Journal of Financial Economics 33 (1993) 293–311. North-Holland

Restructuring through spinoffs

The stock market evidence*

Patrick J. Cusatis
Lehman Brothers, New York, NY 10285, USA

James A. Miles and J. Randall Woolridge
Pennsylvania State University, University Park, PA 16802, USA

Received June 1991, final version received November 1992

We investigate the value created through spinoffs over the 1965–1988 period by measuring the stock returns of spinoffs, their parent firms, and parent–spinoff combinations for periods of up to three years following the spinoffs. We find significantly positive abnormal returns for spinoffs, their parents, and the spinoff–parent combinations. Both the spinoffs and parents experience an unusually high incidence of takeovers and the abnormal performance is limited to firms involved in takeover activity. These findings suggest that spinoffs provide a low-cost method of transferring control of corporate assets to bidders who will create greater value.

1. Introduction

This study examines the common stock returns of spinoffs and their parent firms for periods of up to three years following the spinoff. This research is motivated both by the scarcity of evidence on how this form of restructuring creates value and by the persistent claims in the business press that spinoffs offer

Correspondence to: J. Randall Woolridge, Smeal College of Business Administration, Pennsylvania State University, 609 Business Administration Building, University Park, PA 16802, USA.

*The authors would like to thank Russ Ezzell, Omesh Kini, Chris Muscarella, Tim Opler, Jim Owers, Dennis Sheehan, and seminar participants at Penn State and the Claremont Graduate School for their ideas and comments and Nancy Macmillan for her editorial assistance. We are especially indebted to Michael Jensen (the editor) and Gailen Hite (the referee). Their insightful comments resulted in significant revisions to our original manuscript. Financial support for J. Randall Woolridge comes from the Goldman, Sachs & Co. and Frank P. Smeal Endowed University Fellowship, Smeal College of Business Administration, Pennsylvania State University.

investors superior returns.[1] Another reason for evaluating the investment performance of spinoffs is their similarity to initial public offerings (IPOs). Like IPOs, spinoffs represent newly traded shares in the marketplace. Contrary to the claims for spinoffs, however, two recent studies indicate that IPOs provide negative abnormal returns for periods of up to three years [Aggarwal and Rivoli (1990) and Ritter (1991)].

Previous spinoff research focuses on changes in parent firm share prices at the time of spinoff announcements [Hite and Owers (1983), Schipper and Smith (1983), and Miles and Rosenfeld (1983)]. These studies do not examine returns for either the spinoffs or their parents following the distribution of shares. The positive abnormal announcement-date stock returns reported for the parent firms presumably reflect investors' expectations about the prospective performance of spinoffs and their parents, so, we should not expect to observe post-spinoff abnormal returns. Our research indicates, however, that both the spinoffs and their parents offer significantly positive abnormal returns for up to three years beyond the spinoff announcement date. These abnormal returns are associated with corporate restructuring activity. Both spinoffs and their parents experience significantly more takeovers than do control groups of similar firms, and the abnormal performance is limited to those involved in takeover activity.[2]

These post-spinoff findings indicate that investors have not fully anticipated the increased takeover activity and therefore have underestimated the value created by spinoffs. Hence, event studies that measure abnormal returns near the spinoff announcement dates do not accurately estimate the total value spinoffs create. To assess the value created beyond the announcement date, we form market-value-weighted portfolios of parent firms and their spinoffs and measure long-term portfolio performance. We observe a significantly positive abnormal two-year mean return and attribute this abnormal performance to the returns for spinoffs and parents taken over. We conclude that spinoffs, by dividing a company into separate businesses and thereby effectively creating pure plays for prospective bidders, create value by providing a relatively low-cost method of transferring control of corporate assets to acquiring firms.

The paper is divided into four sections. Section 2 provides background on spinoffs and descriptive statistics on our sample of spinoffs and parent firms; it also describes our stock-performance and control-group methods. We present empirical results in section 3 and summarize our findings in section 4.

[1]Peter Lynch, in his book *One Up on Wall Street*, recommends spinoffs as equity investments. Articles suggesting that spinoffs offer superior investment returns have also appeared in *Forbes* [Palmeri (1989)], *Wall Street Journal* [White (1990)], and *Business Week* [Segal (1990)].

[2]Hite and Owers also associate restructuring with spinoffs. They identify a subsample of spinoffs in which management explicitly states that the spinoff facilitates merger activity, and they observe a higher mean abnormal return for this subsample than for their full sample. They do not follow the restructuring activities of their sample or the parent firms after the distribution date, however.

2. Data and methodology

2.1. Background

We define a pure spinoff as a tax-free, pro-rata distribution of shares of a wholly owned subsidiary to shareholders.[3] All distributions of other firms' stock are considered by U.S. tax authorities to be dividends. Fully taxable spinoffs, which represent the most frequent type of distribution, tend either to involve a parent firm retaining a large percentage of the common shares of a spun-off subsidiary or a firm distributing to its own share holders a large block of shares of another publicly traded firm.[4] For a distribution to be tax-exempt under the criteria set forth in Internal Revenue Code Section 355, it must represent at least 80% of the outstanding shares of the subsidiary, and any shares retained by the parent must not constitute 'practical control' of the subsidiary.[5] As such, nontaxable spinoffs represent restructurings in which a parent firm effectively removes itself from the management and ownership of the subsidiary. These pure spinoffs represent the restructurings studied here.

Recent stock distributions by Kraft and General Mills provide examples of pure spinoffs. In 1986, Kraft made the strategic decision to focus on food processing and to get out of certain unrelated businesses. As part of this restructuring the company combined four consumer product divisions (Tupperware, Food Equipment Group, West Bend, and Ralph Wilson Plastics Company) and distributed shares to stockholders as Premark International, Inc.[6] Likewise, in 1985, General Mills spun off two divisions (Kenner Parker Toys and Crystal Brands) to stockholders. According to a statement issued by the company; 'As historically demonstrated, the toy and fashion industries are substantially more volatile than the company's other businesses. Because of this

[3]In both the academic literature and the popular press, spinoffs often consist of various types of distributions of common stock in other companies. These alternative types of distributions include partial as well as full distributions of stock in subsidiaries, taxable and nontaxable distributions, court-ordered as well as voluntary stock distributions, distributions of common shares in publicly traded companies as opposed to subsidiaries, and return of capital distributions. In some cases, specialized stock distributions such as split offs, and even stock sales such as equity carve outs, are referred to as spinoffs.

[4]Distributions by Masco Corp. and Cyprus Mines exemplify taxable spinoffs. In 1984, Masco Corp. distributed shares in its wholly owned subsidiary, Masco Industries. The distribution was fully taxable since Masco Corp. maintained a 58% stake. According to Masco Corp.'s CEO, the firm wished to stay involved with the subsidiary while removing itself from the cyclicality of its industry. The second type of taxable spinoff involves holdings in other publicly traded companies. In 1978, Cyprus Mines Corp. distributed shares of General Electric to shareholders. The distribution represented shares Cyprus Mines received in an asset exchange and was fully taxable.

[5]Other Section 355 criteria include: (1) both the parent and the subsidiary must be engaged in an active trade or business for at least five years before the distribution date; and (2) the transaction may not be used as a means of distributing profits and must be done for a sound business reason.

[6]*Wall Street Journal*, September 9, 1986, p. 12.

volatility, the appropriate market value of the toy and fashion operations is not fully realized with these businesses as part of General Mills.'[7]

The reasons cited by management for spinning off subsidiaries vary, but often include one of the following: (a) a lack of strategic fit or synergy between the subsidiary and the parent, (b) legal or regulatory pressures to separate the parent and subsidiary, (c) presumed market undervaluation of the combined entity, and (d) excessive operating volatility of the subsidiary. The value-creating potential of spinoffs comes from spinoff-induced organizational changes and/or corporate control activity. Organizational changes associated with spinoffs may induce superior parent and spinoff operating performance as a result of a reduction in agency and overhead costs, a sharpened focus, market as opposed to administrative capital allocation, and/or incentives created by more effective compensation of management. In addition, spinoffs may create value by facilitating the transfer of the assets of either the parent or the subsidiary to higher-valued uses. Along these lines, Aron (1991) develops a model for a subsidiary in which the potential for improved incentives from a spinoff competes with the economies of scope derived from association with the parent firm. Aron suggests that changes in the relative values of these two factors can result in an incentive-inducing spinoff and, at a later date, a takeover of the spun-off firm to again provide economies of scope.

2.2. *Sample selection*

To identify spinoffs, we consult the *CCH Capital Changes Reporter* to ascertain the nature of firms' distributions of common stock in other companies as reported in *Moody's Dividend Record* and the Center for Research in Security Prices (CRSP) *Monthly Master File*. We identify 815 such distributions from 1965 to 1988. Each distribution is put into one of five categories: (1) fully taxable distributions, (2) return-of-capital distributions, (3) mixed-taxation distributions, (4) nonvoluntary distributions, and (5) nontaxable distributions. Of the 815 distributions identified, 91 are not categorized because (1) the listing in the *Capital Changes Reporter* lacks taxation information, (2) a description of the distribution is not available in the *Wall Street Journal*, or (3) stock prices are unavailable.[8] Panel A of table 1 provides a categorical breakdown of the sample. For reasons discussed in the previous section, we exclude the 344 fully taxable and 21 mixed-taxation spinoffs. We also exclude the return-of-capital

[7] *Wall Street Journal*, October 30, 1985, p. 40, and General Mills Inc., 1984 Annual Report, p. 16.

[8] These are very small distributions. In most cases, information on the parent firm is nonexistent. Stock prices are unavailable for the spinoff in the *Wall Street Journal*, the S&P *Daily Stock Price Record*, the *Bank and Quotation Record*, the CRSP *Monthly Returns File*, and the COMPUSTAT *PDE Tape*.

distributions, which are primarily periodic stock distributions by closed-end funds, and the 16 nonvoluntary distributions.

We identify 231 nontaxable, voluntary spinoffs over the 1965–1988 period. Among this group, monthly stock prices are available for 163 spun-off firms from at least one of the following sources: the CRSP *Monthly Returns File*, the *Bank and Quotation Record*, the COMPUSTAT *PDE Tape*, Standard & Poor's *Daily Stock Price Record*, or the *Wall Street Journal*. Seventeen of the nontaxable, voluntary spinoffs have shares trading in the market at the time of the spinoff and therefore are not pure spinoffs. Panel B of table 1 provides a breakdown of the pure spinoff sample. The final sample consists of 146 spinoffs, of which 45 are initially listed on the New York Stock Exchange (NYSE), 12 are listed on the American Stock Exchange (Amex), and 89 are traded over the counter.

Table 2 shows the distribution of spinoffs over time and mean equity market values (closing share price on first trading day times the number of shares outstanding). A recent increase in the number of spinoffs is apparent, as 75% of the spinoffs occur in the last ten years of the sample period. In addition, there is a trend toward larger spinoffs. Table 2 also lists the industry breakdown for the spinoffs and parents by two-digit Standard Industrial Classification (SIC) code.

Table 1

Classification of 815 distributions of other firms' common stock for the period 1965–1988.

Distribution type	Number
Panel A: Full sample[a]	
Taxable	344
Nontaxable	231
Mixed taxation	21
Return of capital	112
Nonvoluntary	16
Information not available	91
Full sample	815
Panel B: Nontaxable spinoffs[b]	
Pure spinoffs	146
Previously traded	17
Not listed	68
Nontaxable spinoffs	231

[a]In total, 815 distributions of other firms' common stock are identified over the 1965–1988 period in *Moody's Dividend Record* and the CRSP *Monthly Master File*. The tax status of and other specific information on these distributions are obtained from the *CCH Capital Changes Reporter*.

[b]The sample of fully nontaxable distributions is classified as: (1) pure spinoffs – a newly traded firm results from the distribution; (2) previously traded – although all requirements of IRS Code Section 355 are met, shares in the subsidiary are already trading when the spinoff is announced; and (3) not listed – stock price data are not available in the *Wall Street Journal*, the *Bank and Quotations Record*, Standard and Poor's *Daily Stock Record*, the CRSP *Monthly Return File*, or on the COMPUSTAT *PDE Tape*.

Table 2

Descriptive statistics for 146 nontaxable spinoffs over the 1965–1988 period and their 141 parent firms.

Panel A: Mean spinoff market value by year[a]

Year	Number of spinoffs	Market value ($ millions)	Year	Number of spinoffs	Market value ($ millions)
1965	1	4.7	1978	4	6.6
1966	1	5.9	1979	12	41.2
1968	1	754.4	1980	8	68.7
1969	2	21.9	1981	15	232.5
1970	2	33.3	1982	6	19.8
1972	2	26.4	1983	6	84.9
1973	2	203.4	1984	12	147.7
1974	3	91.6	1985	14	134.9
1975	5	37.5	1986	8	240.0
1976	5	17.9	1987	13	117.6
1977	8	13.2	1988	16	48.9

Panel B: Industry classification of spinoffs[b]

Industry	Parents	Spinoffs	Industry	Parents	Spinoffs
Agriculture	0	1	Manufacturing	1	2
Apparel & Related Products	2	2	Metals	5	4
Chemicals & Allied Products	10	5	Mining & Extractive Industries	12	11
Communications	1	2	Paper & Allied Products	1	2
Construction	3	0	Petroleum & Energy Products	2	3
Education	0	2	Printing & Publishing	4	2
Electric, Gas & Water	14	11	Rubber & Plastic Products	2	6
Electrical & Electronic Equipment	6	8	Service Industry	11	10
Fabricated Metal Products	5	1	Stone, Clay & Glass Products	1	2
Financial Services	19	17	Textile Mill Products	1	1
Food & Kindred Products	7	2	Transport Equipment	3	1
Furniture	0	1	Transportation	2	9
Instruments & Related Products	5	9	Wholesale & Retail Trade	13	20
Machinery (nonelectric)	8	10	Wood & Wood Products	3	2

[a]Market value (share price × shares outstanding) is calculated for the distribution day for each spinoff.

[b]Industry classifications are based on two-digit SIC codes obtained from *COMPUSTAT II*. Only 141 parent firms are represented because five firms simultaneously distributed two subsidiaries.

The spinoff sample spans 27 industries. The largest concentrations are in wholesale and retail trade (20 firms, or 14% of the sample) and financial services (17 firms, or 12% of the sample). At the two-digit SIC level, the parent-firm sample closely resembles the spinoff sample.

2.3. Stock-return methodology

We evaluate the stock-return performance of spinoffs and parents for periods ranging from ten days to three years following the spinoff. Spinoff and parent performance is analyzed using raw and matched-firm-adjusted returns. As described in the next section, SIC codes and market values are used to identify matched firms for both spinoffs and parents. The matched-firm return adjustment procedure accounts for both contemporaneous market returns and risk. We compute returns presuming a buy-and-hold investment strategy to avoid the bias and transactions costs associated with portfolio rebalancing [Roll (1983)].

Raw return performance presuming a buy-and-hold approach is examined by computing returns ($R_{i,T}$) for spinoffs and parents over alternative periods as follows:

$$R_{i,T} = \left[\prod_{t=1}^{T} (1 + r_{i,t}) \right] - 1, \tag{1}$$

where $r_{i,t}$ is the return (price appreciation and dividends) for firm i in time t. The arithmetic mean of the N individual buy-and-hold returns for T periods is

$$\bar{R}_T = \frac{\sum_{i=1}^{N} R_{i,T}}{N}. \tag{2}$$

If a firm stops trading for any reason in the three years following the spinoff, a buy-and-hold return is computed using the last available stock price, and this return is used for performance measurement purposes for all subsequent intervals.

We calculate buy-and-hold returns for the matched firms ($R^m_{i,j}$) just as in (1) and (2) above. The matched-firm-adjusted returns ($MFARs$) are computed as the mean differences in the buy-and-hold returns:

$$\overline{MFAR}_T = \frac{\sum_{i=1}^{N} [R_{i,T} - R^m_{i,T}]}{N}. \tag{3}$$

The level of significance for the adjusted returns is determined using a matched-pairs t-statistic:

$$t = \frac{\overline{MFAR}_T}{s/\sqrt{N}}, \tag{4}$$

where s is the sample standard deviation of $MFAR$s for N firms in the sample.

To assess the overall value created through spinoffs, we compute raw and adjusted returns for a market-value-weighted portfolio of spinoffs and their parents. As of the spinoff distribution date, we (1) match the spinoff and parent firms with similar firms, (2) construct spinoff–parent portfolio returns by weighting each spinoff and its parent by its respective relative market value on the distribution date, (3) construct matched-firm portfolio returns using the same weights as those for the spinoff–parent combinations, and (4) compute raw returns and $MFAR$s for the spinoff–parent portfolio. In addition, we calculate raw and market-adjusted returns for the parent firms beginning six months before the spinoffs so as to capture the spinoff announcement effect.

2.4. *Matched-firm procedure*

Firms are matched with spinoffs and parents as of the distribution date on the basis of market value and four-digit SIC code using COMPUSTAT II. In each case, we identify a firm with the closest market value in the same industry at the time of the spinoff. Year-end market values for the matched firms are calculated in the year of the spinoff. If there is no match within 25% of the market value of the spinoff within the four-digit SIC code, we search for a match at the three-digit level, then the two-digit level, and finally the one-digit level. If a matched firm stops trading for any reason, a new firm is matched at that point. Allowing firms to drop out and choosing a new matching firm avoids survivorship bias. Spinoffs and parents are not allowed to enter the matched samples at any time.

For the spinoff sample, the mean market values for the spinoffs and matched firms are \$106 million and \$104 million. The mean market values for the parents and their matched firms (as of the ex-date) are \$728 million and \$723 million. For the spinoffs, 97 firms are matched at the four-digit SIC level, 23 at the three-digit level, 21 at the two-digit level, and 5 at the one-digit level. The parents are matched as follows: 20 at the four-digit level, 26 at the three-digit level, 82 at the two-digit level, and 4 at the one-digit level.

3. Empirical results

3.1. *Investment performance*

Short-term spinoff performance is measured for intervals of up to 40 trading days, beginning with the closing price on the initial day of trading. The mean raw returns and $MFAR$s for 10, 20, and 40 trading days are 0.4%/ − 0.9%, − 0.8%/ − 1.5%, and 0.0/ − 1.6%. Although the short-term mean $MFAR$s are predominantly negative, none are significantly different from zero at

Table 3

Common stock returns for 146 spinoffs for the 1965–1988 period; returns are reported from the initial trade (I) to 6, 12, 24, and 36 months.

	Holding period			
	(I–6)	(I–12)	(I–24)	(I–36)
	Panel A: Raw returns[a]			
Mean return	7.7%	19.9%	52.0%	76.0%
t-statistic[c]	2.19**	3.60***	5.94***	6.23***
% positive	51%	58%	64%	64%
	Panel B: Matched-firm-adjusted returns[a, b]			
Mean return	1.0%	4.5%	25.0%	33.6%
t-statistic[c]	−0.19	0.58	2.43**	2.31**
% positive	46%	52%	55%	60%

[a]Returns are computed presuming a buy-and-hold investment strategy. If a firm is delisted or taken over, the longest available return is used to represent the whole period.

[b]Matched-firm-adjusted returns are net of the contemporaneous return to a firm matched on the basis of market value and industry classification.

[c]The t-statistics test the hypothesis that the mean holding-period returns equal zero: * denotes significance at the 10% level, ** denotes significance at the 5% level, and *** denotes significance at the 1% level; two-tailed tests.

conventional levels. As such, initial spinoff performance is similar to that of IPOs when returns are measured from the end of the first trading day.

Table 3 provides the long-term spinoff results for subperiods corresponding to buying at the closing price on the initial day of trading (day I) and holding for periods of 6, 12, 24, and 36 months. The mean raw returns for months I–12, I–24, and I–36 are 19.9%, 52.0%, and 76.0%. The mean $MFAR$s for months I–12, I–24, and I–36 are 4.5%, 25.0%, and 33.6%. The mean $MFAR$s for months I–24 and I–36 are both significant at the 5% level. Although not reported here, we find both mean S&P 500-adjusted returns and mean NASDAQ-adjusted returns for months I–24 and I–36 to be positive and significant at the 1% level. A consistent finding, regardless of the adjustment procedure used, is exceptionally good performance during the second year (months 12–24).[9] Overall, these returns suggest that spinoffs provide superior long-term returns to investors. Furthermore, these findings contrast with the results reported for IPOs. Whereas IPOs underperform the market and peers over the long term, spinoffs provide positive long-term abnormal returns.

[9]We also investigate risk-adjusted performance using Ibbotson's regression across time and securities (RATS) model. These results, not presented here, indicate positive and significant risk-adjusted performance for spinoffs that can be attributed to superior returns during the second year following the spinoff.

Table 4

Common stock returns for 131 parent firms of spinoffs for the 1965–1988 period; returns are reported from the ex-date (X) to 6, 12, 24, and 36 months.[a]

	Holding period			
	(X–6)	(X–12)	(X–24)	(X–36)
	Panel A: Raw returns[b]			
Mean return	11.3%	23.1%	54.0%	67.2%
t-statistic[c]	3.08**	4.62***	5.42***	6.94***
% positive	56%	63%	72%	73%
	Panel B: Matched-firm-adjusted returns[b,c]			
Mean return	6.8%	12.5%	26.7%	18.1%
t-statistic[d]	1.75*	2.51**	2.55**	1.59
% positive	50%	56%	56%	54%

[a]In total, 141 parent firms distribute the 146 spinoffs, since five firms simultaneously spin off two subsidiaries. Of the 141 parents, eight firms are merged or taken over and two are dropped by NASDAQ on or before the distribution date. On the ex-date (X), therefore, only 131 parent firms remain.

[b]Returns are computed presuming a buy-and-hold investment strategy. If a firm is delisted or taken over, the longest available return is used to represent the whole period.

[c]Matched-firm-adjusted returns are net of the contemporaneous return to a firm matched on the basis of market value and industry classification.

[d]The t-statistics test the hypothesis that the mean holding-period returns equal zero: * denotes significance at the 10% level, ** denotes significance at the 5% level, and *** denotes significance at the 1% level; two-tailed tests.

Stock returns for the parent firms are provided in table 4. The sample size for parent firms is only 131 because (1) five parent firms simultaneously distribute two subsidiaries and (2) ten cease trading after the spinoff. Of these ten, eight are taken over on or near the distribution date and two are dropped by NASDAQ. Parent-firm returns are measured from the spinoff ex-date (X), the day that the parent firm's stock starts trading without ownership rights to the subsidiary. For months X–12, X–24, and X–36, the mean raw returns are 23.1%, 54.0%, and 67.2%, and the mean $MFAR$s are 12.5%, 26.7%, and 18.1%. Mean $MFAR$s are significant at the 10% level ($t = 1.75$) for months X–6 and at the 5% level for months X–12 ($t = 2.51$) and X–24 ($t = 2.55$).

In evaluating post-spinoff investment performance, we observe the disappearance of a substantial number of our sample. By the end of the third year, 29 spinoffs and 37 parents are no longer trading. From a stock-performance perspective, firms that are dropped by NASDAQ for failure to meet listing criteria are not likely to be good performers. Conversely, firms dropped on account of takeover activity are apt to be strong performers because of the takeover premiums offered. The following section examines the survivorship status of spinoffs and parents and its relationship to post-spinoff stock performance.

Table 5

Survivorship status of 146 spinoffs and parent firms, and their matched firms, over three years.

Panel A: Spinoff survivorship status

	Spinoffs	Matched firms	*t*-statistic[c]
Merged/taken over	21	5	3.29***
Dropped by NASDAQ	7	10	0.75
Other[a]	1	0	1.00
Survive	117	131	
Total	146	146	

Panel B: Parent survivorship status

	Parents	Matched firms	*t*-statistic[c]
Merged/taken over	18	7	2.31**
Dropped by NASDAQ	3	2	0.45
Other[a]	1	1	0.00
Survive	109	121	
Total[b]	131	131	

[a]The spinoff classified as 'other' paid a liquidating dividend, whereas the parent and parent-matched firm in this classification transferred all assets to other firms.

[b]In total, 141 parents distribute the 146 spinoffs, because five parents simultaneously spin off two subsidiaries. Of the 141 parents, eight are merged or taken over and two are dropped by NASDAQ on or before the distribution date, so only 131 parent firms remain as of the ex-date. A grand total of 26 parent firms in our sample are merged or taken over: eight on or before the distribution date and eighteen thereafter.

[c]The *t*-statistics test the hypothesis that the number of spinoffs–parents and matched firms are equal: * denotes significance at the 10% level, ** denotes significance at the 5% level, and *** denotes significance at the 1% level; two-tailed tests.

3.2. *Survivorship status and takeover activity of spinoffs, parents, and matched firms*

The survivorship status of and takeover activity among the 146 spinoffs, their parents, and the corresponding matched firms are provided in table 5. The number of firms dropped by NASDAQ is quite similar for the spinoffs and parents and their respective matched-firm samples. Both the spinoffs and parents, however, are far more heavily involved in takeovers than their matched firms. Twenty-one spinoffs are taken over, with a mean time between spinoff and takeover of 24 months. Only five matched firms are involved in takeovers. Eighteen of the parent firms are taken over, compared with seven of their matched firms. In addition, another eight parent firms are taken over on or before the distribution date (and therefore are never matched).

To evaluate the impact of takeovers on stock performance for our sample of spinoffs, we divide the full sample of 146 spinoffs into the 21 that are taken over within three years of the spinoff and the 125 that are not. In panels A and B of

table 6, we report mean *MFAR*s for each subgroup for several intervals. Panel A shows that the 21 spinoffs experiencing a takeover yield a mean *MFAR* of 61.3% for months *I*–24 and 99.3% for months *I*–36, both of which are significant at the 1% level. As shown in panel B, the other 125 spinoffs provide a mean *MFAR* of 18.9% for months *I*–24 and 22.5% for months *I*–36, neither of which is significant.

In panel C, we measure mean *MFAR*s for the 21 spinoffs taken over but exclude the six months prior to takeover. This procedure is intended to eliminate the effects of the takeover premiums.[10] For these 21 spinoffs, the mean *MFAR*s for months *I*–24 and *I*–36 are 26.7% and 35.6%. Although each of these mean *MFAR*s is larger than its counterpart for the full sample, as reported in table 3, neither is significant at the 10% level because of the small sample size. In panel D, we report mean *MFAR*s for the full sample after excluding the six months prior to takeover for the 21 firms taken over. The mean *MFAR*s of 20.0% for months *I*–24 and 24.3% for months *I*–36 are significant at the 10% level. In comparison with the results in panel B, these mean *MFAR*s are slightly larger and marginally significant. These findings indicate that only spinoffs involved in takeover activity offer significant abnormal performance.

In table 7 we assess the impact of takeover activity on the performance of the parent firms. Panel A reports mean *MFAR*s for the 18 parents taken over. The mean *MFAR*s for months *X*–12, *X*–24, and *X*–36 are 42.8%, 56.9%, and 69.6%. These three mean *MFAR*s are significant at the 1% level. Panel B provides the mean *MFAR*s for the 113 parent firms not taken over. These mean *MFAR*s are much smaller than those for the firms taken over for all intervals, with only the mean *MFAR* for months *X*–24 being significant at the 10% level. Panel C of table 7 reports mean *MFAR*s for the 15 parent firms taken over after we exclude the six months before the takeover.[11] Only 15 firms are reported in this panel because 3 of the 18 original firms are taken over within six months of the spinoff. The mean *MFAR* for months *X*–12 is 19.3% ($t = 2.06$) which is significant at the 10% level; the corresponding figures for months *X*–24 and *X*–36 are 25.1% ($t = 2.62$) and 25.2% ($t = 2.41$), both of which are significant at the 5% level. Thus, as with spinoffs, the parent firms taken over show superior performance even after the takeover premiums are removed. In panel D, we report mean *MFAR*s for the full sample of parent firms after removing the takeover premiums for those firms taken over. The mean *MFAR* of 9.0% ($t = 1.93$) for months *X*–12 is significant at the 10% level and the mean *MFAR* of 22.2%

[10]There is no assurance that deleting returns for six months prior to takeover removes the entire takeover premium, so abnormal returns excluding the six-month pre-takeover period may still reflect actual or anticipated takeover activity. The six-month pre-takeover mean *MFAR* for the spinoffs is 36.2% ($t = 4.34$), however, which is in line with the takeover premiums reported in Bradley, Desai, and Kim (1988).

[11]For the six months prior to takeover, the mean *MFAR* for these parents is 39.9% ($t = 2.24$).

Table 6

Matched-firm-adjusted stock returns for 146 spinoffs over the 1965–1988 period. Returns are reported from the initial trade (I) to 6, 12, 24, and 36 months. Returns are reported separately for the 21 firms involved in mergers or takeovers and the 125 firms not involved in mergers or takeovers. Also reported are the returns for the 21 spinoffs involved in mergers and takeovers adjusted for takeover premiums by removing the six months prior to merger/takeover, and the returns for all 146 spinoffs excluding the takeover premiums.

	Holding period			
	(I–6)	(I–12)	(I–24)	(I–36)
Panel A: 21 firms merged or taken over[a]				
Mean return	14.0%	11.8%	61.3%	99.3%
t-statistic[b]	1.46	0.72	3.16***	3.58***
Takeovers	0	2	9	21
Panel B: 125 firms not merged or taken over[a]				
Mean return	− 3.6%	3.3%	18.9%	22.5%
t-statistic[b]	− 0.57	0.38	1.64	1.40
Panel C: 21 firms merged or taken over – no takeover premiums[a,c]				
Mean return	7.7%	1.9%	26.7%	35.6%
t-statistic[b]	1.01	0.13	1.25	1.47
Panel D: All 146 firms – no takeover premiums[a]				
Mean return	− 2.0%	3.1%	20.0%	24.3%
t-statistic[b]	− 0.35	0.40	1.94*	1.71*

[a]Returns are computed presuming a buy-and-hold investment strategy. If a firm is delisted or taken over, the longest available return is used to represent the whole period. Matched-firm-adjusted returns are net of the contemporaneous return to a firm matched on the basis of market value and industry classification.

[b]The t-statistics test the hypothesis that the mean holding-period returns equal zero: * denotes significance at the 10% level, ** denotes significance at the 5% level, and *** denotes significance at the 1% level; two-tailed tests.

[c]For the six months prior to takeover, the mean matched-firm-adjusted return for these 21 firms is 36.2% ($t = 4.34$).

($t = 2.11$) for months X–24 is significant at the 5% level.[12] As such, the significance of the mean $MFAR$s for the full sample is enhanced by including the returns of those parents taken over (even after the takeover premiums are removed).

Overall, these results indicate that the abnormal performance of spinoffs and parents is primarily attributable to post-spinoff takeover activity. For spinoffs,

[12]Although the mean $MFAR$s for spinoffs that are taken over are larger than those for the parents that are taken over, the corresponding t-statistics of the parent firms are larger. This occurs for two reasons: (1) the parent firms are taken over earlier than the spinoffs and thus show lower overall return volatility, and (2) for firms taken over, the return up to the takeover (or six months prior when we remove the takeover premium) is used to represent the return for all subsequent intervals. For example, for a firm taken over in month 9, we use the nine-month $MFAR$ as the I–12, I–24, and I–36 mean $MFAR$.

Table 7

Matched-firm-adjusted stock returns for 131 parents of spinoffs over the 1965–1988 period. Returns are reported from the ex-date (X) to 6, 12, 24, and 36 months. Returns are reported separately for the 18 firms involved in mergers or takeovers and the 113 firms not involved in mergers or takeovers. Also reported are the returns for the parents involved in mergers and takeovers adjusted for takeover premiums by removing the six months prior to merger/takeover, and the returns for all parent firms excluding the takeover premiums.[a]

	Holding period			
	(X–6)	(X–12)	(X–24)	(X–36)
	Panel A: 18 firms merged or taken over[a,b]			
Mean return	21.8%	42.8%	56.9%	69.6%
t-statistic[c]	1.45	2.90***	3.78***	4.49***
Takeovers	3	6	13	18
	Panel B: 113 firms not merged or taken over[a,b]			
Mean return	4.4%	7.7%	21.8%	9.9%
t-statistic[c]	1.16	1.49	1.84*	0.77
	Panel C: 15 firms merged or taken over – no takeover premiums[a,b,d]			
Mean return	8.60%	19.3%	25.1%	25.2%
t-statistic[c]	0.90	2.06*	2.62**	2.41**
	Panel D: All 128 firms – no takeover premiums[a,b]			
Mean return	4.9%	9.0%	22.2%	11.7%
t-statistic[c]	1.39	1.93*	2.11**	1.03

[a]In total, 141 parent firms distribute the 146 spinoffs, since five firms simultaneously spin off two subsidiaries. Of these 141 parents, eight firms are merged or taken over and two are dropped by NASDAQ on or before the distribution date, so as of the ex-date only 131 firms remain. Panels C and D contain 15 and 128 parent firms because three parent firms are merged or taken over within six months of the ex-date.

[b]Returns are computed presuming a buy-and-hold investment strategy. If a firm is detailed or taken over, the longest available return is used to represent the whole period. Matched-firm-adjusted returns are net of the contemporaneous return to a firm matched on the basis of market value and industry classification.

[c]The t-statistics test the hypothesis that the mean holding-period returns equal zero: * denotes significance at the 10% level, ** denotes significance at the 5% level, and *** denotes significance at the 1% level; two-tailed tests.

[d]For the six months prior to takeover, the mean matched-firm-adjusted return for these 15 firms is 39.9% (t = 2.24).

19 of the 21 takeovers occur in years 2 and 3, the years showing the largest abnormal returns. The best parent performance occurs in the first two years after the spinoff, when 13 of the 18 takeovers occur. In addition, we ran separate regressions for the spinoffs and parents, with the 36-month mean $MFAR$s as the dependent variable and five explanatory variables, including a takeover

indicator variable.[13] For both the parents and spinoffs, the takeover indicator variable is significant at better than the 10% level, whereas the other variables are not significant at conventional levels.

3.3. *Value creation from spinoffs: Combined parent and spinoff returns*

The post-spinoff abnormal performance for both the spinoffs and the parents indicates that the event studies by Hite and Owers, Schipper and Smith, and Miles and Rosenfeld understate the wealth spinoffs create for shareholders. To measure the value created through spinoffs, we estimate the combined performance of spinoffs and their parents. Adjusted returns are reported for intervals of months -6 to D, where D is the distribution date and months X–12, X–24, and X–36, where X is the date on which shares of the parent firms first trade without rights to the shares of the spinoffs. By convention, the ex-date is the first trading day after the distribution day. Adjusted returns are also reported for months -6 to 12, -6 to 24, and -6 to 36. The pre-distribution period (-6 to D) is included to capture the effect of the spinoff announcement on the market value of the parent.[14] For this interval, parent returns are market-adjusted using the CRSP equally-weighted portfolio including dividends. The post-spinoff performance is measured by constructing a market-value-weighted portfolio of spinoffs and their parents. For each spinoff–parent combination, a portfolio return is computed as the $MFAR$ for each spinoff and parent weighted by their relative sizes. The weights represent the relative market values of the spinoff and parent using closing prices on the spinoff ex-date. Since the market value of 90 of the 146 spinoffs is less than 25% of the combined parent and spinoff value, the combined portfolio returns are heavily weighted toward the parent-firm returns.

As shown in panels A and B of table 8, the mean raw return and mean $MFAR$ for the period -6 to D are 14.7% and 6.4%. Both of these means are significant at the 1% level. Mean $MFAR$s for X–12, X–24, and X–36 are 4.7%. 18.9%, and 13.9%. The mean $MFAR$ for X–24 is significant at the 5% level. This abnormal

[13]The other independent variables include: the market value of the parent or spinoff, the degree of estructuring as measured by the size of the spinoff in relation to the parent (in market value), an exchange-listing indicator variable (NYSE/Amex/NASDAQ), and an indicator variable to assess the relatedness of parent and spinoff (based on parent and spinoff two-digit SIC codes).

[14]The *Wall Street Journal* reported announcements for 140 of these spinoffs. We performed an event study on the announcements involving firms with daily share prices available on CRSP. This data restriction reduced our sample to 107 firms. The announcement-day mean-adjusted return (MAR) using the CRSP value-weighted index is 1.3% and is significant at the 1% level. The two-day MAR is 2.1%. Both Miles and Rosenfeld (1983) and Hite and Owers (1983) report a two-day MAR of 3.3%, while Schipper and Smith (1983) observe a 2.8% MAR. It is not likely, however, that previous studies were limited to tax-free spinoffs.

Common stock returns for 141 spinoff–parent combinations from 1965 to 1988. Returns are reported for various periods ranging from six months prior to (− 6) the distribution date (*D*) to 36 months after the ex-date (*X*). The periods shown are: − 6 *D*, *X*–12, *X*–24, *X*–36, − 6–12, − 6–24, and − 6–36.[a,b].

	Holding period						
	(− 6–*D*)	(*X*–12)	(*X*–24)	(*X*–36)	(− 6–12)	(− 6–24)	(− 6–36)
			Panel A: Raw returns				
Mean return[a]	14.7%	13.3%	39.9%	54.5%	29.3%	59.5%	75.1%
t-statistic[c]	5.65***	3.12***	5.02***	6.76***	5.25***	5.86***	8.38***
% positive	67%	60%	68%	74%	69%	76%	76%
			Panel B: Market- and matched-firm-adjusted returns				
Mean return[a]	6.4%	4.7%	18.9%	13.9%	12.6%	24.2%	17.4%
t-statistic[c]	2.75***	1.12	2.31**	1.48	2.35**	2.62***	1.76*
% positive	57%	55%	58%	56%	55%	62%	62%
			Panel C: Market- and matched-firm-adjusted returns – 100 with no mergers or takeovers				
Mean return[a]	4.1%	− 2.6%	10.8%	1.9%	3.0%	13.5%	1.6%
t-statistic[c]	1.60	− 0.51	0.98	0.15	0.49	1.09	0.12
% positive	55%	48%	50%	49%	45%	53%	54%
			Panel D: Market- and matched-firm-adjusted returns – full sample with no takeover premiums				
Mean return[a]	4.3%	2.4%	15.0%	8.0%	8.1%	18.6%	9.8%
t-statistic[c]	2.04**	0.59	1.86*	0.86	1.58	2.03**	0.99
% positive	56%	53%	55%	53%	52%	58%	55%

[a]The combined return represents (a) the return to the parent firms, adjusted by the contemporaneous CRSP equally-weighted market return, for the six months preceding the spinoff distribution date (− 6–*D*), and (b) the return to a weighted portfolio of parent firms and their spinoffs for periods following the ex-date (*X*), where the spinoff and parent-firm returns are adjusted by the contemporaneous returns of firms matched by SIC code and market value. The portfolio weights are determined by the size of the spinoff (in market value) in relation to the parent. Panel C includes only those 100 combinations in which neither the parent nor the spinoff is involved in a merger or takeover.Panel D includes returns for the combinations in panel C as well as for the 41 combinations in which either the parent or the spinoff (or both) is merged or taken over in the three years following the distribution day. We adjust the returns for these 41 combinations for the takeover premiums by removing the six months prior to the merger/takeover.

[b]Holding periods are in months, where *D* denotes the distribution date and *X* denotes the ex-date of the spinoff. If a firm is delisted or taken over during the period, the longest available holding-period return is used to represent the whole period.

[c]The *t*-statistics test the hypothesis that the mean holding-period returns equal zero: * denotes significance at the 10% level, ** at the 5% level, and *** at the 1% level; two-tailed tests.

performance primarily follows the pattern of takeover activity for parent firms. Combining the pre-spinoff returns with the intervals of one, two, and three years after the spinoff provides mean market- and matched-firm-adjusted returns of 12.6%, 24.2%, and 17.4%, which are significant at 5%, 1%, and 10%. These findings suggest that spinoffs result in significant value creation, at least for intervals of up to two years.

Panel C reports adjusted returns for the 100 spinoff–parent combinations not reporting takeover activity within three years for either the spinoff or the parent. None of the mean adjusted returns are significantly different from zero, indicating average performance for these combinations even after we include the announcement period returns (-6 to D). In addition, the insignificant adjusted return over the -6 to D interval suggests that the market anticipated a lack of takeover activity for these firms. These results indicate that the value created through spinoffs derives primarily from the takeover premiums paid for the spinoff, its parent firm, or both. In panel D, we measure adjusted returns for our full sample of parent–spinoff combinations but remove takeover premiums as in previous tables by excluding the six months of returns before a takeover of either a parent or a spinoff. In panel D, the intervals -6 to D and -6 to 24 show adjusted returns of 4.3% and 18.6%, which are both significant at the 5% level. In addition, an adjusted return of 15.0% for the X–24 interval is significant at the 10% level. Overall the results in table 8 demonstrate that the value created through spinoffs is attributable to the spinoffs and parents involved in takeover activity.

4. Summary and conclusions

Like the business press, we observe superior long-term investment performance for spinoffs. In contrast to the similar and more common newly traded security, the IPO, spinoffs provide positive abnormal returns over an extended period. Surprisingly, we find that parent firms also offer superior post-spinoff long-term investment performance. We associate these performance results with post-spinoff restructuring activity. We find that both the spinoffs and the parents are more frequently involved in takeovers than their control groups of comparable firms. One-third of the spinoff–parent combinations are involved in takeover activity within three years of the spinoff. When the firms involved in takeovers are removed from our sample, adjusted returns are positive but not significantly different from zero over most intervals. For spinoffs, most of the takeover activity occurs in years 2 and 3, the years of strongest stock performance. For parent firms, in contrast, the majority of takeovers occur within the first two years, which is when parent-firm stock returns are highest. Thus, the abnormal performance of spinoffs and parents is closely related to post-spinoff takeover activity.

Previous event studies examine common stock returns only for parent firms near the time of spinoff announcements. The superior mean returns after the spinoff distribution date for both spinoffs and their parents suggests that these event studies underestimate the value created through spinoffs. To gauge that, we measure the long-term performance of market-value-weighted portfolios of spinoffs and their parents. These spinoff–parent combinations show significantly positive matched-firm-adjusted returns over a two-year follow-up period. When the six months before the distribution date are included so as to incorporate the excess returns associated with the spinoff announcement, the two-year adjusted return is 24.2%. This abnormal performance is directly related to returns for spinoffs and/or parents involved in takeover activity, as the returns for the spinoff–parent combinations not involved in takeover activity show insignificant abnormal performance over all intervals.

Our results indicate that the value created by spinoffs is attributable to the returns associated with the spinoffs and/or parents involved in takeover activity. Hence, we conclude that spinoffs create value primarily by providing an efficient method of transferring control of corporate assets to acquiring firms. By splitting companies into separate businesses, spinoffs establish pure plays in the market, allowing bidders who are able to create more value to avoid the expense of taking over whole entities.

References

Aggarwal, Reena and Pietra Rivoli, 1990, Fads in the initial public offering market?, Financial Management 19, 45–57.

Aron, Debra, 1991, Using the capital market as a monitor: Corporate spinoffs in an agency framework, Rand Journal of Economics 22, 505–518.

Bradley, Michael, Anand Desai, and E. Han Kim, 1988, Synergistic gains from corporate acquisitions and their division between stockholders of target and acquiring firms, Journal of Financial Economics 18, 3–40.

Carter, Richard B. and Steve Manaster, 1990, Initial public offerings and underwriter reputation, Journal of Finance 45, 1045–1067.

Glassman, David M., 1988, Spinoffs and spin-outs: Using 'securitization' to beat the bureaucracy, Journal of Applied Corporate Finance 1, 82–89.

Hite, Gailen and James Owers, 1983, Security price reactions around corporate spinoff announcements, Journal of Financial Economics 12, 409–436.

Ibbotson, Roger B., 1975, Price performance of common stock new issues, Journal of Financial Economics 2, 235–272.

Ibbotson, Roger B., Jody R. Sindelar, and Jay R. Ritter, 1988, Initial public offerings, Journal of Applied Corporate Finance 1, 37–45.

Jensen, Michael C., 1972, Capital markets: Theory and evidence, Bell Journal of Economics 3, 357–398.

Miles, James A. and James D. Rosenfeld, 1983, The effect of voluntary spinoff announcements on shareholder wealth, Journal of Finance 38, 1597–1606.

Palmeri, Christopher, 1989, Happy break-ups, Forbes, August 21, 110–111.

Ritter, Jay R., 1984, The 'hot issue' market of 1980, Journal of Business 32, 215–240.

Ritter, Jay R., 1987, The costs of going public, Journal of Financial Economics 19, 269–281.

Ritter, Jay R., 1991, The long-run performance of initial public offerings, Journal of Finance 46, 3–27.
Roll, Richard, 1983, On computing mean returns and the small firm premium, Journal of Financial Economics 12, 371–386.
Schipper, Katherine and Abbie Smith, 1983, Effects of recontracting on shareholder wealth: The case of voluntary spin-offs, Journal of Financial Economics 12, 437–467.
Segal, Troy, 1990, Should you give these orphaned stocks a home?, Business Week, October 15, 126–127.
Tinic, Seha, 1988, Anatomy of initial public offerings of common stock, Journal of Finance 43, 789–822.
White, James A., 1990, Investing in spinoffs grows treacherous, Wall Street Journal, June 1, C1-2.