

Predictability of Long-Term Spinoff Returns

John J. McConnell*
Krannert School of Management
Purdue University

and

Alexei V. Ovtchinnikov
Krannert School of Management
Purdue University

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* The author may be contacted at: Purdue University, Krannert Graduate School of Management, 403 W. State St, West Lafayette, IN 47907-2056, tel: 765-494-5910, fax: 765-494-9658 e-mail: mcconnell@mgmt.purdue.edu.

Abstract

Investment strategies of buying and holding recently spun off companies and their parents have received significant attention from the investment community in the recent past. Despite their popularity, the existing evidence on the attractiveness of spinoffs appears piecemeal. In this paper, we examine in detail stock price performance of spinoffs and their parents on a comprehensive sample that covers the last 36 years. We show that excess returns are indeed positive for both subsidiary and parent companies over almost all holding periods considered. For subsidiaries the results appear both economically and statistically significant after various adjustments for risk. This evidence is consistent with investors earning an above normal rate of return by investing in recently spun off subsidiaries. For parents, however, after correcting for one very large positive outlier, returns are not statistically or economically different from zero.

On April 4, 1996 Lucent Technologies, Inc., a spun off division of AT&T Corp., began trading as an independent entity at \$27 a share. Three years later the stock was trading at over \$230 a share on a split adjusted basis and an investor who had purchased the stock on the first trading day and held it for three years would have generated a return of 783.26% - an impressive number by any standards. Meanwhile, Lucent's parent, AT&T, had earned a respectable 91.72% return over the same time period.

Such an extraordinary return to buying spun off subsidiaries and their parents has attracted significant attention from the investment community since the early nineties. Based on studies by Cusatis, Miles, and Woolridge (1993), Daley, Mehrotra and Sivakumar (1997) and Desai and Jain (1999), just to name a few, the popular press has issued numerous recommendations for investors looking to outperform the market to invest in spun off companies and their parents (Serwer(1992), Michels and Neumeier (1994), Gutner (1996), Hayes (1997), Siwolop (1997), Stewart (2000) and in particular, Sivy (1996)). Numerous investment research companies now offer professional research on upcoming spinoffs for professional money managers, pension funds, and hedge funds. For individual investors, various investment books provide detailed recipes for making money by investing in spinoffs.

Can investors really beat the market by investing in spinoffs and their parents? The existing empirical evidence appears somewhat piecemeal and often results in contradictory conclusions.¹ In this paper, we analyze in greater detail the attractiveness of trading strategies involving spinoffs by examining returns to portfolios of parents and subsidiaries over different holding and time periods considered. We examine portfolio returns both in calendar and event time using a comprehensive sample of spinoffs that covers 36 years of data. For both parent and subsidiary companies, the average cumulative excess returns are positive for up to three

years following spinoffs. However, the results are economically significant only for subsidiary companies. On average, subsidiaries have outperformed their benchmark companies by over 20% over the first three years following the spinoffs. Moreover, on an annualized basis, average subsidiary excess returns tend to be the highest over the first 12 months of trading. This evidence is contrary to the belief in the press that investors should avoid purchasing spun off companies in the first six months following the initial listing date because of significant downside risk associated with many institutional clients rebalancing their portfolios immediately following the spinoffs. These results are robust across various benchmarks and alternative adjustments for risk.

For parent companies, there is a much weaker evidence of excess returns following the spinoffs. While all of excess returns are positive, the results are significantly influenced by the presence of a *single* outlier. When this outlier is removed from estimation, excess returns no longer differ significantly from zero. On average, it appears that parent companies have outperformed their benchmark by a mere five percent over the first 36 months following the spinoffs. This result is not statistically different from zero.

The analysis in this paper demonstrates that investors pursuing strategies of buying spun off companies and their parents have done fairly well in the past. On average it even appears that they were able to beat the market, although whether this phenomenon will persist in the future is difficult to tell because of the poor predictive power of past returns. It appears, therefore, that adding spinoffs and their parents to well-diversified portfolios does not hurt investors and may result in a positive improvement in portfolio performance.

I. Sample Selection and Methodology

To compile our sample, we follow a common methodology in the finance literature and focus only on pure spinoffs, which represent tax-free, pro-rata distributions of shares of wholly owned subsidiaries to shareholders. We do so to minimize any concerns that the difference between our results and those of other studies analyzing long run spinoff performance is due to differences in sample selection.

In order for a distribution to be tax-free under IRS Section 355, it must involve at least 80% of the shares outstanding of the wholly owned subsidiary. Moreover, the remaining shares owned by the parent may not constitute practical control of the subsidiary. Therefore, tax-free spinoffs represent restructurings in which the parent effectively removes itself from controlling the subsidiary. We focus on these pure restructurings.

Our sample consists of 311 spinoffs undertaken by 267 parents between January 1965 and December 2000. The starting and ending points for the sample period were dictated by data availability. No spinoffs were identified prior to January 1965. No spinoffs after December 2000 were included in the sample because at the time of the analysis those spinoffs had less than one full year of return data on the *Center for Research in Security Prices (CRSP)* tapes. To compile the sample, we use *Moody's Dividend Record*, the *CRSP Monthly Master File* and the *CCH Capital Changes Reporter* to identify firms' distribution of the stock of other firms. For the whole sample period, 1,459 distributions are identified. From these, we exclude all taxable or mixed taxation distributions (576), distributions classified as a return of capital (144), involuntary distributions (19), and distributions for which no information on the nature of the distribution is available in *CCH Capital Changes Reporter* (184). This filtering leaves 536 nontaxable distributions for which full information on their nature is available. We further

exclude 31 distributions that were trading prior to the announcement of the spinoff, and 194 distributions for which no return data is available on *CRSP*. As shown in table 1, a spinoff is a relatively recent occurrence. Spinoffs were extremely uncommon in the 1960s but grew more popular in the 1970s. In the last two decades, spinoffs are spread reasonably even through time, although fewer spinoffs took place in the early 1980s and 1990s.

The return data for spinoff companies and their parents is obtained from *CRSP*. We measure excess returns against two sets of benchmark companies that are commonly accepted in the finance literature. The first benchmark (industry- and size-matched benchmark) consists of companies in the same four-digit SIC code as the parent/subsidiary and with the market value of equity that is within 25% of the market value of equity of the parent/subsidiary. The second benchmark (the size- and book-to-market-matched benchmark) comprises of all companies that are in the same book-to-market quintile and the same size-quintile as the parent/subsidiary. The average monthly excess returns are measured as the difference between the average monthly returns for the parent/subsidiary and the average monthly returns for the benchmark.

II. Univariate Results

In analyzing returns to holding recently spun off companies and their parents, we take a position of an investor who follows a trading strategy of buying parent companies at the beginning of the month immediately following the month when the spinoff occurred and holding them for up to 36 months. The strategy for subsidiary companies is to purchase them at the initial listing date and also hold them for up to 36 months. To measure excess performance, we use cumulative excess returns rather than buy-and-hold returns because, as

argued by Fama (1998) and Mitchell and Stafford (1998), buy-and-hold returns may provide an unreliable measure of performance especially when performance is measured over the long run and when returns are significantly skewed.²

II.A. Subsidiaries

Figure 1 plots subsidiary average cumulative excess returns in event time for the first 36 months immediately following the spinoff. The solid line tracks excess returns for the industry- and size-matched benchmark while the dashed line tracks excess returns for the size- and book-to-market-matched benchmark. For all time periods considered average cumulative excess returns are positive and economically significant. For example, the average cumulative excess returns for the first 12 months following the spinoff are 19.40% (0.001 significance level) when measured against industry- and size-matched companies and 16.08% (0.001 significance level) when measured against size- and book-to-market-matched companies. Likewise, the average cumulative excess returns for the 24-month and 36-month holding periods are 24.37% (0.012 significance level) and 26.32% (0.001 significance level) respectively for the industry- and size-matched benchmark and 24.55% (0.009 significance level) and 20.75% (0.032 significance level) for the size- and book-to-market-matched benchmark. The excess returns for the 36-month holding period actually decline from their peak of 28.59% (0.001 significance level) and 24.35% (0.001 significance level) for the two respective benchmarks, which points out that monthly excess returns tend to be negative beyond the 21-month holding horizon. The evidence in figure 1 suggests that the most profitable strategy was to hold spinoffs for up to 21 months following the initial listing date.

The evidence in figure 1 also suggests that subsidiaries produce positive and economically significant excess returns in the first year following the spinoffs.³ This evidence is contrary to the belief in the popular press that the best strategy is to purchase spun off companies six months after the initial listing date (Serwer (1992), for example). The argument most often cited is that immediately following the distribution of shares the new stock experiences a substantial downside pressure as many institutional investors rebalance their portfolios. The rebalancing takes place because often institutional investors are not allowed to hold spinoffs. This includes institutional investors who must own dividend paying stocks as well as index funds, which divest spinoffs because they are not in their indexes. If an investor had followed a strategy often popularized in the press, he would have missed substantial gains from holding spun off companies.

A closer examination of figure 1 reveals a dependency of the results on the benchmark employed. When excess returns are measured against size- and book-to-market-matched companies, the results for subsidiaries appear economically weaker. One possible explanation for the difference in the results is that size- and book-to-market-matched companies share a common risk component with subsidiary companies that is not captured by the industry- and size-matched benchmark. We further address the issue of a more adequate risk adjustment in the next section where we employ the Fama-French-Carhart four-factor model for measuring subsidiary and parent risk-adjusted excess returns.

II.B. Parents

Figure 2 presents parent average cumulative excess returns for the first 36 months following the spinoff. Similar to figure 1, the solid line in figure 2 tracks excess returns for the

industry- and size-matched benchmark while the dashed line tracks excess returns for the size- and book-to-market-matched benchmark. At a first glance it appears that parents of recently spun off subsidiaries significantly outperformed their benchmark companies. Indeed, figure 2 shows that all of the excess returns for parent companies are positive for up to 36 months following the spinoffs. The excess returns also appear economically significant, peaking at 21.28% (0.001 significance level) when measured against the size- and book-to-market-matched benchmark and at 20.19% (0.003 significance level) when measured against the industry- and size-matched benchmark of companies.

However, the average excess returns for parent companies are driven almost exclusively by the presence of a single outlier, Republic Waste Industries, a stock that went from \$3.50 a share to \$82.43 a share on a split adjusted basis over the two years after the spinoff. When this company is removed from the sample, the average excess returns, depicted in figure 2 by two lines with a diamond and a triangular markers, are still mostly positive but indistinguishable from zero bouncing randomly around a five percent mark and never exceeding 10 percent.

The results for parent companies differ from the results in Cusatis, et al. (1993), who find positive and statistically and economically significant gains to holding parent companies after spinoffs. The reason for the difference in results is due to performance of parent companies during the 1989 – 2000 time period. Over the last decade, parent companies earn an average cumulative excess return of merely 1.49% (0.811 significance level) over the 36-month period following the spinoff when the outlier is removed from estimation.

It appears, therefore, that the unusually high returns for parent companies are specific to the 1964 – 1988 time period and dissipate over other horizons, yielding average excess

returns for parents not different from zero. However, because most of the excess returns are positive, strategies of buying and holding parent companies do not seem to hurt an investor who simply attempts to stay with the market. Moreover, if that investor were able to invest in an outlier similar to Republic Waste Industries, the return to his portfolio of parent companies would significantly improve.

In our analysis up to this point we have assumed that the two benchmarks used to measure excess returns adequately capture all risk characteristics associated with purchasing and holding spun off companies and their parents. To the extent that this assumption is violated, however, the excess returns reported above may simply serve as compensation to investors for risk of holding spinoffs and their parents that is not captured by the industry- and size-matched and the size- and book-to-market-matched portfolios of benchmark firms.

To further investigate this possibility, we now turn to multivariate regressions of monthly returns to spinoffs and their parents against the Fama-French-Carhart four-factor model.⁴ Fama and French (1993, 1995, 1996) have argued that their size and book-to-market factors mimic combinations of two underlying risk factors or state variables of special hedging concern to investors. To these we add a momentum factor to capture the momentum effect of stock returns.

III. Multivariate Results

The results of Fama-French-Carhart regressions are reported in table 2. Panel A presents the results for the subsidiary portfolio and panel B reports the results for the parent portfolio. In panel A, all but one of the regression intercepts are positive but only statistically significant for a portfolio of subsidiary companies that were held for no longer than 24 months.

The magnitudes of the implied excess returns are of a much lower magnitude, which can be attributed to a more precise adjustment for risk in the Fama-French-Carhart regressions. For subsidiary companies, the regression intercepts are 0.00964, 0.00842, 0.00659, and 0.00236 for the 6-, 12-, 24-, and 36-month trading strategy respectively, which imply an annual excess return of 12.20%, 10.59%, 8.20%, and 2.87% for each respective strategy. For parents, on the other hand, the intercepts reported in panel B of table 2 imply an annual excess return of 10.70%, 5.91%, 4.64%, and -2.21% for each respective trading strategy.

When we break our sample into various subintervals (the results are not reported), regression intercepts are still positive but rarely statistically significant at conventional levels. The most likely explanation for the lack of statistical significance is the noise in the data. What we know from the long-run returns literature is that the variance of long-run returns increases with the horizon over which the returns are cumulated. This increased variance of long-run returns is likely to affect our results here. Nevertheless, in unreported results it appears that both subsidiary and parent firms have performed better over the 1989 – 2000 time period. For parents, the increase in intercepts may entirely be attributed to the outlier in the data. When we omit Republic Waste Industries, Inc. from estimation, the regression intercepts are no longer statistically different from zero. For subsidiary companies, on the other hand, the results are robust to outliers in the data.

It appears that even after a more rigorous adjustment for risk, subsidiary companies have delivered excess returns to investors who invested in them over the past three and a half decades. Moreover, similar to evidence presented in figure 1, the results in table 2 suggest that it is wiser to hold subsidiaries for shorter time periods and rebalance portfolios more frequently. Because the above analysis excludes any transaction costs, however, the excess

returns to holding spinoffs are likely to be lower than reported, although it is unlikely that transaction costs could wipe all the gains from trading spinoffs reported above.

IV. Conclusion

In this paper, we present evidence on performance of spun off companies and their parents over the long run following the spinoffs. We show that parent companies have produced largely positive, yet economically insignificant excess returns. It appears, therefore, that investing in parent companies following spinoffs does not hurt investors with well-diversified portfolios. Moreover, because the results are significantly improved when outliers are not omitted from estimation, an investor who followed the strategy of investing in every single spinoff was actually able to beat the market over most of the intervals considered.

Subsidiary companies, on the other hand, consistently have outperformed the market over the last three and a half decades. The evidence presented in this paper is robust to alternative benchmarks and is not significantly influenced by the presence of outliers. In this paper, we show, contrary to the belief in the popular press, that it is wiser to purchase spinoffs at the initial listing date instead of waiting several months before making an investment.

While this paper does not address the question on the nature of the gains from trading spinoffs, several explanations are possible. For example, it is possible that spinoffs are created when the management of a large, diversified company feels that its assets are undervalued by the stock market. To recognize the value for those assets, management may spin off a subsidiary to be traded independently in the stock market. After the spinoff, the stock market assigns a new, and hopefully correct, value to company's assets.

Another explanation for the value creation through spinoffs is that before a subsidiary is spun off, valuable resources are allocated away from the division. Once the subsidiary is independent, however, no misallocation of resources is possible and the stock market rewards more efficient subsidiaries through higher valuations. For example, Toddi Gutner of Business Week writes: "...Host Marriott Services, a leading operator of airport and toll-road concessions, didn't have a chance to grow as a subsidiary of Host Marriott Corp. That's because excess cash flow from HMS was used to fund its parent's needs rather than its own...Not anymore. As an independent company created in January, Host Marriott Services is expanding its international operations and moving into the shopping-mall food-court management arena" (Gutner (1996)).

Finally, it has been argued in academic literature that the value created through spinoffs comes as a result of an increased likelihood that the new company will be acquired. Which explanation proves to be the ultimate one standing is a question of future research.

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Figure 1

Subsidiary Average Cumulative Excess Returns, January 1965 – December 2000

Excess returns are computed as the difference between the returns on a subsidiary company and its benchmark. Two sets of benchmark companies are used. The first benchmark consists of companies in the same four-digit SIC code as the subsidiary company and with the market value of equity that is within 25% of the market value of equity of the subsidiary. The market value of equity is the product of the number of shares outstanding and the subsidiary's stock price at the initial listing date. The second benchmark comprises of all companies that are in the same book-to-market quintile at the end of the first fiscal year that the subsidiary is an independent company and the same size quintile as the subsidiary company at the initial listing date. The average excess returns computed against the first benchmark of companies (industry- and size-matched benchmark) are plotted with a solid line. The average excess returns computed against the second benchmark of companies (size- and book-to-market-matched benchmark) are plotted with a dashed line.

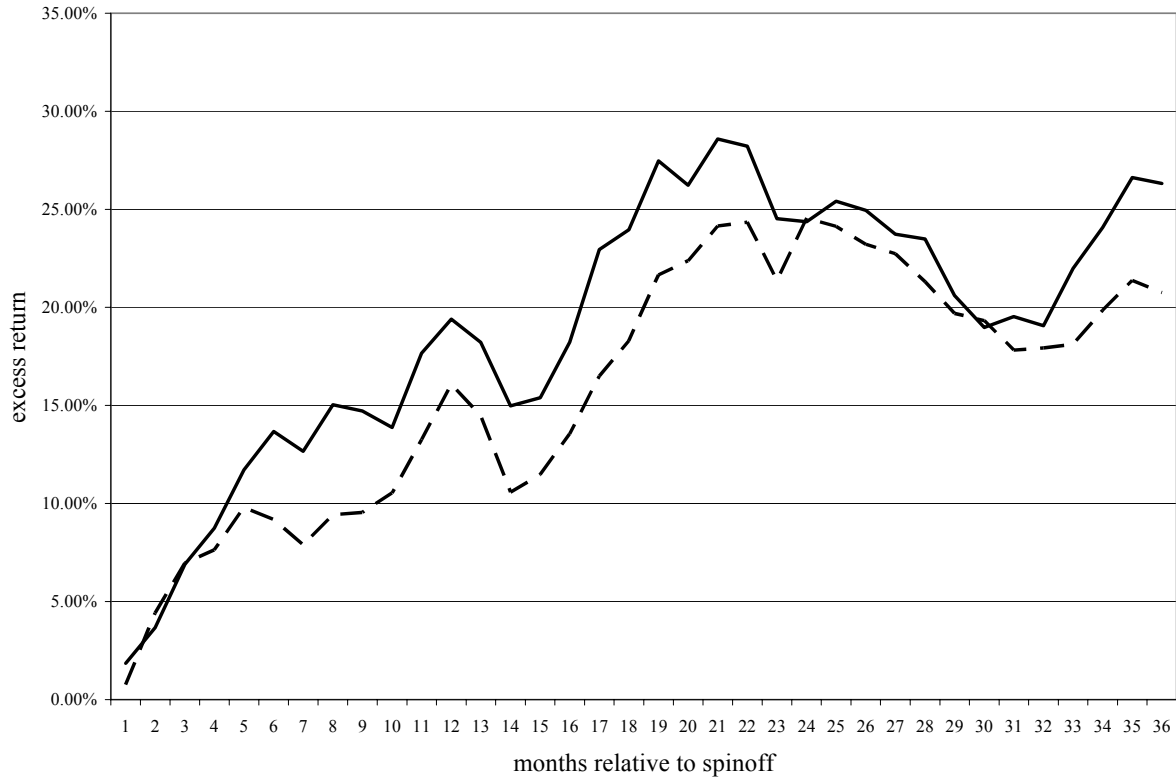


Figure 2
Parent Average Cumulative Excess Returns, January 1965 – December 2000

Excess returns are computed as the difference between the returns on a parent company and its benchmark. Two sets of benchmark companies are used. The first benchmark consists of companies in the same four-digit SIC code as the parent company and with the market value of equity that is within 25% of the market value of equity of the parent. The market value of equity is the product of the number of shares outstanding and the parent's stock price at the ex date. The second benchmark comprises of all companies that are in the same book-to-market quintile at the end of the first fiscal year immediately preceding the year of the spinoff and the same size quintile as the parent company at the ex date. The average excess returns computed against the first benchmark of companies (industry- and size-matched benchmark) are plotted with a solid line. The average excess returns computed against the second benchmark of companies (size- and book-to-market-matched benchmark) are plotted with a dashed line. The figure also presents average excess returns computed without considering an outlier in the parent sample of companies, the Republic Waste Industries, Inc. The results for the industry- and size-matched benchmark of companies are plotted with a solid line with a triangular marker. The results for the size- and market-to-book-matched benchmark of companies are plotted with a dashed line with a diamond marker.

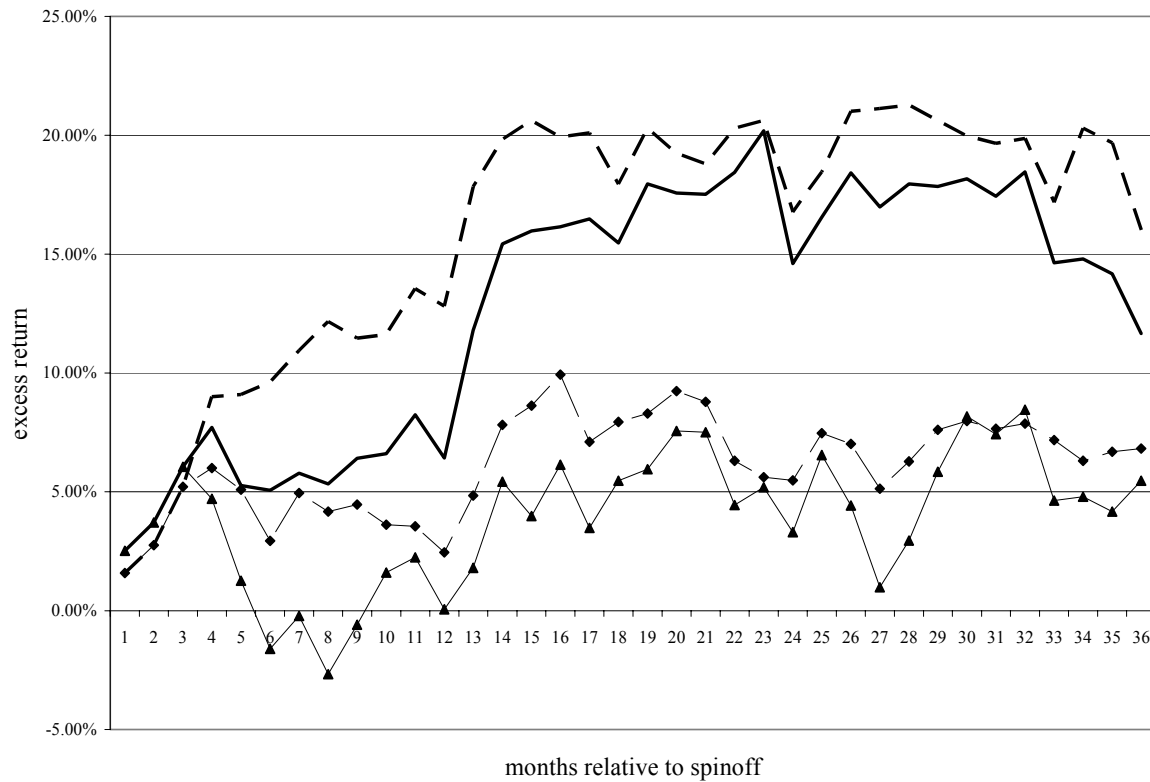


Table 1**Descriptive Statistics for the Spinoff Parent and Subsidiary Companies, January 1965 - December 2000**

The sample of spinoffs is from *Moody's Dividend Record*, *CRSP Monthly Master File* and the *CCH Capital Changes Reporter*. To compile the sample, we exclude all taxable and mixed taxation distributions, distributions classified as a return of capital, involuntary distributions, distributions for which no return data or classification data is available on *CRSP* or *CCH Capital Changes Reporter*, and those distributions that were trading prior to the ex date. The mean market value of equity (MMVE) for parent and subsidiary companies is calculated as the average of the product of the price per share and the number of shares outstanding and reported in millions of dollars. MMVE's are calculated on the ex date for parents and on the initial listing date for subsidiaries. The stock price and the number of shares outstanding are from *CRSP*.

Year	No of spinoffs	Parent MMVE (\$ mil)	Subsidiary MMVE (\$ mil)	Year	No of spinoffs	Parent MMVE (\$ mil)	Subsidiary MMVE (\$ mil)
1965	1	42.085	39.206	1983	6	435.763	111.095
1966	1	94.815	45.284	1984	11	690.526	57.627
1967	0			1985	16	2,276.542	200.564
1968	0			1986	10	1,985.322	242.614
1969	0			1987	13	1,476.414	158.736
1970	0			1988	17	749.326	237.066
1971	0			1989	16	1,193.089	346.809
1972	2	36.287	9.111	1990	15	1,941.028	280.17
1973	2	898.223	172.544	1991	8	1,140.739	309.378
1974	2	207.426	86.14	1992	8	1,895.656	493.063
1975	7	273.631	27.685	1993	15	1,084.688	498.016
1976	5	113.772	63.093	1994	18	3,394.354	629.034
1977	5	50.694	19.317	1995	18	2,383.973	279.554
1978	5	68.762	10.574	1996	16	12,549.548	1,302.698
1979	12	203.475	94.398	1997	11	6,918.156	1,565.420
1980	8	500.936	277.221	1998	13	7,111.411	1,484.120
1981	18	546.994	203.243	1999	11	8,479.884	2,479.467
1982	7	287.264	42.743	2000	14	6,179.520	2,179.140

Table 2
Multivariate Results of Fama-French-Carhart Regressions of Spinoff and Parent Stock Portfolios

Panel A shows the coefficients of the following time-series regressions for subsidiary stocks over the 6, 12, 24, and 36-month strategies:

$$(R_p - R_F)_t = \alpha + \beta_1(R_M - R_F)_t + \beta_2SMB_t + \beta_3HML_t + \beta_4UMD_t + \varepsilon_t$$

where $(R_p - R_F)_t$ is the average monthly return on the portfolio of subsidiary stocks less the contemporaneous return on a 30-day T-Bill in calendar month t , $(R_M - R_F)_t$ is the return on a value-weighted portfolio index of all NYSE, AMEX and NASDAQ stocks less the contemporaneous return on a 30-day T-Bill, SMB_t is the difference between the value-weighted average return on the small-cap portfolios and large-cap portfolios, HML_t is the difference between the value-weighted average return on the high book-to-market portfolios and low book-to-market portfolios, and UMD_t is the average return on the two high prior return portfolios minus the average return on the two low prior return portfolios. Panel B shows the results of the same regressions for spinoff parent stocks. New parent (subsidiary) stocks are added to the portfolio in the calendar month of the stock's ex date (initial trading date) and stocks are removed in the calendar month that marks the end of the holding period of interest or when the stock is delisted. p-values for the significance of the parameter estimates are heteroskedasticity and autocorrelation robust and reported in parenthesis.

Months Relative to Ex Date	Coefficient Estimates					
	α	β_1	β_2	β_3	β_4	R^2
<i>Panel A: Regressions of Subsidiary Company Portfolios</i>						
6	0.00964 (0.040)	0.933 (< 0.001)	0.628 (0.001)	0.192 (0.132)	0.223 (0.111)	0.24
12	0.00842 (0.021)	0.974 (< 0.001)	0.858 (< 0.001)	0.192 (0.211)	0.074 (0.517)	0.41
24	0.00659 (0.047)	1.103 (< 0.001)	0.755 (< 0.001)	0.124 (0.174)	0.060 (0.461)	0.52
36	0.00236 (0.667)	1.157 (< 0.001)	0.688 (< 0.001)	0.192 (0.188)	-0.078 (0.842)	0.52
<i>Panel B: Regressions of Subsidiary Company Portfolios</i>						
6	0.00851 (0.054)	0.778 (< 0.001)	0.367 (0.001)	0.128 (0.647)	0.182 (0.121)	0.17
12	0.00480 (0.124)	0.894 (< 0.001)	0.566 (< 0.001)	0.075 (0.744)	0.217 (0.002)	0.37
24	0.00379 (0.211)	0.921 (< 0.001)	0.734 (< 0.001)	0.173 (0.231)	0.217 (0.041)	0.43
36	-0.00182 (0.561)	1.13 (< 0.001)	0.628 (< 0.001)	0.39 (< 0.001)	0.008 (0.944)	0.50

Endnotes

¹ For example, the evidence in Cusatis, Miles, and Woolridge (1993) suggests that spinoffs and their parents outperform their benchmark companies for up to three years following the spinoff, while McConnell, Ozbilgin, and Wahal (2001) find only limited evidence of overperformance by subsidiaries and parents on a post Cusatis, et al. sample. The latter also conclude that their results are sensitive to outliers in the sample.

² Our conclusions are actually not sensitive to whether we measure performance by cumulative or buy-and-hold excess returns.

³ Similar evidence of high excess returns in the first 12 months following the initial listing date is also presented in McConnell et al. (2001).

⁴ In this exercise, we assume that investors create portfolios of spinoffs and their parents in calendar time. Stocks are added to the portfolio every time a spinoff occurs and deleted either after a 36-month holding period or when the stock stops trading. Portfolios are rebalanced every month with each stock receiving an equal weight in the portfolio. The Fama-French-Carhart procedure is implemented as in Ikenberry et al. (1995).