A TALE OF TWO DECADES: CORPORATE CONTROL CHANGES IN THE ‘80s AND ‘90s

November 23, 2000

Number 21

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Glenn Yago, Director of Capital Studies at the Milken Institute, specializes in financial innovations, financial institutions and capital markets. His work includes extensive analysis of public policy and its relationship to high-yield markets, initial public offerings, industrial and transportation concerns, and public and private sector employment. Mike Bates, Wendy Huang, and Robert Noah contributed research to this paper.

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Executive Summary

How do the mergers of the 1990s compare with the mergers of the 1980s? Is the market vulnerable to waves of merger activity motivated by something other than maximizing shareholder value? It has been observed that the merger and acquisition environment of 1993-97 was more profitable for all parties involved when compared to that of 1985-89.

Mergers, by their very nature, can create value for economic, financial or managerial reasons. Because mergers impact the capital structure of the newly created firm, the initial intent to merge should act to increase the wealth of shareholders. But does it? It has been seen that not all mergers are entered into for this sole intent and purpose. Other reasons may include the following: (1) managers acting out of self-interest for personal gain, power or extended tenure; and/or (2) bidders paying too much for the new company, thus failing to increase the wealth of the bidding firm’s shareholders. In the latter case, one might expect shareholders of targets to do well while shareholders of bidding firms suffer losses.

Five “waves” (eras) characterize the merger activity during the past century. The first great merger wave in the United States followed the depression of the late 19th century and was fueled by growth and infrastructure. The second merger wave sprouted during the economic boom that followed the First World War and was driven by an abundant supply of investment capital. The third merger wave, set in the late 1960s, was primarily motivated by the desire for diversification. This was the wave of conglomeration, with very large firms possessing market share in extremely diverse industries. The diversification of large conglomerates became so questionable that the fourth merger wave, that of the 1980s, served to restructure many conglomerates created during the third wave. The 1990s have emerged to
produce a fifth wave of corporate acquisitions. This wave has seen consolidation of market share and acquisition of technology.

Finally, parties to merger activity are advised to proceed cautiously. Bidding shareholders should be dubious of any claims of large returns and resistant to possible overpayment. Target shareholders should monitor excessive resistance to bidders as well as implementation of anti-takeover measures that may prohibit a value-creating acquisition. In short, takeovers can create value and in fact almost always do. The task of bidders is not to overpay while the job of targets is to get as much as possible. The risk to bidding shareholders is that their firm may pay too much. Target shareholders face the risk that too much resistance may preclude any deal at all.

Tender offers in takeover contests during the 1985-89 period resulted in the clear creation of shareholder value, though most of this value was transferred to shareholders of the acquired firm with bidding shareholders experiencing a slight, though insignificant, value loss. The 1993-97 period exhibits greater gains to shareholders than those experienced during 1985-89 and though most of these gains are still allocated to shareholders of acquired firms, bidding firm shareholders receive positive returns as well. The mergers and acquisitions environment of 1993-97 appears to be more profitable for all parties involved when compared to that of 1985-89. Bidding firms in particular have shifted from slight losers to clear winners in the market for corporate control.

Introduction

Takeovers and mergers are controversial. The phrase “merger mania” appeared in the Wall Street Journal 30 times in the first nine months of 1998 alone. The debate in this area of
corporate behavior is broad, including discussions of “stakeholder” rights to the value of the proposed merger or takeover. Is the market susceptible to waves of merger activity motivated by something other than the maximization of stockholder value? Who wins in the typical corporate takeover contest and why? Have the answers to these questions changed with the 1990s wave of mergers? How do 1990s mergers compare to those of the 1980s?

Why Merge?

When two firms merge, value may be created for economic, financial or managerial reasons. Economic reasons include an increased share of the product market and lower production costs due to economies of scale. Mergers often result in an alteration of capital structure that may benefit the newly created firm for purely financial reasons. Poor management of one firm may be replaced by the more qualified management of the other. In all of these cases combined stockholder value of the two firms should increase.

At first glance, mergers should be like any other action taken by firms: mergers should act to increase the wealth of stockholders. There are at least two generally accepted problems with this. First, it has long been observed that the motives of managers are not necessarily those of their stockholders. Managers, presumed to be maximizing their personal happiness, may choose to acquire another firm even when this does not benefit the stockholders. Why? Management may be “empire building” or seeking to amass corporate power, perhaps obtaining more compensation along the way. In a more mundane possibility, management may be trying to consolidate market power in a shrinking market, effectively prolonging the death of their firm in order to extend management’s tenure. The phrase “merger mania” offers yet another possibility, where management follows a herd of acquirers, even when an acquisition is ill advised. The Economist began a series of briefs on the subject that examine
“how mergers go wrong.” The first brief in the series, in fact, put Compaq’s 1998 takeover of Digital Equipment in the category of an attempt to consolidate market power in a shrinking market (July 22, 2000).

A second, less severe hypothesis regarding the value created by mergers is, in short, that there is some, but that bidders pay too much for it, thus failing to increase the wealth of the bidding firm’s stockholders. Whether there is value or not, management may have more incentive to engage in acquisition than its stockholders would prefer. Paying too much for a target is a natural result. In this case, we might expect stockholders of targets to do well while stockholders of bidding firms, suffer losses. But if a merger really does occur, how do we tell which stockholders won and which lost once the firms are combined?

**Background: Merger Waves**

Chart 1 illustrates merger activity in the United States from 1895 to 1997. Data for 1895-1968 was collected from *Industrial Market Structure and Economic Performance* by F. M. Scherer. This data shows the number of manufacturing and mining firms acquired per year. *Mergerstat* has the number of merger and acquisition announcements from 1963-1997. Both of these series are plotted in Chart 1, with overlap during the 1963-1968 period. While these two data series are not directly comparable, together they show the “waves” of merger activity during the past century.
The first great merger wave in the United States followed the depression of the late 19th century and was fueled by growth in infrastructure. Advances in the transportation industry, particularly the emergence of the first transcontinental railroads, increased the size of the markets that firms served. Lax corporate laws in some states made horizontal mergers easier for firms facing increased competition from companies that were once geographically segregated.

In an effort to secure economies of scale and to maintain market share in their growing markets, firms began to merge with other firms in their respective industries. It was during this era that some of America’s best-known firms were created, including General Electric, Eastman Kodak, Standard Oil, and DuPont. This merger wave gave birth to the first billion-dollar merger in American history when U.S. Steel (J.P. Morgan) and Carnegie Steel (Andrew Carnegie) merged into one firm. Following the merger, the company engulfed more than 700 additional companies, and dominated the United States Steel market.
In response to concern over the monopolization of United States industries, the Sherman Antitrust Act was passed in 1890. Initially, the Act was used primarily as a tool to regulate stockholder trusts. The Justice Department (the enforcement agency of the Act) was unable to vigorously fight monopoly formation due to staffing problems. It would not be until the second merger wave that the Sherman Antitrust Act would play a significant role in impeding horizontal mergers and the formation of monopolies.

The collapse of the first merger wave was due more to disappearance of available capital than to regulatory enforcement. The beginning of the end was the shipbuilding trust collapse at the turn of the 20th century, which taught investors to be leery of certain accounting practices. The deathblow to the monopoly wave was the stock market crash in 1904.

The second merger wave sprouted during the economic boom that followed the First World War and was fed by an abundant supply of investment capital. Fueling the urge to merge was an increase in use of radio advertising to boost market share, as companies sought to develop national name brand recognition.

In 1914, Congress passed the Clayton Act to reinforce the anti-monopoly aspects of the original Act. It clarified which practices reduce competition in an inequitable manner. For one, price discrimination was outlawed, except when cost economies could justify discriminatory pricing. Furthermore, the Clayton Act prohibited the acquisition of stock in competing corporations in cases where competition would be reduced. The Sherman Antitrust Act was a much more effective tool to stop horizontal mergers during this period.

The stricter enforcement of the Sherman Act and new legal framework provided by the Clayton Act drastically shifted the merger mix from horizontal to vertical. Firms were no
longer able to engulf their competitors; instead they purchased companies that operated at
different stages of the production process. This vertical integration of the production process
allowed firms to reduce the production cost of their output, and therefore become more
competitive in the marketplace. This shift created a number of large firms, many of which
remain household names today: IBM, Union Carbide, John Deere, and General Motors.

As was the case with the first merger wave, the demise of the second came with the
-crash of the stock market, in this case on October 24, 1929. The ensuing depression witnessed
curtailed investment and severely depressed consumer spending. Companies were forced to
focus on staying afloat rather than on expanding through acquisitions.

The third merger wave, that of the late 1960s, was primarily motivated by the desire
for diversification. This was the wave of conglomerate creation, with very large firms
possessing market share in extremely diverse industries. The perceived benefit of
diversification was a more smooth and predictable cash flow. Just why this benefited
shareholders who were individually capable of diversifying across firms themselves is
questionable.

Tender offers grew in frequency and size throughout the 1960s. The increased size of
tender offer targets was made possible by increased financing availability. However, in the
prior decade significant revisions of the proxy rules occurred with the aim of constraining
takeovers. The rules imposed significant new costs on large-scale proxy contests.

The diversification of large conglomerates became so questionable that the fourth
merger wave, that of the 1980s, was thought to have restructured the conglomerates created
during the third wave. New management often acted to dismantle many of the conglomerates
created during the previous decades. A notable component of this wave was the real
emergence of tender offers and hostile takeovers as methods of acquisition. These mergers
began using contingent commitments to issue high-yield publicly traded bonds as a method of
financing. Also, the emergence of institutional investors spurred the rise of investment
partnerships as leveraged-buyout associations. These partnerships provided a pool of equity
capital as the large public debt market provided the means to raise money to buy out pre-
existing public investors. Tax code changes, proposed in 1983 and enacted by 1989, were
used to end the 1980s merger wave.

The 1990s have emerged to produce a fifth wave of corporate acquisitions. While it
may be too soon to identify the chief characteristics of this wave, consolidation of market
share and acquisition of technology appear likely candidates. Further identification of this
“fifth wave” of mergers will be possible when mergers of the 1990s are compared to those of
the 1980s.

Comparing the 1980s to the 1990s

Tender offers are a tool used in corporate takeovers, mergers and acquisitions. In the
discussion that follows, the focus is on tender offers between one publicly traded firm and
another. Such offers are ideal for study as they have a well-defined announcement date and the
market’s valuation of the firms involved can be directly observed via stock prices. While
tender offers between publicly traded firms provide an excellent base for research, they
present a problem as well. An obvious omission is the set of takeovers and mergers that are
not between publicly traded firms – buyouts by private LBO partnerships, for example.
Therefore, it is important to remember that the following data represent tender offers in
acquisitions of publicly traded firms by publicly traded firms.
Data on tender offer events was collected from the Mergers and Acquisitions database of Securities Data Company (SDC). Additional information on initial bid premiums was found in the Wall Street Journal. Daily stock price data is from the Center for Research in Security Prices (CRSP).

Chart 2 shows the number of tender offers from 1985 to 1997. The number of offers has been rising steadily since the early 1990s. From 1985 to 1989, 63 percent of tender offers were successful – the bidder acquired at least some shares of the target. This success rate rose to 73 percent for the 1990-92 period and further increased to 82 percent for the 1993-97 period. These three sub-periods will be the focus of the discussion below. The 1985-89 period represents the merger wave of the 1980s while a similar 5-year period of 1993-97
represents the 1990s. The period of 1990-92 experienced much less merger activity and includes a recession.

Chart 3 indicates the total value of public transactions involving tender offers for the 1985-97 time period in 1997 dollars. This value is the total market value of target firms 20 trading days prior to the tender offer. The 1990-92 period is clearly unique with very low total activity, an average of about $3.5 billion of volume per year. The 1985-89 period produced an average of about $37 billion per year in volume with about $34 billion in volume per year for the 1993-97 period.

Chart 4 shows the premiums paid by bidders in successful offers. These premiums are measured by the per-share value of the tender offer as a markup over the target’s share price 20 trading days prior to the offer announcement date. Initial bids during the 1985-89 period averaged 43 percent above the target’s trading value, dropping to 24 percent during 1990-92 and rising to 38 percent during 1993-97. Final premiums paid in successful offers averaged 49 percent above the target’s trading price from 1985-89, 37 percent during 1990-92 and 46...
percent during 1993-97. The most notable thing about these levels is their stability. Other than the recession year of 1991 and the very active merger year of 1988, premiums are regularly at about 40 percent of pre-offer target value.

Chart 5 plots the average size of bidders and targets measured as the total value of common equity 20 trading days prior to the tender offer announcement, in 1997 dollars. Target market capitalization remains fairly small throughout the period when compared to that of bidders. Notable is the larger size of bidders during the 1993-97 period. Throughout bidders are, on average, 26 times the size of targets.

In Chart 6 the average “toehold” for all bidders is plotted along with the average fraction of outstanding shares acquired by successful bidders. Also included is the toehold average for only the bidders who owned a non-zero number of shares in their target. The toehold is reported as the percent of shares held 6 months before the tender offer.
announcement date. During the 1985-97 period, bidders held an average of 5.8 percent of target
shares prior to initiating a tender offer. The subset of bidders that held some non-zero number of shares in their targets had an average ownership of 28.3 percent of target shares outstanding. The average number of shares acquired by successful bidders is fairly stable throughout, at an average of 84.4 percent.

Charts 7 and 8 show the stock exchanges of bidders and targets in the three sub-periods. Bidders are largely NYSE-based while targets are increasingly likely to be NASDAQ firms, rising from one-third of targets in the 1985-89 period to over half during the 1993-97 period. Chart 9 is a plot of the fraction of tender offers that were identified as hostile by SDC (i.e., the tender offer was not welcomed by the target firm’s management).

**Measuring the Value of Mergers**

The ideal question of whether a merger is a value-creating event is based upon a fundamentally unobservable thing: how would the two firms have performed if no merger had been attempted? The fact that this can never be known presents a problem for those seeking to measure the value created by mergers.

One solution to this problem is to observe the performance of the newly merged firm and compare this to similar firms (or the market in general). There are at least two difficulties involved with this approach. First, measuring performance is not as simple as it sounds. What measures should one use? Earnings? Growth in earnings? Returns and dividends to stockholders? And even if a suitable measure is identified does one really want to judge the decision to merge, based upon *expected* value created, by measuring *realized* value created? In an uncertain world even the most prudent of decisions can result in a poor outcome. Should a merger that would have been value-creating nine out of 10 times be judged poorly if one
observes value loss? Finally, if stockholder wealth is the measure of choice then there are good reasons to believe that no firm can sustain long-term deviations in returns when compared to its peers (market efficiency should preclude this outcome). In this case, measuring the value created by mergers by examining long-run stock returns is inherently futile.

Fortunately, an alternative remains. If markets do accurately measure the value of equity then one should be able to observe changes in the market value of equity when a merger is announced and thus learn the expected value of the merger to each firm involved. This is the measure presented here (long run performance is measured later in this brief).

The charts described below show the cumulative abnormal returns (returns adjusted for overall market movements) for bidders, targets and a market-value weighted portfolio of both. Absent any new firm-specific information these plots should show no increase or decrease from zero, i.e. firm returns should follow the market as they have in the past. The
tender offer announcement date is trading day 0 in each chart with 90 trading days prior to and 20 trading days after this date plotted as well. In a world with no information leaks and perfect price adjustment, the plots for targets, bidders and portfolios should stay at about zero until the announcement date, then jump to their new level and stay there. This is approximately what happens, though some information leaks, such as market knowledge of an upcoming tender offer announcement, are evident. These plots show the market’s evaluation of the announced tender offer where increases indicate positive returns to stockholders and decreases indicate negative returns. Each plotted line is the average of returns on a given relative trading day across tender offer announcements.

Chart 10 shows the market evaluation of tender offer announcements for all offers from 1985-97. Target shareholders receive a large return just at the announcement date (day 0) while bidding shareholders receive little. The market value weighted portfolio of bidder and target
shows a value increase of about 7 percent. Targets receive a cumulative abnormal return of about 40 percent while bidders receive a return insignificantly different from zero. There appears to be some information leakage prior to announcement, occurring as much as 60 trading days (about 3 months) prior to the tender offer announcement date. This is revealed in the rising return to target shareholders preceding the announcement. Chart 11 plots returns for successful offers only. These vary little from the plots in Chart 10.

Charts 12, 13 and 14 break out the 1985-89, 1990-92 and 1993-97 sub-periods. These are largely self-explanatory, but note the following. Bidder returns are effectively zero from 1985-89, significantly negative from 1990-92 and significantly positive from 1993-97. Targets on average receive positive returns to tender offer announcements in all periods. The 1990-92 period is the only period where the portfolio receives negative returns, indicating that tender offers during this period, as representative of mergers in general, were on average
CHART 16
Cumulative Abnormal Returns of Bidders:
All Tender Offers

CHART 17
Cumulative Abnormal Returns of Portfolios:
All Tender Offers

(Trading days is relative to the tender offer announcement date)
value-reducing events. Charts 15, 16 and 17 redisplay the data for within group comparison across the 3 sub-periods. 1993-97 is the dominant period for targets, bidders and the portfolio, followed by 1985-89 and 1990-92. Tender offers between public firms during the 1993-97 period were evaluated by the market to be more value-creating than those during 1985-89.

**Long-run Performance**

Measures of long-run performance are difficult to construct for reasons discussed above. For comparison purposes, however, it is interesting to observe simple buy-and-hold returns of bidding firms over a multi-year horizon. Table 1 presents such returns, both as levels and compared to a broad market index. The best way to think of the data in Table 1 is as returns on portfolios. In each portfolio, bidding firms are purchased on the tender offer announcement dates with an equal dollar amount of each bidder purchased. The bidding firm’s stock is then held for the time periods in Table 1 (1, 2 or 3 years). The returns in Table 1 indicate how the portion of the portfolio committed to bidding firms in tender offer contests, performs. This performance is then compared to the returns that would have been realized had the portfolio invested in a broad market index on the announcement dates, rather than the bidding firms.

For the overall time period of 1985-97, bidding firms experienced total returns roughly equal to a value weighted market index (62 basis points higher annual return over one year, 7 basis points higher over two years and 64 basis points higher over three years). In the sub-periods, firms that made bids during 1990-92 experienced the greatest advantage over a value-weighted index, followed by 1993-97 bidders and 1985-89 bidders, which actually under-performed to a slight extent. These results vary only slightly when only successful bidders are included (Table 2).
In the simplest possible terms, it appears that a 1980s strategy of buying shares of bidding firms on announcement dates would not be a better investment than buying a value-weighted market index. However, that strategy in the 1990s could have resulted in an additional 4 percent return on investment (on average, depending on the year of the investment and the length of time the shares were held) when compared to a broad market index.

**Other Merger Studies**

Merger and acquisition studies are numerous. In the interest of brevity, two classic studies will be described here. One measures the returns of bidders and targets, similar to the gains measured at the beginning of this analysis. The other measures performance of acquiring firms by tracking accounting measures of profitability after the merger.

Michael Bradley, Anand Desai and E. Han Kim wrote “Synergistic Gains from Corporate Acquisitions and Their Division Between the Stockholders of Target and Acquiring Firms” (*Journal of Financial Economics*, 1988). This study examines successful tender offers over the period of 1963 to 1984 by measuring abnormal returns on the tender offer announcement date. Their results for bidders, targets and portfolios are much as those found here for the 1985-1997 period. They find that bidders receive small abnormal returns from tender offer announcements at a level of about 1 percent over the entire period with just over 4 percent abnormal returns for 1963-68, 1.3 percent from 1968-80 and –2.9 percent for 1981-84. They find large abnormal returns for targets of about 32 percent over-all with 19 percent for 1963-68, 35 percent for 1968-80 and 35 percent for 1980-84. The weighted bidder and target portfolios earn a consistent return in the 7-8 percent range over the entire period and in sub-periods.
David J. Ravenscraft and F. M. Scherer wrote “The Profitability of Mergers” (*International Journal of Industrial Organization*, 1989). This study examines pre- and post-merger operating results of targets during the 1957-77 period. They find acquired firms to be quite profitable pre-merger, yet less profitable post-merger. They examine post-merger performance of target firms by collecting lines of business data for manufacturing firms in the U. S. The finding that target firms perform worse after merger than before raises the question of whether mergers are value-creating. This conflicts with abnormal return results, such as those in Bradley, Desai and Kim (and this study), that find clear positive returns to portfolios of bidders and targets around the announcement date. Ravenscraft and Scherer point out that the question of how targets would have performed had no merger occurred is not addressed by their study. This is one of the reasons that abnormal returns calculations are performed, to capture the change in the market’s valuation of each firm due to merger. However, the findings of Ravenscraft and Scherer are a clear warning that, whatever the expected value of merger, it does not appear that the value arises from increased post-merger profitability of the target, at least not during the 1957-77 period.

These two studies highlight the types of results that have been found in (1) studies of short-run abnormal stock returns and (2) studies of long-run performance of mergers. Long-run performance measures often indicate little or no clear benefit from merger while short-run measures of the market’s evaluation of mergers tend to find more signs of value creation. A brief summary of other selected literature can be found in the Appendix at the end of this study.
A Different Wave?

Mergers of the 1993-97 period may be more about the consolidation of market power than was the case during the 1985-89 period. Table 3 shows the percent of offers where bidders and targets were in the same industry. This is measured by comparing the primary SIC codes of the bidder and target at the 2, 3 and 4 digit level. At all levels, the 1993-97 period has a greater fraction of offers where bidder and target are in the same industry. While SIC codes at any level are rough measures of firm activity, the fact that a merger during the 1993-97 period is about 25 percent more likely to be between firms in the same industry than was the case during 1985-89 is interesting. The greater market power that arises from consolidation may be part of the explanation of why bidders during 1993-97 receive greater returns to the announcement of a tender offer than was the case from 1985-89. There is a chance that we will look back at the wave of mergers that began in 1993 as one of consolidation and product market positioning.

It is revealing that the 1990-92 period, shown above to have been relatively good for merger performance, exhibits the greatest fraction of bidder / target pairs in the same industry. Recall from Chart 6 that this was a period where bidders had a particularly large toehold in targets prior to the tender offer announcement. The story for 1990-92 thus appears to be of firms merging only when a large fraction of the target is in hand or when clear benefits are available in the product market.

Conclusion

Target shareholders are almost always clear winners, receiving premiums on the order of 40 percent or more. Why, then, do so many firms employ complicated anti-takeover strategies when being acquired is so clearly beneficial to the shareholders? There are at least
two reasons. First is the fact that anti-takeover measures can serve to give targets more leverage when negotiating with bidders. Thus, anti-takeover measures can result in a bigger piece of the pie for the target and therefore can be seen as “anti-low-offer” measures. The second reason for anti-takeover measures is less comforting for target shareholders. Just as bidding management may be overly enthusiastic about an acquisition, target management may be overly resistant. Extreme anti-takeover measures can thus serve to entrench management and thwart a possible takeover attempt that would benefit target shareholders.

Bidding stockholders, as indicated above, may win or lose in a merger, though they rarely do either by much. The fact that bidders are generally much larger than targets means that large increases in target value that arise from merger may only represent a small fraction of bidder value, which then must be divided between bidder and target shareholders. The shareholders of bidding firms are thus well advised to be cautious. Large gains (or losses) are unlikely, particularly when acquiring a relatively small target. In short, takeovers can create value and in fact, mergers between publicly traded firms in the 1990s so far appear to have created more value than similar mergers during the wave of the 1980s.
Table 1

Long-run Returns Over Market to All Bidding Firms

Average Total Annual Returns of Bidding Firms

<table>
<thead>
<tr>
<th>Time Period</th>
<th>1 Year</th>
<th>2 Years</th>
<th>3 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985-1997</td>
<td>17.16 percent</td>
<td>15.12 percent</td>
<td>14.55 percent</td>
</tr>
<tr>
<td>1985-1989</td>
<td>13.05 percent</td>
<td>11.97 percent</td>
<td>12.16 percent</td>
</tr>
<tr>
<td>1993-1997</td>
<td>23.78 percent</td>
<td>22.73 percent</td>
<td>23.53 percent</td>
</tr>
</tbody>
</table>

Benchmark: Market-Value Weighted Market Index

<table>
<thead>
<tr>
<th>Time Period</th>
<th>1 Year</th>
<th>2 Years</th>
<th>3 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985-1997</td>
<td>0.62 percent</td>
<td>0.07 percent</td>
<td>0.64 percent</td>
</tr>
<tr>
<td>1985-1989</td>
<td>-1.62 percent</td>
<td>-1.47 percent</td>
<td>-0.61 percent</td>
</tr>
<tr>
<td>1990-1992</td>
<td>5.02 percent</td>
<td>4.86 percent</td>
<td>5.11 percent</td>
</tr>
<tr>
<td>1993-1997</td>
<td>3.55 percent</td>
<td>2.18 percent</td>
<td>3.16 percent</td>
</tr>
</tbody>
</table>

Tender offers occur between publicly traded firms.

Benchmark data roughly indicate the difference in (1) a portfolio that bought an equal dollar amount of each bidding firm on the announcement date and held the firm during the time period indicated (average total annual returns of bidding firms) and (2) a portfolio that bought an equal dollar amount of the market index on bidding firm announcement dates and held each position for the indicated time period. Negative numbers indicate greater returns for the market index portfolio.

The market-value weighted market index is provided by CRSP. Only firms with returns over the indicated time period are included in each return calculation. Particularly, the 1993-97 period is truncated to 1993-96 (1 year), 1993-95 (2 year) and 1993-94 (3 year).
Table 2
Long-run Returns Over Market to Successful Bidding Firms

Average Total Annual Returns of Bidding Firms

<table>
<thead>
<tr>
<th>Time Period</th>
<th>1 Year</th>
<th>2 Years</th>
<th>3 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985-1997</td>
<td>19.33%</td>
<td>15.94%</td>
<td>14.83%</td>
</tr>
<tr>
<td>1985-1989</td>
<td>14.32%</td>
<td>12.27%</td>
<td>11.77%</td>
</tr>
<tr>
<td>1990-1992</td>
<td>21.42%</td>
<td>16.53%</td>
<td>17.79%</td>
</tr>
<tr>
<td>1993-1997</td>
<td>25.67%</td>
<td>23.61%</td>
<td>24.82%</td>
</tr>
</tbody>
</table>

Benchmark: Market-Value Weighted Market Index

<table>
<thead>
<tr>
<th>Time Period</th>
<th>1 Year</th>
<th>2 Years</th>
<th>3 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985-1997</td>
<td>2.83%</td>
<td>0.78%</td>
<td>1.03%</td>
</tr>
<tr>
<td>1985-1989</td>
<td>0.96%</td>
<td>-0.65%</td>
<td>-0.53%</td>
</tr>
<tr>
<td>1990-1992</td>
<td>4.56%</td>
<td>2.86%</td>
<td>4.30%</td>
</tr>
<tr>
<td>1993-1997</td>
<td>4.93%</td>
<td>2.95%</td>
<td>4.61%</td>
</tr>
</tbody>
</table>

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Benchmark data roughly indicate the difference in (1) a portfolio that bought an equal dollar amount of each bidding firm on the announcement date and held the firm during the time period indicated (average total annual returns of bidding firms) and (2) a portfolio that bought an equal dollar amount of the market index on bidding firm announcement dates and held each position for the indicated time period. Negative numbers indicate greater returns for the market index portfolio.

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Table 3

Percent of Tender Offers with Bidder and Target in the Same Industry

<table>
<thead>
<tr>
<th>Time Period</th>
<th>2-Digit SIC</th>
<th>3-Digit SIC</th>
<th>4-Digit SIC</th>
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<tr>
<td>1985-1997</td>
<td>48.4 percent</td>
<td>37.8 percent</td>
<td>29.9 percent</td>
</tr>
<tr>
<td>1985-1989</td>
<td>44.6 percent</td>
<td>32.2 percent</td>
<td>25.2 percent</td>
</tr>
<tr>
<td>1990-1992</td>
<td>52.5 percent</td>
<td>52.5 percent</td>
<td>40.0 percent</td>
</tr>
<tr>
<td>1993-1997</td>
<td>52.5 percent</td>
<td>42.2 percent</td>
<td>33.8 percent</td>
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</table>

Tender offers occur between publicly traded firms.
## Appendix

### Brief Summary of Selected Literature

<table>
<thead>
<tr>
<th>Study</th>
<th>Issue Addressed</th>
<th>Data</th>
<th>Results</th>
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<tbody>
<tr>
<td>The Profitability of Mergers (David J. Ravenscraft and F. M. Scherer; International Journal of Industrial Organization, 1989)</td>
<td>How do acquired firms perform after mergers when compared to their pre-merger performance</td>
<td>2,732 lines of business from 1957-77 where lines of business of acquiring firms represent the activities of an acquired target.</td>
<td>Acquired firms experience a decrease in performance following acquisition, implying that mergers do not produce value by increasing target performance.</td>
</tr>
<tr>
<td>Corporate Leverage and Leveraged Buyouts in the Eighties (Margaret M. Blair and Robert E. Litan, Debt, Taxes and Corporate Restructuring, John B. Shoven and Joel Waldfogel (editors), The Brookings Institution, 1990)</td>
<td>Why was there an increase in the number of leveraged buyouts during the 1980s?</td>
<td>Various, over various time periods.</td>
<td>Free cash flow (and increased cost of capital) may serve to explain increased LBO activity during the 1980s.</td>
</tr>
<tr>
<td>The Information Effects of Takeover Bids and Resistance (John Pound; Journal of Financial Economics, 1988)</td>
<td>Do takeover bids and resistance to bids inform the marker of firm stand-alone value?</td>
<td>1976-84: 94 target firms.</td>
<td>Analyst forecasts of stand-alone earnings of potential targets do not change significantly after the bid. Forecasts fall when targets resist. This is consistent with a synergy explanation of takeover gains, as opposed to market under-valuation of targets.</td>
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<tr>
<td>The Success of Acquisitions: Evidence</td>
<td>Divestitures of acquired firms are studied to</td>
<td>Acquisitions from 1971-82 with divestitures</td>
<td>Firms with subsequent unsuccessful divestitures</td>
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from Divestitures (Steven N. Kaplan and Micheal S. Weisbach; The Journal of Finance, 1992) examine the value created by corporate acquisitions.

<table>
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<tr>
<th>Do Bad Bidders Become Good Targets? (Mark L. Mitchell and Kenneth Leh; Journal of Political Economy, 1990)</th>
<th>Is the discipline of bad acquirers a function of later takeover attempts?</th>
<th>1982-86: 1,158 firms in 51 industries.</th>
<th>Firms that become targets make acquisitions that reduce their own equity value, consistent with the view that takeovers serve to discipline poorly managed firms.</th>
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</thead>
<tbody>
<tr>
<td>Leveraged Buyouts: Wealth Created or Wealth Redistributed (Kenneth Lehn and Annette Poulson; Public Policy Toward Corporate Takeovers, 1988)</td>
<td>Do leveraged buyouts create wealth or merely redistribute existing firm wealth?</td>
<td>106 LBOs from 1980-84.</td>
<td>Both wealth creation and wealth redistribution are supported. Premiums are related to cash flow, consistent with wealth creation, but are also related to tax liability, supporting redistribution.</td>
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<tr>
<td>Free Cash Flow and Stockholder Gains in Going Private Transactions (Kenneth Lehn and Annette Poulson; The Journal of Finance, 1989)</td>
<td>What is the source of stockholder gains in “going private” transactions?</td>
<td>263 transactions from 1980-87.</td>
<td>Undistributed cash flow is related to the act of going private and premiums paid to stockholders are related to undistributed cash flow. Results are strengthened when management owns little equity in the firm.</td>
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<tr>
<td>Institutional Ownership, Tender Offers, and Long-Term Investments (Gregg A. Jarrell; Securities and Exchange Commission, 1985)</td>
<td>Does the threat of a hostile tender offer force management into focusing on short-term earnings at the expense of long-term projects?</td>
<td>324 firms from 1980-83.</td>
<td>The argument that firms focus on short-term earnings as a response to hostile takeover threats is not supported by the data.</td>
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<tr>
<td>Hostility in Takeovers: In the Eyes of the Beholder? (Robert Comment and G. William Schwert; working paper, 1997)</td>
<td>Can hostile and friendly takeovers be distinguished empirically or do they appear to be identical when examining firm characteristics.</td>
<td>1975-94: 2,048 for firms listed on a stock exchange.</td>
<td>Most deals identified as hostile in the press are not economically distinguishable from those labeled friendly.</td>
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<tr>
<td>Takeover Motives During the Conglomerate Merger Wave (John G. Matsusaka; RAND Journal of Economics, 1993)</td>
<td>What motivated takeovers during the conglomerate merger wave, market demand for diversification or managerial attempts to artificially manipulate earnings-per-share?</td>
<td>199 acquisitions in the years of 1968, 1971 and 1974.</td>
<td>Acquiring shareholders benefited from diversifying acquisitions and there is no evidence that investors were misled by earnings-per-share manipulations due to acquisitions.</td>
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| Motives for Takeovers: An Empirical Investigation (Elazar | What are the motives for corporate takeovers? | 330 tender offers from 1963-88. | Synergy between bidder and target (positive total gains from takeover) is
<table>
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<tr>
<th>Source</th>
<th>Question</th>
<th>Period</th>
<th>Notes</th>
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<td>Berkovitch and M. P. Narayanan; Journal of Financial and Quantitative Analysis, 1993</td>
<td>the most likely explanation, though managerial hubris is consistent with the results. Takeovers with negative gains appear to be initiated by agency problems with management.</td>
<td></td>
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<td>Industry-Level Indicators of Free Cash Flow (Margaret M. Blair and Martha A. Schary; The Deal Decade: What Takeovers and Leveraged Buyouts Mean for Corporate Governance (Margaret M. Blair (editor); The Brookings Institution, 1993)</td>
<td>How can one best measure free cash flow and what can be learned from this?</td>
<td>1971-89: industry level cash flow data.</td>
<td>The quality of investment opportunities vary widely over time and across industries; expected returns on investment vary widely and consistently across industries; changes in tax policy have only a small impact; and changes in real interest rates have a significant impact on the cost of capital.</td>
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<tr>
<td>Industry-Level Pressures to Restructure (Margaret M. Blair and Martha A. Schary; The Deal Decade: What Takeovers and Leveraged Buyouts Mean for Corporate Governance (Margaret M. Blair (editor); The Brookings Institution, 1993)</td>
<td>What are the causes of restructuring across industries?</td>
<td>1979-89: restructurings (private buyouts, junk bond events and leveraged restructurings).</td>
<td>Rise in the cost of capital (and free cash flow) may explain restructuring, though explanatory power is not particularly strong.</td>
</tr>
<tr>
<td>Synergistic Gains from Corporate Acquisitions and Their Division Between the Stockholders of Target and Acquiring Firms (Michael Bradley, Anand Desai and E. Han Kim; Journal of Financial Economics, 1988)</td>
<td>What are the returns to bidder and target stockholders in a corporate takeover?</td>
<td>1963-84: 236 tender offers where both bidder and target are traded on NYSE or AMEX.</td>
<td>Target shareholders receive consistently positive and high returns (about 30 percent) while bidder shareholders earn very small positive returns (about 1 percent). The value-weighted bidder-target portfolio earns about 7 percent.</td>
</tr>
<tr>
<td>Do Takeovers Create Value? Evidence from the Intervention of Competing Bids (David Hirshleifer, Sanjai Bhagat and Robert Noah; working paper, 1998)</td>
<td>Are studies of stockholder returns due to takeover biased, and if so, what is the true value of takeovers to stockholders?</td>
<td>1963-97: 794 tender offers where both bidder and target are traded on NYSE, NASDAQ or AMEX.</td>
<td>Simple measures of stockholder returns may underestimate the value created by takeovers, which may be as much as twice as large as previously thought.</td>
</tr>
</tbody>
</table>
References


**Data Sources:**

Center for Research in Security Prices (CRSP), daily stock price data.


Securities Data Corp., M & A database, data on tender offer events.

*Wall Street Journal*, information on initial bid premiums.