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THE WEALTH EFFECTS OF TRACKING STOCK RESTRUCTURINGS

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Abstract

We provide a comprehensive examination of the post-issue wealth effects of 29 completed tracking stock restructurings. We document that for the parent stock and for the combined firm, tracking stock restructurings lead to insignificant long-term excess returns. However, we find that shareholders of tracking stocks realize significant post-issue wealth losses. Unlike spin-offs and carve-outs, announcements of tracking stock restructurings are preceded by negative one-year excess returns, and unlike the positive post-issue long-term excess returns to spin-off stocks and the insignificant long-term excess returns to carve-out stocks, tracking stocks experience negative long-term excess returns.

JEL Classifications: G12, G14, G24, G34

I. Introduction

Tracking stocks have become a popular form of equity restructuring. In many cases firms adopting tracking stocks also consider other forms of equity restructuring such as spin-offs and carve-outs. The first tracking stock issue occurred in 1984 when General Motors created GME shares to track the performance of its newly acquired Electronic Data Systems (EDS) division. Since then, many companies have issued or proposed issuing tracking stocks.

Tracking stocks are newly issued stocks created by distributing a nontaxable stock dividend to existing shareholders, by an initial public offering, or as payment for target shares in a merger. A tracking stock is an equity claim intended to reflect the performance of a certain division of a multidivisional firm, whereas the old stock begins to reflect the performance of remaining divisions. Tracking stocks differ from spin-offs and carve-outs that also divide the old firm. Whereas spin-offs and carve-outs break up the old firm into two separate firms with distinct boundaries, tracking stocks leave it one combined firm for legal and operational purposes.

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Logue, Seward, and Walsh (1996) and Billett and Mauer (2000) discuss the motives cited for undertaking tracking stock restructurings. Firms issuing tracking stocks often argue that analysts and investors cannot understand the value of unrelated businesses and therefore undervalue the firm. They argue that the creation of quasi pure-play tracking stocks attracts greater analyst coverage and increases attention from investors interested in different parts of the firm's business. In addition, tracking stocks help attract and retain top managers, whose compensation can be linked more directly to the market value of their divisions. Notice that these objectives can also be achieved through spin-offs and carve-outs.

However, tracking stocks differ in several aspects because the firm's boundaries are left intact. First, unlike spin-offs and carve-outs, tracking stocks do not eliminate the firm's internal capital market. This may be value preserving if the internal capital market is efficient or value reducing if inefficient.[1] Second, many studies document that the increased firm focus resulting from the complete separation of unrelated businesses is associated with an increase in firm value.[2] This benefit is unachievable with tracking stocks. Third, the separation of stocks without the separation of businesses raises agency concerns. Hass (1996) points out these concerns, arising from disproportionate ownership of the general division (GD) and tracking (TR) stocks by directors and managers and sibling rivalry between shareholders of the two stocks. We designate the stock intended to track the performance of the traded division as the TR stock and the stock intended to track the performance of the rest of the firm as the GD stocks. Fourth, tracking stocks have been used to expand firm boundaries by facilitating mergers where target firm shareholders were reluctant to exchange their stock for the stock of a large and diversified acquiring firm.

Although previous studies document the wealth effects at the announcement of tracking stocks, this is the first study to document the wealth effects over extended periods before announcement and after issue. We analyze 29 completed tracking stock restructurings that were announced from 1984 to 1999. We examine various measures to gauge the wealth effects, including buy-and-hold excess returns (BHERs), excess returns around earnings announcements, and industry-adjusted operating performance. We examine these measures for the combined firm and the separated GD and TR divisions over four periods that surround and encompass the restructuring. These periods include the one-year period before the announcement date of tracking stock restructuring, the three-day window around the announcement date, the period between the announcement date and the issue date,

[1] Billett and Mauer (2000) estimate the value of the internal capital market for their sample of 20 firms announcing tracking stock restructurings. They find that the internal capital markets are efficient in 4 cases, inactive (neither efficient nor inefficient) in 6 cases, and inefficient in 10 cases.

[2] John and Ofek (1995), Desai and Jain (1999), and Vijh (1999) find that focus-increasing divestitures are associated with greater wealth gains for samples of asset sales, spin-offs, and carve-outs, respectively.

and the three-year period following the issue date. Finally, we use three benchmarks based on the market returns, industry returns, and size and book-to-market decile returns.

We find that the old stocks underperform during the pre-announcement period. This evidence suggests that tracking stocks are issued after periods of poor performance, and it contrasts tracking stocks with spin-offs and carve-outs. Desai and Jain (1999) find insignificant pre-announcement BHERs for firms issuing spin-offs, and Vijh (2002) finds significant and positive pre-announcement BHERs for firms issuing carve-outs.

The pre-announcement returns provide evidence on the circumstances that lead to tracking stock restructurings. However, the wealth effects of restructurings can only be measured starting with the announcement returns. We find that the average announcement excess return is an insignificant 1.09%, smaller than reported by previous studies. However, after removing a highly influential outlier we find a significant and positive average excess return of 2.18%, similar to that documented by previous studies of tracking stocks. We next examine the long-term returns that capture the extended wealth effects of tracking stock restructurings and test whether the market efficiently prices the GD and TR stocks on the issue date. Over a three-year period starting with the issue date and ending no later than December 2002, we find that the BHERs for the combined firms lie between −6.3 and −13.1% (statistically insignificant). We also find insignificant BHERs for the GD stocks. However, the TR stocks earn negative BHERs that are statistically significant relative to all three benchmarks. Over an average holding period of 2.4 years, the TR stocks earn an average buy-and-hold return (BHR) of 6.9%. This translates into an annual raw return of 2.9%. In comparison, the annual market return equals 16.8%, the annual industry return equals 13.7%, and the annual size and book-to-market decile return equals 13.9%. The difference between the annual raw return and the annual benchmark return for TR stocks ranges between −10.8% and −13.9%, highly economically significant.

One concern with long-term returns is that the results can be sensitive to the choice of benchmark. In comparison, tests of short-term event-period returns are less subject to such criticism. We therefore examine three-day announcement returns surrounding quarterly earnings announcements of GD, TR, and combined stocks during the same three-year holding period. Consistent with the evidence on BHERs, the excess earnings announcement returns are insignificant for the GD and combined firms, but significant and negative for the TR stocks. Nearly one-third of the negative BHERs of TR stocks during the three-year holding period can be explained by the negative earnings announcement returns.

We compare all of our results for tracking stocks with previously documented results for spin-offs and carve-outs. The two main comparisons are as follows. First, all three restructurings result in positive announcement excess returns of similar magnitude. However, the combined firms after tracking stock restructurings

earn insignificant long-term excess returns, whereas Cusatis, Miles, and Woolridge (1993) and Desai and Jain (1999) show that pro forma combined firms after spin-offs earn positive long-term excess returns. Thus, it appears that spin-offs create greater wealth gains for combined shareholders than do tracking stocks. Direct evidence for combined firms after carve-outs does not exist, although it may be inferred to be insignificant from a compilation of the wealth effects of different forms of restructuring presented in the Appendix. This suggests that tracking stocks and carve-outs create similar wealth gains to combined shareholders. Second, based on post-issue BHERs and earnings announcement returns, the TR shareholders earn less than their benchmarks. This evidence further contrasts tracking stocks with spin-offs and carve-outs. Both Cusatis, Miles, and Woolridge (1993) and Desai and Jain (1999) document that the newly issued spin-off stocks earn positive long-term excess returns, and Vijh (1999) shows that the carve-out stocks earn insignificant long-term excess returns.

In addition to the preceding main results, we document a few results related to other aspects of tracking stock restructurings. In particular, we examine cases where the firms later announce their decision to retire the tracking stock structure in favor of the old one-stock structure. Analysis of the circumstances leading to this decision and the associated market reaction shed additional light on tracking stock restructurings. On average, the announcement to remove the tracking stock structure results in a significant and positive excess return of 13.9% to 11 TR stocks. This excess return is positive in 9 of the 11 cases. The excess returns to GD stocks and combined stocks are positive but statistically insignificant. Further examination of press releases and reports suggests that in these cases the tracking stock structure resulted in conflicts of interest between different classes of shareholders. We cite evidence of confusion among analysts and shareholders as to what they really own, TR shareholders complaining of unfair treatment in allocating the proceeds from additional restructuring, and cross-liability resulting from maintaining the firm as one legal entity. It is possible that the large positive returns to TR stocks following the announcement to eliminate tracking stocks arise partly because in these cases the TR shareholders bear a greater proportion of agency costs.

II. Data and Methods

Sample of TR Stock Restructurings

Our sample of tracking stock restructurings is obtained from Billett and Mauer (2000) and Elder and Westra (2000). It includes 29 restructurings completed by 23 firms in the U.S. market that were announced from 1984 to 1999. However, our sample is smaller than the cumulative sample of the preceding two studies as we exclude cases where restructurings were announced but not completed. Seventeen firms issued tracking stocks once during the sample period, and 6 firms issued

tracking stocks twice. Following 28 of the 29 restructurings, we can unambiguously identify one GD stock and one or more TR stocks. But, in the singular case of Fletcher Challenge Group, four comparable size stocks exist after the second issue date of March 25, 1996, which are all classified as TR stocks.[3] The overall sample includes 23 different GD stocks and 31 different TR stocks. However, because each restructuring is treated as an independent event, there are 29 combined stocks, 28 GD stocks, and 37 TR stocks in the return measurement experiments. In 5 cases there is some overlap between observations as the second restructuring occurs less than three years after the first restructuring. However, the overlap averages only 1.12 years and has no material effect on our results.[4]

We obtain the announcement dates of tracking stock restructurings from Billett and Mauer (2000) and Elder and Westra (2000) and the issue dates from the first trading date of TR stocks on the Center for Research in Security Prices (CRSP) files. We obtain the earnings announcement dates from Compustat, First Call, or Lexis/Nexis, and announcement dates of subsequent restructuring events from the *Wall Street Journal* and Lexis/Nexis.

Summary Statistics

Table 1 shows the summary statistics. We obtain the number of shares outstanding and the book value of equity from the first available annual report after the issue date from Compustat or Securities and Exchange Commission (SEC) filings (in that order), and the closing stock price on the issue date from CRSP. From this we calculate the market value of equity and the ratio of book value to market value of equity. The combined stocks have an average market value of $16,015 million on the issue date (median $6,289 million). The TR stocks have an average market value of $1,758 million (median $505 million), and the GD stocks have an average market value of $14,327 million (median $5,385 million). The ratio of TR to GD market value averages 0.251. Krishnaswami and Subramaniam (1999) report that the ratio of subsidiary to parent market value averages 0.270 for spin-offs, and Vijh (1999) reports that the ratio of offering value to the parent market value averages 0.159 for carve-outs.[5] Thus, in terms of relative size, TR stocks are similar to other forms of equity restructuring. The book-to-market value averages 0.664 for the TR stocks and 0.477 for the GD stocks.

[3]Another feature sets the second issue by Fletcher Challenge Group apart from the remaining cases and requires this classification. In all other cases, the old stock continues to exist after the new issue and is termed the GD stock. However, in this case the old stock ceases to exist after the new issue.

[4]Inclusion of the same firm twice in the sample is appropriate for two reasons. First, each restructuring is a new event, affecting the boundaries of all pre-existing GD and TR stocks. Second, studies of other restructuring events, such as spin-offs, carve-outs, and mergers, always include repeat events by the same firm.

[5]Strictly speaking, Krishnaswami and Subramaniam (1999) report the average ratio of the spin-off to the sum of spin-off and parent value. However, from this we calculate the ratio of spin-off to parent value.

TABLE 1. Summary Statistics of Tracking Stock Restructurings.

Variable	Mean	Median
Market value of combined stocks (in million dollars)	16,015	6,289
Market value of TR stocks (in million dollars)	1,758	505
Market value of GD stocks (in million dollars)	14,327	5,385
Ratio of TR to GD market values	0.251	0.134
Book-to-market value of TR stocks	0.664	0.533
Book-to-market value of GD stocks	0.477	0.448
Proportion of TR stocks created by initial public offering	19%	
Proportion of TR stocks created by merger	26%	
Proportion of TR stocks created by stock dividend	55%	

Note: The sample of tracking stock restructurings is obtained from Billett and Mauer (2000) and Elder and Westra (2000). It includes 29 restructurings announced in the U.S. market from 1984 to 1999. After issue, the firms have two classes of stocks: GD, the general division stock, and TR, the tracking stock. There is only one GD stock, but there may be one or more TR stocks. In the singular case of Fletcher Challenge Group, four comparable size stocks exist after the issue date of March 25, 1996, which are all classified as TR stocks. The sample includes 23 different GD stocks and 31 different TR stocks. However, because each restructuring is a distinct event, there are 29 combined stocks, 28 GD stocks, and 37 TR stocks in the summary statistics and return measurement. The market value of the GD and the TR stocks is calculated by multiplying the closing price on issue date by the number of shares outstanding. The market value of combined stocks is calculated as the sum of the market values of GD and TR stocks. The number of shares are obtained from the first available annual statement from the Compustat or the Securities and Exchange Commission (SEC) filings, and the closing price on issue date is obtained from the Center for Research in Security Prices (CRSP). The book-to-market value is calculated by dividing the first available book value of GD or TR stock from Compustat or SEC filings by the market value. Information on whether a tracking stock is created by an initial public offering, a stock dividend, or a merger is obtained from various media reports and the SEC filings.

Tracking stock restructurings can be implemented using three procedures. Nineteen percent of the new TR stocks are issued in an initial public offering to outside shareholders, and 26% are issued in an acquisition to replace the target stock. In these cases the GD and TR stocks are held by different shareholders immediately after the issue. In the remaining 55% of the sample the TR stock is issued as a pro-rata stock dividend to existing shareholders. In these cases the GD and TR stocks are held by the same shareholders immediately after the issue.

Computation of Excess Returns

We compute excess returns using three benchmarks to control for the market, the industry, and the size and book-to-market effects. This computation requires stock returns, market returns, industry returns, and size and book-to-market decile returns. We obtain stock returns and market returns from the CRSP daily return files ending in December 2002. Market returns are measured by the returns on the CRSP value-weighted portfolio of all New York Stock Exchange (NYSE), American Stock Exchange (AMEX), and NASDAQ stocks.

Studies of long-term returns often adjust for industry effects by matching sample stocks with other stocks having the same Standard Industrial Classification (SIC) code on the CRSP or Compustat files. Kahle and Walkling (1996) document that 36% of the CRSP and Compustat primary SIC codes disagree at the two-digit level, 50% disagree at the three-digit level, and 79% disagree at the four-digit level, which questions the effectiveness of this procedure. We find that the CRSP SIC codes are particularly inaccurate for TR stocks.[6] The Compustat SIC codes are more accurate, but many CRSP firms are not included in Compustat. For example, one-fourth of our sample of GD and TR stocks cannot be found on Compustat. We searched for sources of industry classification and returns and found an alternative source in Media General Financial Services (MGFS). It maintains 215 industry indexes. We find that its classification agrees with hard-copy sources that describe the business lines of GD and TR stocks.[7] Although the data are available for our entire study period, there is one limitation: cash dividends are excluded from the index returns. As a result, the true industry-adjusted excess returns are likely lower than our reported industry-adjusted excess returns. We calculate that the GD stock and TR stocks in our sample have average annualized dividend yields of 2.29% and 1.42% during the sample period.

We calculate size and book-to-market decile portfolio returns as follows. First, for all ordinary common stocks listed on CRSP (share codes 10 and 11), we compute the market value of equity on June 30 of each year t during our study period. We then compute the book-to-market value of equity for all firms by dividing the book value at the end of fiscal year $t-1$ from Compustat by the market value on December 31 of calendar year $t-1$ from CRSP. Finally, we divide all stocks into 10×10 portfolios using the NYSE decile cutoffs for size and book-to-market value, and compute the daily value-weighted portfolio returns from July 1 of year t to June 30 of year $t+1$.[8]

We compute the long-term excess returns for GD and TR stocks by subtracting the buy-and-hold market returns, industry returns, or size and book-to-market decile returns from the buy-and-hold stock returns over an appropriate holding period. The resulting BHERs are an accurate measure of wealth gains realized by long-term shareholders of GD and TR stocks. The underlying buy-and-hold portfolio strategy is easy to implement and requires no subsequent rebalancing. It follows that we can obtain the BHERs of combined stocks by adding the BHERs of GD and TR stocks in the same proportions as their market values on the issue date.

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[6]For example, CRSP assigns the same SIC code of 3711 to General Motors, General Motors-Class E, and General Motors-Class H (ticker symbols GM, GME, and GMH) stocks. This code stands for "Motor Vehicles and Car Bodies," which is descriptive of GM but not GME or GMH.

[7]Continuing the example from footnote 6, MGFS assigns industry groups of "Auto Manufacturers-Major" to GM, "Information Technology Services" to GME, and "Communication Equipment" to GMH.

[8]We are obliged to Ken French for making the size and book-to-market decile cutoffs available on his Web site.

In addition to long-term BHERs, we report many short-term excess announcement returns in our study. These returns are computed around the announcement of tracking stock restructurings, the announcement of quarterly earnings, and the later announcement of plans to eliminate the tracking stock structure. We compute these excess returns by subtracting the three-day cumulative benchmark returns from the stock returns. Once again, the combined stock excess returns can only be obtained by first computing the GD and TR stock excess returns and then combining these returns in proportion to their market values. The three-day measurement period in such experiments is centered on the event date, which may be the Compustat announcement date, the *Wall Street Journal* publication date, or the Lexis/Nexis publication date. For both the long- and short-term experiments, we compute *t*-statistics using the cross-sectional distribution of excess returns.

III. Wealth Effects of TR Stock Restructurings

Excess Returns of GD and TR Stocks

Table 2 presents the pre-issue returns of GD stocks and the post-issue returns of GD and TR stocks. Panel A shows the raw returns, and Panels B, C, and D show the excess returns computed using three benchmarks. The first row of each panel shows the pre-announcement returns computed over a one-year period ending two days before the announcement date. Over this period, the GD stocks earn an average 3.74% unadjusted BHR, −13.32% market-adjusted BHER (significant at the 5% level), −8.87% industry-adjusted BHER, and −12.19% size- and book-to-market-adjusted BHER (significant at the 5% level).[9] The medians present a similar picture. Sixteen of the 28 one-year pre-announcement BHRs are negative, and 21 of the 28 market-adjusted BHERs, 19 of the 28 industry-adjusted BHERs, and 19 of the 28 size- and book-to-market-adjusted BHERs are negative (significant in each case at the 5% level or better).

The Appendix presents a summary of the different wealth effects of tracking stock restructurings documented in this article and the comparative evidence for spin-offs and carve-outs from the previous literature. It shows that the pre-announcement evidence contrasts tracking stocks with other forms of equity restructuring. Desai and Jain (1999) document that the pre-announcement BHERs of the parent firms of spin-offs are insignificant, and Vijh (2002) documents that the pre-announcement BHERs of the parent firms of carve-outs are significant and positive. Thus, unlike spin-offs and carve-outs, it appears that tracking stock restructurings are announced after a period of poor stock price performance.

[9] Unfortunately, the industry returns do not include dividends. If we compute industry-adjusted BHERs assuming the dividend yield of the industry is equal to that of the GD stock, we find statistically significant underperformance in the pre-issue period.

TABLE 2. Buy-and-Hold Excess Returns (BHERs) of GD (General Division) and TR (Tracking) Stocks Created by Tracking Stock Restructurings.

	GD Stocks				TR Stocks			
Return Computation Period	Mean	*t*-statistic	Median	Frequency Total and Positive	Mean	*t*-statistic	Median	Frequency Total and Positive
Panel A. BHRs (Raw or Unadjusted Buy-and-Hold Returns)								
Pre-announcement	3.74	(0.55)	−4.79	28 12				
Announcement	1.48	(1.06)	2.21	28 19**				
Pre-issue	38.97	(1.98)**	7.49	28 21***				
Post-issue one year	14.40	(1.58)	4.03	28 16	30.14	(1.16)	−0.85	37 17
Post-issue two years	21.72	(1.76)*	21.73	28 18	14.16	(0.99)	−7.68	37 17
Post-issue three years	33.06	(2.40)**	29.14	28 17	6.94	(0.48)	−18.22	37 16
Panel B. Market-Adjusted BHERs								
Pre-announcement	−13.32	(−2.24)**	−14.68	28 7***				
Announcement	1.09	(0.81)	1.06	28 19**				
Pre-issue	27.42	(1.43)	−0.29	28 14				
Post-issue one year	1.37	(0.15)	−10.28	28 10	15.71	(0.61)	−20.71	37 13**
Post-issue two years	−4.98	(−0.43)	−9.25	28 12	−17.62	(−1.21)	−40.53	37 8***
Post-issue three years	−3.85	(−0.32)	−8.55	28 13	−37.19	(−2.39)**	−48.67	37 9***
Panel C. Industry-Adjusted BHERs								
Pre-announcement	−8.87	(−1.32)	−10.90	28 9**				
Announcement	0.04	(0.03)	1.33	28 16				
Pre-issue	29.80	(1.73)*	4.53	28 16				
Post-issue one year	−5.46	(−0.70)	0.33	28 14	8.36	(0.36)	−9.65	37 16
Post-issue two years	−2.59	(−0.30)	−6.35	28 12	−21.03	(−2.06)**	−30.08	37 9***
Post-issue three years	0.48	(0.06)	6.89	28 18	−28.33	(−2.52)**	−33.15	37 8***
Panel D. Size- and Book-to-Market-Adjusted BHERs								
Pre-announcement	−12.19	(−2.12)**	−16.78	28 9**				
Announcement	1.07	(0.85)	1.46	28 17				
Pre-issue	24.80	(1.31)	−5.96	28 13				
Post-issue one year	−1.77	(−0.19)	−9.64	28 11	17.07	(0.65)	−14.14	37 10***
Post-issue two years	−11.06	(−0.98)	−7.93	28 13	−20.93	(−1.47)	−40.62	37 8***
Post-issue three years	−7.17	(−0.61)	−21.62	28 13	−28.93	(−2.01)*	−54.33	37 7***

Note: The sample of tracking stock restructurings announced from 1984 to 1999 is described in Table 1. The BHERs are calculated three ways. The first procedure subtracts the cumulative market returns from the cumulative stock returns over the relevant holding period. The market returns are measured by the Center for Research in Security Prices (CRSP) value-weighted returns including dividends (*VWRETD*). The second procedure subtracts the relevant industry returns from stock returns. The industry group is identified by using the Media General Financial Services (MGFS) data. MGFS provides value-weighted industry indexes that exclude dividends, from which we calculate returns. The third procedure subtracts the returns on appropriate size and book-to-market decile portfolios from stock returns. In all cases, the post-issue holding period stops on the third anniversary of the issue date, the date the TR stock is sold or spun off, or December 31, 2002, whichever comes first. We compute returns over six measurement periods as follows. The announcement return is computed over a three-day period centered on the announcement date. The pre-announcement return is computed over a one-year holding period ending just before the three-day announcement period, and the pre-issue return is computed over the entire period starting after the announcement period and ending on the issue date. The post-issue returns are computed over one-, two-, and three-year holding periods starting after the issue date. The mean, *t*-statistic, median, and frequency of positive versus negative BHERs are calculated from the cross-sectional distribution of return differences.

***Significant at the 1% level.
**Significant at the 5% level.
*Significant at the 10% level.

The second row in each panel shows the announcement returns. Over a three-day period centered on the announcement date, the GD stocks earn an average raw return of 1.48%. The market-adjusted, industry-adjusted, and the size- and book-to-market-adjusted excess returns average 1.09%, 0.04%, and 1.07% (statistically insignificant in all cases). These returns contrast with the results documented in previous studies of tracking stocks. Logue, Seward, and Walsh (1996) document a three-day (−1,+1) excess announcement return of 1.9%, Billett and Mauer (2000) document 1.6%, and Elder and Westra (2000) document 2.4%.

The different announcement reactions may be due to differences in the samples. Given the post-issue focus of our study, we only examine completed tracking stock restructurings whereas the aforementioned studies include all announcements. Second, for completeness, we include all announcements regardless of whether other information is simultaneously revealed. Ziff-Davis's tracking stock announcement occurs the same day management lowers its earnings forecasts. The corresponding excess announcement is −29%. Excluding this one observation results in a sample average announcement excess return of 2.18%, significant at the 5% level. Taken as a whole, the evidence suggests the excess announcement returns to parent firms of tracking stocks are similar to spin-offs and carve-outs. Hite and Owers (1983) document an excess return of 3.30% for spin-offs, and Schipper and Smith (1986) document an excess return of 1.83% for carve-outs.

If the market reacts efficiently to the anticipated wealth gains from tracking stock restructurings on the announcement date and prices correctly the GD and TR stocks on the issue date, all post-announcement excess returns should be insignificantly different from zero. The third rows of Panels B, C, and D in Table 2 show that, over a period starting with the second day after the announcement date and ending on the issue date, the GD stocks earn insignificant BHERs of 27.42%, 29.80%, and 24.80% with reference to the market, industry, and size and book-to-market benchmarks. Although economically large numbers, these BHERS are all statistically insignificant. Examination of the medians shows that these average BHERs are heavily influenced by outliers. The median pre-issue BHERs are −0.29%, 4.53%, and −5.96% with respect to the market, industry, and size and book-to-market benchmarks. All three median BHERs are statistically insignificant.

The last three rows of each panel in Table 2 present the raw and excess returns over periods starting with the issue date and ending one, two, and three years later. Over a three-year holding period, the BHERs of GD stocks average −3.85%, 0.48%, and −7.17% with reference to the market, industry, and size and book-to-market benchmarks. All figures are statistically and economically insignificant. Both the pre-issue and post-issue BHERs show that the GD stocks do not underperform or outperform their benchmarks after the announcement of tracking stock restructurings.

We next examine the long-term returns of TR stocks. Table 2 shows that, over a three-year period starting with the issue date, the TR stocks earn

market-adjusted, industry-adjusted, and size- and book-to-market-adjusted BHERs that average −37.19%, −28.33%, and −28.93%. The associated *t*-statistics equal −2.39, −2.52, and −2.01, all significant at the 5% level. Thus, the three-year post-issue BHERs indicate strong evidence of underperformance by TR stocks.

Following Lyon, Barber, and Tsai (1999), we next calculate skewness-adjusted *t*-statistics:

$$t_{sa} = n^{0.5}[S + \gamma S^2/3 + \gamma/(6n)],$$

where n is the sample size, S is the ratio of sample average to standard deviation, and γ is the sample skewness. The skewness-adjusted *t*-statistics for the three measures of excess returns equal −2.16, −2.29, and −1.58, significant at the 5% level in the first two cases. To examine further the question of statistical significance, Table 2 shows that the three median BHERs equal −48.67%, −33.15%, and −54.33%. Table 2 also shows that 28 of the 37 TR stocks earn negative market-adjusted returns, 29 earn negative industry-adjusted returns, and 30 earn negative size- and book-to-market-adjusted returns, significant in each case at the 1% level. The statistical significance is further examined with earnings announcement returns.

In addition to statistical significance, we look at the economic significance of return differences. Over the average holding period of 2.36 years, the TR stocks earn an average 6.94% return, which is 37.19% less than the market return.[10] This translates into an average annual return of $100 \times (1.0694^{1/2.36} - 1) = 2.88\%$ for TR stocks and 16.75% for the market. A similar calculation shows that the matching industry return averages 13.66% and the matching size and book-to-market decile portfolio return averages 13.87%. We assume that the average industry return is understated by the same order as the 1.42% average annual dividend yield of TR stocks in our sample. The TR stocks then underperform the benchmarks by an average of $2.88 - (16.75 + (13.66 + 1.42) + 13.87)/3 = 12.35\%$ per year over a three-year period after the issue.

The evidence on long-term returns is unambiguous and suggests that the TR stocks underperform. This is our only evidence inconsistent with market efficiency. The GD stocks neither underperform nor outperform their benchmarks, which is consistent with market efficiency. We now compare our evidence on the post-issue three-year excess returns of GD and TR stocks created by tracking stock restructurings with the parent and subsidiary stocks after spin-offs and carve-outs as reported in the Appendix. Cusatis, Miles, and Woolridge (1993) and Desai and Jain (1999) show that both the parent stocks and spin-off stocks earn significant and positive long-term excess returns. Vijh (1999) shows that the parent stocks and carve-out stocks earn insignificant long-term excess returns. At first glance,

[10]The average holding period is less than 3.00 years because in a few cases the return computation stops when the TR division is sold or spun off, or the returns data are not available after December 31, 2002.

it may appear that the post-issue stock returns from tracking stock restructurings are weaker than the stock returns from spin-offs and carve-outs. However, a proper assessment of the aggregate stock returns is only possible after combining the GD and TR returns (or the parent and subsidiary returns) in the same proportions as their market values on the issue date. We pursue this investigation next.

Excess Returns to Combined Firms

Table 3 presents the post-issue BHERs of combined firms. The combination uses the market values of GD and one or more TR stocks on the issue date. We recall from Table 1 that the average size ratio of TR to GD stock equals 0.251. We therefore expect that the combined returns will be closer to the GD returns than to the TR returns. Table 3 shows that this is the case. The combined stocks earn market-adjusted, industry-adjusted, and size- and book-to-market-adjusted BHERs that average −13.06%, −6.34%, and −11.95%, all statistically insignificant. The evidence with medians and the numbers of positive and negative BHERs is also insignificant.

Both Cusatis, Miles, and Woolridge (1993) and Desai and Jain (1999) find that the pro forma combined firms after spin-offs earn significant and positive long-term excess returns, in addition to the positive announcement excess returns. We conclude that spin-offs create greater wealth gains in the form of aggregate stock returns than do tracking stocks. There is no comparable evidence on combined firms after carve-outs, although it may be inferred to be insignificant from Vijh (1999). Such inference would imply that the aggregate stock returns from tracking stocks and carve-outs are similar.

Long-Term Earnings Announcement Returns of GD, TR, and Combined Stocks

Tests of long-term returns are sometimes criticized because of the bad model problem, that is, that all such tests are joint tests of market efficiency and model specification. Because there is no consensus on what risk factors should be included in the returns model, researchers use ad hoc factors and sometimes reach divergent conclusions concerning long-term returns of financing and restructuring events. Tracking stocks pose some unique challenges related to model specification. First, the GD and TR divisions are parts of the same firm and share many of the same resources. Thus, even if the industry, size, and book-to-market characteristics of GD and TR stocks are different, it is not clear that their expected returns should be as different. Second, the risk of TR stockholders may be increased or decreased by the internal politics of the firm. It may be argued that the bigger GD stockholders stand to bail out the smaller TR stockholders during times of distress, which implies a lower expected return for TR stocks and a higher expected return for GD stocks. However, it may also be argued that the GD stockholders benefit from the TR stockholders during times of boom, which implies the opposite effects.

TABLE 3. Post-Issue Three-Year Buy-and-Hold Excess Returns (BHERs) of Combined Firms (Stocks) Created by Tracking Stock Restructurings.

	Combined Firms (Stocks)			GD Stocks			TR Stocks		
Description	Mean (*t*-statistic)	Median	Frequency Total and Positive	Mean (*t*-statistic)	Median	Frequency Total and Positive	Mean (*t*-statistic)	Median	Frequency Total and Positive
Raw returns	25.69 (2.05)**	20.22	29 18	33.06 (2.40)**	29.14	28 17	6.94 (0.48)	−18.22	37 16
Market adjusted	−13.06 (−1.14)	−10.19	29 12	−3.85 (−0.32)	−8.55	28 13	−37.19 (−2.39)**	−48.67	37 9***
Industry adjusted	−6.34 (−0.88)	0.82	29 16	0.48 (0.06)	6.89	28 18	−28.33 (−2.52)**	−33.15	37 8***
Size and book-to-market adjusted	−11.95 (−1.10)	−19.19	29 12	−7.17 (−0.61)	−21.62	28 13	−28.93 (−2.01)**	−54.33	37 7***

Note: The sample of tracking stock restructurings announced from 1984 to 1999 is described in Table 1. In the singular case of Fletcher Challenge Group, four comparable-size stocks exist after the issue date of March 25, 1996, which are all classified as TR stocks. Thus, the sample contains 28 GD stocks, but 29 combinations of GD and TR stocks. The post-issue three-year BHERs of combined firms (stocks) are calculated by weighting the BHERs of GD and TR stocks in the same proportions as their market value on the issue date. These BHERs are calculated three ways. The first procedure subtracts the cumulative market returns from the cumulative stock returns over the relevant holding period. The market returns are measured by the Center for Research in Security Prices (CRSP) value-weighted returns including dividends (VWRETD). The second procedure subtracts the relevant industry returns from stock returns. The industry group is identified by using the Media General Financial Services (MGFS) data. MGFS provides value-weighted industry indexes that exclude dividends, from which we calculate returns. The third procedure subtracts the returns on appropriate size and book-to-market decile portfolios from stock returns. In all cases, the post-issue holding period stops on the third anniversary of the issue date, the date the TR stock is sold or spun off, or December 31, 2002, whichever comes first. The mean, *t*-statistic, median, and frequency of positive versus negative BHERs are calculated from the cross-sectional distribution of return differences.

***Significant at the 1% level.
**Significant at the 5% level.

In contrast to long-term returns, event-study excess returns computed over short windows are less sensitive to the model of expected returns. These returns are also more powerful in detecting abnormal performance because of the smaller variance of short-term returns. Using such arguments, Jegadeesh (2000), Brous, Datar, and Kini (2001), and Denis and Sarin (2001) examine earnings announcement returns over post-issue holding periods of seasoned equity offering firms. They argue that if investors are overoptimistic about the prospects of these firms at the time of seasoned equity offering, the earnings announcements should come as unpleasant surprises. Next, we present a similar analysis of the GD, TR, and combined stocks created by tracking stock restructurings.

Table 4 reports an event study of quarterly earnings announcement dates one year before the announcement and three years after the issue of tracking stocks. The announcement dates are obtained from Compustat, First Call, or Lexis/Nexis. We report three measures of excess returns. The first two measures are calculated by subtracting the three-day cumulative market returns or the size and book-to-market decile returns from the stock returns. The third measure is based on Brous, Datar, and Kini (2001) and corrects for a bias introduced by the prior knowledge that the long-term excess returns with respect to either benchmark may be different from zero. To understand this bias, recall from Table 2 that the TR stocks earn an average 6.94% raw return over an average post-issue holding period of 2.36 years, and the market earns $6.94 + 37.19 = 44.13\%$ over the same period. Assuming 252 trading days in a year, the average three-day TR return equals $100 \times (1.0694^{3/(2.36\times252)} - 1) = 0.034\%$, and the average market return equals $100 \times (1.4413^{3/(2.36\times252)} - 1) = 0.185\%$. Thus, even if the earnings announcements do not reveal unfavorable information, the earnings announcement return would be expected to equal $0.034 - 0.185 = -0.151\%$. To adjust for this bias, our third measure subtracts the three-day market-adjusted nonearnings announcement return during the current quarter from the three-day market-adjusted earnings announcement return.[11]

Table 4 shows that GD stocks earn a mean market-adjusted return of 0.28% (t-statistic = 0.62) during the pre-announcement period. The corresponding size- and book-to-market-adjusted return equals 0.32%, and the market- and nonearnings-announcement-adjusted return equals 0.52% (t-statistics = 0.74 and 1.16). None of the mean or median excess returns is significant in the pre-announcement period.

[11] The exact procedure is as follows. We compute the three-day unadjusted nonearnings announcement return as the three-day geometric average stock return over all nonearnings announcement days in that quarter. This equals $[(1 + HPR_{n-days})/(1 + HPR_{3-days})]^{3/(n-3)} - 1$, where HPR_{n-days} is the holding-period return for the sample stock over all n days of the calendar quarter, and HPR_{3-days} is its holding period return over the three-day announcement period (which is excluded). The three-day market-adjusted nonearnings announcement return is computed as the difference between this expression and a similar expression for the market return.

TABLE 4. Excess Earnings Announcement Returns of GD (General Division) Stocks, TR (Tracking) Stocks, and Combined Stocks Created by tracking Stock Restructurings.

			Excess Earnings Announcement Returns			
Type of Stock	Period	Number of Earnings Announcements	Statistic	Market Adjusted	Size and Book-to-Market Adjusted	Market and Nonearnings Announcement Adjusted
GD	Four quarters preceding the announcement of tracking stocks	98	Mean (t-statistic)	0.28 (0.62)	0.32 (0.74)	0.52 (1.16)
			Median	0.45	0.45	0.28
			Fraction positive (z-statistic)	0.58 (1.21)	0.55 (1.01)	0.57 (1.01)
GD	Twelve quarters after the issue of tracking stocks	242	Mean (t-statistic)	−0.73 (−1.77)*	−0.85 (−2.05)**	−0.67 (−1.61)
			Median	−0.14	−0.23	−0.10
			Fraction positive (z-statistic)	0.49 (−0.39)	0.48 (−0.64)	0.50 (−0.13)
TR	Twelve quarters after the issue of tracking stocks	309	Mean (t-statistic)	−0.96 (−2.43)**	−1.02 (−2.58)***	−0.73 (−1.79)*
			Median	−0.79	−0.87	−0.82
			Fraction positive (z-statistic)	0.41 (−3.02)***	0.41 (−3.13)***	0.41 (−3.24)***
Combined	Twelve quarters after the issue of tracking stocks	240	Mean (t-statistic)	−0.47 (−1.28)	−0.57 (−1.59)	−0.39 (−1.08)
			Median	−0.10	−0.24	−0.16
			Fraction positive (z-statistic)	0.50 (−0.13)	0.49 (−0.39)	0.48 (−0.52)

Note: The sample of tracking stock restructurings announced from 1984 to 1999 is described in Table 1. For each GD stock we identify the earnings announcement dates during the year before the announcement date of tracking stock issue, and for each GD and TR stock we identify the earnings announcement dates during the three years after the issue date. The post-issue examination period stops on the date the TR stock is sold or spun off or December 31, 2002, if either comes before three years. The earnings announcement dates are obtained from Compustat, First Call, or Lexis/Nexis. Earnings announced within the first 63 trading days of tracking stock issue are classified as quarter +1, within 64 to 126 trading days as quarter +2, and so on. Excess earnings announcement returns for GD and TR stocks are calculated three ways. The market-adjusted returns are computed by subtracting the cumulative market returns from the cumulative stock returns over a three-day period centered on the announcement date. The size- and book-to-market-adjusted returns are computed by subtracting the returns on appropriate size and book-to-market decile portfolios from stock returns. The market- and nonearnings-announcement-adjusted excess returns are computed by using a procedure suggested by Brous, Datar, and Kini (2001) and described in section III. This procedure subtracts the geometric average three-day market-adjusted nonearnings announcement returns during the corresponding calendar quarter from the three-day market-adjusted earnings announcement returns. The combined stock returns are calculated by weighting the GD and TR returns in the same proportions as their market value two days before the earnings announcement date. Market returns in all computations are measured by the Center for Research in Security Prices (CRSP) value-weighted returns. The t-statistics are computed by using the cross-sectional distribution of excess returns and are reported in parentheses. The z-statistics are obtained from the frequency of positive and negative excess returns.

***Significant at the 1% level.
**Significant at the 5% level.
*Significant at the 10% level.

Table 4 further shows that the average GD excess earnings announcement returns during the post-issue holding period are −0.73% and −0.85% for the market and size and book-to-market excess returns, significant at the 10% and 5% levels. The mean market- and nonearnings-announcement-adjusted excess return is a statistically insignificant excess return of −0.67% (t-statistic = −1.61). The medians are much closer to zero and are insignificant regardless of the benchmark. However, the corresponding returns for the TR stocks are negative and significant with respect to all three benchmarks, and with respect to both mean and median statistics. The TR excess returns vary between −0.73% and −1.02% per announcement. The last row of Table 4 presents the post-issue combined earnings announcement returns, which are negative but insignificant using any measure.

We now discuss another factor related to the choice of expected returns. The analysis of Table 4 assumes that the mean excess earnings announcement return should equal zero in the first two cases and that it should equal the mean excess nonearnings announcement return in the third case. This assumption is questioned by the classic Robicheck and Myers (1966) ship set sail story. Based on this theory, and using all earnings announcements from 1976 to 1984, Chari, Jagannathan, and Ofer (1988) show that the mean excess earnings announcement return is positive.[12] Casual empiricism suggests that the 1990s were a period of stronger price increases and that some of the price increases occurred around the strong earnings announcements of individual stocks. As evidence, we measure the excess returns around all earnings announcements reported on the Compustat database from 1990 to 1999. Including all stocks with a market value of more than $10 million and a stock price of at least $3 produces a mean excess return of 0.20%. It may be argued that the excess earnings announcement returns in Table 4 should be compared against this benchmark of 0.20% rather than 0. Using this benchmark would make the post-issue TR returns more negative and significant.

An average excess earnings announcement return of $-(0.96 + 1.02 + 0.73)/3 = -0.90\%$ per quarter for TR stocks in Table 4 explains an underperformance of $100 \times (1 - (1 - 0.0090)^{9.5}) = 8.23\%$ over the average 9.5 announcements during the average holding period of 2.36 years. Adjusting for the 0.20% benchmarking effect discussed previously explains an underperformance of 9.97%. This is about one-third of the average negative BHERs of TR stocks during the post-issue holding period. Overall, the evidence on earnings announcement returns reinforces the main conclusion derived from the evidence on holding-period returns over extended periods: TR stocks earn less than their benchmarks.

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[12]The Robicheck and Myers (1966) story can be explained as follows. Suppose a ship sets out on a long voyage in search of a fortune. No information reaches the market during the time the ship is in transit; therefore, the expected return on equity claims linked to the payoff from the voyage should be the same as risk-free return. The uncertainty is resolved on the day the ship reaches the port. Assuming that the payoff risk cannot be diversified, the expected return on arrival date should be very high.

Operating Performance and Investment Activity

Although not reported in a table, we examine the operating performance and investing activity before and after a tracking stock restructuring. We measure operating performance as the ratio of operating cash flow (also known as operating income before depreciation) to assets (Compustat item 13 divided by item 6), and we measure investing activity as the ratio of capital expenditure plus research and development expense to assets (Compustat item 128 plus item 46, all divided by item 6). We then industry adjust these ratios by subtracting the median value across all firms in the same industry. Firms in the same industry are selected based on the four-digit SIC code. However, if at least five firms with the same four-digit SIC code are not available, we match by the three-digit or even two-digit SIC code.

We first find that the operating performance of the combined firm significantly exceeds that of its industry benchmark during each year of a three-year period preceding the announcement of tracking stock restructurings. This evidence is interesting in light of the negative BHERs for the combined firm during a one-year period preceding the tracking stock announcement. It suggests that the negative returns were unlikely due to the contemporaneous operating performance. Second, unlike the pre-announcement period, the post-issue operating performance for the combined firm is statistically indistinguishable from industry benchmarks, consistent with the BHER results and the excess earnings announcement returns. Third, the mean and median industry-adjusted cash flow ratios of GD divisions are positive and occasionally significant whereas the corresponding ratios for TR divisions are always negative and insignificant during the three years post-issue. Fourth, the investment activity of the combined firm pre-announcement and the GD and TR divisions post-issue are all insignificantly different from industry benchmarks.

IV. Miscellaneous Results

Earnings Transparency Pre-Announcement Versus Post-Issue

One commonly cited reason for issuing tracking stocks is to increase firm transparency. If successful, an increase in firm transparency should result in more accurate earnings forecasts after the restructuring. We measure the effect on firm transparency by collecting information on the four earnings announcements before tracking stock announcement and the four earnings announcements after tracking stock issue. We examine three measures of firm transparency: the standard deviation of earnings forecast errors (where error is the actual earnings minus the average forecast), the standard deviation of earnings forecasts across multiple analysts, and the standard deviation of earnings announcement excess returns. We aggregate these measures to calculate the earnings transparency of the combined firm. We find no significant difference in measures from pre-announcement to

post-issue. Our results suggest that, on average, tracking stock restructurings do not increase firm transparency. This evidence also contrasts tracking stocks with spin-offs. Krishnaswami and Subramaniam (1999) show that spin-offs lead to a significant increase in firm transparency. It appears that the separation of stocks without the separation of underlying businesses does not make it any easier to value the combined firm.[13]

Wealth Effects of Decisions to Eliminate the TR Stock Structure

Some firms that adopt tracking stocks later decide to eliminate them. An interesting corporate governance issue concerns the wealth effects to different classes of shareholders following the announcement of these second restructuring decisions. We now examine the aggregate and differential wealth effects and the motives of such decisions.

To identify the events, we search the *Wall Street Journal* and Lexis/Nexis from the date of tracking stock issue through December 2002 for each firm included in our sample. Table 5 lists the seven firms that announced their intention to eliminate the tracking stock structure in favor of the old one stock structure. The group includes CMS Energy, Pittston, Fletcher Challenge, Ziff-Davis, Inco Ltd., Disney, and Andrax, involving 11 TR stocks and 6 GD stocks. The mean announcement excess return equals 13.89% for the 11 TR stocks, significant at the 1% level. This excess return is positive in 9 of the 11 cases and ranges between −5.56% and 49.16%. The GD stocks earn average announcement excess returns of 1.81% and the combined stocks earn 3.07%, both statistically insignificant. In many cases the TR and GD stocks experience very different excess returns. The differential price reaction suggests the tracking stock structure separates a firm into distinct economic entities but may lead to conflicts of interest between TR and GD shareholders. For example, a common method used to eliminate TR stock involves exchanging TR shares for GD shares at a pre-specified premium, which results in a wealth transfer between the two classes of shareholders.[14]

Anecdotal evidence from news sources suggests some possible reasons for these returns. The managers of CMS Energy argued the TR stock had served its purpose and was no longer necessary:

> "While Class G stock helped CMS Energy gain market recognition for our gas utility business when it was first issued in 1995, our gas business has since grown . . . to the

[13] We have earnings analyst information for 20 TR restructurings completed through 1998 from First Call.

[14] The TR stock prospectus at the time of issue usually states the methods and conditions under which the firm can retire the TR stock. These methods include: (1) exchanging TR shares for GD shares, typically at a 15% to 20% premium; (2) selling or liquidating the assets associated with the TR division and paying the net proceeds to TR shareholders; and (3) spinning off the TR division. Of course, following a common practice in stock transactions, at any time after issue the GD firm can also make a tender offer to retire the TR shares.

TABLE 5. Market Reaction to the Elimination of Tracking Stock Structure.

	TR Stocks		GD Stocks		Combined GD and TR Stocks
Announcement Date	Name	Excess Return	Name	Excess Return	Excess Return
September 9, 1999	CMS Energy–Consumer Gas Div	14.17	CMS Energy Corp	−1.27	−0.58
December 6, 1999	Pittston–Minerals Group	49.16	Pittston–Brinks Group	19.62	17.96
	Pittston–BAX Group	10.05			
December 6, 1999	Fletcher Challenge–Forests Div	5.89			9.84
	Fletcher Challenge–Building Div	17.58			
	Fletcher Challenge–Energy Div	11.69			
	Fletcher Challenge–Paper Div	15.72			
January 28, 2000	ZDNet Group	−5.56	Ziff-Davis Inc	−6.82	−6.16
September 6, 2000	Inco Ltd–Class VBN Shares	27.98	Inco Ltd	3.85	4.94
January 29, 2001	Disney Internet Group (GO.com)	−3.16	Walt Disney Company	1.29	1.27
March 28, 2002	Cybear Group	9.25	Andrax Corp	−5.81	−5.80
	Mean excess return	13.89		1.81	3.07
	(*t*-statistic)	(3.08)***		(0.46)	(0.94)

Note: The sample of tracking stock restructurings announced from 1984 to 1999 is described in Table 1. For each tracking stock, we examine media reports through December 2002 to identify subsequent announcements that the firm would eliminate the tracking stock structure. Excess returns are computed by subtracting the market returns from the stock returns over a three-day period centered on the announcement date. Market returns are measured by the Center for Research in Security Prices (CRSP) value-weighted returns. The mean and *t*-statistic are calculated from the cross-sectional distribution of excess returns.

> point where having a separate tracking stock for our gas utility is no longer useful," said William T. McCormick, Jr., CMS Energy's chairman and chief executive officer. (Source: *PR Newswire,* September 9, 1999)

Pursuant to this goal, the TR shares were exchanged for the GD shares at a 15% premium to the pre-announcement market value. Presumably, this premium came at the expense of GD shareholders. The announcement returns are consistent with this notion. CPG stock price went up by 14.17% after adjusting for the market returns whereas CMS stock price went down by 1.27%.

The reasons given by CMS Energy suggest that the tracking stock structure served a useful purpose for some time. But the reasons given by the managers of Pittston, Fletcher Challenge, and Inco Ltd. suggest that the tracking stock structure caused problems. In resolving to dismantle the tracking stock structure, Kerry Hoggard, chairman of the board of directors of Fletcher Challenge, said:

> It is clear that the Group's capital structure is seen as complex by investors, is perceived to raise governance issues, and has resulted in a significant structural discount being applied to all our stocks. We cannot allow this to continue, and will move as quickly as possible to a full dismantling of the targeted share structure. (Source: Fletcher Challenge press release, December 16, 1999)

This statement is interesting in view of the fact that firms adopting tracking stocks often cite increased transparency and elimination of a conglomerate value discount as prime motives. Michael Dan, chairman and CEO of Pittston, gave similar reasons for eliminating the tracking stock structure of Pittston:

> "The value of the businesses are not being reflected under the structure of tracking stocks," Michael T. Dan, Pittston's chairman and chief executive, said. A major reason for that, Mr. Dan said, is that the coal business and its liabilities have "cast a shadow" on the other two businesses. (Source: *Wall Street Journal,* December 6, 1999)

Finally, Inco Ltd. provides an example of the conflicts of interest that can arise between TR and GD shareholders. Such conflicts caused internal strife among Inco's board members and hindered their corporate decision making. To eliminate the problem, Inco's board made a tender offer for the TR shares. However, some of the largest TR shareholders felt they were being coerced to take less than the fair value of their shares and resisted the offer. After several tender offers failed to gain the needed 90% approval, Inco called a special shareholder meeting where a 66% majority would force all TR shareholders to accept the offer. The resolution passed and the meeting was described as follows:

> Inco Ltd. hopes it will find corporate harmony on its board after buying out a group of shareholders whose only interest—represented by two directors—was in the nickel producer's stalled Voisey's Bay development. Despite a handful of disgruntled

> investors who attended a special meeting Tuesday, 84.6 per cent of the Voisey's Bay Nickel shareholders voted to approve the $195-million cash buyout which forced all other shareholders to tender their VBN shares. Inco says the move will prevent "conflict" from a group of shareholders who had a specific interest in one project of the company and two voices representing their interests on Inco's board of directors. "The whole notion of having this special class of shares has created conflict," said Alan Stubbs, Inco's vice president of public affairs. "It complicates the decision process," he said, adding that the two board members have since tendered their resignations. (Source: *Canadian Press Newswire,* November 28, 2000)

Following the meeting several TR shareholders threatened to sue Inco over the unfair value they were being forced to accept.

The anecdotal evidence of this section suggests that firms adopting tracking stock structure sometimes experience confusion and conflicts of interest among different classes of shareholders. We must, however, point out that we are, by definition, selecting cases where a tracking stock structure was not successful in the management's opinion. Attempts to eliminate this structure resulted in positive wealth gains. This evidence shows a parallel between tracking stocks and carve-outs. As reported in the Appendix, Klein, Rosenfeld, and Beranek (1991) and Vijh (2002) document positive returns following the announcement of acquisition offers by parent firms to eliminate carve-out stocks.

V. Conclusions

There has been a large increase in divestiture activity in the U.S. economy. Most divestitures take the form of asset sales, spin-offs, and carve-outs. Tracking stocks are the latest addition to this list. The existing stock of a diversified firm is split into two or more stocks that track the performance of different divisions while the firm continues to operate as one entity. In this article we examine the wealth effects of this unique restructuring that separates the stocks without separating the businesses. We examine the performance of the combined firm and the separated GD and TR stocks created by all tracking stock restructurings announced from 1984 to 1999. We use many different measures, including BHERs, earnings announcement excess returns, and industry-adjusted operating performance. We examine four nonoverlapping intervals: the one-year pre-announcement period, the three-day announcement period, the post-announcement and pre-issue period, and a post-issue three-year period.

Our main conclusion is that the market does not seem to price efficiently the TR stocks at the time of issue. The TR stocks underperform appropriate benchmarks by an average of more than 12% per year in the three years following issuance. However, the combined firms and the GD stocks earn long-term returns that are negative but statistically indistinguishable from their benchmarks. To draw further

implications we contrast our evidence on tracking stocks with existing evidence for spin-offs and carve-outs. First, unlike spin-offs and carve-outs, tracking stock restructurings are preceded by negative one-year pre-announcement excess returns. Second, the previous literature shows that the pro forma combined firms after spin-offs earn significant and positive long-term excess returns in addition to the positive announcement excess returns. This suggests that spin-offs create greater wealth gains for the combined shareholders than do tracking stocks. Third, the previous literature also shows that newly created spin-off stocks earn positive long-term excess returns and the carve-out stocks earn insignificant long-term excess returns. This suggests that the TR stocks do not perform as well as their spin-off and carve-out counterparts. Overall, we find substantial differences in the wealth effects of tracking stocks, spin-offs, and carve-outs. This suggests the need for additional research into understanding the circumstances under which one form of restructuring should be chosen over the others.

APPENDIX. Wealth Effects of Tracking Stock Restructurings Versus Spin-Offs and Carve-Outs.

Wealth Effect	Tracking Stocks	Spin-Offs	Carve-Outs
Pre-announcement excess returns to old stock	Negative	Insignificant (Desai and Jain 1999)	Positive (Vijh 2002)
Announcement excess returns to old stock	Positive (Multiple studies analyze this result, as discussed below)[a]	Positive (Hite and Owers 1983; Schipper and Smith 1983)	Positive (Schipper and Smith 1986)
Post-issue three-year excess returns	Insignificant for combined stocks Insignificant for general division (GD) stocks Negative for TR stocks[b]	Positive for combined stocks Positive for parent stocks Positive for spin-off stocks (Cusatis, Miles, and Woolridge 1993;[c] Desai and Jain 1999)	Not documented for combined stocks Insignificant for parent stocks Insignificant for carve-out stocks (Vijh 1999)
Post-issue three-year earnings announcement excess returns	Insignificant for combined stocks Negative but not clearly significant for GD stocks Negative for TR stocks	Not documented	Not documented for combined stocks Insignificant for parent stocks Insignificant for carve-out stocks (Vijh 1999[d])
Post-issue three-year operating performance compared with industry benchmarks	Insignificant for combined firms Positive but not clearly significant for GD divisions Insignificant for TR divisions	*For focus-increasing spin-offs* Positive for combined firms Positive for parent firms Insignificant for subsidiary firms *For non-focus-increasing spin-offs* Insignificant for combined firms Insignificant for parent firms Negative for subsidiary firms (Desai and Jain 1999[e])	Not documented for combined firms Insignificant for parent firms Insignificant for carve-out firms (Hulbert, Miles, and Woolridge 2002[f])

(Continued)

APPENDIX. Continued.

Wealth Effect	Tracking Stocks	Spin-Offs	Carve-Outs
Announcement excess returns to elimination of restructuring in favor of old combined stock structure	Insignificant for combined stocks Insignificant for GD stocks Positive for TR stocks	Not applicable	Not documented for combined stocks Positive for parent stocks Positive for carve-out stocks (Klein, Rosenfeld, and Beranek 1991;[g] Vijh 2002)

[a]Logue, Seward, and Walsh (1996), Billett and Mauer (2000), D'Souza and Jacob (2000), Elder and Westra (2000), and Chemmanur and Paeglis (2001) find this return to be positive and significant. This study finds it to be positive and insignificant for the aggregate sample, but positive and significant after excluding one outlier.

[b]Our results differ from Chemmanur and Paeglis (2001), who use a smaller sample and find that over a post-issue three-year holding period the TR stocks underperform the S&P 500 index by 55% and at the same time outperform the equally weighted industry index by 44%, significant in both cases at the 5% level.

[c]Cusatis, Miles, and Woolridge (1993) post-issue excess returns are significant for spin-off stocks over a three-year holding period, but for combined stocks and parent stocks only over a two-year holding period.

[d]More accurately, Vijh (1999) documents that the earnings announcement excess returns are significant and positive for carve-out stocks during the first quarter after issue but insignificant during subsequent quarters.

[e]Desai and Jain (1999) do not report the operating performance results for the combined sample of focus-increasing and non-focus-increasing spin-offs.

[f]Hulbert, Miles, and Woolridge (2002) operating performance results change to significant and positive for both parent and subsidiary firms when using industry- and performance-adjusted benchmarks.

[g]Klein, Rosenfeld, and Beranek (1991) announcement excess returns to elimination of carve-out structure are insignificant for parent stocks.

References

Billett, M. and D. Mauer, 2000, Diversification and the value of internal capital markets: The case of tracking stock, *Journal of Banking and Finance* 24, 1457–90.

Brous, P., V. Datar, and O. Kini, 2001, Is the market optimistic about the future earnings of seasoned equity offering firms? *Journal of Financial and Quantitative Analysis* 36, 141–68.

Chari, V., R. Jagannathan, and A. Ofer, 1988, Seasonalities in security returns: The case of earnings announcements, *Journal of Financial Economics* 21, 101–21.

Chemmanur, T. and I. Paeglis, 2001, Why issue tracking stock? Insights from a comparison with spin-offs and carve-outs, *Journal of Applied Corporate Finance* 14, 102–14.

Cusatis, P., J. Miles, and J. Woolridge, 1993, Restructuring through spin-offs: The stock market evidence, *Journal of Financial Economics* 33, 293–312.

Denis, D. and A. Sarin, 2001, Is the market surprised by the poor earnings realizations following seasoned equity offerings? *Journal of Financial and Quantitative Analysis* 36, 169–93.

Desai, H. and P. Jain, 1999, Firm performance and focus: Long-run stock market performance following spinoffs, *Journal of Financial Economics* 54, 75–101.

D'Souza, J. and J. Jacob, 2000, Why firms issue targeted stock, *Journal of Financial Economics* 56, 459–83.

Elder, J. and P. Westra, 2000, The reaction of share prices to tracking stock announcements, *Journal of Economics and Finance* 24, 36–55.

Hass, J., 1996, Directorial fiduciary duties in a tracking stock equity structure: The need for a duty of fairness, *Michigan Law Review* 94, 2089–2177.

Hite, G. and J. Owers, 1983, Security price reactions around corporate spin-off announcements, *Journal of Financial Economics* 12, 409–36.

Hulbert, H., J. Miles, and J. Woolridge, 2002, Value creation from equity carve-outs, *Financial Management* 31, 83–100.

Jegadeesh, N., 2000, Long-term performance of seasoned equity offerings: Benchmark errors and biases in expectations, *Financial Management* 29, 5–30.

John, K. and E. Ofek, 1995, Asset sales and increase in focus, *Journal of Financial Economics* 37, 105–26.

Kahle, K. and R. Walkling, 1996, The impact of industry classifications on financial research, *Journal of Financial and Quantitative Analysis* 31, 309–35.

Klein, A., J. Rosenfeld, and W. Beranek, 1991, The two stages of an equity carveout and the price response of parent and subsidiary stock, *Managerial and Decision Economics* 12, 449–60.

Krishnaswami, S. and V. Subramaniam, 1999, Information asymmetry, valuation, and the corporate spin-off decision, *Journal of Financial Economics* 53, 73–112.

Logue, D., J. Seward, and J. Walsh, 1996, Rearranging residual claims: A case for targeted stock, *Financial Management* 25, 43–61.

Lyon, J., B. Barber, and C. Tsai, 1999, Improved methods for testing long-run abnormal returns, *Journal of Finance* 54, 165–201.

Robicheck, A. and S. Myers, 1966, Conceptual problems in the use of risk-adjusted discount rates, *Journal of Finance* 37, 727–30.

Schipper, K. and A. Smith, 1983, Effects of recontracting on shareholder wealth: The case of voluntary spin-offs, *Journal of Financial Economics* 12, 437–67.

Schipper, K. and A. Smith, 1986, A comparison of equity carve-outs and seasoned equity offerings: Share price effects and corporate restructuring, *Journal of Financial Economics* 15, 153–86.

Vijh, A., 1999, Long term returns from equity carveouts, *Journal of Financial Economics* 51, 273–308.

Vijh, A., 2002, The positive announcement-period returns of equity carveouts: Asymmetric information or divestiture gains? *Journal of Business* 75, 153–90.

Zuta, S., 2000, Diversification discount and targeted stock: Theory and empirical evidence, Working paper, University of Maryland.