THE CLIENTELE EFFECT OF SPINOFFS –
FURTHER EVIDENCE FROM THE EFFECTIVE DATE OF CORPORATE
DIVESTITURES

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Introduction

In the past few decades, issues related to corporate restructuring have been extensively examined in the finance literature.   A major form of corporate restructuring is *divestitures*.   Divestitures are ways in which the subsidiaries, divisions, segments or product lines are separated from their parent companies. The two major types of divestitures are *spinoffs* and *sell-offs*. A *spinoff* creates a separate new legal entity; the shares of the new legal entity are distributed on a *pro rata* basis to the existing shareholders of the parent company. The existing shareholders of the parent company have the same proportion of ownership in the new entity as in the parent company and the parent company receives no cash from the existing shareholders. A spinoff can be viewed as *dividend in kind* paid by the parent company to its shareholders. Spinoffs separate the common stocks of the parent and the new companies for subsequent trading on a date known as the *ex date*.

In contrast to spinoffs are *sell-offs* -- where a portion of the firm's assets is sold to a third party. In a sell-off, the *buyer* of the divested asset is usually an existing firm, which pays the *seller* cash or securities. As the divested asset is bought by an existing firm, no new legal entity is created. Sell-offs are known as "reverse mergers" and generally have an *effective date* following the announcement of a sell-off. This is the date on which the sell-off is completed. This date is comparable to the ex-dates in spinoffs.   The divested asset becomes the assets of the buying firm on the *effective date*.

While a spinoff and a sell-off are similar in that both involve the sale of assets, there is a major difference between them – the former creates a new legal entity while the latter does not. The difference between spinoffs and sell-offs in the *creation* (or the *absence* of it) of new legal entities provides a unique opportunity to empirically examine how *extra* value can be created in the financial market over and above the *effect of corporate restructuring* when new securities become available to investors. In the case of a *spinoff*, the shares of the parent company are separated into shares of two different companies. In an imperfect market, the availability of two separated securities gives investors more choices. This benefit of expanding opportunity set of securities to investors provided by spinoffs is not available in *sell-offs*. Therefore, the market response to the two forms of divestiture should not be the same either. We expect the response of stock market to sell-offs to be weaker than spinoffs. The purpose of the paper is to empirically test this hypothesis.

Ross (1976, p.76), in explaining why the existence of the options markets increase the efficiency of the economy, described the benefit of two separated securities over one single combined security:

An easy way to understand this is by analogy with a market where individuals are permitted to purchase a grapefruit only if they also buy an orange. If, by a fluke, everyone wishes to consume one grapefruit with one orange, this constraint has no force. Otherwise, opening separate markets would improve efficiency.

The finance literature has documented many examples that, due to the fact that the market is imperfect such as the existence of transaction cost, the total value of two securities are worth more than the value of one single security that combines the two securities. For instance, Jarrow and O'Hara (1989) report that when a stock is separated into a "*prime*" and a "*score*" (where the "*prime*" has the claim on the *dividend* component of the stock, while the "*score*" has the claim on the *appreciation* component of the stock), the *combined* value of the "*prime*" and the "*score*" exceeds the value of the original stock. By the same token, mortgage-backed securities (MBS) are often separated into interest-only (IO) and principal-only (PO) securities and then sold in the market separately because the total value of the IO and PO usually exceeds the value of the underlying MBS. Similarly, the U.S. Treasury Department has created an active zero coupon bond market since 1985 through its *Separate Trading of Registered Interest and Principal of Securities* (known as the *STRIPS*) program. The growth and the success of this active market also indicate that some investors prefer the separate trading of individual coupons with different maturities that are stripped from the underlying securities (as well as the separate trading of principals), as opposed to the entire securities which bundle all the coupons and principals.

In a seminal study, Vijh (1994) not only documented a 2.90% excess return on the *announcement date* of spinoffs, he also reported a 3.03% excess return on the *ex-date* for firms participating in spinoffs. This ex-date excess return, which was even greater than the announcement date return, was a puzzle even to the author:

At first, it appears surprising that such large returns occur on predictable ex dates when on average, there is no fresh information (p.582)

However, Vijh (1994) presented robust evidence in the article to show that the imminent separation of parent and subsidiary stocks makes it *attractive* for many *sellers* to sell the *combined* stock *before* the ex date, and makes it *attractive* for *buyers* to purchase the stocks *separately on or after* the ex date and therefore causes the stock price to rise on the ex date. For instance, if an investor wants to buy only one of the two post-spinoff stocks, he would prefer to wait until after the ex date:

Obtaining the desired stock by first purchasing the more expensive combined stock and then selling off the undesired portion would incur higher transaction costs. In addition, …[s]mall investors would face additional constraints, because purchasing the combined stock would require a greater cash investment and lead to an odd lot of subsidiary shares in most cases. One reason for ex-date returns, therefore, may be that many buyers are willing to pay a premium to wait until after the ex-date. From the sellers' point of view, however, selling the combined stock before the ex date makes better sense, because selling the two stocks separately would incur higher transaction costs. Another reason for ex-date returns, therefore, may be that potential sellers require a premium to defer their sales until after the ex dates. (p. 582)

It appears that the major reason for the positive abnormal return on the ex date –no matter whether it is caused by the higher transaction costs for selling two stocks after the ex date or it is caused by the lower transaction costs for buying each stock separately after ex date -- is related to the creation of the separate second legal entity in spinoffs. Vijh (1994) referred to this excessive return on the ex date as the clientele effect of spinoffs since the two post-spinoff stocks may be followed by different analysts, and they may attract different clienteles depending, for example, on the type of industry, S&P listing status, risk characteristics, and dividend yield.

While spinoffs and sell-offs are similar to each other, they are not identical -- *no* separate new stocks are created in *sell-offs*. If the ex-date abnormal returns for spinoffs are related to that the stocks of parent companies are unbundled into smaller stocks on ex date and that the unbundled stocks expand opportunity set of securities available to investors, then we would expect a weaker response to *sell-offs* on effective date since *no* additional stocks are created on that date. In other words, a weaker response to sell-offs on *the effective date* (which is similar to the ex-dates in spinoffs) would be consistent with the clientele effect hypothesis in spinoffs.

In this paper we examine if the abnormal returns accrued to the stockholders of the parent companies in spinoffs on the ex date also occur to corporations participating in sell-off on the *effective date of completion*. Using the market model methodology, we find that *no* significant abnormal returns accrue to the stockholders of 117 buying firms and 105 selling firms in corporate sell-offs. The findings in our paper is consistent with Vijh's (1994) argument that the positive abnormal returns for spinoffs on the ex date is related to the availability and the transaction costs in trading *two separate* stocks since no additional new stock is created in sell-offs.

The results in our paper are also consistent with the findings in the stock split and stock dividend literature. In a *spinoff*, current stockholders of the parent company receive the stocks of the new company. Consequently, a *spinoff* can be considered as a stock split in which the two split-up portions are different. Vijh's (1994) finding of ex-date abnormal returns for spinoff, therefore, is

consistent with the studies of Eades, Hess, and Kim (1984), and Grinblatt, Masulis, and Titman (1984) who also report ex-date abnormal returns for stock splits and stock dividends. However, in a sell-off, the stockholders of the selling company do *not* receive any stock (or cash) as a result of the divestiture. Consequently, the ex-date abnormal returns reported in the stock split or stock dividend, may not be applicable in sell-offs.

The rest of the paper is organized as follows. We review the literature related to spinoffs and sell-offs in Section II. We discuss the data and the methodology in Sections III and VI respectively. We present the empirical results in Section V, and conclude the paper in Section VI.

Review of the Literature

Several authors have investigated the wealth effects of sell-offs over the past two decades. Hite and Owers (1983), Miles and Rosenfeld (1983), Schipper and Smith (1983) report significantly positive abnormal returns surrounding the *announcements* of spinoffs.

Copeland, Lemgruber, and Mayers (1987), and Vijh (1994) not only find abnormal returns around the *announcement day* of spinoffs, but also document significant returns on *ex date*. Copeland, Lemgruber, and Mayers (1987) do not offer any explanation for the ex-date returns, except that these returns may be related to the bid-ask spread effect (i.e. the cum-date prices tend to lie at the bid price and the ex-date prices tend to lie at the ask price). In contrast, Vijh (1994) presents the clientele effect hypothesis, as well as concrete evidence and robust results supporting the hypothesis, to explain why abnormal returns occur on the predictable ex dates even though there is no systematical arrival of new information on the date.

John and Ofek (1995) document positive abnormal returns for selling firms around the *announcement day* of *sell-offs*. Alexander, Benson, and Kampmeyer (1984), and Jain (1985) report significant abnormal returns for both buyers and sellers around the *announcement day* of *sell-offs*. In addition, Afshar, Taffler and Sudarsanam (1992), and Klein (1986), and Linn and Rozeff (1984) report that the announcement date abnormal returns for sell-offs are higher when the *sales price* of the divested asset and the *motive* for the sell-off are disclosed in the announcement. They also find that the announcement date abnormal returns are *positively* related to the *size* of the divested assets. Dutta and Iskandar-Dutta (1996) document announcement date abnormal returns for both the *stockholders* and the *bondholders* of the selling firms.

The reason for the market to respond positively to the announcement of sell-offs is because when a company sells off a major asset to another company, it makes both the companies more attractive: the selling company has divested an asset which no longer contributes to the strategic goals of the company, while the purchasing company has purchased an asset which could mean strategic addition to it.

Khan and Mehta (1996) show that when a division or subsidiary has *low* growth and *stable* earnings, it tends to be divested through a *sell-off*. On the contrary, when a division or subsidiary has *high* growth prospects and *uncertain* earnings, it tends to be divested through a *spinoff*.

To the best of our knowledge, no study has examined the stockholders wealth effect on *effective date* for sell-offs. It is the purpose of our study to examine the stock market response to the sell-off surrounding the effective date following the announcement of a sell-off.

Data Description

The data for the study is collected using the following procedure. We first randomly identified 217 sell-off announcements over the six-year period of January 1989 to December 1994 by searching the *Wall Street Journal* daily using the database *Lexis-Nexis.* We then deleted those divestitures in which there is some ambiguity regarding the actual announcement date. We next identified the effective date of the divested assets from the column *Rosters, US Mergers and Acquisitions* published by the *Mergers and Acquisitions* quarterly. We discarded those companies that are completed in less than seven days after the announcement of the sell-off. This is done to ensure that the announcement day effects do not overlap into this study of the effective date effects. We also had included only those companies that had the announcement date *preceding* the effective date. This was because of the practice of some companies not to announce the divestitures until after it had been completed. In these cases, since the announcement and effective dates are the same we did not include those in the sample. We also excluded those companies that did not include the transaction terms such as prices as part of the description in the *Rosters* columns since the stock prices of such companies may not have reflected all the information related to the sell-offs upon announcement if the terms of the transaction are not disclosed in the announcement (Linn and Rozeff (1984)). We also excluded the companies that have assets divested in the form of leveraged buyouts since these involve other information effects. After checking for all the above factors, our sample had reduced to 143 sell-offs involving over 300 companies. These companies all had a definite announcement date that precedes the effective date by at least seven days, are completed successfully, and have disclosed the terms of the transaction.

We collected the data for the sample from the *CRSP* (Center for Research of Securities Prices) tapes. We had to exclude those companies from the sample that were not traded during either the period used for calculation of the regression parameters or the event period. We also had to exclude those companies that were not listed on the *CRSP* tapes. We had a final sample of 222 companies for the study. Of these, 117 were buying companies and 105 were selling companies. We collected data for the daily market returns of the companies, the *CRSP* equally weighted combined daily market return for each of these companies and used the methodology below to examine the hypothesis of the study.

Methodology

The methodology used in the study is the market model. This is one of the major empirical models used for residual analysis. The procedure outlined below is consistent with several earlier studies (see for example, Liu, Smith and Syed (1990)).

Under the market model, the abnormal return for security j on event day t, AR_{jt}, is calculated as

$$AR_{jt} = R_{jt} - (\hat{\alpha}_j + \hat{\beta}_j R_{mt}) \tag{1}$$

Where R_{jt} is the return on security j for day t, R_{mt} is the return on the CRSP equally weighted market index for day t, $\hat{\alpha}_j$ and $\hat{\beta}_j$ are the ordinary least squares estimates for firm j's market model parameters. For calculation of the regression parameters, we use a comparison period of 250 days, from $t = -21$ to $t = -270$, where $t = 0$ is the announcement date. This is necessary as we cannot use the returns immediately prior to the effective date as the announcement period effects and other information effects related to the sell-off could be included in it. For a sample of N securities, the average daily abnormal return $\overline{AR}_t$, for day t, will be calculated as

$$\overline{AR}_t = \frac{1}{N} \sum_{j=1}^{N} AR_{jt} \tag{2}$$

where $t = -5$, …+5, (where $t = 0$ is the effective date)

and the average daily abnormal return from day $T1$ to day $T2$, $\overline{CAR}_{T1,T2}$, is calculated as

$$\overline{CAR}_{T1,T2} = \sum_{t=T1}^{T2} \overline{AR}_t \tag{3}$$

To test the statistical significance of $\overline{AR}_t$ and $\overline{CAR}_{T1,T2}$, we will calculate the standardized abnormal return for security j on day t, SAR_{jt}, and the standardized cumulative abnormal return over the interval of T1 and T2, $SCAR_j$, where

$$SAR_{jt} = AR_{jt} / S_j \tag{4}$$

and

$$SCAR_j = \sum_{t=T1}^{T2} SAR_{jt} / (T2 - T1 + 1)^{1/2} \tag{5}$$

In Equation (4), S_j is the (time series) residual standard deviation for security j estimated from the market model regression. The average standardized abnormal return $\overline{SAR}_t$, and the average standardized cumulative abnormal return $\overline{SCAR}$, are given respectively, by

$$\overline{SAR}_t = \frac{1}{N} \sum_{j=1}^{N} SAR_{jt} \tag{6}$$

$$\overline{SCAR} = \frac{1}{N} \sum_{j=1}^{N} SCAR_j \tag{7}$$

Assume that the abnormal returns, AR_{jt}, are independent and identically distributed with finite variance, then the test statistics for a sample of N securities on day t, T(t, t) and the test statistics over the period T1 to T2, T(T1, T2), will be distributed Student-t in the absence of abnormal performance

$$T(t, t) = \overline{SAR}_t * (N)^{1/2} \tag{8}$$

and

$$T(T_1, T_2) = \overline{SCAR} * (N)^{1/2} \tag{9}$$

We used the methodology described above to calculate the returns for the 117 buying and 105 selling companies. The results of these are presented in the next section.

Empirical Results

The results of the 117 buying companies are given in Tables I and II. Tables III and IV document the results of the 105 selling companies in the sample.

Table I

The average abnormal returns, their t-statistics, standardized abnormal returns, and their t-statistics surrounding the effective date (from five days before (t = -5) to five days after (t = +5) the effective date) for 117 buying companies involved in sell-offs announced during the six year period between January 1989 and December 1994. These companies have clear sell-off announcement dates that precede the effective dates by at least seven days, are completed successfully, have disclosed the terms of transactions, and have sufficient data on the CRSP tapes.

Event Day	$\overline{AR}_t$	t-value	$\overline{SAR}_t$	t-value
-5	0.002	0.883	0.150	1.550
-4	0.000	-0.249	0.008	0.091
-3	0.002	0.915	0.122	1.572
-2	-0.003	-1.184	-0.154	-1.416
-1	0.000	-0.117	-0.074	-0.695
0	-0.001	-0.429	0.002	0.017
1	0.002	0.743	0.026	0.292
2	0.000	0.147	-0.018	-0.202
3	-0.001	-0.566	-0.069	-0.824
4	-0.002	-0.800	-0.045	-0.395
5	-0.003	-1.382	0.099	-1.006

* indicates value significant at 0.05 level

** indicates value significant at 0.10 level

In Table I we present the average daily abnormal returns, standardized daily abnormal returns and the t-statistics for the testing of significance for the buying companies in the sell-offs. The results for days t = -5 to t = 5 where t = 0 is the effective date are given in the Table.   The first column in the Table gives the event day while the second gives the average abnormal return on

that event day. The t-statistic values corresponding to the average abnormal returns are given in the third column while columns four and five give the values of the standardized daily abnormal returns and the corresponding t-values.

It can be seen from the results in Table I that there are no significant abnormal returns for the buying companies in the sample on either the effective date or any of the ten days surrounding it. The highest positive return is on days t = -5, t = -3 and t = 1 when the return is 0.002 percent. On days t = -2, t = 0, t = 3, t = 4 and t = 5 the returns are negative. However, none of the abnormal returns are significant at any level. The low values of the t-statistics, none of which are significant, confirm this. This result is also confirmed by the low standardized abnormal return values and their corresponding t-statistics in the Table.

Table II

The cumulative abnormal return, its t-value, the standardized cumulative abnormal return, and its t-value surrounding the effective date (from five days before (t = -5) to five days after (t = +5) the effective date) for 117 buying companies involved in sell-offs announced during the six year period between January 1989 and December 1994. These companies have clear sell-off announcement dates that precede the effective dates by at least seven days, are completed successfully, have disclosed the terms of transactions, and have sufficient data on the CRSP tapes.

$\overline{CAR}_{T1,T2}$ -0.004 (t-value = -0.043)

$\overline{SCAR}$ -0.046 (t-value = -0.49)

*   indicates value significant at 0.05 level

** indicates value significant at 0.10 level

Table II presents the cumulative abnormal return over the eleven-day event period and the standardized cumulative abnormal return over the same period and the corresponding t-statistics. It can be seen from the results presented in Table II that the cumulative abnormal return (of -0.004 percent) and the standardized cumulative abnormal return (-0.046) are not significant either. The low values of the cumulative figures are reflected in the low t-statistic levels, both of which are not significant.   The results seem to indicate that there are no significant abnormal returns to buying' companies shareholders at the time of the effective date.

Table III

The average abnormal returns, their t-statistics, standardized abnormal returns, and their t-statistics surrounding the effective date (from five days before (t = -5) to five days after (t = +5) the effective date) for 105 selling companies involved in sell-offs announced during the six year period between January 1989 and December 1994. The sell-offs involving these selling companies have clear announcement dates that precede the effective dates by at least seven days, are completed successfully, have disclosed the terms of transactions, and the selling companies have sufficient data on the CRSP tapes.

Event Day	$\overline{AR}_t$	t-value	$\overline{SAR}_t$	t-value
-5	0.005	0.919	0.164	1.626
-4	0.001	0.367	0.077	0.728
-3	-0.002	-0.488	0.056	0.583
-2	0.006	2.270*	0.145	1.589
-1	0.009	.307	0.104	0.974
0	0.003	0.778	0.125	1.222
1	-0.007	-1.952*	-0.163	-1.706**
2	-0.006	-1.766**	-0.145	-1.475
3	-0.002	-0.515	-0.099	-0.927
4	-0.002	-0.227	-0.064	-0.341
5	-0.001	-0.251	-0.051	-0.461

* indicates value significant at 0.05 level

** indicates value significant at 0.10 level.

Table IV

The cumulative abnormal return, its t-value, the standardized cumulative abnormal return, and its t-value surrounding the effective date (from five days before (t = -5) to five days after (t = +5) the effective date) for 105 selling companies involved in sell-offs announced during the six year period between January 1989 and December 1994. The sell-offs involving these selling companies have clear announcement dates that precede the effective dates by at least seven days, are completed successfully, have disclosed the terms of transactions, and the selling companies have sufficient data on the CRSP tapes.

$\overline{CAR}_{T1,T2}$ 0.004 (t-value = 0.041)

$\overline{SCAR}$ 0.045 (t-value = 0.460)

* indicates value significant at 0.05 level

** indicates value significant at 0.10 level.

The results for the selling companies sample are given in Tables III and IV. Table III gives the abnormal returns, their corresponding t-values, the standardized abnormal return and their corresponding t-values. For selling companies' shareholders, the abnormal return on day t = -2, 0.006 percent is significantly positive at 5% level of significance. The abnormal returns on days t = 1, which is -1.952%, and t = 2, which is -1.766% are negatively significant at 5% and 10% levels of significance respectively. When these values are standardized we find that only the return for day t = 1, is -0.163% and is significant at 10% level. It can be seen that in case of the selling companies, all the abnormal returns after day t = 0 are negative. However, unlike the case of buying companies, the stockholders of the selling companies gain an amount that though positive, is not significant. This is evident from Table IV. It is noticeable that neither the cumulative abnormal return nor the standardized cumulative abnormal return is significant. These results like those of the buying companies' seem to indicate that there are no significantly abnormal returns for the shareholders of the buying and selling companies in corporate divestitures.

A few points of interest are evident from the results. The first is that the cumulative returns for the shareholders for the selling companies are positive and the returns for the shareholders of the shareholders of the buying companies are negative surrounding the effective date. It is also seen that the returns for the shareholders of the selling companies, despite not being significant, are of higher magnitude than that of buying companies shareholders.

Conclusion

The results of the study show that there are no significant abnormal returns to the stockholders of buying and selling companies surrounding the *effective date* for *sell-offs*.   The results of the study support the study by Vijh (1994) who argues that the market positive response to *spinoffs* on the *ex-date* is related to the creation of a separate new company on that date and he attributes the abnormal returns to the clientele effect for the formation of the new company on that date. Since no new companies are formed on the *effective date* for *sell-offs*, the market's response on the effective date appears to be different for sell-offs than it is for spinoffs. In addition, in case of spinoffs, the market has to wait until after the ex-date to buy the shares in the company that was originally a subsidiary. However, in corporate divestitures, since the shares of both the leading participants are traded right through the process, the reprising process appears to be different.

This study contributes to the literature in that it is the first to examine the returns for participating firms' on days surrounding the effective date. The study adds to the existing literature on corporate sell-offs in that it shows no abnormal returns accrue to stockholders at the completion of the sell-off process.

References

Afshar, K. A., Taffler, R. J., and Sudarsanam, P.S., "The Effect of Corporate Divestments on Shareholder Wealth: The UK Experience," *Journal of Banking and Finance,* Feb. 1992, pp. 115-135.

Alexander, G. J., Benson, P.G., and Kampmeyer, J., "Investigating the Valuation Effects of Voluntary Corporate Sell-Offs," *Journal of Finance*, Vol. 39, June 1984, pp. 503-517.

Copeland, Thomas, Eduardo Lemgruber, and David Mayers, "Corporate Spinoffs: Multiple Announcements and ex-date Abnormal Performance," in Thomas Copeland, ed: *Modern Finance and Industrial Economics: Essays in Honor of Fred Weston* (Basil Blackwell, New York), 1987.

Dutta, S., and Iskandar-Dutta, M.E., "Who Gains From Corporate Asset Sales?" *The Journal of Financial Research*, Vol. XIX (1), Spring 1996, pp. 41-58.

Eades, Kenneth, Patrick Hess and Han Kim, "On Interpreting Security Returns During the Ex-Dividend Period," *Journal of Financial Economics*, 13, 1984, pp. 3-24.

Grinblatt, Mark, Ronald Masulis, and Sheridan Titman, "The Valuation Effects of Stock Splits and Stock Dividends," *Journal of Financial Economics*, 13, 1984, pp. 461- 490.

Hearth, D., and Zaima, J. K., "Divestiture Uncertainty and Shareholder Wealth: Evidence from the U.S.A. (1975-1982)," *Journal of Business Finance and Accountin*g, Vol. 13(1), Spring 1996, pp. 71-85.

Hite, Gailen, and James Owers, "Security Price Reactions around Corporate Spinoff Announcements," *Journal of Financial Economics*, 37, 1983, pp. 409-436.

Jain, Prem C., "The Effect of Voluntary Selloff Announcements on Shareholder Wealth," *Journal of Finance*, Vol. 40, March 1985, pp. 209-224.

Jarrow, A. Robert, and Maureen O'Hara, "Primes and Scores: An Essay on Market Imperfections," *Journal of Finance*, Vol. XLIV (5), December 1989, pp. 1263-1287.

John, K., and Ofek, E., "Asset Sales and Increase in Focus" *Journal of Financial Economics*, Vol. 37(1), Jan. 1995, pp. 105-126.

Khan, A.Q., and Mehta, D.R., "Voluntary Divestments and the Choice Between Sell-Offs and Spin-Offs," *The Financial Review*, Vol. 31(4), Nov. 1996, pp. 885-912.

Klien, April, "The Timing and Substance of Divestiture Announcements: Individual, Simultaneous and Cumulative Effects," *Journal of Finance*, Vol. XLI (3), July 1986, pp. 685-697.

Linn, Scott C., and Michael S. Rozeff "The Corporate Sell-Off," *Midland Corporate Finance Journal*, Summer, 1984, pp. 17-26.

Liu, P., Smith, S.D., and Syed, A.A., "Stock Price Reactions to the Wall Street Journal's Securities Recommendations," *Journal of Financial and Quantitative Analysis*, Vol. 25(3), September 1990, pp. 339-410.

Miles, James, and James Rosenfeld, "The Effect of Voluntary Spinoff Announcements on Shareholder Wealth," *Journal of Finance*, 38, 1983, pp. 1597-1606.

Ross, Stephen A. "Options and Efficiency," *Quarterly Journal of Economics,* Vol. 90(1), February 1976, pp. 75-89.

Schipper, Katherin, and Abbie Smith, "Effect of Recontracting on Shareholder Wealth: The Case of Voluntary Spinoffs," *Journal of Financial Economics*, 12, 1983, pp. 437-468.

Vijh, A.M., "The Spinoff and Merger Ex-Date Effects," *The Journal of Finance*, Vol. XLIX (2), June 1994, pp. 581-609