

THE DIVESTITURE OF REAL ESTATE ASSETS BY SELL-OFF

A study of restructuring asset holdings to improve the performance of firms is compared with other recent findings and indicates significant increases in value for both the selling and buying companies.

by James E. Owers and Ronald C. Rogers

There has been an increase in the rate of restructuring asset holdings that includes a continuation of merger activity. Much of the increase has resulted from reverse mergers—transactions in which firms divest operations. Recently, 35% of all restructuring has been related to divestitures; and the formation of master limited partnerships, trusts and going-private transactions all reflect this trend.¹

There are several reasons why firms choose to divest part of their operations, and no one explanation applies in all cases. This is similar to the explanations for mergers—several motivations exist but each needs to be evaluated separately. Reasons for restructuring include possible synergy (positive gives rise to mergers, negative, or bad fit to divestiture), tax motivation, asymmetric information, the goals pursued by managers of firms and the impact of regulatory constraints.

In addition to the general economic explanations for restructuring, there are circumstances applicable to particular industries, and this is especially true for real estate. The market frequently underestimates the contribution of the real estate assets to the value of the firm having extensive holdings. Consequently, the stocks of such firms trade at prices lower than justified by their intrinsic worth. While the discrepancy between accounting and current values is widely acknowledged and applicable in many industries, it is particularly true with firms having extensive real estate assets. Palmon and Seidler (1978) note the lower of cost or market valuation basis. They report a depreciated historical cost for



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real estate assets which “combines to mislead investors in the opinion of the managements, and causes share prices to be unduly depressed”. If stocks derive part of their value from real estate assets, then to further stock maximization it would be necessary to divest those real estate holdings. The market value of the assets will be disclosed at the time of the transaction, and if this has

been underestimated then the stock price will change (increase) when the assets are divested.

The central issue is whether the market accurately incorporates the value of real estate assets in pricing stocks. To the extent that all public (accounting and non-accounting) information does not enable the market to accurately price real estate values, there may be a market reaction at the time of divestiture even with semi-strong efficient markets.

This paper examines the stock price reaction to announcements by publicly traded firms that they are involved in realignment deals involving real estate assets. By examining 85 such transactions, value adjustments are identified.

Sell-offs

The divestiture of operations can be accomplished by sell-off or spin-off transactions. Although both result in the separation of the divested operations from the firm, they are two distinct types with different procedural, legal and economic characteristics.

The sell-off is the most frequently employed, and the mechanics are straightforward. A deal is negotiated, and the selling/divesting firm transfers ownership and control to the buying/acquiring firm. The consideration is typically cash or debt securities and negotiations can extend over a protracted period with several potential acquirers negotiating before a sale is finalized.

A spin-off is a separation where ownership of a unit of the divesting (parent) firm is transferred to a separate company and becomes directly owned by stockholders of the parent corporation. The majority of spin-offs are pro rata distributions, with ownership rights in the spun firm distributed to stockholders of the parent corporation as a dividend. There is no negotiation with another firm, although IRS ruling on the tax status of the transaction is typically sought. The newly separated firm is a corporation in the majority of cases, but recent real estate spin-offs have distributed ownership in the forms of trusts (e.g., Dillingham Corp.), and master limited partnerships (e.g. Newhall Land and Farming Co.).

While the term liquidation is most frequently used in the context of financial distress, there is an important restructuring strategy termed a voluntary liquidation. This is where the management of a firm decides to liquidate all or part of the firm by selling the assets and distributing the proceeds to stockholders. The decision to distribute the sale proceeds is the feature that distinguishes a liquidation from a sell-off. In the later case, the proceeds are kept by the firm and presumably redeployed into other investments. A voluntary liquidation can be total (the firm ceases to exist) or partial. A voluntary liquidation can be regarded as the extreme form of sell-off.

As previously indicated, value change from the sell-off divestiture of real estate assets may occur for a number of reasons. For example, generally accepted accounting practices may mislead investors to the intrinsic worth of real estate assets, and if other information does not

compensate, then the disclosure of a market value at the time of the transaction may result in a price revision. Another reason relates to tax benefits. If the tax basis of real estate assets is low, it gives rise to minimal tax shields. Yet if the value of the assets is high, it provides an extensive tax shield to a buyer at current market values. Depending on characteristics of the market for real estate assets and their associated tax shields, the selling firm may derive some of the value of the increased tax shields resulting from the sale. The tax code is such that there are several potential tax benefits associated with voluntary liquidations.

The synergy that results from combining different types of operations may be positive, negative or zero. Negative synergy can be undone by getting back to basics (what a firm does best) and specializing. For example, a firm that combines manufacturing with real estate holdings may not optimize the value of its real estate assets, and the company would increase in value if it sold its real estate assets (to a firm able to maximize the value associated with their use) and concentrated on manufacturing. The perspective of a firm, as set of contracts gives rise to further insights, relate to observations of this nature.² If the optimal set of contracts is a function of the type of assets (in place and future) of a firm, then there may be a value increase associated with a realignment of the assets and associated investment opportunity set, owned by a given corporation.³

Sample

The sample for this study includes corporations that were parties to transactions involving the realignment of ownership of real estate assets. The returns data employed were from the CRSP⁴ daily files, and the analysis restricted to firms listed on the New York or American Stock Exchanges. The sell-off subsample was identified by examining transactions reported in the Sell-off

TABLE 1

Distribution of the 88 Real Estate Asset Sell-off Transactions Over the Period Examined.

<u>Year*</u>	<u>Number of Transactions</u>
1968	2
1969	2
1970	9
1971	20
1972	14
1973	3
1974	5
1975	2
1976	3
1977	3
1978	7
1979	5
1980	10
1981	3
	<u>88</u>

*Year in which the transaction press announcement was made.

Column in *Mergers & Acquisitions* for the period 1968-1981, and identifying those relating to real estate. This gave a preliminary sample of 88 transactions, but sample selection criteria and data requirements resulted in the exclusion of 17 from the analysis. Table 1 provides the distribution of the transactions over the interval covered by this study. The 71 remaining transactions included sellers in 55 cases, and acquirers in 16 cases.

For each transaction identified from *Mergers & Acquisitions*, further details of the transaction were sought from the *Wall Street Journal* and *Funk & Scott*. Since daily returns are employed in the analysis, a requirement was that the day of first public disclosure (the press date) relating to the transaction could be identified. For some transactions, a separate date when the transaction was finalized (completion date) could be identified, but this was not a requirement for inclusion in the sample. When a transaction was announced as a completed deal, then the press and completion dates were simultaneous. When other material events occurred around the real estate realignment event, that transaction was excluded from the sample. Our sample only includes completed transactions. When negotiations were disclosed, but later terminated without a deal being finalized, the transaction was excluded from the analysis.

Methodology

The details of the methodology are provided in the appendix, and what follows here is an outline of the techniques used. The research employs an event study perspective to identify the stock price reaction associated with the disclosure that a firm is involved in a transaction involving the realignment of real estate assets. For each transaction, the press date is denoted day 0, and the analysis for each transaction is centered around this event. Abnormal stock price reactions around the event date are generated for each transaction, aligned in event time (i.e., relative to day 0, regardless of the calendar dispersions of the dates), averaged across transactions in the sample and tested to see if they are statistically different from zero. Abnormal returns are identified over an event window surrounding the event. This extends from 50 trading days before the event to 10 trading days after, and is denoted as $(-50,10)$. This 61 trading day interval covers approximately three calendar months.

The abnormal stock price reactions are stock price changes after the general movement of the market has been controlled, and they are measured as abnormal rates of return. For each day in the event window, this is the actual rate of return minus the predicted return day, given the market change that occurred. Given the clean of other events criterion used in sample selection, any non-zero abnormal returns are interpreted to be associated with the real estate asset realignment transaction. The predicted rates of return are generated by the market model. Using this framework, the relative volatilities (betas) and overall market movements are used in estimating the normal return for each day in the absence of firm-specific events such as the sell-off.

TABLE 2

Daily Average Prediction Errors (PE) and the Cumulative Sum of the Daily Average Prediction Errors (CPE). n is the size of each subsample

Day	Sellers (n = 55)		Buyers (n = 16)	
	PE	CPE	PE	CPE
-50	0.004	0.004	-0.005	-0.005
-40	0.001	0.011	0.006	0.002
-30	0.005	0.011	-0.002	0.021
-20	0.000	0.019	0.004	0.026
-10	0.001	0.002	-0.000	0.045
-9	0.007	0.009	0.014	0.059
-8	0.002	0.011	-0.013	0.046
-7	-0.004	0.007	0.004	0.050
-6	0.006	0.013	-0.000	0.050
-5	-0.003	0.010	-0.014	0.036
-4	0.000	0.010	0.004	0.040
-3	-0.000	0.010	-0.004	0.036
-2	0.010	0.020	-0.004	0.032
-1	0.005	0.025	0.017	0.049
0	0.003	0.028	-0.005	0.044
1	0.010	0.038	0.009	0.053
2	-0.003	0.035	-0.022	0.030
3	-0.001	0.034	-0.004	0.027
4	0.005	0.039	0.007	0.034
5	-0.001	0.038	-0.007	0.027
6	-0.006	0.032	0.006	0.033
7	0.004	0.036	-0.013	0.020
8	-0.002	0.035	0.003	0.023
9	-0.002	0.033	-0.008	0.015
10	-0.001	0.032	-0.012	0.003

Results

The results for sell-off transactions incorporate the analysis of 71 transactions. On average, sell-offs were associated with statistically significant positive abnormal returns. Over the 71 transactions, the average abnormal return accumulation over the interval starting at day -5 and ending with the press day $(-5,0)$, was 1.00% (.010), and over the two-day event interval $(-1,0)$ 0.8%.³ Given the overall positive valuation changes associated with the real estate restructuring, the analysis now examines the partition of this incremental value between selling and acquiring firms.

Sellers

The average day by day abnormal returns (prediction errors) for selling firms, and their cumulation beginning at day -50 , are presented in columns two and three of Table 2. Cumulation over specified intervals is reported in column two of Table 3.

For sellers in these 55 transactions, the average increase in market value, after market movements are taken into account, is 1.4% in the week ending with the press announcement relating to the transaction. Over the two-day event interval, the controlled market value increases

by 0.7%, which is statistically significant at the 5% level. By day 0, the cumulative abnormal return from day - 50 is 2.8%, and in general this is maintained, the CPE at day 10 being 3.2%.

Acquirers

Details of the average abnormal return performance of acquirers are provided in columns 4 and 5 of Table 2, and column three of Table 3.

TABLE 3

Mean Cumulative Prediction Error (CPE) for Specified Intervals Relative to Press Date. Test statistics are in parenthesis. n is the size of each subsample.

Days in Interval	Seller Subsample (n = 55)	Acquirer Subsample (n = 16)
- 50 to 0	0.027 (1.17)	0.044 (1.16)
- 5 to 0	0.014 (1.43)	- 0.005 (- 0.17)
- 1 to 0	0.007 (1.75)*	0.012 (1.93)*
+ 1 to + 5	0.011 (1.00)	- 0.017 (- 0.87)

*Significant at 5% level

As in the case of sellers, on average, acquirers experience increases in value around the time of the transaction. However, the small subsample size (16) means that these results must be interpreted with caution. For example, when examining reasons for the decline in post event CPE (from 4.4% at day 0, to 0.30% at day + 10), it was found that this is primarily the result of the post event return patterns of two companies in the sample. These lost 44% and 22% of their value (respectively) in the interval between press and completion dates, and in neither case did this appear to be related to the sell-off transaction.

Interpretation

We identified significant upward revision of values associated with the sell-off of real estate assets, and this incremental value was shared by both sellers and acquirers. In the case of the latter, the small subsample size resulted in cautiously interpreting the findings.

These value increases associated with real estate asset restructuring are consistent with the hypothesis that firm values increase when real estate asset ownership is realigned and information provided about their separable values. However, the findings cannot be interpreted as supporting the notion that real estate assets (in place) are undervalued to a greater extent than other types of assets. When examining a general sample of sell-offs, Hite and Owers (1984) found average two-day (- 1,0) abnormal returns for seller firms of 1.40% and for acquirer firms of 0.90%

In an analysis of the separation/divestiture of real estate assets by spin-off, Hite, Owers, and Rogers (1984) identified two-day event interval average abnormal returns of 5.7% (test statistic 10.27). This is materially larger than the overall 1.0% two-day event interval for all sell-off transactions. With a spin-off, there is not an arms length, market determination of asset values, but rather a value is placed on the separate pieces of the parent for purposes of partitioning the tax basis. Thus, it could be claimed that a sell-off and the associated market bargaining process would provide more new information about the separate value of real estate assets than the partitioning of value associated with a spin-off. Our findings are not consistent with this, but drawing conclusions regarding the relative disclosure of information with the two types of restructuring is complicated by the differing tax implications.

Spin-off transactions frequently have tax motivations associated with them.⁶ For example, in May 1971 The Prudential Real Estate Trust transferred its oil and gas properties to a subsidiary (Petrox Industries) as part of a plan to requalify as a real estate investment trust (REIT). In July 1982, Masonite Corp. spun off its timber and sawmill properties in the form of a master limited partnership. Depository receipts were distributed to stockholders and became publicly traded. The overall effect was to reduce the total tax burden on the sell-off/liquidation of the timber properties. In contrast to a spin-off, a sell-off realignment will frequently result in a realized gain on which taxes will be payable. While the higher basis will provide higher depreciation tax shields for the acquirer in sell-off transactions, the net tax benefit from the transaction will be reduced by taxes on gains payable by the seller, and will be bounded by the fact that the acquirer will not pay a higher price simply because of tax shields—the acquisition must be a viable investment project.

Consequently, as a result of the different tax consequences, we are unable to draw conclusions regarding the relative information disclosure associated with real estate asset realignment by sell-off and spin-off. The smaller magnitude of valuation revisions associated with sell-offs suggests that spin-offs may result in more disclosure, despite the lack of market negotiations. Or the incremental information disclosure may be equivalent for both types of transactions, but the disadvantageous relative tax status of sell-offs may result in the smaller valuation revisions observed.⁷

Conclusion

This paper reviewed the issues relating to the undervaluation of real estate assets when incorporated along with other assets, and outlined the potential sell-off transactions to give rise to upward revision of real estate asset values.

Within the valuation context, a sample of 71 sell-off transactions were examined and upward revision of stock values were identified for both sellers and acquirers in sell-off transactions. However, after relating the

findings of this paper to general samples of sell-off transactions, we do not interpret our sell-off results as supporting the hypothesis that real estate assets are undervalued when in place to any greater extent than other types of assets. The findings of this study also were contrasted with those from the examination of real estate asset realignment by spin-off, and identified the different tax implications of the two types of restructuring. The smaller stock price changes in the case of sell-offs may result from differences in tax effects, information disclosure or relative sizes of transactions.

NOTES

1. See The Midland Corporate Finance Journal, Vol. 2 for an examination of restructuring activity in recent years.
2. See Jensen and Mechling (1976), Myers (1977) and Smith and Warner (1977) for the original formalization of the concepts.
3. See Hite, Owers, and Rogers (1984) for an analysis of these concepts in the context of real estate operations.
4. Center for Research in Security Prices, University of Chicago.
5. The press day is when a report on a transaction first appears in the *Wall Street Journal*. Thus the immediate event related impact on security prices can occur on day -1 or day 0, depending on the time of day when the press release was made. If before 4 pm on day before press date (i.e. day -1), the immediate price reaction will be reflected in changes in stock price on day -1. If the press release is after 4 pm on day -1, the market will be closed, and the immediate impact will be reflected in trading on the day after the release—i.e., day 0.
6. Tax motivations are not typically cited as major incentives for spin-off transactions because that would assist the IRS in having the transaction classified as a tax device rather than a restructuring motivated by business reasons.
7. We recognize the differences in magnitudes also may be a function of the relative sizes of the transactions. A complete analysis of this is complicated by the different disclosure requirements relating to

these transactions. With spin-offs, relative sizes of the separated pieces are disclosed in required capital-changes filings, whereas with a sell-off transaction, the price of the assets transferred always is not disclosed.

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APPENDIX Methodological Details

The series of abnormal returns (prediction errors) over the 61 trading day interval from 50 before the press day to 10 trading days after (-50, +10) is derived and analyzed.

It is assumed that the one-factor market model (1) is a valid representation of the return generating process.

$$\bar{R}_{jt} = \alpha_j + \beta_j \bar{R}_{mt} + \bar{\epsilon}_{jt} \quad (1)$$

where:

\bar{R}_{jt} = The rate of return on security j over the period t, the unit being one trading day.

\bar{R}_{mt} = The rate of return on the value weighted market portfolio over day t.

β_j = Covariance ($\bar{R}_{jt}, \bar{R}_{mt}$) / Variance (\bar{R}_{mt})

α_j = $E(R_j) - \beta_j E(R_{mt})$

ϵ_{jt} = The residual return on security j in period t. The assumptions relating to $\bar{\epsilon}$ are:
 $E(\bar{\epsilon}_{jt}) = 0$, $\text{Var}(\bar{\epsilon}_{jt}) = \sigma^2(\bar{\epsilon}_j)$, $\text{Cov}(\bar{\epsilon}_{jt}, \bar{R}_{mt}) = 0$

Use of the model is based on the bivariate normality of security and portfolio returns.

The parameters of the market model were estimated over the interval (-200, -51). For each trading day in (-50, +10), the prediction error for firm j is:

$$\epsilon_{jt} = PE_{jt} = R_{jt} - (\hat{\alpha}_j + \hat{\beta}_j R_{mt}) \quad (2)$$

where $\hat{\alpha}$ and $\hat{\beta}$ are estimated over (-200, -51).

For each trading day t , $t \in (-50, 10)$, the average prediction error is defined as:

$$APE = (1/N_t) \sum_{j=1}^{N_t} PE_{jt} \quad (3)$$

where:

N_t = the number of firms with an abnormal return defined in day t .

The cumulate average prediction error is defined as:

$$CAPE_T = \sum_{t=-50}^T APE_t \quad (4)$$

The cumulative average prediction error over the interval t_1 to t_2 inclusive is

$$CAPE = \sum_{t=t_1}^{t_2} APE_t \quad (5)$$

and the interval has length $L = t_2 - t_1 + 1$.

To test the null hypothesis of zero abnormal returns in event day t , the following t-statistic is calculated:

$$t = APE_t / \sigma_t \quad (6)$$

where:

$$\sigma_t = (1/60) \left\{ \sum_{i=-50, i \neq t}^{10} (APE_i - (\sum_{i=-50}^{10} APE_i / 60))^2 \right\}^{1/2}$$

To test the null hypothesis of zero abnormal return accumulation over specified intervals (t_1, t_2) , the Z test statistic of the following derivation is employed. The standardized abnormal return for the firm j in period t is defined as:

$$SPE_{jt} = PE_{jt} / \sigma(PE_{jt}) \quad (7)$$

where:

$$\sigma^2(PE_{jt}) = \sigma_{\epsilon}^2 \left(1 + (1/n) + \frac{(R_{mt} - \bar{R}_m)^2}{\sum_{\tau=1}^n (R_{m\tau} - \bar{R}_m)^2} \right)$$

σ_{ϵ}^2 = estimated variance of the disturbance term from the OLS estimation of the market model for security j .

\bar{R}_m = the mean return on the value weighted market portfolio over the parameter estimation interval for security j .

n = The number of observations (length of the interval) over which the parameters are estimated ($n = 100$).

The average standardized prediction error over N firms in day t is defined as:

$$ASPE = (1/N) \sum_{j=1}^N SPE_{jt} \quad (8)$$

and the average standardized prediction error over the interval I (with trading day extreme t_1 and t_2), is:

$$ASPE = (1/L) \sum_{t=t_1}^{t_2} ASPE_t \quad (9)$$

where $L = t_2 - t_1 + 1$.

The cumulation of average standardized prediction errors over the interval I is:

$$CASPE_I = \sum_{t=t_1}^{t_2} ASPE_t \quad (10)$$

When the number of firms (N) is sufficiently large, the statistic defined in (11) and (12) has a distribution that approximates the standard normal. This statistic is employed to test the null hypotheses of zero abnormal accumulation of returns over a specified interval relative to the event.

$$Z = \frac{ASPE_L}{\left[\frac{(n-2)}{(n-4)} \right]^{1/2} (NL)^{1/2}} \quad (11)$$

$$= \left[\frac{N}{L(n-4)} \right]^{1/2} (CASPE_t) \quad (12)$$

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