# A Study of Two-Step Spinoffs

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## 1. Introduction

In the last decade, spinoffs have become increasingly popular with firms seeking to divest a part of their businesses. Most of these spinoffs involve a pro-rata distribution of shares in a wholly owned subsidiary to the shareholders of the firm in the form of a dividend. After the distribution, both parent and subsidiary initially share the same shareholder base, even though the operations and management of the two entities are now separate and independent of each other. Another important feature of a spinoff that sets it apart from other types of corporate divestitures is that it does not provide the parent with any cash infusion.

Recently, there has been a noticeable trend towards two-step spin off transactions, where parent firms first sell up to 20% of the shares in the subsidiary in an initial public offering, followed shortly by a distribution of the remaining shares to its shareholders. The 20% limit is usually observed in the first step in order to preserve the tax-free status of the transaction. Why firms choose to pursue a two-step spinoff instead of a 100% pure spinoff is unclear. Previous research generally focuses on pure spinoffs, so this question has been yet to be addressed. A possible reason for this is to avoid the dip in the stock price that the spun off subsidiary usually experiences in the first few months following the distribution. This initial stock price decline is usually associated with the portfolio rebalancing activities of large institutional investors who may not wish to hold the shares of the subsidiary given away by the parent in a spinoff transaction. For example, the manager of an index fund may be required to sell the shares of the spin-off subsidiary if that subsidiary does not form part of the index.

In a two-step spinoff, the minority carve-out enables the parent firm to create an orderly market for the new issue and avoid flooding the market with a large number of shares all at once as in the case of a pure spinoff (Lamont and Thaler, 2000). Also, since the carve-out takes the form of an IPO, investment banks are often committed to help support and market the new issue – a feature that is conspicuously absent in a spinoff transaction. Hence, when the spinoff takes

place, the market may be better positioned to support the portfolio rebalancing activities highlighted above.

In this paper, we seek to validate this strategy by comparing empirically the shareholder wealth effects of one-step spinoff transactions and their two-step counterparts. To do this, we looked at the cumulative market-adjusted returns of a sample of pure spinoffs against a sample of two-step spinoffs for periods of up to 30 trading days following the distribution of shares in the subsidiaries by the parent firms. Our empirical tests reveal that while there is some evidence to support our hypothesis that two-step spinoffs perform better than pure spinoffs in the very short term, the results are probably too transient to justify the costs incurred by parent firms in pursuing a two-step process rather than a pure spinoff. The results of regressions that include size controls provide further evidence that the presence of a preceding minority carve-out does not significantly influence the returns of the spinoffs. Hence, we conclude that two-step spinoffs are ineffective in circumventing the initial decline in stock price that spinoffs generally experience.

The remainder of this paper is organized as follows: Section 2 provides a background on the shareholder wealth effects of spinoffs. In Section 3, we discuss our sampling methodology and pertinent definitions. The results of our empirical tests are presented in Section 4 and our findings are summarized in Section 5.


## 2.    Background

There is a wealth of research on the effects of spinoffs on both parent and subsidiary firms. Early research efforts focused mainly on the changes in parent company share prices at the time of the spinoff announcement. In a study of 6 major spinoffs in the 1970s, Kudla and McInish (1983) showed a positive market reaction in the parents' stock 15 to 40 weeks before the distribution took place – an indication that the market correctly predicted the spinoff well ahead

of the actual event.  This result has been supported by many other studies for periods that date back as early as 1963 to 1981.

Cusatis, Miles and Woolridge (1993) were among the first researchers to focus on the performance of the subsidiary post-spinoff.  They examined 815 spinoffs from 1965 to 1988 and found significantly positive abnormal returns for the spun-off subsidiary, the parent and the spinoff-parent combination for a period of up to three years after the spinoff announcement date.  They also found that the abnormal returns were attributable to increased takeover activity, which was not fully anticipated by the market at the time of the spinoff announcement.  Hence, they concluded that earlier event studies underestimated the value created by spinoffs.

A 1997 study done by J.P. Morgan provided evidence that the positive stockholder wealth effects continued well into the 1990s.  Also, it was found that smaller spinoffs (with an initial market capitalization less than $200 million) significantly outperformed their larger counterparts.  J.P. Morgan attributed this to underpricing by the market, which was in turn due to the lack of knowledge on the part of investors.

An interesting phenomenon reflected in the graphs showing the post-distribution stock returns of the spin off subsidiary but not investigated by J.P. Morgan is the initial decline in returns experienced by the spinoffs in approximately the first 30 trading days after the distribution.  Thereafter, the downward trend is reversed and returns become positive three months after the spinoff date.  This pricing anomaly, however, had already been picked up by the press and documented by other researchers such as Brown and Brooke (1993) and Abarbanell, Bushee and Raedy (1998).  Brown and Brooke reported price declines of approximately 4% in spun off subsidiaries that coincided with substantial reductions in institutional holdings in these firms, and concluded that the sudden and substantial sell-off of subsidiary shares by institutional investors as part of their portfolio rebalancing activities explained the downward pressures on

price and consequently returns.[1]  Likewise, Abarbanell et al. found empirical evidence supporting the initial decline in the stock returns of the spin off subsidiary.  In a study of 179 spinoffs between 1980 and 1996, they noted that the overall returns to subsidiaries were significantly negative within 10 trading days of the distribution date, and this was consistent with a decrease in mean level of institutional ownership.  In fact, a negative abnormal return of –4.12% was observed for a 35-day trading period (similar to the finding by Brown and Brooke) and it took another 25 trading days for this trend to be completely reversed.  However, Abarbanell et al. did not find any reliable evidence that led them to conclude this decline was associated with institutional sell-offs.

Finally, in a study of equity carve outs by J.P. Morgan, it was found that carve-out firms in which the parent firm announced that a spinoff would follow at a later date outperformed the market by 11% for a period of 18 months after the initial public offering, while carve-out firms without spinoff announcements underperformed the market by 3%.[2]  This evidence indicates an interest in the market for two-step spinoffs and lends support to our hypothesis that the use of a two-step spinoff process could enable parent firms to avoid the initial decline in stock price normally observed in pure spinoffs.

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[1]  Institutional investors often limit themselves to certain types of stocks either due to specific investment styles or the need to abide by certain fiduciary standards.  Examples of such investors include index funds (as mentioned earlier in the Introduction) and most income-oriented funds, which will not own stock in companies that do not pay dividends).  Hence, if the spinoff subsidiary differed substantially from the parent and do not meet the investment criteria of such investors, it will be sold off after the spin off has been completed.

[2]  Equity carve outs involve the sale of an equity interest in a subsidiary to outsiders.  This sale may not necessarily leave the parent in control of the subsidiary.  Post carve-out, the partially divested subsidiary is operated and managed as a separate firm.

## 3.    Data and Methodology

*3.1    Sampling Methodology*

The firms in our sample have been obtained from the SDC Platinum database.  First, we performed a search of the Global M&A and Alliances database for completed domestic spinoffs between January 1, 1992 and December 31, 1999.  SDC defines a spinoff as "a tax-free distribution of shares by a company of a unit, subsidiary, division, or another company's stock, or any portion thereof, to its shareholders" and tracks spinoffs of any percentage.  For our purposes, we selected only transactions in which not less than 80% of the subsidiaries' shares have been spun off by the parent companies.  The resulting sample was then verified against Lexis-Nexis newswires to ensure that the correct transactions had been identified.  This produced a sample comprising 121 pure spinoffs.

Second, we used a sample of equity carve-outs obtained from the Global New Issues database by doing a search for "spinoffs" using the same date range to help us isolate two-step spinoffs.  Unlike the M&A database mentioned earlier, a spinoff in this case is defined as an "initial distribution of shares (IPO) by a company representing ownership" of 50% of less "in a division or subsidiary of the company that will now trade separately from its parent".  We have further pared down the result from this search to include only carve outs representing 20% or less of the shares of wholly owned subsidiaries.  This yielded a sample of 65 transactions.

Finally, by matching up the firms from these two samples, we have identified 17 firms that have been through a two-step spinoff process, i.e. the parent first carried out a minority carve-out representing 20% of less of the shares in the subsidiary, followed closely by a complete spinoff of its remaining interest in that subsidiary within 12 to 18 months.  This sample of two-step spinoffs has also been verified against Lexis-Nexis newswires.

Table 1 shows the distribution of spinoffs over the 8-year period sampled, as well as the average size of the spinoffs in each year as given by the mean market capitalization.  Table 2 lists

the industries to which the spinoffs belong according to their 2-digit SIC codes. As seen from this table, the four largest concentrations of the spinoffs in our sample are in chemicals (SIC code: 28), industrial and commercial (SIC code: 35), telecommunications (SIC code: 48) and business services (SIC code: 73).

**Table 1: Descriptive statistics for the 121 spinoffs from 1992 to 1999**

| Year | Pure Spinoffs | Two-Step Spinoffs | Total Spinoffs | Average Market Capitalization* |
|------|---------------|-------------------|----------------|-------------------------------|
| 1992 | 6 | 0 | 6 | 947.3 |
| 1993 | 9 | 2 | 11 | 1,413.4 |
| 1994 | 11 | 2 | 13 | 1,918.7 |
| 1995 | 9 | 3 | 12 | 2,393.0 |
| 1996 | 17 | 3 | 20 | 2,403.9 |
| 1997 | 14 | 2 | 16 | 1,323.9 |
| 1998 | 22 | 4 | 26 | 1,043.5 |
| 1999 | 16 | 1 | 17 | 1,314.9 |
| | 104 | 17 | 121 | |

*Market capitalization (stock price x shares outstanding) for each sample firm is based on the closing stock price for the first trading day following the distribution.*

**Table 2: Industry classifications of the spinoffs**

| 2-Digit SIC Code | Industry | Pure Spinoffs | Two-Step Spinoffs | Total Spinoffs |
|------------------|----------|---------------|-------------------|----------------|
| 00 | Agriculture | 2 | 0 | 2 |
| 10 | Mining | 0 | 2 | 2 |
| 13 | Oil and gas | 1 | 1 | 2 |
| 20 | Food and beverages | 4 | 0 | 4 |
| 21 | Tobacco products | 1 | 0 | 1 |
| 22 | Textiles | 1 | 0 | 1 |
| 24 | Wood and wood products | 2 | 0 | 2 |
| 25 | Furniture | 1 | 0 | 1 |
| 26 | Pulp and paper | 3 | 0 | 3 |
| 27 | Printing and publishing | 3 | 0 | 3 |
| 28 | Chemicals | 8 | 0 | 8 |
| 30 | Rubber and plastics | 3 | 0 | 3 |
| 31 | Leather | 3 | 0 | 3 |
| 32 | Stone, clay and glass | 1 | 0 | 1 |
| 33 - 34 | Metals | 3 | 0 | 3 |
| 35 | Industrial and commercial (incl. computer equipment) | 9 | 1 | 10 |
| 36 | Power, electrical and electronic equipment | 6 | 0 | 6 |

| 2-Digit SIC Code | Industry | Pure Spinoffs | Two-Step Spinoffs | Total Spinoffs |
|---|---|---|---|---|
| 37 | Transportation equipment | 2 | 1 | 3 |
| 38 | Instruments and related products | 4 | 1 | 5 |
| 41 - 47 | Transportation and warehousing | 6 | 0 | 6 |
| 48 | Telecommunications | 5 | 2 | 7 |
| 50 - 59 | Wholesale and retail trade | 8 | 0 | 8 |
| 60 - 62 | Financial services | 2 | 4 | 6 |
| 63 | Insurance | 1 | 2 | 3 |
| 65 - 67 | Real Estate | 3 | 0 | 3 |
| 70 | Hotels | 6 | 0 | 6 |
| 73 | Business services | 6 | 2 | 8 |
| 78 - 79 | Entertainment | 1 | 1 | 2 |
| 80 | Healthcare | 5 | 0 | 5 |
| 83 - 95 | Other services | 4 | 0 | 4 |

## 3.2    Stock Return Methodology

Our primary objective is to determine whether the two-step spinoff is able to avoid the initial decline in stock returns experienced by the average pure spinoff.  To do this, we analyze and compare the cumulative market-adjusted returns of the pure spinoffs and the two-step spinoffs on a daily basis for periods of up to 30 trading days following the stock distribution date (this refers to the date on which the remaining shares in the subsidiary are distributed in the case of two-step spinoff).  All the data for our analysis has been obtained from the CRSP database. The cumulative market-adjusted return for each firm is computed as follows[3]:

$$\text{CAR} \quad = \Sigma \text{ Daily Return of Stock} - \text{Daily Market Return}$$

$$= \Sigma \left[ \ln (1 + R_t) - \ln (1 + R_m) \right]$$

where:

$R_m$ = CRSP value-weighted market return (including all distributions)

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[3]   We have not used a model comprising beta-adjusted returns since betas are typically computed based on the past stock prices and in the case of spinoffs, no past stock price existed prior to the distribution date.

In addition, we perform a series of regressions on the combined samples of pure and two-step spinoffs in order to determine if the presence of a preceding carve-out has a significant impact on their post-distribution returns. We then proceed to analyze whether the returns of the spinoffs have been influenced by size and industry-specific factors. For size, we look at the market capitalization of the spinoffs at the close of the first trading day following the distribution. To isolate industry-specific factors, we apply dummy variables to the four most concentrated industries in our sample (chemicals, industrial and commercial, telecommunications and business services) and perform regressions using dummy variables for these industries. This helps us determine whether abnormal returns were associated with particularly buoyant market activity or sentiment in any one industry or sector.

## 4.     Empirical Test Results

Figure 1 shows the 5-day cumulative average market adjusted returns for pure versus two-step spinoffs. This graph clearly indicates that the dip in stock price experienced by pure spinoffs is avoided in two-step spinoffs. However, this phenomenon in two-step spinoffs is only temporary. By Day 4 following the distribution date, the trend has been mitigated.

**Figure 1:  5-day cumulative average market-adjusted returns
– pure spinoffs vs. two-step spinoffs**
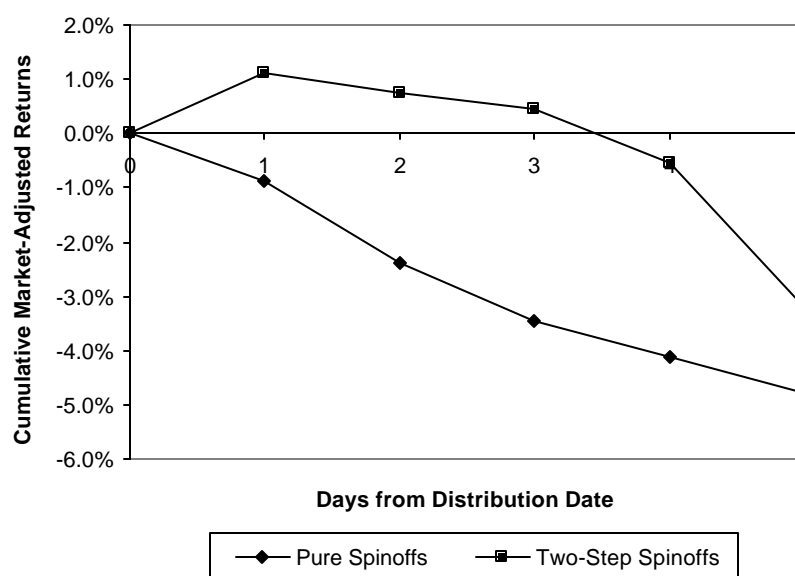


As shown in Figure 2, the market-adjusted returns of both the pure spinoffs and two-step spinoffs remained negative for a period of 30 trading days following the distribution.  In both cases, the stock price never recovered to the levels at which they were trading when the stock was first distributed.

**Figure 2: 30-day cumulative average market-adjusted returns
– pure spinoffs vs. two-step spinoffs**
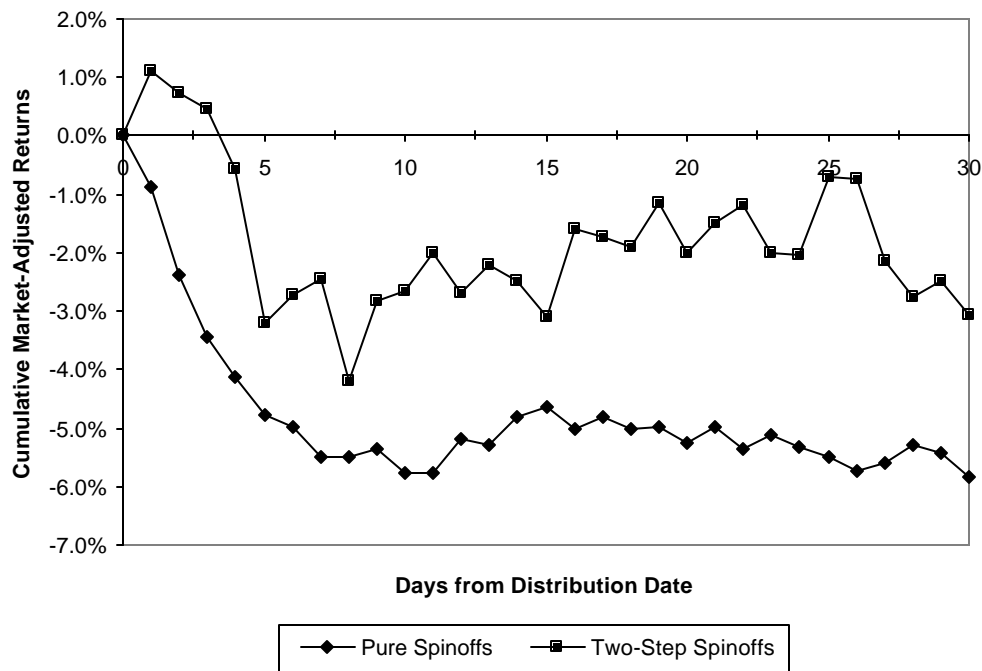
We performed t-tests to determine if these results were statistically significant. For the

entire period under analysis, the daily cumulative returns of pure spinoffs were found to be

significantly different from zero at the 5% level. However, none of those returns observed for

two-step spinoffs were statistically significant, although this could be due to the relatively small

sample size of only 17 firms.

Although neither forms of spinoffs seem to do well in the short term, it is apparent from

the graphs that two-step spinoffs outperformed pure spinoffs on a daily basis by a decent margin.

The difference in the daily cumulative returns ranges from 1.3% to 5.0% over the 30-day period.

We ran t-tests again and found that they differed significantly at the 5% level only on Day 3 and

Day 4. Therefore, while there is some evidence to support our hypothesis that two-step spinoffs

perform better than pure spinoffs in the very short term, the results are probably too transient to

justify the costs incurred by parent firms in pursuing a two-step process rather than a pure spinoff.

The results of regressions provide further evidence that the presence of a preceding minority carve out does not significantly influence the returns of the spinoffs. Since the maximum difference in terms of returns occurred on Day 3, we performed a series of regressions using 3-day CARs in addition to 30-day CARs. Tables 3 and 4 lists the various regressions that we ran as well as summarize the t-statistics of the various coefficients employed.

In regressions involving the 3-day CAR and the 30-day CARs against a dummy variable representing whether the transaction was a pure spinoff or a two-step spinoff (see regressions 10 and 20 on Tables 3 and 4), we found the dummy variables to be statistically insignificant at the 5% level since the t-statistics fell below 1.96 in both cases. Significance levels dropped further after we controlled for size and the industry factors in our regressions. Therefore, we conclude that the form in which the spinoff takes does not influence its post-distribution returns.

Interestingly, among our various regressions, the only variable that was found to have a significant impact on the 30-day CARs was the dummy representing spinoffs that came from the telecommunications industry. This is likely to be explained by the highly positive market sentiment and demand in this sector in the last 4 years.

**Table 3: Results of the significance tests for regressions of**
**3-day cumulative market-adjusted returns against independent variables**

| Regression Equations | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | *T-Statistics* | | | | | |
| *Independent Variables:* | | | | | | | | | | |
| Two-Step Dummy | 0.95 | 0.85 | 0.72 | 0.84 | 0.84 | 1.59 | 1.49 | 1.30 | 1.45 | 1.47 |
| ln (Market Cap) | 1.78 | 1.76 | 1.63 | 1.72 | 1.73 | - | - | - | - | - |
| SIC Dummy (28) | 1.26 | - | - | - | - | 1.18 | - | - | - | - |
| SIC Dummy (35) | - | 0.67 | - | - | - | - | 0.58 | - | - | - |
| SIC Dummy (48) | - | - | 1.64 | - | - | - | - | 1.73 | - | - |
| SIC Dummy (73) | - | - | - | -0.02 | - | - | - | - | 0.15 | - |
| R-Square | 5.5% | 4.6% | 6.4% | 4.2% | 4.2% | 2.9% | 2.1% | 4.2% | 1.8% | 1.8% |

*Regression Equations:*

1. CAR (3-day) = - 0.106 + 0.0266 Two-Step Dummy + 0.0111 ln (Mkt Cap) + 0.0466 SIC Dummy (28)

2. CAR (3-day) = - 0.104 + 0.0238 Two-Step Dummy + 0.0110 ln (Mkt Cap) + 0.0224 SIC Dummy (35)

3. CAR (3-day) = - 0.0999 + 0.0199 Two-Step Dummy + 0.0102 ln (Mkt Cap) + 0.0643 SIC Dummy (48)

4. CAR (3-day) = - 0.101 + 0.0235 Two-Step Dummy + 0.0108 ln (Mkt Cap) - 0.0006 SIC Dummy (73)

5. CAR (3-day) = - 0.101 + 0.0235 Two-Step Dummy + 0.0108 ln (Mkt Cap)

6. CAR (3-day) = - 0.0378 + 0.0424 Two-Step Dummy + 0.0439 SIC Dummy (28)

7. CAR (3-day) = - 0.0361 + 0.0396 Two-Step Dummy + 0.0196 SIC Dummy (35)

8. CAR (3-day) = - 0.0377 + 0.0343 Two-Step Dummy + 0.0684 SIC Dummy (48)

9. CAR (3-day) = - 0.0348 + 0.0387 Two-Step Dummy + 0.0055 SIC Dummy (73)

10. CAR (3-day) = - 0.0345 + 0.0391 Two-Step Dummy

**Table 4: Results of the significance tests for regressions of
30-day cumulative market-adjusted returns against independent variables**

| Regression Equations | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | T-Statistics | | | | | |
| *Independent Variables:* | | | | | | | | | | |
| Two-Step Dummy | 0.01 | 0.05 | -0.16 | 0.03 | 0.02 | 0.59 | 0.67 | 0.37 | 0.62 | 0.61 |
| ln (Market Cap) | 1.73 | 1.84 | 1.63 | 1.77 | 1.74 | - | - | - | - | - |
| SIC Dummy (28) | -0.01 | - | - | - | - | -0.08 | - | - | - | - |
| SIC Dummy (35) | - | 1.75 | - | - | - | - | 1.65 | - | - | - |
| SIC Dummy (48) | - | - | 2.25 | - | - | - | - | 2.34 | - | - |
| SIC Dummy (73) | - | - | - | -0.41 | - | - | - | - | -0.24 | - |
| R-Square | 2.8% | 5.3% | 6.9% | 3.0% | 2.8% | 0.3% | 2.6% | 4.7% | 0.4% | 0.3% |

*Regression Equations:*

11. CAR (30-day) = - 0.174 + 0.0007 Two-Step Dummy + 0.0189 ln (Mkt Cap) - 0.0007 SIC Dummy (28)

12. CAR (30-day) = - 0.189 + 0.0022 Two-Step Dummy + 0.0198 ln (Mkt Cap) + 0.100 SIC Dummy (35)

13. CAR (30-day) = - 0.172 - 0.0075 Two-Step Dummy + 0.0174 ln (Mkt Cap) + 0.151 SIC Dummy (48)

14. CAR (30-day) = - 0.175 + 0.0017 Two-Step Dummy + 0.0193 ln (Mkt Cap) - 0.0262 SIC Dummy (73)

15. CAR (30-day) = - 0.174 + 0.0007 Two-Step Dummy + 0.0189 ln (Mkt Cap)

16. CAR (30-day) = - 0.0581 + 0.0274 Two-Step Dummy - 0.0054 SIC Dummy (28)

17. CAR (30-day) = - 0.0668 + 0.0305 Two-Step Dummy + 0.0950 SIC Dummy (35)

18. CAR (30-day) = - 0.0661 + 0.0169 Two-Step Dummy + 0.158 SIC Dummy (48)

19. CAR (30-day) = - 0.0576 + 0.0287 Two-Step Dummy - 0.0154 SIC Dummy (73)

20. CAR (30-day) = - 0.0585 + 0.0278 Two-Step Dummy

## 5.    Summary and conclusions

When divesting certain businesses, it is becoming increasingly popular for firms to undertake minority carve-outs before spinning off the remaining interest in their subsidiaries to their shareholders.  We call these transactions two-step spinoffs, and tried to explain why firms choose to pursue this two-step process instead of a pure spinoff.  By first undertaking a minority carve-out, the parent firm incurs higher costs associated with an initial public offering such as filing costs and fees paid to the investment bank to market the issue.  The parent firm also incurs higher monitoring costs that come with the majority ownership retained in the interim before the final distribution of stock in the subsidiary takes place.  Hence, we hypothesized that two-step spinoffs achieves higher shareholder wealth effects than pure spinoffs, thus justifying the extra costs that the parent incurs.

We did not find strong evidence supporting such a view.  In fact, the stock price of two-step spinoffs increased only in the first 3 days following the distribution date.  Beyond that, the stock price declined substantially to levels that were lower than the price at which the spinoff first traded post distribution.  Cumulative market-adjusted stock returns for pure and two-step spinoffs differed only on days 3 and 4 of the 30-day trading window studied.  Additionally, our regressions indicated that the presence of a preceding minority carve-out did not have a significant impact on the post distribution spinoff returns.  Therefore, we conclude that firms are likely to be better off divesting their subsidiaries by spinning them off in one step, since the initial positive returns of the two-step spinoff are too transient and too small to justify the increased costs associated with this form of divestiture.

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