-forma Regression Parameter Estimates

		Regression Variable									
		Intercept	**Spinoff as Percent of Parent**	**Debt Ratio**	**Pct Insider**	**Pct Institutional**	**Pct Widely Held**	**Tobin's Q**	**Parent MV**	**R^2**	**Obs**
Years post ex dividend	**0.5**	0.084	-0.107	0.506	-1.120	-0.427	0.264	-0.007	0.000	0.16226	48
		(0.084)	-(0.254)	(1.575)	-(1.120)	-(0.427)	(0.264)	-(0.859)	-(1.017)		
	1.0	0.000	-0.450	0.326	0.200	-0.023	-0.148	-0.009	0.000	0.05297	47
		(0.000)	-(0.998)	(0.921)	(0.200)	-(0.023)	-(0.148)	-(1.023)	-(0.232)		
	1.5	-0.238	-0.142	0.652	-0.141	-0.015	0.005	-0.017	0.000	0.09	47
		-(0.238)	-(0.234)	(1.373)	-(0.141)	-(0.015)	(0.005)	-(1.400)	-(0.864)		
	2.0	-0.558	1.435	1.127	-1.198	0.079	-0.072	-0.033 *	0.000	0.22281	43
		(0.000)	(1.477)	(1.661)	(0.000)	(0.000)	(0.000)	-(1.978)	-(0.162)		
	2.5	-1.205	1.339	1.500*	-0.949	0.232	0.604	-0.037 *	0.000	0.23252	42
		(0.000)	(1.205)	(1.931)	(0.000)	(0.000)	(0.000)	-(1.930)	-(0.037)		
	3.0	1.144	0.592	1.682	1.093	-2.389	-1.256	-0.050 *	0.000	0.21611	38
		(0.000)	(0.350)	(1.399)	(0.000)	(0.000)	(0.000)	-(1.750)	-(0.080)		
	3.5	2.235	-0.352	1.525	4.125***	-3.798***	-0.982	-0.056	0.000	0.15677	34
		(2.235)	-(0.105)	(0.632)	(4.125)	-(3.798)	-(0.982)	-(0.950)	-(0.252)		
	4.0	3.685	-0.518	2.518	2.636***	-5.403***	-3.864***	-0.059	0.000	0.21253	32
		(3.685)	-(0.170)	(1.084)	(2.636)	-(5.403)	-(3.864)	-(1.077)	-(0.381)		
	4.5	-2.485	3.166	-0.092	8.916***	0.959	2.600 **	-0.065	0.000	0.24634	25
		-(2.485)	(0.866)	-(0.037)	(8.916)	(0.959)	(2.600)	-(1.138)	(0.363)		
	5.0	3.298	6.167	-1.941	-11.948***	-3.936***	-1.962 *	-0.041	0.000	0.26347	22
		(3.298)	(1.551)	-(0.662)	-(11.948)	-(3.936)	-(1.962)	-(0.681)	(0.120)		

*** = significance at 1% level ** = significance at 5% level * = significance at 10% level

Appendix A: Sample Summary Statistics

Exhibit 1: Chronological Distribution of Spinoff Ex Dividend Dates

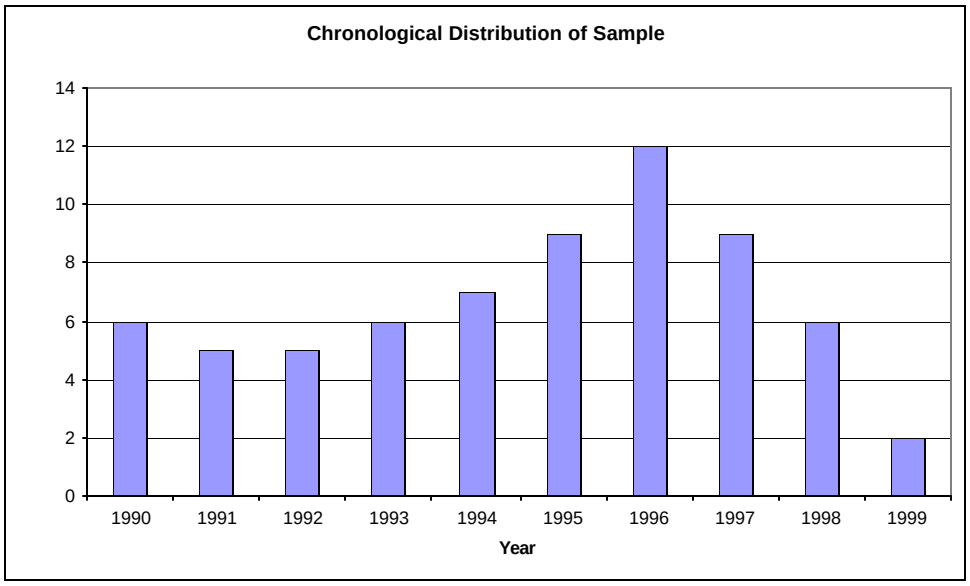


Exhibit 2: Parent Firm Market Capitalization Distribution, Pre-Spinoff

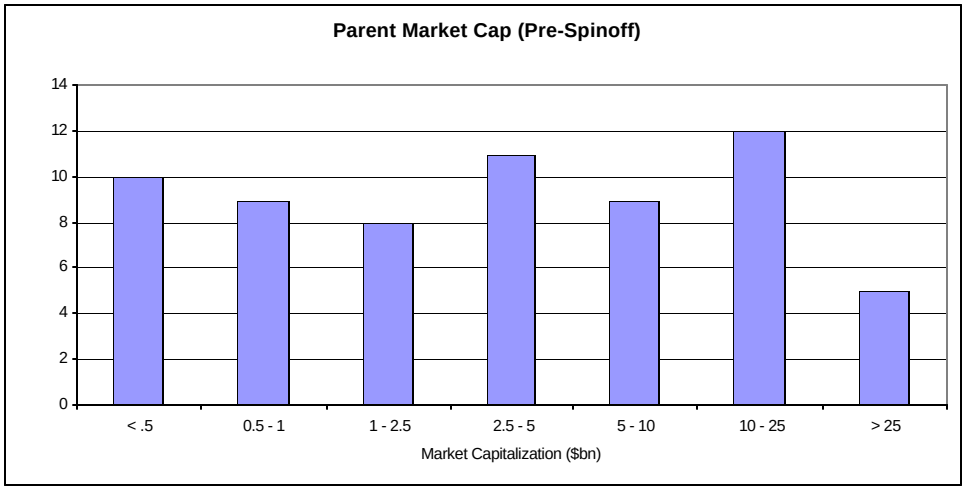


Exhibit 3: Parent Firm Book Debt Ratio Distribution, Pre-Spinoff

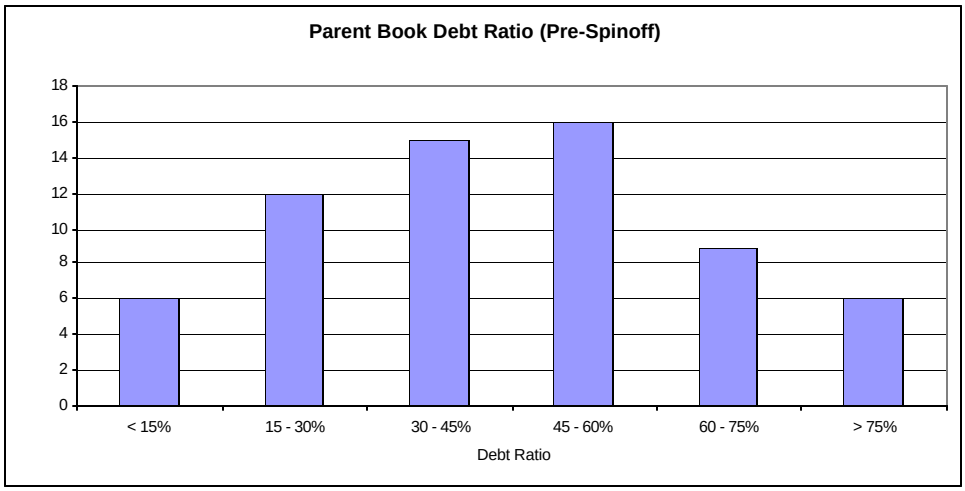


Exhibit 4: Distribution of Relative Size of Spinoffs as Percentage of Parent Firm Value

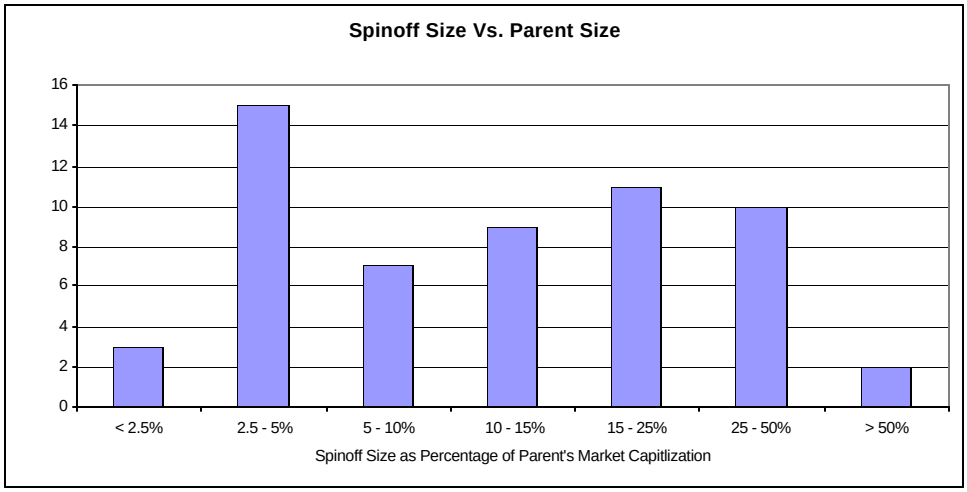


Exhibit 5: Parent Firm Ownership Structure, Pre-Spinoff

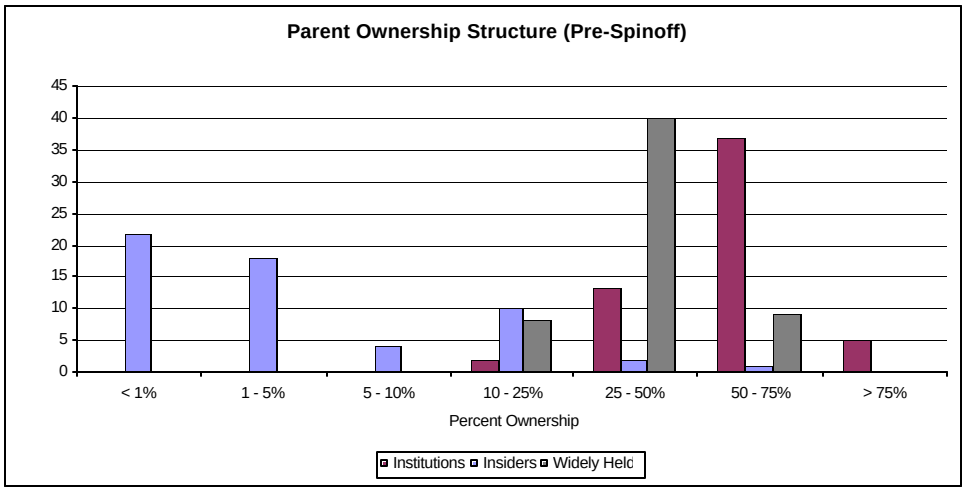
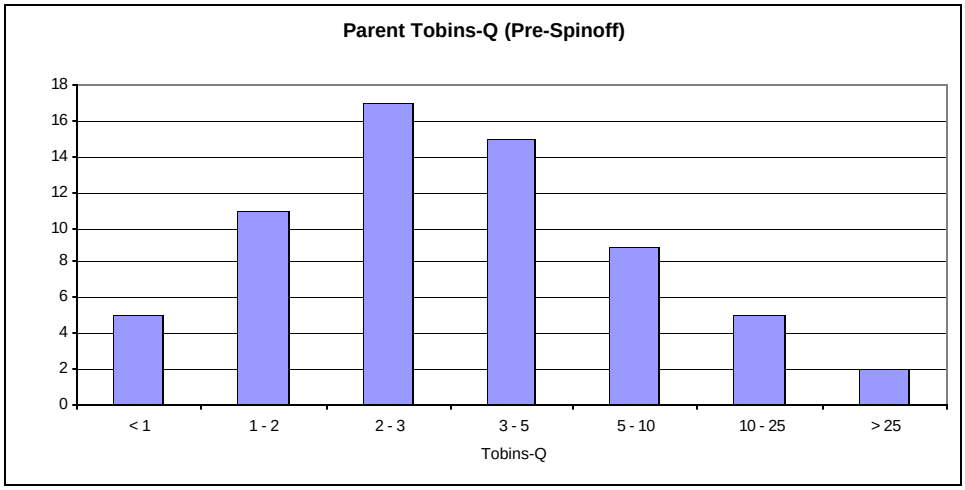


Exhibit 6: Parent Firm Tobin's Q Distribution, Pre-Spinoff



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