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THE SUCCESS OF ACQUISITIONS:  
EVIDENCE FROM DIVESTITURES

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ABSTRACT

This paper studies a sample of large acquisitions completed between 1971 and 1982. By the end of 1989, acquirers have divested almost 44% of the target companies. Using the accounting gain or loss recognized by the acquirer, press reports, and the sale price, we characterize the ex post success of the divested acquisitions and consider only 34% to 50% of classified divestitures as unsuccessful. Acquirer returns and total (acquirer and target) returns at the acquisition announcement are significantly lower for unsuccessful acquisitions than for divestitures not classified as unsuccessful and for acquisitions not divested. These results suggest that market reactions to acquisition announcements reflect expectations of future profits and that unprofitable acquisitions are recognized as such when initiated. Diversifying acquisitions are almost four times more likely to be divested than related acquisitions. However, we do not find strong evidence that diversifying acquisitions were less successful than related ones.

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## 1. Introduction

Acquirers often buy other companies only to sell them afterwards. Grimm's *Mergerstat Review* reports that divestitures make-up at least 35% of mergers and acquisitions transactions in the 1980s.<sup>1</sup> In a more systematic study, Ravenscraft and Scherer (1987) estimate that 33% of acquisitions in the 1960s and 1970s were later divested, while Porter (1987) finds that over 50% of the acquisitions made by 33 conglomerate acquirers in "new" or unrelated industries were later divested. These authors interpret the divestiture rates as evidence that acquisition strategies, particularly diversifying ones failed to increase and probably destroyed value. In light of such high divestiture rates, they question the typical event-study results that the combined stock market return to acquirer and target shareholders is positive [see Bradley, Desai and Kim (1988) and Jensen and Ruback (1983)]. In fact, Scherer (1988) concludes that "... the implications of event studies have been contradicted by historical evidence (p. 71)."

This view of divestitures (and acquisitions) as failures, however, is not the only explanation consistent with high divestiture rates. Weston (1989) argues that acquirers sell targets for a number of reasons which do not involve poor performance. For example, an acquirer may sell a business it has improved or a business that once had synergies with the acquirer's core business but no longer does. In these cases, both the original acquisition and the sale could have increased shareholder value. In addition, relaxed antitrust enforcement and financial innovations made in the 1980s made possible some business combinations that were not viable previously. Some acquisitions that led to a relatively efficient allocation of resources in the 1970s may no longer have been efficient in the 1980s when sales to related buyers or leveraged buyouts became feasible [see Shleifer and Vishny (1990)].

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<sup>1</sup> See Weston (1989) and W.T. Grimm's *Mergerstat Review*, 1989.

In this paper, we evaluate the extent to which divestitures in the 1980s represent unsuccessful or failed acquisitions. Beginning with a sample of 271 large acquisitions completed between 1971 and 1982, we follow the acquisitions and determine which are subsequently divested. We find that 43.9% of the acquisitions have been divested by the end of 1989. Whenever possible, we categorize divestitures as successful or unsuccessful acquisitions using accounting data on the gain or loss on sale from the divestiture, divestiture sale price, and the *Wall Street Journal* or business press article describing the divestiture. The results suggest that many divestitures are not failures, *ex post*. For example, of the divestitures with a reported gain or loss on sale, 42% report a gain on sale; 44% report a loss; and 14% report that the gain or loss is immaterial. Based on accounting results as well as comments by reporters and managers, we classify only 34% of the divested acquisitions as unsuccessful - that is, the reason for the divestiture appears to be performance-related. Furthermore, in transactions that report a comparable sale price, targets are divested at 192% of their purchase price, which when adjusted for the increase in the S&P 500 index over the same time period equals 90% of their purchase price and 143% of their market value before the initial takeover announcement.

The view of divested acquisitions as failures questions the use of the stock market reaction to the initial acquisition announcement as a measure of an acquisition's value. The results for gain on sale and sale price, however, are generally consistent with the event-study results that bidder returns are slightly negative, while combined returns to bidder and target are positive. Targets appear to be worth less than the bidders pay, but more than the target is worth before the takeover occurs. We note, however, that because our sample is limited to one time period, our evidence is also consistent with the alternative explanation that sellers of assets received fortuitously high prices for those assets in the 1980s thanks to relaxed antitrust, financial innovation or some other reason not known at the time of the acquisitions.

Accordingly, we further test the information content of the stock market reaction to acquisition announcements by comparing the announcement period abnormal returns for divestitures we categorize as unsuccessful with those we do not categorize as unsuccessful. We find that acquirer returns and combined (acquirer and target) returns at the acquisition announcement are significantly lower for unsuccessful acquisitions than the corresponding returns for successful divestitures and for acquisitions that are not divested.

This last result has two important implications. First it provides some evidence that the market evaluates managerial decisions in a sensible way based on their effect on fundamental value. This distinction occurs in a situation where the nature of the news revealed to all market participants is not obvious. Second, the result is consistent with managers making acquisitions for non-value maximizing reasons. When they complete acquisitions with large negative acquirer returns, managers ignore signals that the acquisitions decrease acquirer shareholder value.<sup>2</sup>

As noted above, previous researchers have found higher divestiture rates for diversifying acquisitions than for related acquisitions. In light of this evidence, they argue that diversifying acquisitions were particularly bad investments. We consider this possibility by distinguishing between related and diversifying acquisitions. We find large differences in divestiture rates between diversifying and related acquisitions. Divestitures are almost four times more likely when targets are not in businesses highly related to those of the acquirer (i.e., the four most important lines of business of the acquirer and target do not have at least one three-digit SIC code industry in common). Over 58% of these diversifying acquisitions are divested compared to fewer than 16% of highly related acquisitions. Furthermore, 80% of the divested units are sold to related (new) acquirers, sold to management groups, or spun

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<sup>2</sup> For more discussion of managerial motivation of firm decisions, see Marris (1963), Demsetz (1983), Jensen (1988), Morck, Shleifer and Vishny (1990), and Shleifer and Vishny (1989).

off to shareholders. Only 20% of the targets divested are sold to (new) acquirers in businesses not highly related to the divested unit.

The evidence on the success of diversifying versus related acquisitions is mixed. We classify two of fifteen (13%) related acquisitions as unsuccessful compared to 35 of 93 (38%) diversifying acquisitions. This difference is significant at the 10% level. However, we also find that 43% of diversifying and 40% of related divestitures register a gain on sale. Finally, the stock market reactions to the announcements of diversifying and related acquisitions are not significantly different.

This evidence seems only weakly supportive of arguments that diversification programs decreased value, *ex ante*. In view of the small difference in the success rates of diversifying and related acquisitions, we are more sympathetic towards alternative explanations for the large difference in divestiture rates. If there is greater uncertainty about potential synergies for diversifying acquisitions than for related ones, or if there is a real and unrecoverable cost of integrating related acquisitions, divestiture rates would naturally be higher for diversifying acquisitions than for related ones. The relaxation in antitrust policy that occurred during the 1980s may also explain part of the difference in divestiture rates -- diversifying acquisitions that were value-increasing in the 1970s could have become dominated by newly-permitted related combinations in the 1980s.

Our results complement recent work on the cross-sectional determinants of stock market reactions to acquisition announcements. Morck, Shleifer and Vishny (1990) find that acquirers in diversifying mergers have negative abnormal returns in the 1980s but not in the 1970s. The high divestiture rate of unrelated acquisitions to related buyers in the 1980s suggests that by the mid-1980s, unrelated acquisitions were more likely to be pursued for the benefit of managers, not shareholders. Asquith, Bruner and Mullins (1987) and Eckbo and Langohr (1989) find that negative acquirer returns are associated with stock financing but not with cash financing. In our sample, acquirer returns are negatively related to the use of

stock financing, but this relation is independent of acquisition success. This is consistent with the argument that the form of financing in an acquisition provides a signal about the value of the acquirer. It is also consistent with tax benefits (through interest deductions and asset write-ups) as a source of value in acquisitions.

Our paper also complements several recent studies on post-acquisition performance. Bhagat, Shleifer and Vishny (1990) find that hostile targets in the 1984 -1986 period are often broken up and sold to companies in related businesses. Healy, Palepu and Ruback (1989) use accounting data to measure post-acquisition performance in 50 large acquisitions in the period 1979 to 1983. They find an increase in industry-adjusted operating cash flow return on assets (operating income as a fraction of assets) that is caused primarily by an increase in asset turnover. The increase in return on assets is positively correlated with the total excess return in the acquisition. Mitchell and Lehn (1990) examine a sample of companies which made large acquisitions between 1982 and 1986. They find that firms which receive hostile takeover bids are more likely to have made acquisitions to which the market reacted negatively. They also find that acquisitions that are subsequently divested are associated with negative acquirer abnormal returns.

Our comparisons of announcement returns to post-acquisition outcomes are closest in spirit to, although somewhat different from those of Ravenscraft and Pascoe (1989). They find that acquisitions with lower changes in operating margins and acquisitions ultimately divested have significantly lower target abnormal returns, similar acquirer returns, and slightly, but not significantly, lower combined returns. There are two potential reasons our results differ from theirs. First, they do not impose a relative size criterion which increases the noise in their abnormal return measures. Second, they do not explicitly consider the ultimate success of divested acquisitions. Operating margins may not accurately reflect the value of a company's assets.

The paper proceeds as follows. Section 2 describes our sample design and data

set. Section 3 presents our results on acquisition success. Section 4 explores the differences between related and diversifying acquisitions. Section 5 summarizes and discusses the results.

## 2. Sample Design and Description

### 2.1. Sample Selection

Our initial sample of acquisitions comes from *Mergers and Acquisitions* magazine. Beginning in 1971, *Mergers and Acquisitions* lists the largest completed deals of the year. The number reported varies from 10 in 1971 to 100 in 1987.<sup>3</sup>

We use several criteria to obtain the acquisitions in our sample. To restrict ourselves to larger transactions whose post-acquisition history is easier to follow, we eliminate those transactions valued at less than \$100 million in 1982 dollars. Second, we require the acquiring company to have stock return data available on the CRSP tapes so that we can measure the market reaction to the acquisition announcement. This eliminates acquisitions by foreign and private buyers. Third, we eliminate acquisitions by insurance companies, banks and railroads because they are regulated. Fourth, to improve the likelihood that the stock market reaction to the acquisition announcement is not affected by random noise, we require the purchase price of the target equity to exceed 5% of the market value of acquirer equity twenty trading days before the first acquisition announcement. Fifth, we consider only those acquisitions completed by 1982. This gives an acquirer at least seven years to divest an acquisition. To the extent that some acquirers still own targets that they will subsequently divest, our results underestimate the extent of divestitures. Such measurement error will also bias our cross-sectional tests toward finding no relation between

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<sup>3</sup> In some of the data descriptions below, we report that some deals took place in 1969 and 1970. These deals made it into the *Mergers and Acquisitions* sample because they were completed after the beginning of 1971 even though they were announced before 1971.



divestiture and announcement returns. Finally, we eliminate deals if the acquirer did not obtain complete ownership of the target. Our selection criteria yield 282 acquisitions.

## 2.2. Divestiture Information

For each acquisition, we examine *Moody's Industrial Handbook*, the *Wall Street Journal*, annual reports and 10-K's to determine the subsequent history of the acquisition. We determine whether the target is subsequently divested. We classify an acquisition as a divestiture only if the acquirer divests all recognizable assets and product lines of the target. Therefore, we do not classify the 17 observations in which targets are only partially divested to be divestitures. If the acquirer still owns the target, but is subsequently acquired itself, we follow the original acquisition under the new owner. The original acquisition is considered a divestiture if the new owner separates the assets of the original target from the original acquirer. When the acquirer spins-off all or part of the target to its public shareholders, we classify the spin-off or carve-out as a divestiture, even if the acquirer maintains an equity stake in the target. For each divestiture, we collect the *Wall Street Journal* article describing the divestiture, and determine, if possible, the gain or loss on sale from the divestiture, the selling price of the target, and the operating income of the divested unit.

In eleven cases, we cannot determine whether the acquirer still owned the target. We excluded these acquisitions from our sample, leaving us with a final sample of 271 acquisitions. The first two columns of Table 1 list the number of acquisitions and the relative size of the targets to acquirers by year. The table shows that the acquisitions in our sample are concentrated between 1975 and 1982. Consistent with our sampling method of using the largest transactions from the annual *Mergers and Acquisitions* magazine lists, the median relative target size (the ratio of final target value or purchase price to pre-announcement acquirer market value of equity) is 25.6%.

### 3. Results

#### 3.1 Frequency of Divestitures

Table 1 also documents that 43.9% of the acquisitions in our sample are divested by 1989. Because we measure divestitures only through the end of 1989, this clearly represents a lower bound on the total number that will eventually be divested. However, the percentage of acquisitions divested varies only slightly with age: 47% of the acquisitions before 1978, 44% of the acquisitions between 1978 and 1979, and 40% of the acquisitions from 1980 to 1982 have been divested. This pattern suggests that additional acquisitions will be divested, particularly those completed in the early 1980s, but the number probably will not be large. The overall divestiture rate of at least 43.9% is somewhat higher than the 33% estimated by Ravenscraft and Scherer (1987).

#### 3.2. Measuring Divestiture Success

As we noted earlier, the high divestiture rate is certainly consistent with the view that acquisitions are mistakes and do not increase value. However, the high rate might occur for any of several reasons. In this section, we attempt to determine the extent to which the high divestiture rate indicates that the original acquisitions turned out to be poor investments. We use two methods to classify whether divestitures were unsuccessful acquisitions. First, we examine the reasons stated by the corporation and by the business press at the time of the divestiture. We classify acquisitions for which the stated reason is unsatisfactory performance as unsuccessful. Second, we use accounting data on the gain or loss on sale of the asset when it is available. We consider acquisitions divested at a loss as unsuccessful. These two measures enable us to classify 108 of the 119 divestitures.

We recognize there are several reasons that these measures may be flawed. First, we do not have reasons or accounting measures for all divestitures in the sample -- we tend not to have reasons for smaller, less visible divestitures and accounting measures for

acquisitions that are sold in pieces. Second, firms can manipulate accounting numbers and they may have tax and political incentives to do so. Finally, firms have a tendency to understate and disguise mistakes they have made. For example, econometric evidence indicates that firms regularly dismiss CEOs for poor performance, yet the firms rarely announce publicly that they are doing so. [See Warner, Watts, and Wruck (1988) or Weisbach (1988).] We proceed with these potential biases in mind.

The reasons announced by the press (usually the *Wall Street Journal*) for 103 of the 119 divestitures are presented in Table 2. In those cases in which the firm gives a different reason (usually change of focus or strategy) than the reporter (usually performance-related), we rely on the reporter's judgment. Similarly, in the few cases the reporter gives more than one reason including performance, we consider the divestiture to be performance-related.<sup>4</sup>

The most common reason, used in 42%, or 43 of the 103 cases, is to change corporate focus or strategy. Some of these undoubtedly are actually performance-related. The second most common reason, used in 28% of the divestitures, is to finance subsequent acquisitions or leveraged buyouts. In 21% of the cases, units are sold for performance-related reasons. The four remaining reasons - antitrust, needing cash, defending against a takeover, and receiving a good price - are infrequent, representing fewer than 9% of the divestitures.

In many divestitures, the acquirer reports an accounting gain or loss on the sale of the target. This provides a crude measure of the target sale price relative to the purchase

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<sup>4</sup> We stress that we rely primarily on the reason mentioned in the article, not on additional data the article may provide. For example, if the article says, "XYZ Corp. will divest ABC division at a loss on sale of \$ 50 million. James Smith, a spokesman for the company, indicated the divestiture was part of a plan to change the corporate strategy...", we count this as a change in focus or strategy, not as poor performance. We count the reason as poor performance if the article says, "Because of the poor earnings at ABC division, XYZ Corp. decided to sell ABC to UVW Inc. XYZ said it would recognize a loss of \$ 50 million on the sale."

price. A loss on the sale of a target signifies that the acquirer has sold the target for less than the net book value of the target. In most cases, the net book value of the target will reflect the purchase price of the target adjusted by subsequent investment in and depreciation of target company assets. This is true as long as the original acquirer uses purchase accounting for the acquisition and the original acquirer divests the target. Accordingly, we record accounting gain or loss on sale only for those targets divested by the original acquirer, and not for the cases in which the original acquirer is itself acquired.<sup>5</sup> When an acquirer sells the target as the primary part of a package of assets, we record whether the package is sold at a gain or loss.

We acknowledge that the accounting measure is imperfect because it does not measure the value of the investment in the target precisely. It is possible to recognize an accounting gain on sale many years after an acquisition, yet have had negative operating profits for a long time. In favor of the gain or loss on sale measure, we feel it is very unlikely that acquisitions divested with a loss on sale are successful. A loss on sale indicates that the acquirer has sold the target for less than its historical cost which does not control for any expected appreciation over time. Furthermore, to the extent that it measures divestiture price relative to original acquisition price, both market based measures, accounting gain or loss on sale is superior to accounting measures of income which may be affected by corporate transfer pricing and may not reflect market values.

We present the accounting measures in Panel 1 of Table 3. The divestitures are roughly split -- 28 have a gain on sale while 29 have a loss on sale. In 9 cases, the selling firms announced that it would not recognize a gain or loss on the sale. The results are similar when the divestitures are divided between those accounted for as purchases and those

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<sup>5</sup> Overall, of the 119 divestitures, 82 are divested by the original acquirer; 8 by the original acquirer after a leveraged restructuring; and 27, by the new owners of the acquirer and target. In two cases, we cannot determine whether a new owner or the original acquirer completes the divestiture.

accounted for as pooling of interests. Panel 1 of Table 3 also shows that the average pre-tax accounting gain or loss is 12% of the purchase price. The averages are calculated from fewer observations than the percent positive because we exclude divestitures that report only the sign of the gain or loss and that include operations in addition to those of the original acquisition. For divestitures that report only an after-tax result, we estimate the pretax gain or loss as the after-tax gain or loss divided by one less the (U.S.) corporate tax rate in the divestiture year.

The accounting measures suggest that approximately half of the divestitures were performing poorly. This figure exceeds the 22% of divestitures which the press reports as performance-related. The two measures may disagree for three reasons. First, as noted above, firms tend to disguise poor performance (which should also show up in accounting numbers, but to a lesser extent because of FASB requirements). Second, the press does not always identify divestitures with a loss on sale as performance-related. Third, a number of targets are not divested by the original acquirer making it impossible to use accounting gain or loss on sale. This subsample of divestitures has a disproportionately small number of poorly-performing acquisitions, because many of these divestitures occur shortly after takeovers or buyouts and are sold to retire takeover related debt. We classify only two takeover-related divestitures as performance-based.

When available, we also recorded the operating income or net income of the divested unit reported by the press or the seller. For 69 divestitures, we could record operating income (52 cases) or net income (17 cases). In 55 of the 69 cases, the measure of income is positive. This suggests, again, that the divested units are not disasters. This finding contrasts with Ravenscraft and Scherer (1987) who find that divested units have negative operating income on average.

Panel 2 of Table 3 compares the sale value of the divestiture to the original purchase price. This comparison includes targets that are divested by companies that have

acquired the original acquirer. Most of the units increase in value -- 44 of the 58 divestitures with a sale value are sold for more than their purchase price. The mean return (increase of sale value over purchase price) is 92% and the median is 52%.

Although the sale value relative to purchase price provides a rough benchmark of the success of these acquisitions as investments, it is clearly flawed. As with accounting gain or loss, sale value to purchase price does not include the interim cash flows paid from the target to the acquirer. Unlike accounting gain or loss, the sale value to purchase price will overstate the importance of additional investments made by the acquirer in the target. Sale value includes these investments, while the purchase price does not. Similarly, the sale value may not be directly comparable to the purchase price if the sale price does includes the assumption of target debt.

In addition, the return measure using sale price is a nominal return. An investment in the stock market over most of this period would have increased in value as well. As a benchmark, we use the return an acquirer would have received if it had invested in the S&P 500 (excluding dividends) instead of purchasing the target. This benchmark, therefore, approximates the capital gain portion of an investment in the value-weighted index. The returns relative to this benchmark are presented in Panel 3 of Table 3. This panel indicates that the mean market-adjusted return is -11%; the median, -23%. This suggests that the divested acquisitions are not, on average, superior investments; firms would have done better if they had invested their money in the S&P 500 (excluding dividends). At the same time, the divested acquisitions do not seem to be unmitigated disasters for the acquirers.

Finally, if we are interested in measuring the improvement in the value of the assets due to the acquisition, we should not include the value of the premium into our calculations, since this premium reflects the market's expectation of the improvement. Panel 4 of Table 3 compares the sale value of the divestiture to the equity value of the target 20

days before the acquisition announcement. As in Panel 3, the sale price is deflated by the return on the S&P 500 from the acquisition announcement until the divestiture. Panel 4 indicates that the mean market-adjusted return is 43%; the median, 7%. Acknowledging again the crude nature of this comparison, the results are consistent with positive combined returns for these acquisition.

Overall, the results in this section appear consistent with previous studies of the returns to acquirer and target shareholders at acquisition announcements. These studies (including our results that we report later) find that on average acquirer shareholders suffer a small loss, target shareholders earn a positive return, while acquirer and target shareholders combined earn a positive return when acquisitions are announced (during the 1970s and early 1980s).

We note that our evidence is also consistent with the alternative explanation that market reactions did not reflect expectations of future improvements given information available at that time, but that sellers of assets fortuitously received high prices for those assets in the 1980s thanks to relaxed antitrust, financial innovation or some other reason.

### 3.3. Market Expectations and Acquisition Success

To this point, we have documented the performance of divested acquisitions. We have argued that this casts a more favorable light on previous event-study results of the average shareholder reaction to acquisition announcements. In this section, we test whether acquisition success is related to acquirer and target shareholder returns when the acquisitions are announced. A positive correlation would give additional support to the view that announcement period returns measure are related to changes in underlying fundamental values. In contrast, a negative or zero correlation would put this view into doubt.

#### 3.3.1. Methodology

To determine the market reaction to the acquisition announcements, we estimate market model parameters using the period from -300 to -61 trading days before the first acquisition announcement in the *Wall Street Journal*. We compute daily (percentage) abnormal returns for both acquirer and target shareholders over the event period using these parameters. We cumulate the daily abnormal returns to obtain cumulative abnormal returns (CARs). For acquirers, we cumulate abnormal returns from five trading days before the acquirer's first acquisition announcement through five trading days after the announcement of the final bid. For targets (when available), we cumulate abnormal returns from five trading days before the announcement of any bid on the target, again until five trading days after the announcement of the final bid. This procedure follows the method used by Bradley, Desai and Kim (1988), and Lang, Stulz and Walkling (1989).

Combined returns to target and acquirer shareholders are calculated as the sum of the total dollar CARs for the acquirer and the target divided by the sum of the market value of equity of the acquirer and the target twenty trading days before the first acquisition announcement. Total dollar CARs are calculated by multiplying the acquirer and target CARs by, respectively, the market value of the acquirer and target equity twenty trading days before the first acquisition announcement.

We conduct our significance tests using (cross-sectional) announcement period returns and standard errors. This tends to yield larger standard errors than those obtained using estimation period returns as suggested by Patell (1976). Our decision to report two-tailed significance levels is similarly conservative. We also note that we generally obtain similar results when we use a shorter event window, when we eliminate firms that make other announcements during the event window, and when we exclude acquisitions in which the target purchase price is less than 10% of the market value of acquirer equity twenty trading days before the first acquisition announcement.



### 3.3.2. Non-Divestitures versus Divestitures

Table 4 presents CARs for the entire sample and for the divested and nondivested subsamples. The first row presents the CARs. The acquirer CARs are negative, with a mean of -1.49% and median -1.75%. The average CAR of -1.49% is significant at the 1% level. The average CAR for the divestitures of -1.99% is lower than the -1.11% CAR of the nondivestitures. The 0.88% difference, however, is moderate in magnitude and not significantly different from zero (t-statistic = 1.0, p=.31). Rows two and three present the target CARs and combined CARs. Again, both of these measures are lower for divestitures than for nondivestitures, but the differences are not significant. We note that the combined CARs are significantly positive. This is consistent with previous event-study results that the total returns to acquisitions are positive.

Morck, Shleifer, and Vishny (1990) argue that a more appropriate benchmark for scaling acquirer returns is the size of the target, rather than the size of the acquirer, since large acquisitions will have a greater impact on an acquiring firm's profits than small acquisitions. Accordingly, we report the dollar value of acquirer CARs as a fraction of the final purchase price of the target. This provides an estimate of the market's evaluation of the present value of the acquisition to acquirer shareholders as a fraction of the acquisition price. We also report the dollar value of combined acquirer and target CARs as a fraction of the target value twenty days before the first acquisition announcement. This provides an estimate of the total present value added by the acquisition.

We find that the average change in bidder value as a fraction of target value is higher for divestitures than for nondivestitures, while the median is lower. This higher average value is caused by a few outliers. The differences are not significant. Both the means and the medians of the combined CARs as a fraction of target value are lower for divestitures than for nondivestitures. Again, none of these differences are significantly different from zero. Overall, our results show that divested operations have CARs that are

lower than, but not significantly different from those of nondivested acquisitions.

### 3.3.3. Successful versus Unsuccessful Divestitures

As we have argued above, acquisitions are divested for a number of reasons, only one of which is poor performance. In addition, acquirers may decide to keep some acquisitions which are not successful. The appropriate test of the stock market's ability to predict an acquisition's ultimate success is not to compare returns for divestitures to non-divestitures, but to compare returns to acquisitions that are considered unsuccessful *ex post* with those of other acquisitions.

In this section, we classify divestitures as unsuccessful if either the acquirer reports a loss on the sale of the divestiture or the business press reports that the acquisition was a mistake (at the time of the divestiture). We classify divestitures in the "no reason" category if the acquirer does not report a usable accounting number for the divestiture and the business press does not report the divestiture. All other divestitures are classified as "not unsuccessful." We can classify 108 divestitures using this definition. We consider approximately 34% ( 37 of 108) of these as unsuccessful. We recognize that this classification system is imperfect. However, measurement error should lead to a bias against finding any differences.

Table 4 also presents CARs for divestitures categorized as unsuccessful, not unsuccessful, and no reason available. The results strongly suggest that the stock market can differentiate unsuccessful and not unsuccessful acquisitions when they are announced. The mean acquirer return is -4.42% for divested acquisitions classified as unsuccessful, compared to -0.64% for divested acquisitions not classified as unsuccessful, and -1.11% for acquisitions not divested. The mean acquirer returns are significantly lower for the unsuccessful

acquisitions than for the other two groups.<sup>6</sup>

The mean target CARs for the unsuccessful acquisitions are not significantly different from those for acquisitions not considered unsuccessful and acquisitions not divested. This is consistent with target returns being determined in a competitive market for corporate control.<sup>7</sup> The combined CARs are significantly lower for unsuccessful acquisitions (0.83%) than for acquisitions not considered unsuccessful (4.59%) and acquisitions not divested (4.13%). Again, the combined CARs for unsuccessful acquisitions are significantly lower than those for the other two groups. In fact, the combined CARs for the acquisitions labeled unsuccessful are not significantly different from zero.

Finally, Table 4 shows that the market reaction is similar for divested acquisitions not classified as unsuccessful and for acquisitions that are not divested. Bidder, target and combined returns of these two groups are not significantly different.

One potential objection to the results in Table 4 is that we arbitrarily interpret the reasons for a divestiture given in the business press. We also compare excess returns for divestitures classified according to the accounting definition of profitability. The results are similar to the results in Table 4. Acquisitions sold at a loss have significantly lower acquirer and combined CARs than acquisitions sold for a gain. CARs for divestitures sold for a gain average 0.79% compared to CARs of -3.35% for acquisitions sold at a loss. Combined CARs are 4.77% for gains, only 1.43% for losses. Again, these results suggest that the market has some ability to forecast the future success of an acquisition.

We obtain qualitatively similar results using two additional classification schemes. These classify divested acquisitions as unsuccessful, respectively, if: (1) the business press

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<sup>6</sup> These results and those which follow are qualitatively similar when we use median returns instead of mean returns.

<sup>7</sup> This result is somewhat different from the finding in Ravenscraft and Pascoe (1989) that target returns are correlated with post-acquisition changes in profit margins.

notes that the divested acquisition is unprofitable or a mistake; and (2) the divested unit is sold at a loss, or the business press identifies the divested acquisition as a mistake, or the divested unit is sold for less than the purchase price.

#### 3.3.4. Multivariate Results

The results in Table 4 are univariate results. They do not control for other potential determinants of abnormal returns. In Table 5, we control for two potential determinants in regressions of announcement period returns against divestiture success. Our cumulative abnormal return variables serve as the dependent variables in these regressions. We include two dummy variables to measure the divestiture status of the acquisition. The first (Divested-Unsuccessful) equals 1 if we classify a divested acquisition as unsuccessful and 0 otherwise. The second (Divested-Not-Unsuccessful) equals 1 if we classify a divested acquisition as not unsuccessful. We do not include the 11 divested acquisitions we could not classify.

Asquith, Bruner and Mullins (1987) and Eckbo and Langohr (1989) have shown that announcement period returns to acquirers in mergers are significantly more negative for acquisitions financed with stock than those financed with cash. Accordingly, the regressions include a dummy variable, Stock, that equals 1 if some part of the acquisition is financed by acquiring firm equity; the variable equals 0 if the acquisition is financed by cash and debt only.

Bradley, Desai and Kim (1988) find that announcement period returns to acquirers in tender offers are negatively related to the presence of multiple bidders; returns to targets are positively related to their presence. Accordingly, the regressions include a dummy variable, Multiple Bidders, that equals 1 if multiple bidders compete for the target and 0 otherwise.

Regression A.1 of Table 5 shows that acquirer CARs are 3.85% lower as a

percentage of acquirer value for acquisitions of targets classified as unsuccessful divestitures ( $t=3.0$ ) than for acquisitions that are not divested. This is significant at the 1% level. CARs to acquirers in divestitures not classified as unsuccessful are 0.24% ( $t=0.2$ ), but insignificantly higher than CARs for acquisitions not divested. This is consistent with the results in Table 4.

At the same time, there is a significant relation between the acquirer CARs and the Stock and Multiple Bidder variables. Acquirer returns are 3.52% lower ( $t=4.0$ ) for acquisitions financed by acquirer stock than those financed solely by cash and debt. The stock variable is unrelated to our measure of the success of the acquisition. This is consistent with the form of financing in an acquisition as a negative signal of the acquirer's value, rather than a negative signal about the acquisition. The negative coefficient on the stock value may also reflect the absence of interest tax shields and asset write-ups. Consistent with previous work, we also find that acquirer returns are 2.49% lower ( $t=2.3$ ) when multiple bidders are present.

Finally, it is worth noting that the constant term in regression A.1 is positive. This implies that acquirers earn positive returns for uncontested acquisitions financed with cash or debt and not classified as divested unsuccessful. Because only 20% of the acquisitions involve multiple bidders, acquirer returns are still positive, at 1.07%, for cash and debt acquisitions that are not divested unsuccessfully.

Regression A.2 presents a similar regression using the target CARs. Target CARs are negatively, but not significantly related to the two divestiture dummies. Like acquirer CARs, target CARs are significantly negatively related to the Stock variable (-5.01%,  $t=1.7$ ). Target CARs are positively and significantly related to the presence of multiple bidders (12.25%,  $t=3.7$ ).

Regression A.3 presents results for the combined acquirer and target returns as a percentage of acquirer and target value. The results are similar to those in regression 1.

The combined returns to divestitures classified as "unsuccessful" are significantly lower, by 3.61% ( $t=2.2$ ), than those of acquisitions not divested. CARs to acquirers in "Not unsuccessful" acquisitions are again insignificantly higher than CARs for acquisitions not divested (0.31,  $t=0.4$ ). Stock acquisitions are associated with lower combined returns while acquisitions involving multiple bidders are associated with higher combined returns.

Regressions A.4 and A.5 repeat the analysis of regressions A.1 and A.3 using the acquirer and combined CARs as a percentage of target value. The results are qualitatively similar for the divestiture success variables, but insignificant. Acquirer returns are 5.28% lower (as a percentage of target value) in divested-unsuccessful acquisitions ( $t=0.9$ ) than in acquisitions not divested; combined returns are 9.41% lower ( $t=0.8$ ).

In both regressions A.4 and A.5, the coefficient on the divested-unsuccessful variable is affected by a few large acquirer stock price movements on the announcement of relatively small acquisitions. To account for this, Panel B of Table 5 restricts the sample to targets with an equity market value at least 10% of acquirer market value. The results in regressions B.1 - B.3 are similar to those in A.1 - A.3. However, regression B.4 shows that a divested-unsuccessful acquisition is associated with a return of -9.98% ( $t=1.9$ ) to acquirer shareholders (as a percentage of target value) not -5.28%. Similarly, in regression B.5 a divested-unsuccessful acquisition is associated with a combined return of -14.67% ( $t=1.5$ ) not -9.41%.

Overall, the regression results in Table 5 are consistent with our earlier results. The market returns to acquirer shareholders and the combined returns to acquirer and target shareholders are significantly related to our classification of the success of the acquisition.

### 3.3.5. Implications of the Cross-Sectional Results

The results in Tables 4 and 5 suggest that stock price movements at the time of an acquisition announcement are related to the acquisition's ultimate success or failure. In this

section, we examine the relation between the initial market reaction and the success of the acquisition. For this test, we restrict the sample to those divested acquisitions we can categorize as successful or not unsuccessful and estimate the following equation:

$$\text{Probability ( Divested Unsuccessful )} = \begin{matrix} 0.31 & - 1.82 * \text{Acquirer CAR} \\ (6.6) & (2.8) \end{matrix}$$

The estimated coefficient of -1.82 indicates that a 5% drop in the stock price on the announcement of the acquisition is associated with a 9.1% increase in the probability that a divestiture is unsuccessful rather than successful.

Considering the measurement error in our variables, the -1.82 coefficient is likely to have been underestimated. To place an upper bound on the coefficient, we run a reverse regression of the acquirer CAR on the divestiture success variable and obtain a coefficient of -0.035 on the divestiture success variable. Inverting this, we obtain an upper bound of -28.6 for the sensitivity of the acquirer return to the probability of an unsuccessful divestiture. In this case, a 5% drop would be associated with a 143% increase in the probability that a divestiture is unsuccessful rather than successful.

The true predictive power of the information available to the market as estimated by the coefficient for the acquirer CAR (regressed against acquisition success) lies somewhere between -1.82 and -28.6. At the upper end of this range, the size of the coefficient implies that the market had an impressive ability to forecast the ultimate success of an acquisition. At the lower end, the market still had a non-trivial forecasting ability.

If the market had this information, the managers of the acquiring companies most likely had it also. The costs of gathering the information probably would not have been large. If managers thought the market had better information than they did, the managers could have asked analysts or investment banks their opinion of the acquisition. (Analysts following the acquiring company probably have some influence on the stock market movements around these announcements.) In all likelihood, the managers have at least as good information about their companies as the market.

Accordingly, one can make a strong argument that the managers knowingly made negative net present value investments when they acquired companies that were subsequently unsuccessful divestitures. This suggests the managers had other motivations for the investment. These motivations are described by the managerial model of the firm originally proposed by Marris (1963) and further developed by Demsetz (1983) and Shleifer and Vishny (1989). We view our result that the market can predict the unsuccessful divestitures as evidence in support of this managerial view of the firm.

#### 4. Related versus Diversifying Acquisitions

Other authors (Porter (1987), Ravenscraft and Scherer (1987), and Morck, Shleifer, and Vishny (1990)) have argued that diversifying acquisitions are more likely to be managerially motivated than related acquisitions. Porter (1987) and Ravenscraft and Scherer (1987) find evidence that divestiture rates are particularly high for diversifying acquisitions and argue that this evidence implies that diversifying acquisitions were worse investments than related acquisitions.

To examine this view, we classify each of our acquisitions as either related or diversifying. To measure the relatedness of an acquisition, we use a rule based on the SIC codes listed in *Dun and Bradstreet's Million Dollar Directory*. For each firm, the *Million Dollar Directory* lists the SIC codes of the firm's businesses in the order of their importance (as measured by sales). We focus on the SIC codes of the four most important businesses of the target and acquirer. An acquisition is related at the four-digit level if one of the four most important businesses of both the acquirer and target are in the same four-digit SIC code industry. Similarly, acquisitions are related at the three- or two-digit levels if the acquirer and target are in the same three- and two-digit SIC code industries, respectively. Acquisitions are considered unrelated if none of the four most important businesses of the acquirer and target share a two-digit SIC code. These definitions are similar to Morck,



Shleifer, and Vishny (1990) who consider firms to be related if they share a four-digit SIC Code in one of the three most important four-digit SIC codes businesses.<sup>8</sup> We refer to acquisitions as highly related if the acquirer and target are related at the three- or four-digit level and as diversifying if the acquirer and target are not related only at the three- or four-digit level.

The divestiture rate differs dramatically and monotonically by our relatedness measure. Table 6 shows that 60.2% of the acquisitions in which the acquirer and target do not share a primary two-digit SIC code are divested; 55.6% in which they share a two-digit SIC code; 26.3% in which they share a three-digit SIC code; and, only 13.3% in which they share a four-digit SIC code. The divestiture rates of the unrelated and two-digit acquisitions are significantly different from the rates of the three- and four-digit acquisitions at the 1% level.<sup>9</sup> The divestiture rates of unrelated and two-digit acquisitions are not significantly different from one another at conventional levels; nor are the divestiture rates of the three- and four-digit acquisitions.

Because more of the acquisitions in 1981 and 1982 are related -- 52% versus 69% for acquisitions before 1981 -- it is possible that the difference in divestiture rates by relatedness occurs only because a shorter time has elapsed since the highly related acquisitions were completed. To test this possibility, we estimate a linear probability model in which the dependent variable equals one if the acquisition is divested, zero otherwise.<sup>10</sup> As independent variables, we include variables (1) Diverse, that equals one if the acquisition

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<sup>8</sup> We obtain similar results when we classify acquisition relatedness using *Standard and Poor's Register of Corporations* which lists all SIC codes in which a firm produces. [The *Million Dollar Directory* only lists the six most important SIC codes.] This rule classifies acquisitions as diversifying when the target and acquirer do not share any two-digit SIC codes.

<sup>9</sup> Significance levels are calculated using chi-square tests with one degree of freedom.

<sup>10</sup> The results are qualitatively identical using a logit specification. We present the linear probability model for ease of interpretation.

is diversifying (two-digit or no-digit match), zero otherwise; (2) D1977, that equals one if the acquisition occurs before 1978, zero otherwise; and (3) D1980, that equals one if the acquisition occurs between 1978 and 1980, zero otherwise:

$$\begin{array}{rcl}
 \text{Prob (Divest)} = & \text{Constant} & \text{Diverse} & \text{D1977} & \text{D1980} & \\
 \text{Coeff.} & 0.14 & + 0.42 & + 0.04 & + 0.03 & R^2 = 0.17 \\
 \text{(t-stat)} & (2.2) & (7.1) & (0.7) & (0.8) &
 \end{array}$$

These estimates imply that acquisition relatedness rather than age is the primary determinant of whether an acquisition is divested. Diversifying acquisitions are 42% more likely to be divested than related acquisitions (significant at 1% level). In contrast, both variables for acquisition completion date are small and insignificant.

While the overall divestiture rate in our sample of 43.9% is slightly higher than the 33% estimated by Ravenscraft and Scherer (1987), the relative frequency of divestitures of diversifying (versus related) acquisitions in our sample appears to be much higher. Ravenscraft and Scherer (1987, p. 180) estimate that divestitures of conglomerate acquisitions (no two-digit match) are only 12% more likely than those of highly related horizontal acquisitions (four-digit match). Our results for unrelated acquisitions appear to be more in line with those of Porter (1987) who finds that approximately 53% of the acquisitions in "new industries" and 74% of the acquisitions in "unrelated new fields" by 33 conglomerate acquirers are later divested. Because Porter's definition of "unrelated new field" or "new industry," is different from ours, we cannot compare our results directly to his.

#### 4.1 Purchasers of Divested Units

The strong relation between divestiture rate and relatedness in our sample is consistent with an increase in relatedness and a deconglomeration in the 1980s. However, this is true only if the divested units are not resold to unrelated acquirers. Table 7 addresses this possibility by classifying the buyers of the divested divisions in our sample. Only 21 of 105, or 20%, of the divestitures we can classify are sold to buyers that are not highly related

to the divested units.<sup>11</sup> In contrast, 43% of the divestitures are sold to highly related acquirers, 22% are sold to management groups, 12% are spun off, and 3% are liquidated.

The results in Tables 6 and 7 are consistent with an undiversifying or deconglomeration of American corporations in the 1980s. Table 6 shows that 104 of the 177 (59%) diversifying or not highly related acquisitions are divested by 1989. In the 92 cases we can identify, only 21, or 23%, of the diversifying acquisitions that are divested are sold to companies that do not share a three- or four-digit SIC code with the unit. If this is typical, 45% of the diversifying acquisitions in our sample are no longer in diversified corporations by 1989. (This calculation ignores cases where the unit is kept and possibly expanded while other units in the corporation are sold, again undiversifying the corporation.) These calculations support the view that there has been a shift in the structure of American corporations towards increased relatedness since 1980.

#### 4.2 Success of Diversifying and Related Acquisitions

There are several potential explanations for the large difference in the divestiture rate between acquisitions that are related and those that are not. First, if diversifying acquisitions are more likely to be bad acquisitions than related ones, diversifying acquisitions will be divested more often for performance reasons. Alternatively, if there is a real and irrecoverable cost to integrating related mergers (such as changing product names or integrating functional areas) that is incurred immediately after the acquisition, divestitures of related units will be less likely. Third, before 1981 and the Reagan Administration, related acquisitions were strongly discouraged. Acquirers of unrelated businesses may have hoped to increase value by improving management, improving systems, improving access to capital markets, etc. In the 1980s, with relaxed antitrust as well as more accessible and innovative

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<sup>11</sup> In 14 divestitures, we could not determine the primary business (or the identity) of the buyer.

capital markets, assets are worth less under the control of unrelated owners than under related or specialized owners.

The evidence on the success of diversifying versus related acquisitions is mixed. Among the acquisition we classify, we consider two of fifteen (13%) related acquisitions as unsuccessful compared to 35 of 93 (38%) diversifying acquisitions. This difference is significant at the 10% level (chi-square test). At the same time, two of five (40%) and 26 of 61 (43%), respectively, of diversifying and related divestitures register a gain on sale. This difference is not significant.

To measure whether expected future profits were different for diversifying and related acquisitions, we also compare the excess returns at the acquisition announcements. Acquirer returns at the acquisition announcement are -1.46% for all diversifying acquisitions; -1.56% for related acquisitions. Combined acquirer and target returns are 3.53% and 4.33%, respectively. The differences are not significant. Among divested acquisitions, acquirer announcement returns are -2.07% for diversifying acquisitions; -1.42% for related acquisitions. Combined acquirer and target returns are 3.24% and 4.25%, respectively. Again, the differences are not significant. The results for median returns are qualitatively similar.

We do not find large differences in the average performance of diversifying and related acquisitions. While some of the less successful acquisitions in our sample are diversifying (United Technologies and Mostek, or Armco and NN Corporation), so are some of the more successful ones (IC Industries and Midas, or Westinghouse and Teleprompter). This evidence provides surprisingly weak support for arguments that diversifying acquisitions decreased value, *ex ante*. In view of the small difference in the success rates of diversifying and related acquisitions, we are more sympathetic towards non-performance based explanations for the large difference in divestiture rates.

## 5. Summary and Discussion

This paper documents that a substantial fraction, almost 44%, of a sample of large acquisitions completed in the 1970s and early 1980s have been divested in the 1980s. Given the commonly held view that divestitures represent failure, the high frequency of divestitures appears to contradict event-study evidence that finds positive combined acquirer and target returns in acquisitions. Our results, however, suggest that many divested acquisitions were not failures. Only 44% of the acquirers who report an accounting result for the divestiture report a loss on sale. The remaining 56% report a gain or no loss. Similarly, when we can compare a sale price to a purchase price for a divested unit, we find that most units are sold for more than they cost. Deflated by the S&P 500, the average sale price of these divested units is 90% of the purchase price - negative, but apparently not the failure suggested by previous work. Furthermore, the sale price (deflated by the S&P 500) averages 143% of the target's pre-takeover market value. Targets appear to be worth less than the bidders pay, but more than the target is worth before the takeover occurs. The results for gain and loss on sale as well as the sale price, therefore, are consistent with event-study findings of small negative returns to acquirers and positive combined returns to acquirers and targets. Because our sample is limited to one time period, however, this evidence is also consistent with the alternative explanation that sellers of assets received fortuitously high prices for those assets in the 1980s thanks to relaxed antitrust, financial innovation or some other reason not known at the time of the acquisitions.

Our cross-sectional results further reconcile the high divestiture rates with the event-study evidence. Acquirer returns and combined (acquirer and target) returns at the acquisition announcement are significantly lower for divestitures we classify as unsuccessful than the corresponding returns for divestitures we do not classify as unsuccessful and for acquisitions that are not divested. This last result has two implications. First, in a setting where the nature of the news being revealed is not initially obvious, our results suggest that

stock market prices do react to fundamentals. Second, it suggests that acquisitions that ultimately prove unsuccessful are considered poor investments by the market when they are announced. If management has at least as good information as the market about their own companies, then they made these poor investments despite knowing their poor quality.

Diversifying acquisitions are divested much more often than related ones. Almost 60% of those acquisitions in which the acquirer and target are not highly related have been divested. In contrast, fewer than 20% of the highly related acquisitions have been divested over the same time period. The evidence on the success of diversifying versus related acquisitions, however, is mixed. We classify two of fifteen (13%) related acquisitions as unsuccessful compared to 35 of 93 (38%) diversifying acquisitions. At the same time, we find that 43% of diversifying and 40% of related divestitures register a gain on sale. Finally, the stock market reactions to the announcements of diversifying and related acquisitions are not significantly different.

These results suggest that diversifying acquisitions in the 1970s (and early 1980s) increased the combined value of the target and acquirer relative to their next most highly valued use. Possible sources of that value would include tax benefits, reduced corporate overhead, improved management systems, and undervaluation. In view of the small difference in the success rates of diversifying and related acquisitions, we are more sympathetic towards non-performance-based explanations for the large difference in divestiture rates. In the 1980s, with relaxed antitrust enforcement, improved information systems, and more active capital markets, a related acquirer arguably brings more value to (or pay more for) a target than a diversifying one.

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Table 1

Number of acquisitions<sup>a</sup>, relative sizes of acquirer and target, and number and percentage of subsequent divestitures by year of acquisition completion. Sample consists of 271 Acquisitions of at least 100 million 1982 dollars.

Year	Number of Acquisitions	Average Target Value as Percentage of Acquirer Value	Number Divested	Percentage Divested
1971	8	35.6%	5	62.5%
1972	4	28.9	1	25.0
1973	9	22.3	7	77.8
1974	7	19.6	2	28.6
1975	7	34.1	4	57.1
1976	16	19.8	8	50.0
1977	30	26.1	12	40.0
1978	39	28.0	16	41.0
1979	45	28.1	23	51.1
1980	30	25.7	12	40.0
1981	34	28.4	17	50.0
1982	42	24.6	12	28.6
Total	271	25.6	119	43.9

<sup>a</sup> Acquisition sample is taken from Mergers and Acquisitions magazine lists of the largest completed deals of the year from 1971 - 1982. Excludes foreign company, insurance company, bank, and railroad acquirers. All acquirers have stock returns available from CRSP. Value of transaction exceeds 5% of the equity market value of the acquirer twenty trading days before the initial acquisition announcement.

<sup>b</sup> Acquisitions are considered diversifying or not highly related if one of the four most important business of the acquirer and target are not in the same three-digit or four-digit SIC codes industry according to Dun and Bradstreet's Million Dollar Directory.

<sup>c</sup> Target value is the final purchase price of the target. Acquirer value is the equity market value of the acquirer twenty trading days before the initial acquisition announcement.

Table 2  
REASONS FOR DIVESTITURES\*

Announced reasons for 101 divestitures of acquisitions of at least 100 million 1982 dollars acquired between 1971 and 1982.

Reason	Number of Divestitures
Change focus or corporate strategy	43
Unit unprofitable or mistake	22
Sale to Finance Acquisition or Leveraged Restructuring	29
Antitrust	2
Need cash	3
To defend against takeover	1
<u>Good Price</u>	<u>3</u>
Divestitures with reasons	103

\* The reasons are either announced publicly by the corporation or inferred by reporters from the Wall Street Journal, Fortune, or Business Week. When a firm's announcement differs from the reporter's assessment, we use the reporter's assessment.

Table 3  
ACCOUNTING GAIN AND LOSS, AND SALE VALUE RELATIVE TO PURCHASE AND PRICE

Divestitures by accounting gain or loss on sale, and by relation of sale value to purchase price and pre-takeover price for divestitures from a sample of 271 acquisitions of at least 100 million 1982 dollars completed between 1971 and 1982.

	> 0	= 0	< 0	N	Mean	Median	N
1. Accounting gain or loss on sale as a percentage of purchase price <sup>a</sup>	28	9	29	66	12%	0%	58
a. Purchase Acquisitions <sup>b</sup>	22	7	21	50	9%	0%	44
b. Pooling Acquisitions <sup>b</sup>	6	2	8	16	22%	0%	14
2. Percentage change in sale value of divestiture relative to purchase price <sup>c</sup>	44	0	14	58	92%	52%	58
a. Loss on Sale	5	0	7	12	-5%	-19%	12
b. Gain on Sale	22	0	2	24	146%	107%	24
3. Percentage change in sale value of divestiture deflated by S&P 500 relative to purchase price <sup>d</sup>	19	0	39	58	-11%	-23%	58
a. Loss on Sale	1	0	11	12	-43%	-51%	12
b. Gain on Sale	12	0	12	24	16%	5%	24
4. Percentage change in sale value of divestiture deflated by S&P 500 relative to purchase price <sup>d</sup>	27	0	22	49	43%	7%	49
a. Loss on Sale	2	0	10	12	-30%	-36%	12
b. Gain on Sale	14	0	5	19	110%	405	19

<sup>a</sup> Accounting gain or loss on sale is gain or loss reported when original acquirer divests a target. Includes targets divested in several pieces or combined with other assets as long as gain or loss on sale is reported. Means and medians are calculated using pretax gain or loss on sale. If pretax gain is not reported, pretax gain is estimated as the after-tax gain divided by one minus the corporate tax rate in effect the year of the divestiture.

<sup>b</sup> Purchase acquisitions are acquisitions accounted for as purchases. Pooling acquisitions are accounted for using pooling of interests accounting.

<sup>c</sup> Measures the reported sale or divestiture price of a target relative to the acquisition price. A target sale price is included only if the target is sold at one time and in one piece.

<sup>d</sup> Measures the reported sale or divestiture price of a target deflated by the S&P 500, relative to the acquisition price. A target sale price is included only if the target is sold at one time and in one piece.

<sup>e</sup> Measures the reported sale or divestiture price of a target deflated by the S&P 500, relative to the target equity value 20 days before the first acquisition announcement. A target sale price is included only if the target is sold at one time and in one piece.

Table 4  
CUMULATIVE ABNORMAL RETURNS BY DIVESTITURE STATUS AND SUCCESS

Mean and median cumulative abnormal returns<sup>a</sup> at announcement of original acquisition by divestiture status and divestiture success<sup>b</sup> for 271 Acquisitions of at least 100 million 1982 dollars completed 1971-1982.

Cumulative Abnormal Return	All Acquisitions	All Non-Divested Acquisitions	All Divested Acquisitions	Divested Acquisitions		
				Unsuccessful	Not unsuccessful	No reason
<u>Ch. Acquirer Value</u> <u>Acquirer Value</u>	Mean: Std. Error: Median: N:	-1.11% 0.61 -1.77 152	-1.99% 0.63 -1.73 119	-4.42% 1.28 -2.65 37	-0.64% 0.71 -1.25 71	-2.48% 2.03 -4.18 11
<u>Ch. Target Value</u> <u>Target Value</u>	Mean: Std. Error: Median: N: <sup>c</sup>	27.83 1.80 26.08 113	25.81 2.21 21.08 96	26.13 4.10 19.22 30	23.54 2.90 19.86 56	34.50 5.77 30.81 10
<u>Ch. Acquirer + Target</u> <u>Acquirer + Target</u>	Mean: Std. Error: Median: N:	3.77 0.59 2.21 209	3.34 0.78 1.86 96	0.83 0.82 1.03 30	4.59 1.04 5.06 56	3.88 3.87 -0.65 10
<u>Ch. Acquirer Value</u> <u>Target Value</u>	Mean: Std. Error: Median: N:	-8.29 2.11 -5.69 271	-7.35 3.15 -6.90 119	-12.90 5.23 -9.87 37	-2.75 3.80 -1.42 71	-18.43 15.70 -16.48 11
<u>Ch. Acquirer + Target</u> <u>Target Value</u>	Mean: Std. Error: Median: N:	12.24 4.47 13.36 209	9.94 7.40 10.72 96	9.36 8.60 4.33 30	19.04 6.69 22.76 56	-39.18 54.58 -4.58 10

<sup>a</sup> Cumulative abnormal returns are calculated from five trading days before the day of the initial *Wall Street Journal* announcement of the acquisition until five trading days after the final bid. Returns are computed using parameters from a market model estimated from 300 to 61 trading days before the initial announcement. Median cumulative abnormal returns are in brackets and the number of observations per category is in parentheses.

<sup>b</sup> Acquisitions are classified as "Unsuccessful" if either the acquirer reports a loss on the sale of the acquisition or if the business press reports that the acquisition was *ex post* a mistake. Acquisitions in the "Not Unsuccessful" category are divested acquisitions that either have a gain or no loss on sale, or are not referred to as mistakes by the business press. Acquisitions for which we have no information on gain or loss on sale, and no business press description of the divestiture are classified as "no reason."

<sup>c</sup> The number of observations for rows requiring changes in target values is smaller than the rest of the sample because some targets were not traded publicly.

Table 5  
REGRESSIONS OF CUMULATIVE ABNORMAL RETURNS ON ACQUISITION AND DIVESTITURE CHARACTERISTICS

Regressions of cumulative abnormal returns<sup>a</sup> on acquisition and divestiture characteristics including whether acquisition is described as unsuccessful, whether acquisition is divested, form of payment in original acquisition, and whether original acquisition attracted multiple bidders for a sample of 271 acquisitions of least 100 million 1982 dollars completed between 1971 and 1982. (t-statistics are in parentheses.)

Cumulative Abnormal Return	Constant	Divested Unsuccessful <sup>b</sup>	Divested Not Unsuccessful <sup>c</sup>	Stock <sup>d</sup>	Multiple Bidders <sup>e</sup>	R-Square	N
<b>A. Target market value is at least 5% of acquirer market value.</b>							
1. <u>Ch. Acquirer Value</u> Acquirer Value	1.57 (1.9) <sup>10</sup>	-3.85 (3.0) <sup>1</sup>	0.24 (0.2)	-3.52 (4.0) <sup>1</sup>	-2.49 (2.3) <sup>5</sup>	.10	260
2. <u>Ch. Target Value</u> Target Value	28.34 (9.4) <sup>1</sup>	-0.75 (0.2)	-4.54 (1.4)	-5.01 (1.7) <sup>10</sup>	12.25 (3.7) <sup>1</sup>	.10	199
3. <u>Ch. Acquirer+Target</u> Acquirer+Target	5.29 (4.3) <sup>1</sup>	-3.61 (2.2) <sup>5</sup>	0.31 (0.2)	-2.90 (2.3) <sup>5</sup>	3.61 (2.7) <sup>1</sup>	.09	199
4. <u>Ch. Acquirer Value</u> Target Value	-0.91 (0.2)	-5.28 (0.9)	5.51 (1.1)	-12.37 (2.9) <sup>1</sup>	-2.66 (0.5)	.04	260
5. <u>Ch. Acquirer+Target</u> Target Value	29.78 (3.6) <sup>1</sup>	- 9.41 (0.8)	3.79 (0.4)	-22.26 (2.7) <sup>1</sup>	0.68 (0.1)	.04	199
<b>B. Target market value is at least 10% of acquirer market value.</b>							
1. <u>Ch. Acquirer Value</u> Acquirer Value	1.90 (2.0) <sup>10</sup>	-4.45 (3.1) <sup>1</sup>	0.16 (0.1)	-3.88 (3.9) <sup>1</sup>	-2.39 (2.0) <sup>5</sup>	.11	224
2. <u>Ch. Target Value</u> Target Value	29.41 (9.4) <sup>1</sup>	-1.68 (0.4)	-2.65 (0.8)	-7.34 (2.3) <sup>5</sup>	15.22 (4.4) <sup>1</sup>	.15	174
3. <u>Ch. Acquirer+Target</u> Acquirer+Target	5.92 (4.4) <sup>1</sup>	-4.32 (2.4) <sup>5</sup>	0.33 (0.2)	-3.26 (2.4) <sup>5</sup>	4.56 (3.1) <sup>1</sup>	.12	174
4. <u>Ch. Acquirer Value</u> Target Value	1.18 (0.3)	- 9.98 (1.9) <sup>10</sup>	2.12 (0.5)	-11.04 (3.0) <sup>1</sup>	0.39 (0.1)	.06	224
5. <u>Ch. Acquirer+Target</u> Target Value	30.92 (4.3) <sup>1</sup>	-14.67 (1.5)	6.20 (0.8)	-23.72 (3.2) <sup>1</sup>	10.84 (1.4)	.09	174

<sup>a</sup> Cumulative abnormal returns are calculated from five trading days before the day of the initial *Wall Street Journal* announcement of the acquisition until five trading days after the final bid. Returns are computed using parameters from a market model estimated from 300 to 61 trading days before the initial announcement. Median cumulative abnormal returns are in brackets and the number of observations per category is in parentheses.

<sup>b</sup> Acquisitions are classified as "Unsuccessful" if they are divested and either the acquirer reports a loss on the sale of the acquisition or the business press reports that the acquisition was *ex post* a mistake. This variable equals 1 if an acquisition is classified as unsuccessful, 0 otherwise.

<sup>c</sup> Acquisitions are classified as "Not Unsuccessful" if they are divested and either have a gain or no loss on sale, or are not referred to as mistakes by the business press. This variable equals 1 if an acquisition is divested and classified as "Not Unsuccessful," 0 otherwise.

<sup>d</sup> Variable equals one if part of the payment for the acquisition is an equity security of the acquirer. The variable equals 0 if the payment consists of cash and debt only.

<sup>e</sup> Variable equals one if multiple bidders compete for the target.

Two-tailed tests: <sup>1</sup> Significant at the 1% level;

<sup>5</sup> Significant at the 5% level;

<sup>10</sup> Significant at the 10% level.

Table 6  
DIVESTITURES BY RELATEDNESS OF ACQUISITION

Acquisitions divested and kept as of December 31, 1989 for 271 acquisitions of at least 100 million 1982 dollars completed between 1971 and 1982. Target market value is at least 5% of acquirer market value.

	Total Number Acquisitions	Percentage (Number) Acquisitions Divested As of 1989	Percentage (Number) Acquisitions Not Divested As of 1989
1. Acquirer and Target share four-digit SIC Code <sup>a</sup>	75	13.3% (10)	86.7% (65)
2. Acquirer and Target share three-digit SIC Code <sup>b</sup>	19	26.3% (5)	73.7% (14)
3. Acquirer and Target share two-digit SIC Code <sup>c</sup>	54	55.6% (30)	44.4% (24)
4. Acquirer and Target do not share any SIC Code	123	60.2% (74)	39.8% (49)
All Acquisitions	271	43.9% (119)	56.1% (152)

<sup>a</sup> Acquisitions are in this category if acquirer and target share one of the four principal four-digit SIC codes listed in Dun and Bradstreet's Million Dollar Directory.

<sup>b</sup> Acquisitions are in this category if acquirer and target share one of the four principal three-digit SIC codes but not one of the four principal four-digit SIC codes.

<sup>c</sup> Acquisitions are in this category if acquirer and target share one of the four principal two-digit SIC codes but not one of the four principal three-digit SIC codes.

<sup>d</sup> Acquisitions are in this category if acquirer and target do not share any of the four principal two-digit SIC codes.

Table 7  
DIVESTITURES CLASSIFIED BY PURCHASER

Divestitures classified by purchaser of divested unit for divestitures from a sample of 271 acquisitions of at least 100 million 1982 dollars completed between 1971 and 1982.

	All	Acquirer and Target do not share primary 3 or 4 digit SIC Code <sup>a</sup>	Acquirer and Target share primary 3 or 4 digit SIC Code <sup>b</sup>
1. Divested unit sold to management group	23	21	2
2. Divested unit sold to buyer that shares primary 3 or 4 digit SIC code. <sup>c</sup>	45	36	9
3. Divested unit sold to buyer that does not share primary 3 or 4 digit SIC code. <sup>d</sup>	21	21	0
4. Divested unit is part of spin off.	13	11	2
5. Divested unit is liquidated.	3	3	0
6. Buyer could not be classified.	<u>14</u>	<u>12</u>	<u>2</u>
Total	119	104	15

<sup>a</sup> Acquisitions are in this category if acquirer and target do not share one of the four principal three- or four-digit SIC codes listed in Dun and Bradstreet's Million Dollar Directory.

<sup>b</sup> Acquisitions are in this category if acquirer and target share one of the four principal three- or four-digit SIC codes listed in Dun and Bradstreet's Million Dollar Directory.

<sup>c</sup> Divestitures are in this category if the target is sold to a purchaser that shares one of the four principal three- or four-digit SIC codes listed in Dun and Bradstreet's Million Dollar Directory.

<sup>d</sup> Divestitures are in this category if the target is sold to a purchaser that does not share one of the four principal three- or four-digit SIC codes listed in Dun and Bradstreet's Million Dollar Directory.