Asset sales, firm performance, and the agency costs of managerial discretion

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(Received May 1992; final version received February 1994)

Abstract

We argue that management sells assets when doing so provides the cheapest funds to pursue its objectives rather than for operating efficiency reasons alone. This hypothesis suggests that (1) firms selling assets have high leverage and/or poor performance, (2) a successful asset sale is good news, and (3) the stock market discounts asset sale proceeds retained by the selling firm. In support of this hypothesis, we find that the typical firm in our sample performs poorly before the sale and that the average stock-price reaction to asset sales is positive only when the proceeds are paid out.

Key words: Asset sales

JEL classification: G3; L2

1. Introduction

Existing empirical evidence shows that asset sale announcements are associated with positive stock-price reactions. Alexander, Benson, and Kampmeyer (1984), Hite, Owers, and Rogers (1987), and Jain (1985) document significant average abnormal returns between 0.5% and 1.66%. The theory advanced in the

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Respectively, Reader, Chinese University of Hong Kong, Augustus H. 'Billy' Sterne Chair in Banking and Finance, University of Georgia, and Ralph Kurtz Chair in Finance, The Ohio State University, and NBER. We are grateful for useful comments from David Brown, Gailen Hite, Ravi Jagannathan, Michael Jensen, David Mayers, Robert McCormick, Craig Lewis, Jeffry Netter, Tim Opler, Eli Ofek, participants at seminars at Clemson University, New York University, the University of Michigan, the WFA meetings in San Francisco, the AFA meetings in Anaheim, and especially Harry DeAngelo (the referee).
literature to explain this empirical evidence, most explicitly by Hite, Owers, and Rogers (1987), is that asset sales promote efficiency by allocating assets to better uses, and sellers capture some of the resulting gains. With this view, which we call the efficient deployment hypothesis of asset sales, managers only retain assets for which they have a comparative advantage and sell assets as soon as another party can manage them more efficiently irrespective of their financial situation; stockholders benefit from asset sales equally of whether managers re-invest the proceeds or pay them out.

In this paper, we advance an alternative explanation for asset sales. We take as our starting point that management values firm size and control, so that it is reluctant to sell assets for efficiency reasons alone. For such management, a more compelling motivation to sell assets is that asset sales provide funds when alternative sources of financing are too expensive, possibly because of agency costs of debt or because information asymmetries make equity sales unattractive. With this view, which we call the financing hypothesis of asset sales, the completion of an asset sale is good news about the value of the asset because if the value of the asset had turned out to be low, the sale would not have taken place. Further, one expects the market to discount proceeds of asset sales retained by the firm in the presence of agency costs of managerial discretion since shareholders do not capture all of the value of the asset sold.

Our main empirical results are consistent with the financing hypothesis of asset sales rather than with the efficient deployment hypothesis. First, we show that firms selling assets tend to be poor performers and/or have high leverage. In particular, for our sample, median net income normalized by total assets is insignificantly different from zero in the year before the sale, even though we exclude from the sample bankrupt firms and firms in default. This result suggests that the typical firm selling assets is motivated to do so by its financial situation rather than by the discovery that some other firm has a comparative advantage in operating the assets. Second, contrary to the efficient deployment hypothesis, we find that the stock-price reaction to successful asset sales is strongly related to the use of the proceeds. In our sample, the stock-price reaction to asset sales is significantly positive for those firms expected to use the proceeds to pay down debt, but negative and insignificant for firms which are expected to keep the proceeds within the firm.

Section 2 develops the financing hypothesis in greater detail and discusses the existing empirical evidence. Section 3 presents our sample of large asset sales. In Section 4, we investigate the characteristics of the firms in our sample and show that they are consistent with the financing hypothesis. In Section 5, we show that

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1In addition, as argued by Boot (1992) and Weisbach (1993), management might be reluctant to sell because doing so might reveal that it made poor investment choices. Weisbach (1993) shows that divestitures are concentrated around management changes.
abnormal returns associated with asset sale announcements differ substantially between firms that have performed poorly and use the proceeds to repay debt and those that do not. Section 6 uses cross-sectional regressions to explore the robustness of our main results. Concluding remarks are presented in Section 7.

2. The financing hypothesis

The efficient deployment hypothesis assumes that management maximizes shareholder wealth. In contrast, the financing hypothesis assumes that management pursues its own objectives and, more specifically, values control and firm size. Since it values firm size, management has little incentive to sell assets unless it needs to raise funds and cannot do so cheaply on capital markets. Management may have to raise funds to reduce financial distress costs, to pay dividends to shareholders to prevent a takeover, or to undertake investments that it values but shareholders do not.

Why would selling assets be an efficient source of new funds? Consider a firm where management wants to raise funds to pursue its own objectives but cannot sell low-risk debt because the firm has high leverage and/or poor performance. Outsiders know that the firm wants to raise funds. Such a firm may find it expensive to use the capital markets for at least three reasons: First, it may face the underinvestment problem described by Myers (1977) or the asset substitution problem analyzed by Jensen and Meckling (1976). Second, raising outside funds may be costly because of the adverse selection costs modeled by Myers and Majluf (1984). Third, the cost of outside funds may be high because of agency costs of managerial discretion. In particular, if management is expected to use new funds to pursue objectives of doubtful value, capital providers require a higher promised rate of return or restrictions on the use of funds.

Asset sales may provide a source of funds that managers find preferable to capital markets despite high transaction costs. First, informational asymmetries may be less important for the asset the firm wants to sell than for the firm as a whole. Second, if the firm's debt overhang is large, selling an asset may avoid the recapitalization costs that would have to be paid to raise funds on capital markets. Third, if management pursues its own objectives, selling an asset provides funds with potentially fewer restrictions on managerial discretion.

Of course, managers trying to sell an asset to obtain cheaper funds than on the capital markets may fail. The sale price they can obtain after shopping the asset may be too low to justify selling it, either because the asset is worth too little to outsiders relative to its value in its current use or because, as emphasized by Shleifer and Vishny (1992), a quick asset sale may require a large discount.

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because of limited liquidity. Hence, if the firm succeeds in selling the asset at a price that makes the transaction worthwhile, this is good news about the asset's value even if it is known that managers want to sell the asset to raise funds.

If the intended use of the proceeds is a positive NPV project for the shareholders, and if the firm does not have a more advantageous source of funds, a successful asset sale means that the firm can carry out the positive NPV project with the cheapest available funds. For some firms, however, the sale proceeds could be put to uses that do not increase shareholder wealth, so that the good news about the value of the asset sold is tempered or negated by the expectation that some of the proceeds will be wasted by management. For instance, a firm whose core operations are suffering massive losses and should be changed dramatically may sell assets to finance these losses to avoid making necessary changes. Hence, for firms where agency costs of managerial discretion are important, the stock market views asset sales where the proceeds are paid out to debtholders or shareholders more favorably than those where the proceeds are kept within the firm.

3. The sample of asset sales and the use of the proceeds

To investigate the financing hypothesis, we have to identify the use of the proceeds from asset sales, since this hypothesis specifies that the stock-price effect of the announcement of asset sales is related to the use of the proceeds. In this section, we describe our sample and our evidence on the use of the proceeds. We investigate asset sales reported to the SEC in 8K forms as identified through the NEXIS database. NEXIS reports all 8K filings from October 1988 but only selected abstracts are included from 1985 through October 1988. The 8K form requires that the registrant furnish specific information if it or '... any of its majority-owned subsidiaries has acquired or disposed, of a significant amount of assets, otherwise than in the ordinary course of business'. Hence, asset sales reported in 8K forms are ideally suited to address the issues raised in this paper, since the firm deems the sale to be both significant and unanticipated. In particular, the sample selection criteria exclude asset sales programs and make the sample more appropriate to investigate the financing hypothesis.

We identify 151 asset sales taking place from 1984 to 1989 for firms which have data available on the Compustat files. We want to study voluntary asset sales and therefore eliminate firms that are in default, in a corporate control contest, in voluntary or involuntary liquidation, or that have filed for

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3The NEXIS search used the key words 'asset' within ten words of 'sale', and 'divestitures'.
reorganization under Chapter 11.\footnote{Brown, James, and Mooradian (1993) study asset sales of firms in default. They find that asset sales of firms in default where the proceeds are paid out to creditors typically benefit creditors at the expense of shareholders.} Further, we omit all asset sales of less than $1 million. Finally, we eliminate all firms for which stock returns could not be found on the CRSP files for NYSE and AMEX stocks. Of the 151 asset sales, 93 sales made by 77 firms satisfy our additional criteria. The Appendix provides detailed information on each sale in our sample; the reader can refer to this Appendix when we mention specific sales in our discussion. The average number of asset sales per year (15.3) in our sample is substantially smaller than in the Jain (1985) sample, but substantially larger than in the Alexander, Benson, and Kampmeyer (1984) and Hite, Owers, and Rogers (1987) samples. We use as the announcement date the earliest of the following three dates: (1) the Wall Street Journal (WSJ) announcement date (44 cases), (2) the Dow Jones News Retrieval Service announcement date (25 cases), (3) the agreement date as reported by the 8K filing (24 cases).

Since we are interested in the differences between firms that are expected to pay out the proceeds and those that are not, we use information from the 8K filings, annual reports, the S&P Standard Stock Reports, and the WSJ to determine why the asset was sold and how management expects to use the proceeds. The sample has 40 asset sales by 35 firms with proceeds paid out to creditors and/or shareholders and 53 sales by 43 firms with proceeds retained by the firm (one firm makes one sale of each type). We call the sample of 40 sales the 'payout sample' and the sample of 53 sales the 'reinvest' sample throughout the paper. For 22 asset sales by 18 firms in the payout sample, information about the use of the proceeds is given by the 8K filing or press articles contemporaneous with the announcement.\footnote{Of these 22 sales, there are 12 cases where the source for the announcement date is the WSJ or the Dow Jones Wire and the use of funds is given in the WSJ and four cases where the announcement date is the date of the 8K filing and the 8K form gives the use of funds. In the remaining six cases, the announcement is the Dow Jones Wire and the use of funds is from the 8K form filed on the same day.} For the other 18 asset sales in the payout sample, our sources describing the use of funds are later than the sale announcement. These sources are the annual report (12 times), an 8K filing subsequent to the announcement date (four times), or the S&P Standard Stock Reports (two times).

If the financing hypothesis applies to the sales in our sample, we would expect the proceeds paid out to be used to pay down debt rather than to distribute cash to shareholders. If a firm is excessively levered in management’s eyes, management has a strong motivation to sell assets to reduce leverage and avoid possible costs of financial distress. In contrast, management that values size and control seems unlikely to want to pay out the proceeds to the shareholders in the absence of pressures from the market for corporate control. Evidence that
management tends to pay out the proceeds to shareholders would seem consistent with the absence of agency costs of managerial discretion and supportive of the efficient deployment hypothesis which implies that management pays out to shareholders funds it cannot invest profitably within the firm. We have only five cases where there is evidence that management plans to pay some of the proceeds to shareholders: Allied-Signal, Culbro Corp., Federal Mogul, Koppers Co., and Union Carbide. Since we have only five observations where shareholders receive some of the proceeds directly, we cannot investigate this subsample separately in the following analysis and treat it as part of the sample of firms that pay out the proceeds. The results in this paper do not depend on these five observations.

Even when there is no indication that management expects to pay out part of the proceeds to shareholders, there could still be an indirect connection between asset sales and payouts to shareholders. For instance, management could sell assets to replenish liquid assets used for repurchases or to repay debt incurred to finance share repurchases; alternatively, it could change its mind about the use of the proceeds after the sale and repurchase shares. A careful reading of the case histories provided in the Appendix shows that the evidence in favor of an indirect connection is limited. After the sale, only two firms not paying out proceeds, John Fluke and Varo Inc., announced that they would undertake a stock repurchase. For ten firms paying out proceeds, there are repurchase announcements in the year before the sale. Six of these repurchases are targeted repurchases where the company buys out a major shareholder, raising suspicion of entrenchment.

There is some indication, though, that dividend payments may be affected by asset sales in our sample. Irrespective of the use of the proceeds, approximately twice as many firms increase dividends in the year after the sale compared to the 12 months before the sale (five relative to three for firms that pay out proceeds; 11 relative to five for those that do not). Two firms that pay out the proceeds decrease dividends in the 12 months before the sale and one in the following 12 months. In contrast, three firms that retain the proceeds reduce dividends in the year before the sale and one does so in the year following.

In our sample, firms provide a number of different reasons for selling assets. In some cases, they sell assets explicitly to reduce debt. In other cases, they give other reasons to sell assets, but still pay out the proceeds. If a firm sells an asset and pays out the proceeds, though, the asset sale typically reduces the firm's diversification. If the asset is an unrelated division, it necessarily does so. To avoid this mechanical relation between paying out the proceeds and greater firm focus, we explore separately management's motivation for the sale for the firms which retain the proceeds. For the 53 sales made by firms that do not plan to pay out the proceeds, the following reasons for undertaking the sales are given for at least five sales in our sample:
(1) Focusing on core businesses. For instance, Warner Communications Inc. sold Franklin Mint in 1984 because this business was not part of its core businesses. In total, we have 15 firms (21 asset sales) where this motivation is prevalent.

(2) Selling unprofitable or slow-growing businesses. An example of this is the sale of United Inns Inc.'s car wash business in 1988 for $17 million. Thirteen firms (14 asset sales) fit this explanation.

(3) To finance acquisitions or expansion. Primark Corp. sold its TV leasing business for $37.9 million in 1988 to generate cash for a pending acquisition. This explanation seems appropriate for six firms (nine asset sales).

It is noteworthy that many companies seem to sell assets while engaged in a program of acquisitions so that the asset sales provide cash for these programs, even though management may motivate the asset sale using different considerations, such as eliminating unprofitable divisions or focusing on core activities. These cases are certainly consistent with the view that management might be raising funds to pursue its own objectives. An example of such a sale is the sale by Canal Capital Corp. of its stockyard business for close to $7 million in 1989. The annual report mentions that the stockyard business was not profitable, but at the same time the firm had moved (according to its annual report) from a stockyard firm to a diversified firm interested in real estate development, trading securities, and investing in ancient art!

Table 1 summarizes the characteristics of the sales for our whole sample and for the two subsamples formed according to the use of the proceeds. It is immediately apparent that our sample selection procedure is successful in identifying asset sales that are significant for the selling firms. The median asset sale in our sample represents 23% of the value of the selling firm's equity. There is a significant difference (at the 0.01 level) between the median sale proceeds as a fraction of the equity value for firms that pay out proceeds (42%) and the other firms (13%). The difference in the size of the sale relative to equity is partly due to the fact that the median market value of equity for the firms in the reinvest sample is higher than for the firms in the payout sample. There is no significant difference, however, between the median book values of total assets of the two groups of firms. Finally, we report the average accounting gain or loss on sale, which turns out to be small for the typical firm regardless of the use of the proceeds. Evidence of an average accounting loss on sale would indicate that firms mostly sell losers and might be supportive of the efficient deployment hypothesis of asset sales.

4. Firm characteristics and the financing hypothesis

With the financing hypothesis, firms selling assets are firms for which raising funds on capital markets is likely to be expensive because of high leverage
Table 1
The sample of 93 significant asset sales from 1984 to 1989

The sales are obtained from inspection of 8K forms. The accounting loss on the sale is from the 8K form. All other data are obtained from Compustat and CRSP tapes. The Compustat data are from the year preceding the asset sale. The market value of equity is for six days before the announcement date. *, **, and *** denote significance of the t-test for the difference in the means between the two subsamples at the 0.1, 0.05, and 0.01 levels respectively. (In parentheses we report the significance level for the median test.)

<table>
<thead>
<tr>
<th></th>
<th>Whole sample (93 sales)</th>
<th>Payout sample (40 sales)</th>
<th>Reinvest sample (53 sales)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (Median)</td>
<td>Mean (Median)</td>
<td>Mean (Median)</td>
</tr>
<tr>
<td>Value of sale (million $)</td>
<td>120.68 (32.50)</td>
<td>129.04 (50.50)</td>
<td>114.00 (22.00)</td>
</tr>
<tr>
<td>Market value of equity (million $) (**)</td>
<td>904.78 (150.45)</td>
<td>740.30 (110.00)</td>
<td>1028.92 (292.64)</td>
</tr>
<tr>
<td>Value of sale/Value of equity <strong>(</strong>*</td>
<td>0.69 (0.23)</td>
<td>1.32 (0.42)</td>
<td>0.18 (0.13)</td>
</tr>
<tr>
<td>Total assets (TA) (million $)</td>
<td>1470.48 (348.93)</td>
<td>1588.04 (348.93)</td>
<td>1387.21 (366.05)</td>
</tr>
<tr>
<td>Value of sale/TA <em><strong>(</strong></em>)</td>
<td>0.11 (0.09)</td>
<td>0.17 (0.13)</td>
<td>0.07 (0.06)</td>
</tr>
<tr>
<td>Gain on sale/Market value of equity (**)</td>
<td>-0.95% (0.19%)</td>
<td>2.23% (1.41%)</td>
<td>-3.25% (0.00%)</td>
</tr>
</tbody>
</table>

and/or poor performance. In this section, we investigate the characteristics of the firms in our sample and whether they are consistent with the financing hypothesis. We also seek to understand how the firms that pay out the proceeds differ from those that do not, since the financing hypothesis implies that firms that pay out the proceeds will do so because of excessive leverage.

In Table 2, we provide data on the firms which made the 93 asset sales in our sample. Although we report both means and medians, we focus on the medians because the sometimes large difference between means and medians indicates that the distribution of the variables is not symmetric, and hence the medians are likely to be more informative about the typical sample firm. The median interest coverage is 2.53, but firms in the payout sample have a lower coverage ratio than firms in the reinvest sample. The median coverage ratio of firms that pay out the proceeds is 1.56, indicating that earnings for the typical firm exceed interest payments by 56%. In contrast, the median coverage ratio for the reinvesting firms exceeds 3. Hence, the typical firm paying out the proceeds is
Table 2
Firm characteristics for a sample of 93 significant asset sales from 1984 to 1989

The sales are obtained from inspection of 8K forms. Managerial ownership is obtained from proxy statements. All other data are obtained from Compustat and CRSP tapes. The Compustat data are from the year preceding the asset sale. The market value of equity is for six days before the announcement date. The net of market abnormal return is the return on the firm minus the return on the market portfolio. *, **, and *** denote significance of the t-test for the difference in the means between the two subsamples at the 0.1, 0.05, and 0.01 levels respectively. (In parentheses we report the significance level for the median test.)

<table>
<thead>
<tr>
<th>(A) Leverage characteristics of selling firms</th>
<th>Whole sample (93 sales)</th>
<th>Payout sample (40 sales)</th>
<th>Reinvest sample (53 sales)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (Median)</td>
<td>Mean (Median)</td>
<td>Mean (Median)</td>
<td></td>
</tr>
<tr>
<td>Interest coverage (EBIT/Interest payments) (***)</td>
<td>16.11 (2.54)</td>
<td>0.98 (1.56)</td>
<td>27.04 (3.38)</td>
</tr>
<tr>
<td>Short-term liabilities/TA</td>
<td>0.32 (0.29)</td>
<td>0.35 (0.28)</td>
<td>0.30 (0.29)</td>
</tr>
<tr>
<td>Short-term debt/TA</td>
<td>0.09 (0.05)</td>
<td>0.11 (0.07)</td>
<td>0.07 (0.04)</td>
</tr>
<tr>
<td>Long-term debt/TA</td>
<td>0.27 (0.21)</td>
<td>0.31 (0.28)</td>
<td>0.23 (0.20)</td>
</tr>
<tr>
<td>Long-term + Short-term debt/TA (*)</td>
<td>0.36 (0.31)</td>
<td>0.42 (0.34)</td>
<td>0.30 (0.23)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(B) Performance characteristics of selling firms</th>
<th>Whole sample (93 sales)</th>
<th>Payout sample (40 sales)</th>
<th>Reinvest sample (53 sales)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (Median)</td>
<td>Mean (Median)</td>
<td>Mean (Median)</td>
<td></td>
</tr>
<tr>
<td>Net income/TA (**)</td>
<td>-0.01 (-0.01)</td>
<td>-0.03 (-0.02)</td>
<td>0.00 (0.01)</td>
</tr>
<tr>
<td>Operating income/TA (**)</td>
<td>0.09 (0.10)</td>
<td>0.07 (0.07)</td>
<td>0.10 (0.12)</td>
</tr>
<tr>
<td>Cumulative net of market returns ( -250 to -5 ) (**)</td>
<td>-6.25% (-10.97%)</td>
<td>-8.60% (-14.45%)</td>
<td>-4.48% (-3.75%)</td>
</tr>
<tr>
<td>Tobin's q (<strong>) (</strong><em>(</em>))</td>
<td>0.83 (0.73)</td>
<td>0.67 (0.67)</td>
<td>0.94 (0.87)</td>
</tr>
<tr>
<td>Managerial ownership as a fraction of total equity (****)</td>
<td>0.13 (0.08)</td>
<td>0.17 (0.12)</td>
<td>0.11 (0.05)</td>
</tr>
</tbody>
</table>

close to being unable to pay interest out of earnings. The firms paying down debt seem to have a powerful motivation to sell assets, providing evidence consistent with the financing hypothesis.

For the full sample, the average ratio of the sum of short-term and long-term debt to the book value of total assets, 0.36, is larger than the average ratio of 0.28
in Bernanke and Campbell (1988) for the 1986 universe of Compustat firms, providing some evidence that our sample firms have above-average leverage. Using the ratio of the book value of long-term debt to the book value of total assets, the median test results in no difference between the firms that intend to pay out the proceeds and those that reinvest. There is also no evidence that firms paying out the proceeds have significantly more short-term debt or short-term liabilities. However, the ratio of short-term and long-term debt to total assets is significantly higher for firms that pay out the proceeds for the mean and the median.

The firms in the sample perform poorly before the sale. Their average net income is negative and their median net income is trivially small. Their cumulative net of market return, computed as their return minus the market’s return over the period from day $-250$ to day $-5$, is negative. Their Tobin’s $q$ is also low. In addition, the performance of firms paying out the proceeds is significantly worse than the performance of the reinvest sample. The payout sample has significantly lower net income to total assets and operating income to total assets. In fact, the typical firm in the payout sample loses money in the year before the sale. Cumulative net of market returns are lower for the payout firms at the 0.05 level. The firms in the payout sample also have a significantly lower Tobin’s $q$ ratio than the firms in the reinvest sample, suggesting that firms that retain the proceeds have better investment opportunities.

Though asset sales by firms in distress have been studied in a number of recent papers (Asquith, Gertner, and Scharfstein, 1991; Brown, James, and Mooradian, 1993; Ofek, 1994), it is important to note that the firms in our sample were not selected because of distress or poor performance. Further, as explained earlier, we removed from the sample those firms that were bankrupt at the time of the asset sale announcement. Only one firm files a Chapter 11 petition in the year following the asset sale. Seven firms defaulted on their loans or restructured their debt in the year before the sale, four of these firms paid down debt from the proceeds. Two firms renegotiated loans in the year before the sale and both paid down debt with the proceeds. Two firms defaulted after the sale and both used the proceeds to pay down debt. Hence, the typical sale in our sample is not undertaken to cure a default or as part of a workout. The median firm is, however, a poor performer whose net income is just about zero and whose stock price is not keeping up with the market.

There is some weak evidence that being a takeover target makes it more likely that a firm will pay out the proceeds of an asset sale. In the 12 months preceding the asset sale, there is evidence of takeover activity for nine firms and five of these firms paid out the proceeds of the asset sale. Further, there is evidence of takeover activity for five firms following the sale and three of these paid out the proceeds.

The last row of Table 2 provides evidence on managerial ownership. If it turned out that managerial ownership for the firms selling assets and reinvesting
the proceeds is large, one might conclude that management's incentives are better aligned with shareholders' interests for these firms and hence be skeptical of the financing hypothesis. Table 2 shows that this concern is not important since the firms that reinvest the proceeds have lower managerial ownership than the firms that pay out the proceeds.

5. The stock-price effect of asset sales

In the previous section, we found that the firms selling assets are generally poorly performing firms with significant leverage. These results are supportive of the financing hypothesis. The financing hypothesis also predicts that the market discounts the proceeds of successful asset sales when the proceeds are reinvested. In this section, we investigate this hypothesis and compare the announcement abnormal returns for the payout sample and the reinvest sample. In most of the analysis of this section, we use the whole sample of firms paying out the proceeds even though for some firms the announcement of the use of the proceeds is made after the announcement of the completion of the sale. We therefore assume that investors have rational expectations at the time of the asset sale announcement, in the sense that, on average, they expect the proceeds to be paid out when a subsequent announcement to that effect is made. To the extent that the probability that such a statement will be made is less than one, the effect of the planned use of the proceeds on the announcement of the sale is reduced and our tests are less powerful.

In Table 3, we provide the cumulative market model prediction errors for two event windows around the announcement date. The first window includes the day before the announcement and the day of the announcement. The second window includes the 11 days centered on the announcement day. For the full sample, our finding of a significantly positive cumulative average return of 1.41% for days -1 and 0 is comparable to findings in earlier papers. We show, however, that this positive cumulative average return is due to the payout subsample. For this subsample, the cumulative average return for the short window is 3.92%. For the reinvest subsample, it is -0.48%. The average difference between the two subsamples is 4.40% with a t-statistic of 4.21. The difference between the medians of these two subsamples is 2.24%. The evidence for the longer window is similar. This evidence is strongly supportive of the financing hypothesis and contrary to the prediction of the efficient deployment hypothesis that the use of the proceeds should not matter since management always maximizes shareholder wealth.

The market model is estimated from 250 to 50 days before the announcement.
Table 3
Cumulative percentage abnormal returns for the whole sample and various subsamples for 93 asset sales undertaken from 1984 to 1989

The cumulative abnormal returns are obtained from market model prediction errors. z-statistics are given in parentheses for the means, p-values for the sign-rank test are given in square brackets, and p-values for the median test are given in curly brackets.

<table>
<thead>
<tr>
<th>From day –1 to day 0</th>
<th>From day –5 to day +5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Whole sample (93 sales)</td>
<td>1.41%</td>
</tr>
<tr>
<td></td>
<td>(3.61)</td>
</tr>
<tr>
<td>Payout sample (40 sales)</td>
<td>3.92%</td>
</tr>
<tr>
<td></td>
<td>(5.93)</td>
</tr>
<tr>
<td>Reinvest sample (53 sales)</td>
<td>–0.48%</td>
</tr>
<tr>
<td></td>
<td>(–0.43)</td>
</tr>
<tr>
<td>Difference between payout and</td>
<td>4.40%</td>
</tr>
<tr>
<td>reinvest samples</td>
<td>(4.21)</td>
</tr>
</tbody>
</table>

We see from Table 2 that firms paying out the proceeds are typically firms that have poorer performance (as measured by net income, operating income, or cumulative net of market returns before the sale) and higher leverage (as measured by long-term plus short-term debt and by interest coverage) than firms reinvesting the proceeds. This evidence raises an important question about the results of Table 3: Could it be that the abnormal returns differ between the payout and reinvest samples not because of the difference in the use of the proceeds but because of the difference in the financial health of the selling firms? A distressed firm could benefit from an asset sale irrespective of the use of the proceeds because the sale removes financial constraints. To investigate whether the positive abnormal returns of firms in the payout sample are due to financial distress rather than to the use of the proceeds, we provide in Table 4 mean and median cumulative abnormal returns for several subsamples of asset sales constructed using various indicators of poor performance. In successive panels, we classify firms as poorly performing if they (a) have negative news in the WSJ asset sale announcement, (b) have negative net income in the year before the sale, (c) have negative cumulative net of market returns for the period from 250 days to 5 days before the announcement, and (d) have a coverage ratio below the sample median.

In all subsamples in Table 4, the cumulative average abnormal return is higher for the firms classified as poorly performing. However, for the traditional window of days –1 and 0, the difference in cumulative average returns between the firms in the poorly performing subsamples and the other firms is never
Table 4
Cumulative percentage abnormal returns for subsamples formed according to firm performance indicators from a sample of 93 asset sales from 1984 to 1989

The cumulative abnormal returns are obtained from market model prediction errors. The net of market return is the firm return minus the market return. z-statistics for the means are given in parentheses, p-values for the sign-rank test are given in square brackets, and p-values for the median test are given in curly brackets.

<table>
<thead>
<tr>
<th>Subsamples From day -1 to day 0</th>
<th>From day -5 to day +5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td>(A)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>(A) <em>WSJ announcement includes negative news</em></td>
<td></td>
</tr>
<tr>
<td>Includes</td>
<td>2.31%</td>
</tr>
<tr>
<td>(50; 27)</td>
<td>(3.61)</td>
</tr>
<tr>
<td>Does not include</td>
<td>0.37</td>
</tr>
<tr>
<td>(43; 13)</td>
<td>(1.38)</td>
</tr>
<tr>
<td>Difference</td>
<td>1.94</td>
</tr>
<tr>
<td>(1.67)</td>
<td>{0.27}</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>(B) <em>Net income (year before the sale)</em></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>2.12</td>
</tr>
<tr>
<td>(37; 22)</td>
<td>(3.35)</td>
</tr>
<tr>
<td>Positive</td>
<td>0.13</td>
</tr>
<tr>
<td>(45, 12)</td>
<td>(1.54)</td>
</tr>
<tr>
<td>Difference</td>
<td>1.99</td>
</tr>
<tr>
<td>(1.11)</td>
<td>{0.27}</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>(C) <em>Cumulative net of market returns for the period from day -250 to day -5</em></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>2.15</td>
</tr>
<tr>
<td>(53; 26)</td>
<td>(3.38)</td>
</tr>
<tr>
<td>Positive</td>
<td>0.43</td>
</tr>
<tr>
<td>(40; 14)</td>
<td>(1.58)</td>
</tr>
<tr>
<td>Difference</td>
<td>1.72</td>
</tr>
<tr>
<td>(1.51)</td>
<td>{0.61}</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>(D) <em>Coverage ratio (EBIT)/Interest payments</em></td>
<td></td>
</tr>
<tr>
<td>Below median</td>
<td>1.62</td>
</tr>
<tr>
<td>(42; 23)</td>
<td>(2.71)</td>
</tr>
<tr>
<td>Above median</td>
<td>0.40</td>
</tr>
<tr>
<td>(39; 11)</td>
<td>(2.08)</td>
</tr>
<tr>
<td>Difference</td>
<td>1.22</td>
</tr>
<tr>
<td>(0.51)</td>
<td>{0.32}</td>
</tr>
</tbody>
</table>
significant. For the longer window of days $-5$ to $+5$, the mean average abnormal return is significantly higher for firms whose WSJ announcement includes negative news, for firms with negative net income for the year before the sale, and for firms with negative cumulative net of market returns for the year before the sale. Firms with coverage ratios lower than the sample median have cumulative abnormal returns insignificantly different from firms with higher coverage ratios.

Table 4 shows that dividing the sample according to performance indicators is not as successful as dividing the sample according to the use of the proceeds. Unfortunately, though, it is obvious from Table 4 that there is substantial overlap between the firms in the payout sample and those that exhibit poor performance and/or financial difficulties. This overlap does not affect the interpretation of the results for the shorter window since there the only way to split the sample to obtain a significant difference between abnormal returns is to divide the sample according to the use of the proceeds. However, for the longer window, dividing the data on the basis of firm performance indicators yields the result that poorly performing firms have greater abnormal returns than the other firms. To understand better the impact of firm performance and use of the proceeds on the stock-price effect, we divide the sample into four mutually exclusive groups in Table 5. We define firms as poorly performing if they have negative net of market cumulative returns the previous year, negative net income over the previous year, and/or a WSJ sales announcement that provides some evidence of difficulties, such as negative earnings. For the 11-day window, asset sales have a significant positive average stock-price reaction only for poorly performing firms in the payout sample. The poorly performing firms in the reinvest sample have an insignificant positive abnormal return which is significantly lower than the poorly performing firms in the payout sample. For firms not in the poorly performing subsample, firms in the payout sample have a higher abnormal return than firms in the reinvest sample. The same results hold with the two-day window, except that healthy firms in the payout sample have a positive significant stock-price effect that is significantly lower than the poorly performing firms in the payout sample. Given that there are only seven firms in the healthy payout sample, such a result has to be interpreted with caution.

A concern with Table 5 is that the sample of poorly performing firms in the payout sample might be dominated by firms that are facing immediate financial difficulties, so that the positive average abnormal return reflects the ability of these firms to sell assets successfully and hence reduce their financial difficulties. To investigate this possibility, we divided the sample into firms with a coverage ratio (EBIT divided by interest payments) above the sample median and firms with a coverage ratio below the sample median. We then compared stock-price reactions for firms with a coverage ratio below the sample median in the payout sample to similar firms in the reinvest sample. We found that the 18 asset
Eleven-day percentage abnormal returns for subsamples of asset sales formed on the basis of performance and use of proceeds from a sample of 93 asset sales from 1984 to 1989

Poorly performing firms are firms that have negative cumulative net of market returns for the period from day $-250$ to day $-5$, negative net income for the previous year, and/or a WSJ asset-sale announcement that provides some evidence of distress. For each cell, we report the mean, the median in parentheses, the z-statistic for the mean in square brackets, and in curly brackets the number of observations and the fraction of observations with a positive value. The lower right-hand cell gives the mean difference between troubled firms that pay out the proceeds and healthy firms that reinvest the proceeds.

<table>
<thead>
<tr>
<th>Sales in payout sample</th>
<th>Poorly performing firms</th>
<th>Healthy firms</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.16</td>
<td>(4.65)</td>
<td>(1.39)</td>
<td>[3.58]</td>
</tr>
<tr>
<td>1.16</td>
<td>(1.15)</td>
<td>(0.21)</td>
<td>[0.80]</td>
</tr>
<tr>
<td>5.00</td>
<td>(2.35)</td>
<td>(1.25)</td>
<td>[3.26]</td>
</tr>
</tbody>
</table>

Sales by firms with below-median coverage ratios in the reinvest sample have an insignificant abnormal return that is significantly lower than the stock-price effect for firms with below-median coverage ratios in the payout sample. Since the abnormal returns for firms that pay out the proceeds do not differ between firms with above and below-median coverage ratios, it is unlikely that the relation between abnormal returns and the use of the proceeds depends on the selling firm's financial situation.

In Table 6, we provide results for additional subsamples of interest. First, we show the average and median abnormal returns for the sale announcements where the source for the use of the proceeds is similar to the source for the announcement. This sample comprises sales where the announcement is reported on the Dow Jones wire or in the WSJ with a WSJ story that has the use of the proceeds or where the announcement date is the agreement date from the 8K filing with the use of the proceeds described in the 8K. These 16 observations have slightly higher mean and median returns than those reported for the 40 observations in Table 3, but the z-statistic is lower and the p-value of the sign-rank test is higher, possibly because of the smaller number of observations. Second, we show that, among the firms that do not pay out the proceeds, there is no evidence that there are subsamples of sales with average or median abnormal...
Table 6

Percentage cumulative abnormal returns for additional subsamples based on how information is released and on strategic reason for sale from a sample of 93 asset sales from 1984 to 1989

Cumulative abnormal returns are market model prediction errors for a sample of 93 large asset sales obtained from 8K forms from 1984 to 1989. The subsamples are constructed using information from press articles, the 8K form, the annual report, and the S&P Standard Stock Report. Simultaneous announcement means that the same source provides the announcement of the sale and of the use of the proceeds. The subsamples selected on the strategic reason for the sale use the announcement of the sale to select the strategic reason. These subsamples include only firms in the reinvest sample.

<table>
<thead>
<tr>
<th>Subsample Description</th>
<th>From day -1 to day 0</th>
<th>From day -5 to day +5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (z-statistic)</td>
<td>Median</td>
</tr>
<tr>
<td></td>
<td>[p-value for sign-rank test]</td>
<td></td>
</tr>
<tr>
<td>Payout sample (40)</td>
<td>3.92% (5.93)</td>
<td>1.90% [ &lt; 0.01]</td>
</tr>
<tr>
<td>Payout sample; simultaneous announcement (16)</td>
<td>4.98 (3.93)</td>
<td>2.13 [0.19]</td>
</tr>
<tr>
<td>Focus on core; reinvest sample (21)</td>
<td>-0.46 (-0.61)</td>
<td>-0.34 [0.60]</td>
</tr>
<tr>
<td>Sell unprofitable division; reinvest sample (14)</td>
<td>-1.41 (-0.31)</td>
<td>0.42 [0.43]</td>
</tr>
<tr>
<td>Finance acquisitions or expansions; reinvest sample (9)</td>
<td>1.24 (1.44)</td>
<td>1.03 [0.43]</td>
</tr>
</tbody>
</table>

returns comparable to those of firms that pay out the proceeds when one focuses on the shorter window. For the longer window, there is no case where the z-statistic is significant when the firm does not pay out the proceeds, but the magnitude of the abnormal returns is fairly high in the case of the firms that sell an unprofitable division and retain the proceeds. In contrast, firms that sell assets to focus more on core operations but do not pay out the proceeds have very small abnormal returns in absolute value and for the short window both average and median abnormal returns are negative.

6. Explaining the cross-sectional variation in cumulative returns

6.1. Relative proceeds and stock-price reaction

The efficient deployment view of asset sales does not distinguish between poorly performing firms paying out asset sales proceeds and other firms selling assets. Since we document in this paper a sharp difference in the stock-price reaction between these firms, can our evidence be reconciled with the efficient
deployment view? One possibility that we have not explored so far is that the differences in stock-price reactions are driven by differences in the ratio of asset sales proceeds to the market value of equity. To understand this concern, note that Table 1 shows that firms paying out the proceeds have a significantly greater ratio of asset sale proceeds to the market value of their equity. Hence, if the seller's gain from selling an asset (the premium the bidder pays for the asset in excess of the asset's value when used by the seller), expressed as a percentage of the proceeds, is the same irrespective of the firm that sells the asset, one would expect a larger stock-price reaction for firms in the payout sample. However, in this case, the relation between the stock-price reaction and the use of the proceeds would be spurious. Regressions 1 and 2 of Table 7 show there is a significant relation between the stock-price reaction and the proceeds divided by the market value of equity. However, this relation does not explain the higher average abnormal return of the payout sample since the dummy variable that takes the value one for the firms that pay out the proceeds is significantly positive. Regressions 1 and 2 are consistent with the argument of Shleifer and Vishny (1992) that, given the illiquidity of the market for asset sales, large asset sales are more likely to fail. We find that the completion of asset sales is better news for larger asset sales than for small asset sales.

Throughout the paper, we have assumed that the firm's financial situation is known, so that asset sales are informative about the asset's value rather than about the firm's need for funds. The literature on security issues generally emphasizes that they convey information about the true value of the firm's securities and its financial situation (see, for instance, Myers and Majluf, 1983, and Miller and Rock, 1983). The same could be true here: an asset sale could provide information that the firm's earnings are lower than expected or that it was not able to get attractive terms on financial markets. Mayers and Singh (1993) provide evidence that announcements of asset sale programs reveal information about a firm's financial situation. It makes sense that program announcements would reveal mostly information about the firm's financial situation since, by definition, such disclosures reveal that managers plan to raise capital. In this paper, our sample is collected to include announcement of sale

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7 All regressions of Table 6 are estimated using weighted least squares, where the weight is the reciprocal of the standard deviation of the residual of the market model regression.

8 They find positive stock-price effects when the firm announces that it intends to use the proceeds to finance a stock repurchase and when the firm intends to reinvest the proceeds, and a negative effect when the firm intends to repay debt. The size of the effects they observe is similar to the size of the effects one would observe if the announcements were not accompanied by the announcement of asset sale programs: stock repurchase announcements have large positive effects, announcements of investments have small positive effects, and announcements of leverage decreases have small negative effects. See McConnell and Muscarella (1985) for evidence on investment announcements and Smith (1986) for a review of the stock-price reactions to financing announcements.
Table 7
Weighted least squares regressions of the abnormal return on firm and sale characteristics for a sample of 93 asset sales from 1984 to 1989

The sales are obtained from inspection of 8K forms. Managerial ownership is obtained from proxy statements. The accounting loss is from the 8K form. All other data are obtained from Compustat and CRSP tapes. The Compustat data are from the year preceding the asset sale. (t-statistics in parentheses below the coefficient estimates.) The net of market return for a firm is the firm's stock return minus the market return. The dependent variable is the cumulative abnormal return measured over the day of the announcement and the day before (-1, 0), or over the 11 days overlapping the day of the announcement (-5, 5).

<table>
<thead>
<tr>
<th>Regression Sample size</th>
<th>(Event window over which the abnormal returns are computed)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>81</td>
<td>81</td>
<td>82</td>
<td>82</td>
<td>79</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-1, 0)</td>
<td>(-5, +5)</td>
<td>(-1, 0)</td>
<td>(-5, +5)</td>
<td>(-1, 0)</td>
<td>(-5, +5)</td>
</tr>
<tr>
<td>Intercept</td>
<td></td>
<td>-0.37</td>
<td>0.21</td>
<td>-0.49</td>
<td>0.77</td>
<td>0.31</td>
<td>1.95</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(-0.44)</td>
<td>(0.16)</td>
<td>(-0.43)</td>
<td>(0.46)</td>
<td>(0.21)</td>
<td>(0.89)</td>
</tr>
<tr>
<td>Payout proceeds dummy</td>
<td></td>
<td>2.92</td>
<td>4.01</td>
<td>2.82</td>
<td>3.85</td>
<td>3.00</td>
<td>2.88</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.11)</td>
<td>(1.87)</td>
<td>(2.25)</td>
<td>(2.05)</td>
<td>(2.24)</td>
<td>(1.46)</td>
</tr>
<tr>
<td>Proceeds/Equity</td>
<td></td>
<td>1.22</td>
<td>1.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.54)</td>
<td>(1.86)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Managerial ownership</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-2.54</td>
<td>7.27</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-0.59)</td>
<td>(1.15)</td>
</tr>
<tr>
<td>Net income</td>
<td></td>
<td>0.05</td>
<td>-2.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.01)</td>
<td>(-0.20)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tobin's q</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.23</td>
<td>-2.28</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-0.16)</td>
<td>(-1.10)</td>
</tr>
<tr>
<td>Net of market cumulative returns from day -250 to day -5</td>
<td></td>
<td>-1.46</td>
<td>-9.35</td>
<td>-1.82</td>
<td>-7.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(-0.79)</td>
<td>(-3.38)</td>
</tr>
<tr>
<td>Long-term debt/Total assets</td>
<td></td>
<td>1.61</td>
<td>-1.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.42)</td>
<td>(-0.23)</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td></td>
<td>0.14</td>
<td>0.09</td>
<td>0.04</td>
<td>0.15</td>
<td>0.04</td>
<td>0.15</td>
</tr>
<tr>
<td>p-value for F-test</td>
<td></td>
<td>&lt;0.01</td>
<td>0.01</td>
<td>0.14</td>
<td>&lt;0.01</td>
<td>0.16</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

completions outside of asset sale programs rather than announcements of asset sales programs. If our sales primarily conveyed information about the firm's financing requirements and hence the firm's financial situation, one would expect larger sales to convey worse news since they imply that the firm needs more funds. Hence, if our sales conveyed information about financing requirements, we would expect the coefficient on the proceeds in Table 7 to have the
opposite sign. In fact, the positive relation we find between abnormal returns and the size of the proceeds is the opposite of the negative relation found between stock-price effects and the size of security issuances.⁹

6.2. Abnormal returns and performance: A multivariate perspective

We investigated in Section 5 the extent to which the difference in abnormal returns can be explained by the fact that a successful asset sale is more important for the firms in the payout sample since these firms are generally in a worse financial situation and would face significant costs of financial distress without the successful sale. In that section, dividing the sample according to recent performance or the extent of financial difficulties does not lead to significant differences between subsamples for the shorter event window, but does so for the longer event window. It could be that our classification of firms as poorly performing or healthy does not capture a relation between performance and stock-price reactions that could be captured by regressing stock-price reactions on levels of performance measures. To investigate this, we relate abnormal returns to net income, net of market cumulative returns for the period from day $-250$ to day $-5$ and the debt–asset ratio in regressions 3 and 4.

The regression estimates in Table 7 confirm the earlier results that the higher abnormal return of firms in the payout sample cannot be explained by these firms having poorer performance or a more precarious financial situation. Whereas past stock returns are correlated with abnormal returns for the longer window, this effect does not explain why firms in the payout sample have higher abnormal returns since the payout dummy variable is significant for both windows. Further, regressing abnormal returns on past performance could lead to significant results when abnormal returns are estimated from market residuals because the intercept of the market model estimates depends on past performance.

Regressions 5 and 6 relate abnormal returns to net-of-market cumulative returns for the period from day $-250$ to day $-5$, Tobin's $q$, and managerial ownership. The financing hypothesis implies that there should be a negative relation between the stock-price effect and the degree of agency costs. We would expect abnormal returns to be higher for firms with higher managerial ownership (provided that management is not using its control of voting rights for entrenchment purposes). We also would expect high-$q$ firms to have lower agency costs of managerial discretion, so that the stock market would discount sales proceeds less for these firms. For the shorter window, these variables have no explanatory power whatsoever. For the longer window, these variables make

⁹See Korajczyk, Lucas, and McDonald (1990) for a review of the evidence on the determinants of the stock-price reaction to equity issues.
the dummy variable for the use of the proceeds insignificant. This is because they are correlated with the use of the proceeds. In a logistic regression not reported here, we find that firms with low managerial ownership or a high $q$ are significantly more likely to retain the proceeds, so that introducing these variables in the regression makes it more difficult to estimate the coefficient on the use of the proceeds precisely.

7. Conclusions

In this paper, we have shown that for a sample of large asset sales the stock-price reaction is significantly positive only for those firms that plan to pay out the proceeds. This evidence is inconsistent with the hypothesis that the market reacts favorably to asset sales simply because they lead to more efficient use of assets and the selling firm captures some of the benefit from the increased efficiency.

Our evidence is consistent with what we call the financing hypothesis. Under this hypothesis, management sells assets to obtain funds to pursue its objectives when alternative funding is either too expensive given its objectives or unavailable. On average, firms benefit from announcing successful sales because a successful sale means that the firm received enough money to make the sale worthwhile. Further, proceeds are discounted when retained by the selling firm because of agency costs of managerial discretion. In our sample, firms selling assets typically are poor performers and they are more likely to pay out the proceeds when they find it difficult to service their debt. The average stock-price reaction to asset sales is positive and it is significantly higher for firms that pay out the proceeds. We do not, however, find a direct link between abnormal returns and proxies for agency costs of managerial discretion.

This paper raises some questions which should be addressed in further research. We do not explore why managers might be reluctant to sell assets. Why is it that managers value size? Are they reluctant to sell assets because they do not want to acknowledge failure or is it that complex organizations cannot sell assets easily because of intrafirm relationships and quid pro quos? Though we are convinced that our evidence demonstrates the relevance of the financing hypothesis, it is also clear from our analysis and from our empirical results that the information conveyed by asset sales is difficult to evaluate because asset sales convey news about the value of the asset sold, the intended use of the proceeds and, possibly, the firm's financial health. Larger samples of possibly less significant asset sales might offer a way to disentangle these various effects with more precision and provide useful information on the relative importance of the financing hypothesis and of the efficient deployment hypothesis.

In conclusion, our sample suggests that the efficient deployment hypothesis is not as useful as prior studies might have suggested. Perhaps one could view our
evidence as showing that firms seem more aware of their comparative advantage when they are short of funds than otherwise. If this is the case, though, it provides further support for the view that the agency costs of managerial discretion matter and that debt plays a useful role in disciplining management.\textsuperscript{10}

**Appendix: Brief description of asset sales**

The following material briefly describes the asset sales in our sample. Each sale was reported to the SEC in an 8K filing, indicating that the sale represented a '... significant amount of assets'. Information regarding each sale is gathered from several sources, including annual reports, 8Ks, the Wall Street Journal (WSJ), Dow Jones News Service, S&P Standard Stock Reports, and other news sources.

The source of the date of the first public announcement of the asset sale is indicated below in parentheses following the announcement date: WSJ indicates that the announcement was in the WSJ (we used one trading day before the WSJ story as the announcement date); DJ indicates that the story was reported over the Dow Jones News Wire but was not reported in the WSJ on the same or following date; agreement date indicates that the first public date related to the announcement was the date the sale agreement was signed, as reported in the 8K.

**Format of asset sale information**

<table>
<thead>
<tr>
<th>Seller/Buyer</th>
<th>Cumulative abnormal return ((-1, +1)) in percent / announcement date (source of announcement date)</th>
<th>Price (in millions) / gain on sale (in millions)</th>
<th>Business of asset sold / business of buyer</th>
<th>Use of funds from sale / code [0 = strategic, 1 = cash paid out of firm through debt reduction and/or stock repurchase] / source of information on use of funds</th>
<th>Brief details (including information on payouts to stockholders through repurchases where applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adobe Resources Corp. / Equitable Resources</td>
<td>7.06 / 12/30/86 (DJ)</td>
<td>$22.41 / NA</td>
<td>Oil wells &amp; land / natural gas</td>
<td>Reduce debt / 1 / annual report</td>
<td>Adobe Resources had a loss in the quarter around the sale due to lower oil prices. The asset sale occurred at the same time the firm called $55 million in convertible debentures and enabled Adobe</td>
</tr>
</tbody>
</table>

\textsuperscript{10}See Jensen (1988) and Stulz (1990).
Resources to reduce its long-term debt to zero. The firm mentioned that the assets were not consistent with their long-range objectives. Stock repurchase: On 1/28/86, bought back a million shares for $12 million and may buyback 500,000 more. No indication of connection to asset sale.

*Airgas Inc.* / Jackson Acquisition Company
7.25 / 9/12/89 (DJ)
$70 / $32.2
Manufacturing / NA
Reduce debt / 1 / 8K
Airgas went public in 1986 and made several acquisitions over the following two years. This asset sale enabled the firm to reduce borrowings under a revolving credit facility by $50 million and was consistent with their long-term plan to emphasize gas distribution.

*Allied Signal Inc.* (two sales) / (1) Lanesborough Corp. (2) Commerzbank AG
(1) -3.59 (2) 4.77 / (1) 4/6/87 (WSJ) (2) 3/25/87 (DJ)
(1) $479 (2) NA / All discontinued operations gave $79 million gain.
(1) Electronics (2) electronics / (1) NA (2) NA
(1) & (2) Reduce debt, share buyback and investment in core businesses / (1) & (2) 1 / (1) & (2) Annual Report
Allied Signal was formed by the merger of Signal Cos. and Allied Corp. in 1985. These asset sales are part of a program to reduce debt and concentrate the new firm's assets in desired areas. Stock repurchases: the firm announced that proceeds from asset sales would be used to buy back shares but no additional information on number or price of shares available.

*American Barrick Resources* / Peabody Coal Company
-3.41 / 3/31/87 (agreement date)
$12.5 / NA
Coal operations / mining
Not profitable / 0 / 8K
Over the previous five years, this successful firm had grown into one of the largest North American gold producers, in part through acquisitions. This sale was its exit from unprofitable coal operations.

*American Brands* / MacAndrews and Forbes Holdings Inc.
2.19 / 7/25/86 (agreement date)
$14 / NA
Cigar maker / NA
Strategic / 0 / annual report
Faced with poor performance in the tobacco market, American Brands was engaged in a program of diversification and international expansion. The firm sold this tobacco unit as part of this plan.

*Amfac Inc.* / Borden Inc. and Rabin Brothers
-2.14 / 11/12/86 (WSJ)
NA / $20
Fisher Cheese Co. / diversified food companies
Strategic / 0 / 8K
Amfac sold Fisher Cheese Co. in an effort to streamline operations and strengthen its financial position.

*Armco Inc.* / Kawasaki Steel
1.02 / 3/24/89 (agreement date)
$350 / $109.4
Steel division / steel
Joint venture / 0 / WSJ, 8K
Kawasaki Steel (which had a 40% stake in the sold unit) purchased remaining interest as part of a joint venture with Armco.

Artra Group Inc. / VWR Corp.
8.11 / 8/8/89 (DJ)
$25.5 / -$16.5
Laboratory supply / photo supplies
Reduce debt, paydown bank loans / 1 / annual report
The firm sold several unprofitable assets that it had previously purchased as part of an expansion plan.

Baker Hughes Inc. / Oy Tampella AB
-2.25 / 3/13/89 (WSJ)
$130 / $0
Mining equipment / NA
Strategic / 0 / annual report
Baker Hughes was formed in 1987 as merger of Baker International and Hughes Tool Co. The sold division did not fit in with the long-run plans of the new company.

Ball Corporation / TBG Europe
-5.05 / 1/29/87 (WSJ)
$80 / $8
Glass and container manufacturing / joint venture
Joint venture / 0 / WSJ, 8K
The asset sale was a spinoff of Ball's glass container business into a 50-50 joint venture with a European firm.

Banner Industries / Diamond Monitors
-1.58 / 3/31/87 (WSJ)
NA / NA
Gas detection device manufacturing / NA
Restructuring to divest operations not meeting growth and profit objectives / 0 / 8K
In early 1987 the firm purchased Rexnord. This sale was part of a program to divest units not meeting the firm's growth and profit objectives.

R.G. Barry Corp / Jumping-Jack Shoes
2.08 / 9/23/85 (DJ)
$2.3 / -$1
Footwear division / footwear
Restructuring (strategic) / 0 / annual report
This asset sale is the last of a series of sales to downsize the firm and turn profits positive. Stock repurchase: the firm agreed in November 1984 to buy about 10% of its shares from the Streim family for about $2.3 million.

Brown Group Inc. / Jepson Corporation
-0.98 / 5/7/85 (WSJ)
$50 / -$/9.3
Recreational products / NA
Strategic / 0 / annual report
This asset sale completed Brown Group’s strategic withdrawal from the volatile, low-return recreational products business.

Canal Capital Corp./USK Acquisition Corporation
-3.37/6/23/89 (DJ)
$6.875/$2
Stockyard business/NA(former insider)
Not profitable/0/annual report
The sale of its stockyard operations reflected the fundamental change in the nature of this firm’s business from a stockyard firm to a diversified firm including real estate development, trading securities, and investing in ancient art.

Champion International Corp./Stone Container
-5.52/9/30/85 (WSJ)
$372.9/$0
Paperboard mills, corrugated container and bag packaging plants/paperboard packaging products
Reduce debt/1/WSJ
This sale was part of Champion International's restructuring by selling assets to reduce debt incurred when it acquired St. Regis as a white knight.

Craig Corp./Bercor Inc.
-0.05/12/27/85 (agreement date)
$1.61/$0
Consumer electronics/NA
Cash for acquisitions/0/news reports, annual report
Craig Corp. sold assets of its consumer electronics division while at the same time developing an aggressive expansion policy that could lead to increased debt. Craig was retained as a consultant by the buyer. Stock repurchases: In October 1985, directors authorized repurchase of about $1 million worth of shares. No evidence that it was carried out.

Crompton and Knowles (two sales)/(1)NCH Corp.& others (2) Univar Corp.
(1) -0.23 (2) -2.14/(1)12/19/86 (agreement date) (2)12/5/88 (agreement date)
(1) $14.7 (2) $11/(1) -$0.92 (2) -$0.8
(1) Cleaning subsidiary (2) chemicals/(1) chemicals (2) chemicals
(1) Strategic /0/annual report; (2) cash for acquisitions (strategic) /0/annual report
These asset sales combined with acquisitions were part of management's strategy for improving long-term growth. Stock repurchases: In December 1986, redeemed all preferred shares in a private transaction for about $4.5 million. In October 1986, bought back 8% of common shares from largest holder. Amount paid not disclosed.

Crown Central Petroleum/Amoco Corp.
-1.97/11/12/87 (agreement date)
$166/$62.7
Oil and gas exploration/oil and gas
Reduce debt/1/8K
The company suffered from falling oil prices. It sold this asset to reduce debt and to concentrate on marketing and convenience stores instead of production.

Culbro Corp./American Maize Products
11.74/12/31/85 (WSJ)
$65/NA
As part of its plan to reduce reliance on tobacco industry, Culbro sold its smokeless tobacco division and distributed the proceeds to shareholders as a special dividend.

To strengthen their balance sheet to support future growth, the firm took several actions to reduce debt, including the sale of this asset and the conversion of debt to equity.

The firm sold several hotels after failing to obtain needed working capital in other ways.

Arrow Electronics paid $10 million in Ducommun debt, $79 million in cash and about $35 million worth of Arrow stock for this asset. Ducommun used the proceeds to lower its outstanding debt. The firm's performance had suffered due to slowdown in the semiconductor and space industries.

This firm had several unprofitable years and sold this asset (and several others) to reduce debt and concentrate on its core. In addition a group held a more than 10% stake in the firm.

The firm sold its commercial duplicating operation and ended a joint venture with Mitsubishi because they were unprofitable. This enabled them to concentrate on core businesses and reduce debt. Stock repurchase: In June 1988, Electrosound repurchased $1,080,000 worth of shares from Cinram Ltd. No evidence of connection to asset sale.
Enviro pact Inc. / GSX Tank Management
11.83 / 10/23/89 (DJ)
$5.4 / $1.4
Pump drilling division / NA
Reduce debt, pay taxes and increase working capital / 1 / annual report
The firm sold these operations in mid-1989 to reduce debt and return to profitability.

Equitec Financial Group Inc. / Hallwood Group Inc.
3.69 / 10/18/89 (DJ)
$76.2 / NA
Real estate investment partnerships / real estate
Financial difficulties, need cash / 1 / annual report
This financial service firm was hit hard by the Tax Reform Act of 1986 and sold assets as part of an attempt to avoid bankruptcy.

Federal Mogul / CMV Interamerica Inc.
1.80 / 1/9/89 (WSJ)
NA / $8.3
Diamond blade manufacturing / blade manufacturing
Used part of proceeds to repurchase one million common shares and to create an ESOP as a defensive tactic against possible bidder Nortek Inc. / 1 / WSJ
This firm, in response to a threatened hostile takeover, refocused the firm on its core businesses by selling this division. It used part of the proceeds to repurchase 1 million shares and create an ESOP. Stock repurchases: The announced defensive repurchase of 1 million shares would cost about $51 million. In a standstill agreement in October, 1989, the firm repurchased $13.3 million worth of shares from Nortek.

First City Industries Inc. / HB Holdings, subsidiary of Glen Dimplex Ltd.
0.17 / 10/9/86 (WSJ)
$90 / $9.8
Hamilton Beach small appliances / Irish appliance maker
Used to repay debt / 1 / 8K
First City Industries reduced their long-term debt significantly through the sale of two operating units, including Hamilton Beach.

John Fluke Mfg. Co. / N.V. Phillips
-0.55 / 9/28/87 (DJ)
NA / -$7.9
Stock in European subsidiary for sale of electronic equipment / joint venture
Establishing joint venture / 0 / 8K
This firm and a European firm entered into a joint venture in which each would sell the other's products in their area. The asset sale consisted of the John Fluke's European sales division. Stock repurchase: In December 1986, the firm bought back about $20 million in stock from the Fluke family. In November 1987, the firm authorized repurchase of about $8 million. No evidence it was carried out.

General Host Corp (three sales) / (1)Kraft (2) Management (3) American Salt Acquisition Co. (Mgt.)
(1) 13.89 (2) -1.48 (3) 8.61 / (1) 6/4/87 (WSJ) (2) 6/22/87 (WSJ) (3) 2/1/88 (agreement date)
(1) $95.8 (2) $39 (3) $31 / (1) $87 (2) $0 (3) $0
(1) All American Gourmet Co. (2) Hickory Farms (3) American Salt / (1) food products (2) mgmt group (3) mgmt group
In the early 1980s, General Host began restructuring away from cyclical dependent industries to focus on retailing, nurseries, and crafts. The proceeds from these asset sales were used to reduce debt and were part of the continuing restructuring. Stock repurchases: General Host repurchased about $21 million worth of shares in an open-market buyback program in 1986. Through 1987 and 1988, the firm repurchased about $58.6 million worth of shares on the open market.

Gleason Corp. / Diesel Kiki Co.
5.56 / 4/22/89 (agreement date)
$18 / $7.725
Differential and gear manufacturing / NA
Strategic, termination of joint venture, selling interest to partner / 0 / Annual report
This asset sale is part of the firm’s exit from a failed diversification effort.

Goodyear Tire & Rubber Co. (two sales) / (1) Loral (2) International Paper
(1) 2.51 (2) 2.17 / (1) 1/22/87 (WSJ) (2) 4/13/87 (WSJ)
(1) $640 (2) $70 / (1) NA (2) NA
(1) Aerospace (2) oil and gas division / (1) military electronics (2) paper manufacturing
(1) & (2) Restructuring, reduce debt incurred in repurchase of shares / (1) & (2) 0 / (1) WSJ
(2) 8K
As part of a successful defense to a hostile bid, Goodyear sold several assets, refocusing the firm on its core tire and rubber business. As part of the defense, the firm repurchased 40 million shares, financing the repurchase with the sale of all non-tire assets. Stock repurchases: Firm paid approximately $2 billion for shares repurchased in defensive moves.

Greyhound Corp. / Investor group
4.92 / 12/23/86 (WSJ)
$255 / 30.1
Bus lines / NA
Not profitable / 0 / WSJ & annual report
Greyhound was unable to profitably cope with deregulation in the bus transportation industry and thus sold its unprofitable bus lines. Stock repurchases: Firm announced plans to buy back up to 8 million shares ($265 million) in June and September 1986.

Grow Group / Nippon Oil and Fats
1.38 / 7/13/89 (DJ)
$25.3 / $15
Paint production assets / paints and coatings
Reduce debt, general business purposes / 1 / 8K
Grow Group grew in the 1980s through acquisitions. However, earnings suffered. The asset sale enabled the firm to report a profit and reduce its high debt level.

Gulf Resources & Chemical Corp. / Grace Petroleum
2.62 / 9/18/89 (agreement date)
$25 / $0.4
Oil and gas / oil and gas
Cash for working capital and environmental costs and penalties / 1 / annual report
Gulf Resources & Chemical Corp. faced environmental cleanup and liability costs. To generate cash, the firm sold this and other assets.
Harnischfeger Corp. / Century II, Inc.
3.10 / 5/12/88 (agreement date)
$76.2 / $59.3
Construction equipment manufacturing / management buyout
Strategic - sold to MBO / 0 / 8K
The company decided to discontinue its construction equipment division and sold the business to a group of former managers.

Helene Curtis Industries Inc. / PTI Holdings Company
1.85 / 10/24/85 (DJ)
$12.5 / NA
Sealants and adhesives subsidiary / newly formed holding company
Strategic / 0 / annual report
The sale of the sealants subsidiary was consistent with Helene Curtis Inc.’s focus on personal care products.

Inspiration Resources Corp. (2 sales) / (1) Minero (2) Cyprus Corporation
(1) 7.79 (2) -1.10 / (1) 12/3/85 (WSJ) (2) 7/1/88 (DJ)
(1) NA (2) $125 / (1) $10 (2) $26.7
(1) Oil and gas (2) copper / (1) mining (2) mining
(1) Restructuring (2) repay debt (retired all of bank debt) and general business purposes / (1) 0 (2) 1 / (1) 8K (2) 8K
(1) Given the poor economic conditions in the natural resources industry, the firm divested operations (purchased only a year earlier) and tried to remake the corporation in a way that significantly improved the prospects for profitability. (2) The firm’s attempt to concentrate on agribusiness and away from cyclical metal resources continued with the sale of its copper division.

Intermedics / Intermedics Intraocular Acquisition Corp. (First Chicago Venture Capital)
-1.84 / 5/2/86 (agreement date)
$35 / ‘substantial gain’
Intraocular lens subsidiary / venture capital group
Proceeds to pay off debt / 1 / annual report
The intraocular lens division was sold to First Chicago Venture Capital.

International Thoroughbred / Greenwood Racing Inc.
14.79 / 6/30/89 (agreement date)
$63 / NA
Race track / race track management - newly formed company
Reduce debt and obtain cash / 1 / annual report
This financially troubled firm sold its Philadelphia race track to repay debt and obtain needed cash.

International Technology Corp. (two sales) / (1) Tenera, LP (2) GSX Chemical Services
(1) 5.18 (2) -12.85 / (1) 10/12/88 (WSJ) (2) 4/11/89 (WSJ)
(1) NA (2) $84.9 / (1) NA (2) - $110.1
(1) Nuclear risk control (2) treatment and disposal division / (1) services to manufacturing (2) chemicals
(1) & (2) Strategic (focus on core) / (1) & (2) 0 / (1) & (2) 8K
(1) The sale of the nuclear risk control group is consistent with the continuing effort of the firm to direct its resources into the rapidly growing industrial risk assessment sector. (2) The sale was part of the firm’s restructuring program to concentrate on growing subsidiaries.
IU International Corp. / Paper Corp. of America, subsidiary of Alco Standard Corp.
5.24 / 3/10/86 (WSJ)
$32.5 (total cash $106.7 with gain from terminating pension plan) / $21.6 with gain from terminating pension plan
Paper distribution operations / paper company
Broad restructuring and debt reduction effort / 0 / WSJ (restructuring seems to dominate debt reduction)
As part of a broad restructuring effort, IU International sold several operating units, including this and the bulk of its agribusiness operations and its macadamia nut orchards. Over recent years, the restructuring has transformed IU from a complex enterprise serving a multitude of markets into a simpler and smaller company focused on a much narrower range of business activities.

K–H Corporation (Fruehauf) / Terex Trailer Corp.
18.11 / 3/28/89 (WSJ)
$231.3 / NA
Trailer manufacturer and shipyard / NA
Pay interest on outstanding debt, repay banks, working capital / 1 / WSJ
In 1986, the firm underwent a management buyout. This asset sale was part of the resulting program to restructure the firm and pay down the debt with asset sales.

Keystone Consolidated Industries / Fastener Five Acquisitions, Inc.
—3.08 / 1/16/89 (Agreement date)
$16 / $17.6
Metal and plastic crafters / NA
Strategic (focus on the core) / 0 / Financial World, Feb. 1990
After losing money for most of the 1980s, the company earned $9.3 million in the first nine months of 1989 after extensive restructuring.

Kollmorgen / PC Acquisition Corp.
—3.62 / 9/30/86 (WSJ)
$25 / $5
Photocircuits division / management group
Strategic / 0 / annual report
As part of a plan to concentrate on new markets in electronics, the firm sold its photocircuits division to a management group.

Koppers Co. / NA
1.70 / 12/13/85 (agreement date)
$160 / $100
Ten different businesses / NA
Strategic / 1 / annual report
Koppers announcement of the sale of ten business units reflected its plan to reposition the company to increase earnings growth rate and raise its value to shareholders by concentrating on its construction materials and services and chemical-based operations. The proceeds were to be used to repurchase the company’s preferred stock and some of its common shares. Stock repurchases: In June 1986, announced plans to redeem convertible preference shares for about $46.6 million. In December 1986, board approved repurchase of about 15% of common shares for about $135 million.

Lee Enterprises Inc. / Henry/Benedek Broadcasting
—3.00 / 9/4/86 (WSJ)
$13 / $10
Radio station / broadcasting
Regulation / 0 / 8K
To avoid violation of FCC rules against ownership of television and radio stations in the same community, Lee Enterprises sold its ratio station in Omaha after acquisition of a television station there.

Loral Co. / Opus Acquisition Corp.
-1.14 / 3/26/89 (agreement date)
$455 / $5
Aircraft braking division / NA
Strategic / 0 / annual report
The sale of the aircraft braking division was part of the firm’s goal of redeploying assets from slower growth to growing core activities, including growth through acquisitions. There were allegations of conflicts of interest in the sale to the firm’s chairman.

Morgan's Foods Inc. / Midwest Restaurants Concepts
7.58 / 1/10/89 (agreement date)
$3.752 / - $4.013
Sizzler Restaurants / restaurants
Strategic, not profitable / 0 / 8K
The company sold 11 Sizzler Restaurants that had never achieved projected sales volume and had operated at a loss since their acquisition.

National Intergroup Inc. (two sales) / (1) Norandahl Inc. (2) Werner Co.
(1) -4.50 (2) -6.73 / (1) 9/13/89 (WSJ) (2) 10/27/89 (WSJ)
(1) $117.7 (2) $15 / (1) - $16.45 (2) -$2.5
(1) National aluminum (2) extrusion division / (1) aluminum (2) NA
(1) & (2) Strategic (concentrate on core) / (1) & (2) 0 / (1) & (2) annual report
These asset sales were part of the firm’s exit from aluminum and steel to concentrate on the core distribution business.

S.E. Nichols Inc. / Schreiber Wholesale Services
11.70 / 5/24/89 (DJ)
$21 / $3.5
Wholesale distribution division / management buyout
Financial difficulties, need to reduce debt / 1 / S&P ASE stock reports
Nichols sold its F.R. Schreiber Co. subsidiary to a group of management investors. The proceeds were to be used to repay its revolving credit line and for working capital.

Nicolet Instrument Corp. / AM International
1.41 / 6/27/86 (WSJ)
$22 / - $9.4
Electronic instrument testing division / NA
Strategic / 0 / annual report
The firm was unable to operate this division profitably due, in part, to depressed market conditions. Its sale was accompanied by restructuring of the remaining product lines.

Nicor Inc. / Adcor Drilling Inc.
-0.29 / 9/2/86 (WSJ)
NA / NA
Drilling division / management buyout
Reduce debt through restructuring / 1 / annual report
After two years of sizable losses, the firm returned to profitability by divesting several unprofitable units, including this drilling division. The proceeds were used to reduce debt.
Nortek Inc. / Duro Industries Inc.  
-6.71 / 12/30/85 (agreement date)  
$20 / $6  
Textile processing / management buyout  
Strategic / 0 / annual report  
Although the textile processing division remained viable, the firm concluded that it no longer fit into Nortek’s long-term plans due to foreign competition and low growth prospects.

O'Sullivan Corp. / Vulcan Corp., Jones and Vining  
-3.31 / 6/4/86 (agreement date)  
NA / $0.15  
Rubber heel and sole operations / footwear  
Strategic / 0 / annual report  
O'Sullivan Corp. decided to get out of the rubber business and concentrate on its core businesses of vinyl sheeting and injection molding.

Portec / Harsco  
-3.91 / 2/6/89 (DJ)  
$9.1 / NA  
Railway maintenance products / steel/metal works  
Cut bank debt (in default) / 1 / 8K  
The firm sold its railway maintenance products division and used the proceeds to repay its outstanding bank debt. The firm had been in default with its creditors until a debt restructuring in August 1988.

Primark Corp. / C. Itoh and Co., Inc.  
8.51 / 9/21/88 (WSJ)  
$37.9 / NA  
TV leasing company / NA  
Cash for pending takeover / 0 / WSJ  
Primark sold its Telerent Leasing Corporation (providing TV leasing to the lodging industry).

Professional Care Inc. (two sales) / (1) Tender Loving Care Health Service (2) Olsten Corporation  
(1) - 35.02 (2) - 3.41 / (1) 9/1/87 (DJ) (2) 7/22/88 (DJ)  
(1) $3 (2) $2.4 / (1) $3 (2) $67  
(1) Offices (2) offices / (1) health care (2) temporary services  
(1) & (2) Cash for litigation settlement in medicaid fraud / (1) & (2) 1 / (1) & (2) 8K  
The firm had several years of financial difficulties due to civil and criminal litigation charging medicaid fraud. These sales were part of an asset sale program used to pay litigation expenses and penalties.

Punta Gorda Isles Inc. / Village Builders of Florida  
17.65 / 10/19/85 (agreement date)  
$23 / NA  
Real estate / real estate  
Reduce debt and financial difficulties / 1 / 8K  
Weak real estate conditions and a heavy debt burden had resulted in poor performance for this company since 1981. The proceeds from the sale of this marina project were used to further reduce its debt.

Quantum Chemical Corporation / Henkel Corporation  
19.32 / 12/28/88 (WSJ)  
$480 / $16.8
Oleochemicals business / NA
Cash to repay bank loan that was used to pay dividend / 1 / WSJ
This asset sale was part of the firm's unusual recapitalization in late 1988. The firm used the proceeds from the asset sale and a debt issuance to repay a bank loan used to pay shareholders a $50 dividend and maintain the ability to continue their acquisition program. Stock repurchase: On 3/8/88, the firm announced a stock buyback plan valued at $246 to $273 million.

Savin Corp. / Scriptex Enterprises
4.82 / 1/13/87 (DJ)
NA / $1.9
New York and Long Island retail branches / retailer
Strategic (focus on the core) and streamline operations / 0 / annual report
This asset sale was part of the firm's program to streamline operations, focus on the core, increase efficiency and lower its breakeven point. The firm had restructured its debt to get out of default in the previous year.

Service Resources Corp. (two sales) / (1) U.S. Banknote Company (2) Thomas L. DePetrillo
(1) -4.94 (2) 13.14 / (1) 880829 (WSJ) (2) 890406 (DJ)
(1) $7.6 (2) $3.2 / (1) - $19.1 (2) 2,036
(1) Financial printing company (2) keyboard manufacturing / (1) financial printing (2) management buyout
(1) & (2) financial difficulties & pay down debt / (1) & (2) 1 / (1) WSJ (2) 8K
This financially troubled firm (in default on interest payments since 1987) sold these assets in an attempt to remain solvent.

Sierracin Corp. / Valor Electronics Inc.
7.12 / 860607 (agreement date)
$2.3 / $0
Power systems division / electronics
Strategic / 0 / annual report
The firm sold this asset to concentrate on growth-oriented businesses and core technologies.

Talley Industries Inc. / TRW
-16.93 / 2/6/89 (WSJ)
$85 / $37.5
Air bag division / industrial
Cash earmarked to repay debt / 1 / WSJ
The sale of the air bag division culminated the firm's two-year restructuring program of divestments and acquisitions.

Tandy Brands Inc. (2 sales) / (1) Action Inc. and D. Motsenbocker (2) Grate Home and Fireplace Co.
(1) -2.47 (2) 12.20 / (1) 4/10/86 (DJ) (2) 3/4/87 (DJ)
(1) $3 (2) $1.6 / (1) - $0.88 (2) - $9.3
(1) Western leather division (2) grate and fireplace division / (1) NA (2) home supplies
(1) & (2) Strategic / (1) & (2) 0 / (1) & (2) annual report
These sales were part of the company's restructuring program designed to enable the firm to concentrate resources on its remaining rapidly growing specialty retailing division.

Morton Thiokol / Dow Chemicals
-11.86 / 11/15/84 (WSJ)
$131 / $75.1
Household cleaner division / chemicals
Strategic (focus on the core) / 0 / annual report & WSJ
The sale of the household cleaning division to Dow Chemical for cash and the shares of the firm held by Dow helped the firm concentrate on its other businesses and served as an antitakeover device against Dow (the sale was accompanied by a ten-year standstill agreement).

*Total Petroleum Ltd.* / Various buyers
2.98 / 1/4/89 (WSJ)
$152 / $2
Oil and gas / NA
Strategic / 0 / annual report
The oil and gas operations in the U.S. did not offer sufficient prospects for future profitability.

*Tridex Corp.* / *Jordan Industries Inc.*
8.05 / 8/3/89 (DJ)
$9.9 / NA
Radio coaxial connectors division / NA
Redeem notes, working capital and acquisitions / 1 / WSJ
The firm used the proceeds to pay in full its outstanding indebtedness of $6.7 million to Heller Financial and to end its credit facilities with Heller.

*Tribune Co.* / *Cooke Media Corporation*
1.66 / 12/10/85 (WSJ)
$176 / $176.7
LA Daily News (newspapers) / communications
Retire debt / 1 / WSJ
The proceeds from this sale plus the sale of four cable systems were used to retire debt that had been incurred in the acquisition of a Los Angeles TV station.

*Union Carbide Corp.* / *Ralston Purina*
4.86 / 4/7/86 (WSJ)
$1415 / $304
Battery products division / diversified company
Proceeds used as special dividend (about $33.20 per share) / 1 / WSJ
These asset sales were part of Union Carbide's restructuring as a defense to a hostile bid from GAF. In the restructuring, the firm repurchased 56% of its shares for cash and debt, and paid a large cash dividend to shareholders. Stock repurchases: To ward off GAF, paid out $774.6 million in cash plus about $2.6 billion in debt for 56% of shares. Also paid out the proceeds from sale of unit to shareholders as a special dividend.

*United Inns Inc.* / *Hanna Car Wash*
−0.84 / 8/12/88 (DJ)
$17 / $2.2
Car wash business / car wash
Not profitable / 0 / annual report
This firm sold its unprofitable discontinued car wash division.

*U.S. Shoe Corp.* (3 sales) / (1) *Edison Brothers Apparel Stores* (2) *Freeman Shoe Co.* (3) *Linen Supermarket*
(1) 1.31 (2) 0.55 (3) 0.38 / (1) 4/29/87 (WSJ) (2) 5/11/87 (agreement date) (3) 6/9/87 (agreement date)
(1) $44 (2) $41 (3) $4.6 / $7 on all three combined
(1) J Riggings (retailing) (2) mens shoe division (3) home front division / (1) shoes (2) shoes (3) home products (1), (7) & (3) Strategic / (1), (2) & (3) 0 / (1), (2), & (3) annual report
U.S. Shoe sold a chain of apparel stores, its home products division and its mens shoe division to fund expansion of specialty retailing and optical retailing, as well as selective footwear opportunities.

**Varo Inc. / Varo Quality Semiconductor Inc.**
-0.30 / 12/24/85 (WSJ)
$14.8 / -$2.2
Semiconductors / management group
Unprofitable division / 1 / S&P stock reports
Varo sold its unprofitable semiconductor manufacturing subsidiary and earmarked the funds to repay $7 million of short-term debt with the remainder for working capital purposes. Stock repurchases: Firm authorized repurchase of about $1 million of common stock on the open market.

**Vermont Research Corp. / Miltope**
-7.02 / 9/19/88 (WSJ)
$2.85 / $1.5
Disk drive manufacturing / computer
Unprofitable division / 0 / S&P ASE stock reports
Disappointing sales of a new disk drive led to the sale of a disk drive production facility and related technology.

**Warner Communications Inc. / American Protection Industries, Inc.**
0.37 / 12/13/84 (WSJ)
$162 / NA
Franklin Mint (collectible manufacturing) / newly formed partnership – Warner Communications retains stake
Strategic / 0 / annual report
Warner Communications sold several businesses to reduce corporate overhead, build upon continuing operations, improve balance sheet and refocus attention on its core businesses. Stock repurchases: Announcement on 3/19/84 that firm would buy back Rupert Murdoch’s News Corp.’s shares for $180.6 million, ending a 15-week struggle for the company.

**Warner–Lambert Co. (three sales) / (1) Becton Dickinson & Co. (2) Cambridge Instrument Co. (3) Henley Group Inc.**
(1) 1.47 / 3.61 / (3) -2.45 / (1) 3/6/86 (WSJ) (2) 3/26/86 (DJ) (3) 4/25/86 (WSJ)
(1) $225 (2) $50 (3) $163.5 / - $497 on all three combined
(1) Hospital products division (2) scientific instruments division (3) Imed / (1) health care (2) NA (3) NA
(1), (2), & (3) Restructuring to focus on the core / (1), (2), & (3) 0 / (1), (2), & (3) 8K
As part of a review of operations and the changing business environment in the hospital supply industry, Warner–Lambert made the decision to write down and divest certain of its operations and to restructure and consolidate others. Stock repurchases: WSJ reports on 11/29/85 that firm plans to buy back 8 million shares, for about $352 million.

**Westinghouse Electric Corp. / Group of five telecommunications companies**
-1.51 / 12/23/85 (WSJ)
$1700 / $500
Cable company / telecommunications
Restructuring / 0 / 8K
This sale is part of Westinghouse Electric Corporation’s restructuring program designed to promote growth as the leading participant in several markets. Stock repurchases: By March 1986, the firm had repurchased about 21 million shares for about $887.25 million.
References


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