THE CONOCO TAKEOVER AND STOCKHOLDER RETURNS

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Comments invited.

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1. Introduction

On August 5, 1981 DuPont announced that its takeover attempt of Conoco was successful. This announcement concluded the largest and one of the most dramatic takeovers in history. DuPont initially offered an average price of $79.52 for each share of Conoco, but revised this offer three times; the successful offer involved a cash payment of $98 for 45% of Conoco and 1.7 shares of DuPont for each of the remaining Conoco shares. The value of this bid was $7.54 billion making it the largest takeover in American business history. In addition to DuPont, two other firms bid for Conoco: Seagram made three offers and Mobil made three offers. This paper examines this takeover in detail. In particular, the stock price changes associated with each bid and other information releases are calculated.

The effect of corporate takeovers on the stock prices of the participating firms has been studied extensively. Recent studies of mergers include Mandelker (1974), Ellert (1976), Dodd (1980) and Asquith (1981). The effects of tender offers on stock prices is examined in Dodd and Ruback (1977), Kummer and Hoffmeister (1978) and Bradley (1980). These studies focus on the average impact of the takeover; that is, they compute the average abnormal stock returns associated with takeovers for a sample of participating firms. While there are many advantages to the averaging technique, it prohibits a detailed examination of individual takeovers. For example, the published studies of takeovers focus on the stock price performance around one or two information release dates (eg. the announcement of the proposed takeover and the announcement of the outcome).
In reality, however, a takeover often involves several distinct informative releases. During the takeover of Conoco, almost every issue of the *Wall Street Journal* contained articles about the takeover. These articles, summarized in the appendix of this paper, contain announcements of original, competing and revised bids, the position of Conoco's managers and regulatory authorities, interim reports of progress by the bidders, and so on. The detailed examination of the stock price changes associated with these events, therefore, complements the existing studies.

The studies of the average impact of takeovers provide a framework to assess the results of this study. The studies of mergers, Mandelker (1974), Ellert (1976), Dodd (1980) and Asquith (1981), indicate that the target or acquired firms realize substantial abnormal returns if the acquisition is completed; the estimated average increase in the value of the target's equity ranges from 14% to 34%. In contrast, successful bidders or acquiring firms do not tend to realize significant positive abnormal returns. Ellert finds positive abnormal returns for successful bidders, Mandelker and Asquith find no abnormal performances, whereas Dodd reports significant negative abnormal performance.

Two merger studies, Dodd and Asquith, also examine the effects of unsuccessful mergers. Both studies report losses for unsuccessful bidders of about 5.5%. Also, at the time the merger proposal is announced, both Asquith and Dodd report significant increases in the target's share price; the abnormal performance is virtually identical for targets of successful and unsuccessful mergers. However, the stock prices of targets in
unsuccessful merger attempts fall as news of their cancellation is released. Asquith's data indicate that this reduction in the equity value of the target more than offsets the original announcement gains, whereas Dodd reports that the reduction does not eliminate all of the target's earlier gains. Thus, the merger studies agree that successful targets realize gains and that unsuccessful bidders incur losses, but disagree on the direction of the impact of the merger on successful bidders and unsuccessful targets.

The impact of tender offers on the firms involved has been studied by Dodd and Ruback (1977), Kummer and Hoffmeister (1978) and Bradley (1980). Consistent with the results of the mergers studies, all of the studies report substantial increases of 16% to 21% in the equity values of targets in successful tender offers. Relatively small positive abnormal returns (2% - 5%) are observed for successful bidding firms. In contrast to the merger studies, the equity values of targets in unsuccessful tender offers rise substantially and do not, on average, return to their pre-offer level. Also, bidders in unsuccessful tender offers do not realize significant reductions in equity values.

The empirical results in this paper are generally consistent with findings of earlier takeover studies. The target, Conoco, realized a substantial increase in stock price. From June 17, 1981, the date Conoco rejected Seagram's first offer, through August 5, 1981, the day DuPont's success was announced, Conoco shareholders realized an abnormal return of 71%. The equity value of the successful bidder, DuPont, was reduced by about 10%. This result is consistent with Dodd (1980), but inconsistent
with other studies. The unsuccessful bidders, Seagram and Mobil, exhibit different results. For Seagram, there is virtually no net impact of its failed takeover attempt, while Mobil incurred losses.

This paper is organized as follows: Section 2 describes the calculation of the abnormal returns for the firms involved in the Conoco takeover. Section 3 presents the empirical results. The conclusions of this study are in Section 4.
2. Methodology

To measure the impact of the Conoco takeover on the stock prices of the participants, we want to focus on the component of their return which is due to the takeover. Since most stocks tend to move up or down with the market, the realized stock returns are adjusted for market-wide movements. This adjustment is accomplished by using linear regression to estimate the following market model:

\[
R_{jt} = \alpha_j + \beta_j R_{mt} + \epsilon_t \tag{1}
\]

The parameter \( \beta_j \) measures the sensitivity of the return to firm \( j \) \( (R_{jt}) \) to movements in the market index \( (R_{mt}) \) and is equal to the 'beta' of the Sharpe-Lintner Capital Asset Pricing Model. The term \( \beta_j R_{mt} \) in (1), therefore, is the portion of the return to security \( j \) on day \( t \) that is due to market-wide factors. The parameter \( \alpha_j \) measures that part of the average return of the stock which is not due to market movements. Lastly, \( \epsilon_t \) measures that part of the return to the firm which is not due to movements in the market or the firm's average return.

Table 1 contains estimates of the market model (1) for the participants in the Conoco takeover. The regressions use daily data from the beginning of 1979 through the end of 1980. The Standard and Poors 500 is used as the market index and all returns are taken from the Daily Returns File from the Center for Research in Security Prices at the University of Chicago. The estimates in Table 1 provide a means of calculating, conditional on the realized market return, the expected return of the firms common stock.
example, the estimated market model for Conoco means that, if the market return was 1%, the expected return to Conoco is $100(0.001 + 1.4(0.01)) = 1.5\%$. Furthermore, the $R^2$ (in the fourth column of Table 1) indicates that this relationship explains 49% of the variability of Conoco's common stock returns. Similar results are obtained for DuPont and Mobil. For Seagram, the $\beta_j$ coefficient is less than one, indicating that, unlike the other participants it is less risky than the average security in the S & P 500. Also, the market model explains only 7% of the variability in Seagram's common stock returns. For all four firms, the coefficient $\hat{\beta}$ is statistically significant which indicates that the firms' returns are related to the market return.

Using the estimated market model parameter of Table 1, the abnormal returns for each of the participants in the Conoco takeover is calculated on each date $t$ by the following equation:

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

the bracket term in (2) provides the normal return to firm $j$ on day $t$ given its estimated market model parameters $\hat{\alpha}_j$ and $\hat{\beta}_j$, and the return to the market on day $t$. The prediction error for firm $j$ on day $t$ is its actual return ($R_{jt}$) less its predicted return on day $t$ ($\hat{\alpha}_j - \hat{\beta}_j R_{mt}$) and thus proxies for firm specific abnormal returns. The daily abnormal returns for Conoco, DuPont, Mobil and Seagram are calculated for the period June 1, 1981 through August 31, 1981.1/

1/ The stock prices for each firm and the level of the S & P 500 over this period were extracted from the Wall Street Journal.
Table One

Market Model Regression Coefficients for the Participants in the Conoco Takeover Estimated Over the Period 1/2/79 - 12/31/80

\[ R_{jt} = \alpha_j + \beta_j R_{mt} + \varepsilon_{jt} \]

(t-statistics in parentheses)

<table>
<thead>
<tr>
<th>Firm Name</th>
<th>( \hat{\alpha}_j )</th>
<th>( \hat{\beta}_j )</th>
<th>( R^2 )</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conoco</td>
<td>0.0010</td>
<td>1.40</td>
<td>0.49</td>
<td>1.86</td>
</tr>
<tr>
<td></td>
<td>(1.76)</td>
<td>(21.93)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DuPont</td>
<td>-0.0005</td>
<td>1.21</td>
<td>0.41</td>
<td>2.09</td>
</tr>
<tr>
<td></td>
<td>(-0.85)</td>
<td>(18.76)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobil</td>
<td>0.0010</td>
<td>1.62</td>
<td>0.34</td>
<td>1.97</td>
</tr>
<tr>
<td></td>
<td>(1.16)</td>
<td>(16.21)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seagram</td>
<td>0.0013</td>
<td>0.76</td>
<td>0.07</td>
<td>1.89</td>
</tr>
<tr>
<td></td>
<td>(1.18)</td>
<td>(6.05)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( \frac{1}{R_{jt}} \) is the common stock return of firm \( j \) on day \( t \), \( R_{mt} \) is the return to the S & P 500 index on day \( t \), \( \hat{\alpha}_j \) and \( \hat{\beta}_j \) are estimated regression coefficients. There are 501 daily observations in this two year period.
3. Empirical Results

This section is divided into three sub-sections. In 3.1 the events that precipitated the takeover activity in Conoco stock are described. The abnormal returns corresponding to the major announcements in the Conoco takeover are examined for the firms involved in 3.2. The section concludes with a summary of the takeover related abnormal returns for each firm.

3.1 Background of the Conoco Takeover

In March and April of 1981 Dome Petroleum Ltd. approached Conoco to discuss the purchase of Conoco's 52.9% interest in Hudson Bay Oil and Gas Company. Conoco's Board of Directors was not receptive to Dome's offer. In response, Dome announced a tender offer for between 13% and 20% of Conoco's common stock at $65 a share on May 6, 1981. The expressed intention of the offer was to negotiate an exchange of the Conoco shares for Conoco's interest in Hudson Bay Oil and Gas Company. On May 12, Conoco announced that its Board of Directors opposed the Dome bid. The Dome offer was, however, successful. On May 27, Dome announced that it had received tenders for about 50% of Conoco's common stock and that it would purchase 20% of Conoco. Finally, on June 1, 1981, Dome and Conoco announced that Conoco would exchange its interest in Hudson Bay Oil and Gas Company for Dome's 20% of Conoco common stock and $245 million. The exchange was completed on June 10, 1981.

These events precipitated the bidding for Conoco by Seagram, Mobil and DuPont for at least two reasons. First, Conoco's management in an attempt
to thwart Dome's offer sought out other bidders. These discussions started the chain of events which eventually led to the takeover offers that are described in Section 3.2. Second, the success of the Dome offer suggested that control of Conoco could be obtained, although a premium would be required. Compared to Conoco's stock price of $49.875 on May 5, 1981, the day before the Dome offer was announced, the premium implicit in the Dome offer was 30%. This premium is within the range of average premiums reported in prior takeover studies. The combined effect of these two phenomena led firms to seriously consider the profitability of acquiring Conoco.

3.2 The Stock Market Reactions to Major Announcements in the Conoco Takeover

This sub-section details the abnormal returns associated with major announcements in the Conoco takeover. Before presenting the empirical results, several factors that affect their interpretation are worth highlighting. First, there were many news reports relating to the Conoco takeover during June, July, and August 1981. The content of these reports, which is detailed in the appendix, varied substantially and thus the definition of a "major announcement" is ambiguous. In this sub-section, the stock market reaction to 12 different announcements is described. The announcements, presented in Table 2, primarily include bid announcements. The market reaction to other announcements can be found by comparing the appendix to the plots of the daily abnormal returns contained in Figure 1. Second, the stock market prices incorporate the value of future uncertain opportunities. Thus, the measured abnormal return reflects the unanticipated percentage change in value. Also,
Figure 1
Plots of Abnormal Returns for the firms involved in the Conoco takeover during June, July and August, 1981

a. Conoco

Abnormal Return

Dates

b. Seagram

Abnormal Return

Dates
Figure 1
(continued)

c. DuPont

Abnormal Return

Dates

d. Mobil

Abnormal Return

Dates
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/12/81</td>
<td>Seagram revamps its bid to $89 a share for 57% of Coe.</td>
</tr>
<tr>
<td>7/13/81</td>
<td>Seagram revamps the tender offer to $85 a share for 54% of Coe.</td>
</tr>
<tr>
<td>7/15/81</td>
<td>Dorton increases its tender bid for Coe to $89 a share for 57% of Coe.</td>
</tr>
<tr>
<td>7/17/81</td>
<td>Mobil makes an offer of $90 a share for 50% of Coe.</td>
</tr>
<tr>
<td>7/19/81</td>
<td>Coe, Mobil, and Seagram agree to exchange old stock for new shares.</td>
</tr>
<tr>
<td>7/22/81</td>
<td>Dorton raises its tender offer to $90 a share for 54% of Coe.</td>
</tr>
</tbody>
</table>

### Event Parameters

<table>
<thead>
<tr>
<th>Mobil</th>
<th>Coe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offer</td>
<td>57%</td>
</tr>
<tr>
<td>Price</td>
<td>$89</td>
</tr>
<tr>
<td>Seagram</td>
<td>$89</td>
</tr>
<tr>
<td>Price</td>
<td>$85</td>
</tr>
<tr>
<td>Coe</td>
<td>57%</td>
</tr>
<tr>
<td>Price</td>
<td>$90</td>
</tr>
<tr>
<td>Mobil</td>
<td>50%</td>
</tr>
<tr>
<td>Seagram</td>
<td>57%</td>
</tr>
<tr>
<td>Price</td>
<td>$90</td>
</tr>
<tr>
<td>Dorton</td>
<td>$89</td>
</tr>
<tr>
<td>Seagram</td>
<td>$90</td>
</tr>
</tbody>
</table>

**Notes**

- Figures in parentheses refer to participants in parentheses.
- Major Events in the Coe takeover and the Corresponding Abnormal Returns of the Participating Firms

**Table 3**
the estimation period. To estimate the market models, \( R^m_t \) is the market return on day \( t \) and \( R^w_t \) is the average daily market return over

where \( \epsilon_t \) is the residual variance from the market model regressions, \( N \) is the number of observations used to

\[
\left( \frac{\text{VAR}(\epsilon_t)}{\text{VAR}(R^m_t)} + \frac{1}{N} + \frac{1}{\text{VAR}(R^w_t)} \right)^2 \epsilon_t \leq \text{VAR}(\epsilon_t)
\]

\[
\frac{\text{VAR}(\epsilon_t)}{\text{VAR}(R^m_t)} = 1
\]

The \( t \)-statistics are calculated as

\[
\frac{\text{VAR}(\epsilon_t)}{\text{VAR}(R^m_t)} = 1
\]

Extended time offer for Conoco.

Victor, Mobil tendered 55% of Conoco shares to Seagram. Seagram raised the apparent bid to 2.09.

Dupont received 1.75% of Conoco shares to Seagram.

A share, the Justice department agree to trust clearinghouse in Conoco offer to 2.09.

Out of 1.75% of Conoco shares to Seagram was conditionally approved by the

Justice department.

For a Conoco-Dupont merger.

A share, Seagram raised the cash portion of its Conoco offer to 3.74.

Dupont-Seagram merger was conditionally approved by the

Event Date

| 8/5/81 |
| 8/4/81 | Mobil raised the cash portion of its Conoco offer to 3.74.
| 8/3/81 | 5.73 7.49 0.73 0.57 1.26 1.26 Conoco
| 8/3/81 | 5.72 7.39 0.73 0.57 1.26 1.26 Seagram
| 8/3/81 | 5.72 7.39 0.73 0.57 1.26 1.26 Dupont
| 8/3/81 | Abnormal Returns
| 8/3/81 | Event

The abnormal return for Conoco is based on the shares of Conoco that were not tendered to shareholders.

The Seagram tender offer was announced on June 27, 1981. Trading in Conoco was suspended and thus the stock price did not include the information until trading was resumed on June 26, 1981.

On June 27, 1981, Seagram notified regulatory authorities that it was acquiring more than 25% of Conoco's common stock. Conoco announced on June 27 that it had received notification of Seagram's filing and intent to tender offers.

On June 22, 1981, Seagram notified Conoco's board of directors that it was reconsidering its tender offer on June 17, 1981, but it was not announced until June 19, 1981.
because of the forward looking nature of the market, the interpretation of a given daily abnormal return involves speculation about changes in expectations. Third, when two pieces of information are released only their combined effect can be measured.

With these considerations in mind, we begin the analysis of the Conoco takeover on June 19, 1981 when Conoco announced that it rejected a bid for about 25% of Conoco for $70 a share. Table 2 presents the abnormal stock returns associated with the major events for Conoco, Seagram, DuPont, and Mobil. The first line of Table 2 shows that the rejection of the takeover bid is associated with an abnormal return of 6.55% for Conoco. The t-statistic of 3.67 indicates that this positive abnormal performance is statistically significant. This initial increase in the value of Conoco could be attributed to either the expectation of a forthcoming takeover bid or a revaluation of Conoco based on the information that another firm valued Conoco at $70 a share. Also, the first line of Table 2 suggests that the market did not know the identity of the future bidders since their abnormal returns are not statistically different from zero.

On June 23, the unidentified bidder was identified as Seagram and Seagram announced its intention to purchase shares of Conoco in the open market. Ironically, in light of subsequent events, Seagram revealed that its rejected offer included a "standstill agreement" in which Seagram agreed not to seek control of Conoco. The announcement that Seagram would purchase shares in the open market led to a statistically significant abnormal return for Conoco of 8.85% and an abnormal return of 1.71% for Seagram.
On June 25, Seagram announced its first tender offer of $73 a share for 41% of Conoco. Conoco's shareholders realized an abnormal return of 5.37% on that day. Since the takeover attempt was anticipated because of the earlier announcements on June 19 and 23, the correct measure of the abnormal return is the cumulative performance from all three announcements which is 22.2% and is within the range reported in the earlier studies of takeovers. Somewhat surprisingly, however, is the large positive abnormal return of 7.65% for Seagram on June 25. A glance at Figure 1b, which presents a plot of the abnormal returns for Seagram, shows that this is the largest abnormal return that Seagram stock realized during June through August of 1981. This is surprising since most studies report small or now abnormal returns for bidders. The positive abnormal return for Seagram on June 25 suggests that the market viewed Seagram's tender offer as a value increasing investment. Seagram's cumulative abnormal performance over the three announcements is 11.42% which translates into an increase in its equity value of $213,270,000 or approximately $6.08 per share.

The tender offer by Seagram was opposed by Conoco's management and they sought out other takeover bids. This search was successful in that a takeover of Conoco by DuPont was announced on July 6, 1981. This offer, which was supported by Conoco's management, involved the payment of $87.50 for 40% of Conoco's stock and an exchange of 1.6 shares of DuPont for each of the remaining Conoco shares. An unusual feature of the agreement between Conoco and DuPont was that DuPont received an option to buy 15.9 million shares of Conoco at $87.50 per share until March 31, 1982. This option provided DuPont a partial hedge against failure of its takeover bid. If another bidder offered a price in
excess of $87.50 for each share of Conoco, DuPont could exercise its option and tender its Conoco shares and thereby realize a profit. Also, the option increased the probability that DuPont's offer would be successful. Under Delaware law, the merger required the approval of a majority of Conoco shares. The option, if exercised, would give DuPont 15.6% of Conoco's outstanding shares and increases the likelihood of obtaining majority approval.

The effect of DuPont's June 6 offer on Conoco's common stock price was positive and dramatic. As Table 2 indicates, the abnormal return of Conoco was 11.87% on July 6 or approximately $711 million. The t-statistic of 8.89 indicates statistical significance and inspection of Figure 1a shows that it is the largest abnormal return during the period. Equally dramatic is DuPont's negative abnormal performance on June 6 of -8.05% which has a corresponding t-statistic of -6.04. Figure 1c shows that this abnormal return is outstanding even over this turbulent 3 month period. This negative abnormal return translates into a one day reduction of $641 million in the equity value of DuPont. This loss in DuPont is roughly equal to the dollar value of Conoco's gain.\footnote{\text{1}} The market, therefore, did not expect the merged firm to be more valuable than the separate firms and thus the premium was just a wealth transfer to Conoco's shareholders from DuPont's shareholders. Also, note that Seagram's stockholders incurred an abnormal loss of -3.88% which is consistent with the view that Seagram's initial tender offer was

\footnote{\text{1}} The gain to Conoco exceeded DuPont's loss by about $69.5 million which is small in comparison to the performance of the individual firms. In other words, the holder of a value weighted portfolio of DuPont and Conoco common stock would have realized an abnormal return of about 0.5%
a good investment for them and that DuPont's offer made the Seagram offer less likely to succeed.

Seagram responded to the DuPont offer by increasing its offer to $85 a share for 51% of Conoco on July 13, 1981. Compared to Seagram's earlier offer, the revised offer involved the purchase of more shares at a higher offer price. Conoco's stock responded to this revised offer and realized a significant abnormal return of 9.14% on July 13, 1981. The two active bidders for Conoco, Seagram and DuPont, realized relatively small negative abnormal returns of -0.29% and -0.20%, respectively. For DuPont, this small negative abnormal return is somewhat surprising in light of the substantial decline in its equity value that was associated with its first bid for Conoco. The revised Seagram offer provided a convenient means for DuPont to abandon its takeover attempt and perhaps reverse its stock price decline. One interpretation of the small negative abnormal return is that the market anticipated subsequent bids by DuPont for Conoco.

On July 15, 1981, DuPont increased the cash portion of its bid for Conoco to $95 from $87.50 a share for 40% of Conoco and increased the exchange ratio for the remaining shares of Conoco to 1.7 from 1.6 shares of DuPont. Again, Conoco's stock price rose, although the abnormal return of 1.46% was considerably smaller than the market reaction to the earlier bids and statistically insignificant. Each of the bidders incurred abnormal losses: the abnormal return for Seagram was -0.47%; for DuPont the abnormal return was -1.29%; and for Mobil the abnormal return was -1.23%. These losses indicate that the market anticipated a decline in the profitability of the takeover for the bidders. For DuPont,
the negative market reactions to each of its bids indicate that the market viewed DuPont's takeover bid as an unprofitable investment.

Mobil entered the bidding for Conoco on July 17 with an offer of $90 a share for 50% of Conoco and an exchange of $90 worth of Mobil securities upon completion of a merger with Conoco. In contrast to the impact of previous offers, the abnormal return for Conoco was negative, but very small in relation to the previous large positive abnormal returns and not significantly different from zero. All three of the active bidders incurred abnormal losses.

Seagram responded to Mobil's offer by raising its bid for 51% of Conoco to $92 a share from $85 a share on July 23, 1981. Conoco's stock rose and the abnormal return was 3.93% with a t-statistic of 3.09. Seagram incurred an abnormal loss of -2.34% suggesting the reduction in value of the takeover for Seagram's shareholders.

DuPont and Mobil revised their offers for Conoco on July 27, 1981 and the pattern of negative abnormal returns for bidding firms is repeated. Mobil revised its offer a third time on August 3 by increasing the cash portion of its bid to $115 from $90 a share. The familiar pattern of negative abnormal returns for bidders is not repeated; Seagram realized a positive abnormal return of 7.49% with a t-statistic of 2.93 and the other bidders, Mobil and DuPont, realized small positive abnormal returns. This abnormal performance cannot, however, be attributed to the Mobil's offer since there were three other important announcements that occurred on the same day. First, Seagram announced that it had received 15.5 million shares of Conoco and that they would begin purchasing them at $92. Second, the Justice Department said that its only anti-trust concerns in a DuPont-Conoco merger involves a joint venture between
Conoco and Monsanto Company. DuPont announced plans to file a consent
decree which would eliminate this problem. Third, the Justice Department
requested more information from Mobil which postpones Mobil's purchase of
Conoco's stock by at least ten days. The abnormal returns for August 3
incorporate the effects of the Mobil bid and the three other announcements.

On August 4, 1981, DuPont raised the cash portion of its offer to $98 and
the Justice Department announced anti-trust clearance for a Conoco-DuPont merger.
The three bidders incurred abnormal losses on August 4. The abnormal return
for Conoco, in contrast to earlier announcements, is -4.75%. This abnormal
return is based on a closing price of $96 on August 3. According to the
Wall Street Journal, there are suspicions that this $96 closing price may have
been manipulated; only 1400 shares were traded on the Pacific Coast Exchange
at this price before its close. Using the NYSE closing price for Conoco
of $93.75 on August 3, the abnormal return for Conoco on August 4 is -1.60%
with a t-statistic of -1.25.

The takeover battle for Conoco ended with the announcement by DuPont
on August 5, 1981 that it had received tenders for 55% of Conoco common
stock. In calculating the abnormal return to Conoco shareholders on August 5,
it is important to distinguish those Conoco shares tendered to DuPont from
those that were not. Since the withdrawal deadline was on August 4, the shares
tendered to DuPont could not be sold by the shareholders. Also, after August
4, DuPont was no longer willing to pay $98 for each share of Conoco. The
market price on August 5 and thereafter reflects the value of those shares that
were not tendered to DuPont. Table 3 details the calculation of Conoco's equity
<table>
<thead>
<tr>
<th>Class of Conoco</th>
<th>Number of Shares (Millions)</th>
<th>Per Share Value Value On 8/5/81</th>
<th>Total Value of Class (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shares tendered to DuPont and bought for cash</td>
<td>38.7</td>
<td>$98</td>
<td>3792.60</td>
</tr>
<tr>
<td>Shares tendered to DuPont and exchanged for DuPont stock</td>
<td>9.4</td>
<td>80.1125&lt;sup&gt;a/&lt;/sup&gt;</td>
<td>753.06</td>
</tr>
<tr>
<td>Remaining shares outstanding</td>
<td>37.9</td>
<td>91.875</td>
<td>3482.06</td>
</tr>
<tr>
<td>All shares</td>
<td>86</td>
<td>93.35&lt;sup&gt;b/&lt;/sup&gt;</td>
<td>8027.72</td>
</tr>
</tbody>
</table>

<sup>a/</sup>The per share value of shares to be exchanged is based on an exchange ratio of 1.7 DuPont shares for each share of Conoco and a closing price of DuPont on August 5, 1981 of $47.125.

<sup>b/</sup>This is the average price per share.
value on August 5 which was approximately $8028. This implies an average price per share of $93.35. The abnormal return for Conoco based on this average price is -0.43%, whereas the abnormal return based on the market price of Conoco shares on August 5 is -2.02%.

The abnormal return for DuPont on August 5, 1981 was 2.24% with a t-statistic of 1.75. The positive abnormal return for DuPont and the negative abnormal return of -2.02% for those Conoco shares not tendered to DuPont is in contrast to previous observations of positive abnormal returns to Conoco and negative abnormal returns to the bidders which were associated with the announcements of the bids. One interpretation of these abnormal returns is that the bids were unprofitable for the bidders and prior to DuPont's announcement of success the market anticipated additional bids for Conoco. These anticipations were reflected in market prices on August 4. The announced DuPont victory on August 5 meant that the bidding was over. Thus, Conoco's stock price went down because no higher bids would be made and DuPont realized a positive return because it would no longer be making higher unprofitable bids. The negative abnormal return of -1.89% for Seagram suggests that DuPont's success resulted in Seagram losing a profitable investment opportunity. For Mobil, the positive abnormal return of 1.70% implies that its takeover proposal was unprofitable for Mobil and thus its failure was good news for Mobil's shareholders.

3.3 Summary of the Abnormal Performance

Table 4 summarizes the abnormal returns associated with each firm's involvement in the Conoco takeover. The most dramatic effect of the takeover
is on the value of Conoco's common stock. The cumulative abnormal return for Conoco, measured from June 17, 1981, the day Conoco's board rejected Seagram's first offer, through August 5, 1981, the day DuPont's success was announced, is $71.24\%^{1/}$ This abnormal return is substantially larger than the average abnormal return for targets of successful takeover attempts reported in earlier studies of mergers and tender offers. In dollar terms, the equity value of Conoco rose by over three billion dollars as a result of the takeover.

The successful bidder, DuPont, realized cumulative abnormal returns of $-9.90\%$ from its involvement in the Conoco takeover. This negative cumulative abnormal return is consistent with the results of Dodd (1980) which reports negative abnormal returns for successful bidding firms. The negative abnormal return for DuPont translates into an abnormal decline in equity value of $-\$789$ million. If the stock market is assumed to be efficient in the sense that it correctly values firms, this evidence means that the acquisition of Conoco was a negative net present value investment. Furthermore, the market's response to each of DuPont's bids was negative (see Table 2), implying that each successive DuPont bid reduced the value of DuPont's common stock.

The two unsuccessful bidders, Seagram and Mobil, exhibit different abnormal returns. For Seagram, the cumulative abnormal return associated with its attempted takeover of Conoco is $1.13\%$. This small positive abnormal

\[\text{\footnotesize}\text{The cumulative abnormal return for Conoco incorporates the purchase of Conoco shares by DuPont on August 5, 1981. See Table 3 for details of this calculation.}\]
return indicates that Seagram's attempted takeover did not have a substantial impact on its equity.\textsuperscript{1} From a Seagram shareholder's viewpoint, it is as if the takeover attempt did not occur. For Mobil, negative abnormal returns of -3.05% are associated with its attempted Conoco takeover. The origin of this reduction in Mobil's stock price is unclear. While the reduction incorporates the loss of legal fees and other transactions costs, it is hard to attribute the entire loss of over $400 million to transactions costs. A plausible source of these losses involves Mobil's anti-trust difficulties. Mobil asserted that its acquisition of Conoco did not present any substantial anti-trust problems. However, the Justice Department's policy towards horizontal mergers was and is unclear. Its request of more information from Mobil on August 3 substantially raised doubts that the takeover would be approved and thus increased the cost of the acquisition of Conoco by postponing Mobil's purchase of Conoco shares. Also, it signaled an increase in the probability that the Justice Department would oppose the takeover. Thus, the negative abnormal returns for Mobil could be attributed to the expectation that the Justice Department would oppose Mobil's future acquisition attempts.

\textsuperscript{1}Seagram's takeover attempt was not entirely unsuccessful. Seagram obtained 28 million shares of Conoco for $92 each. These shares were tendered to DuPont for 47.6 million shares of DuPont common stock which represents 20% of DuPont's equity. Based on DuPont's stock price as of August 5, 1981, Seagram paid a premium of 14.8% for its DuPont shares.
Table 4

Summary of Abnormal Returns for the Firms Involved in the Conoco Takeover

<table>
<thead>
<tr>
<th>Firm</th>
<th>Holding Period</th>
<th>Cumulative Abnormal Return (Percent)</th>
<th>Cumulative Abnormal Equity Value Change (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conoco</td>
<td>6/17/81-8/5/81</td>
<td>71.24</td>
<td>$3201.2</td>
</tr>
<tr>
<td>Seagram</td>
<td>6/17/81-8/5/81</td>
<td>1.13</td>
<td>20.6</td>
</tr>
<tr>
<td>DuPont</td>
<td>7/6/81-8/5/81</td>
<td>-9.90</td>
<td>-789.1</td>
</tr>
<tr>
<td>Mobil</td>
<td>7/13/81-8/5/81</td>
<td>-3.05</td>
<td>-405.4</td>
</tr>
</tbody>
</table>

1/ The holding period is from the first indication that the firm would become involved in the takeover through 8/5/81, the date DuPont announced that it had won.

2/ The cumulative abnormal return is measured as

\[
\left[ \frac{8/5/81}{\prod_{t=t_1}^{8/5/81} (1 + PE_{jt})} \right] - 1
\]

where \( t_1 \) is the first day of the holding period and \( PE_{jt} \) is the prediction error (abnormal return) for firm \( j \) on day \( t \). The calculation of the abnormal return for Conoco on 8/5/81 incorporates the purchase of shares by DuPont. See Table 3 for the details of this calculation.

3/ The cumulative abnormal equity value change is calculated by multiplying the closing stock price for firm \( j \) on the day before the holding period starts times the number of shares outstanding for firm \( j \) and multiply this pre-takeover equity value times the cumulative abnormal return over the holding period.
4. Conclusion

The empirical results of this paper indicate that the takeover of Conoco by DuPont resulted in a 71% increase in the equity value of Conoco and a decrease in the equity value of DuPont of almost -10%. Furthermore, these effects were consistent throughout the bidding process; bid announcements were associated with positive abnormal returns for Conoco and negative abnormal returns for DuPont. These results raise two puzzling questions. First, what caused the substantial revaluation of Conoco? Second, why did DuPont pursue an acquisition that decreased the wealth of their stockholders?

Most of the reasons cited in the takeover literature for the revaluation of target firms do not seem to apply to the Conoco takeover. Synergy, the increase in productivity resulting from combining the assets of the bidder and target firms, does not appear to apply to the DuPont-Conoco merger for at least four reasons. First, according to public information, no explicit combination of assets is intended. Second, DuPont and Conoco are in different industries so the realization of economies of scale is unlikely. Third, while Conoco does provide inputs to DuPont's chemical production, these inputs are sold in competitive markets and thus no gains from vertical integration are apparent. Fourth, the three active bidders for Conoco are in very different industries. Similar considerations suggest that the gains from the merger are not due to monopolization of product markets. Another possible origin of the Conoco revaluation is that Conoco was poorly managed and the premium reflects the value of a more efficiently run firm. This explanation does not seem to fit because DuPont does not
intend to replace Conoco's management. The only explanation for Conoco's revaluation that is consistent with both economics and market efficiency is that the bidders possessed information about the value of Conoco that was not available to the market.

This explanation for the revaluation of Conoco, if correct, provides a rationale for DuPont's pursuit of Conoco. The market consistently signaled that it perceived DuPont's bids as negative net present value investments. These signals, however, did not incorporate the inside information that led DuPont to value Conoco so highly because the information was not available to the market. Also, it was not in DuPont's best interests to reveal this information since it would raise the cost of acquiring Conoco. Two additional facts support this explanation. First, Conoco did allow DuPont to examine inside information. Second, on August 18, 1981, the day after DuPont's shareholders met to vote on the merger, DuPont's abnormal return was 3.7% with a t-statistic of 2.90. This suggests that DuPont's management released some information at that meeting which resulted in a revision in the market's estimate of the value of Conoco to DuPont. Nevertheless, the hypothesis that some information that was not available to the market caused both Conoco's revaluation and DuPont's bids cannot be confirmed since the nature of this information remains nebulous.
Appendix

Chronology of Events in the Acquisition of Conoco

In May 1981 Dome Petroleum Ltd. tried to purchase Conoco's 53% interest in Hudson Bay Oil and Gas Company. Conoco and Dome did not reach agreement and Dome initiated a hostile tender offer for 20% of Conoco's common stock at a price of $65/share. Almost half of Conoco's common stock was tendered and Dome purchased its desired 20% interest. Conoco eventually exchanged its shares in Hudson Bay for the Conoco shares held by Dome and some cash.

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/22/81</td>
<td>Conoco rejects a proposal by an unidentified major foreign corporation to buy about 25% of its stock for $70/share. Wall Street Journal article says that it &quot;seems unlikely&quot; that Seagram Co. is the foreign suitor. Conoco announced it has approached an unidentified U.S. firm &quot;of approximately similar size&quot; about a possible merger. Oil, mining and chemical companies are possible partners. A DuPont spokesman denied any possible merger.</td>
</tr>
<tr>
<td>6/23/81</td>
<td>Conoco did not open for trading on the NYSE.</td>
</tr>
<tr>
<td>6/24/81</td>
<td>Seagram Co. is identified as the foreign suitor that tried to buy 25% of Conoco at $70/share. Seagram said it intended to buy shares in the open market. Speculation about Diamond Shamrock Corp., Cities Services Co., and Newmont Mining as possible merger partners. Spokesmen at each company deny it.</td>
</tr>
<tr>
<td>6/26/81</td>
<td>Seagram Co. announces a tender offer for 41% (35 million shares) of Conoco at $73/share. The minimum number shares tendered for is 28 million. Merger talks between City Services and Conoco revealed. The merger talks were cancelled in response to the Seagram tender offer.</td>
</tr>
<tr>
<td>7/1/81</td>
<td>Conoco files a $1 billion dollar suit to block the tender offer by Seagram. Ralph E. Bailey, chairman of Conoco calls the $73/share bid by Seagram &quot;inadequate.&quot;</td>
</tr>
</tbody>
</table>

1This chronology was extracted from the Wall Street Journal and the dates listed correspond to the date the articles were published. Since the Wall Street Journal is a morning paper, the information in the articles is often available on the day before publication.
7/6/81  Seagram sues Conoco requesting a restraining order to prevent Conoco from opposing the tender offer.

7/7/81  DuPont Co. agreed to buy Conoco for cash and stock. The offer is: $87.50 in cash for 40% (34.4 million shares) of Conoco's stock and 1.6 DuPont shares for the remainder of Conoco. The proposed merger would be the largest in corporate history.

Seagram officials said that the company had not decided whether it will compete with the DuPont bid.

Texaco announced that it was involved in merger negotiations with Conoco. The talks were halted when the Conoco-DuPont merger was announced. Conoco disclosed in a SEC filing that it had received an $85/share offer for all of its stock. The unidentified bidder might be Texaco. Rumors of a Texaco-City Services merger reported.

7/8/81  Follow up reports on the Conoco-DuPont merger. Reasons for merger cited. Texaco rumored to have a $5 billion credit line for an acquisition.

7/9/81  Article on compensation protection for Conoco's management. The details of this plan were announced earlier and reported on 7/6/81.

7/10/81  Both the FTC and Justice Department want to review the DuPont-Conoco merger. Senators Metzenbaum and Kennedy requested hearings in the Senate Judiciary Committee.

DuPont's Chairman Edmund Jefferson says that the Conoco-DuPont Merger won't change DuPont's diversification program.

7/13/81  Seagram announces a tender offer for 51% of Conoco at $85/share. The offer isn't contingent on a minimum number of Conoco shares being tendered. There is no commitment from Seagram to buy the remaining 49% of Conoco if the offer is successful.

7/14/81  Mobil Corp. signals that it intends to bid for Conoco. No terms are announced.

"Heard on the Street" article says analysts are wary of DuPont's bid for Conoco.

7/15/81  DuPont increases its merger bid for Conoco to $95/share for 40% of Conoco's stock and 1.7 DuPont shares for the remaining 60% of Conoco. This announcement was made after the NYSE closed on 7/14/81. The DuPont offer was cleared by federal regulatory authorities.

Mobil Corp.'s board authorized a takeover bid for Conoco. No terms were announced.
7/15/81 The Justice Department will investigate the Conoco takeover. Assistant Attorney General William Baxter said that horizontal mergers, such as Conoco-Mobil or Conoco-Texaco, may be opposed by the Justice Department. Also, rival bidders could try to prevent Mobil or Texaco from acquiring Conoco by filing private antitrust suits.

7/20/81 Mobil mailed an offer of $90 per share for 50% of Conoco on Friday, 7/17/81. Also, Mobil proposed to follow the cash offer with a merger in which the remaining Conoco shares would be exchanged for $90 of preferred stock or debentures.

The Justice Department said it will scrutinize the merger proposal. Mobil asserts that the merger would not violate anti-trust guidelines.

7/21/81 Conoco's directors unanimously rejected Mobil Corporation's bid citing anti-trust difficulties. Conoco's directors reiterated their support for DuPont's bid.

Gulf Oil Corporation is raising a $5 billion line of credit presumably to make a takeover bid for an unidentified U.S. oil company. Gulf sources say the target is not Conoco.

7/22/81 Mobil drew down its $6 billion credit line.

DuPont announced that it is building an $85 million facility to expand research in life sciences.

7/23/81 Mobil and Seagram considering raising their offers for Conoco.

Conoco filed an anti-trust suit against Mobil to block Mobil's takeover bid. The suit asserts that a Conoco-Mobil merger would lessen competition in the energy industry.

Conoco announced that its earnings rose 317% since the second quarter of 1980. The rise was mainly due to the sale of Hudson's Bay Oil and Gas Company and without that gain Conoco's earnings rose 36%.

7/24/81 Seagram revised its bid for Conoco to $92 a share for 51% of Conoco.

Texaco's earnings rose 11% in the second quarter.

7/27/81 Article indicates that Mobil, DuPont and Seagram may raise their bids for Conoco.

7/28/81 DuPont raised its bid for Conoco by increasing the number of shares it is willing to pay $95 to 45% of Conoco's outstanding common stock.
Mobil raised its bid to $105 for up to 50% of Conoco's outstanding common stock, but lowered to $85 the value of preferred stock and debentures that will be offered for the remaining Conoco stock in the subsequent merger.

Conoco's directors supported the DuPont offer. The directors objected to Mobil's offer on anti-trust grounds. Seagram's offer was criticized because the offer is conditional on litigation.

7/28/81 DuPont is opposing an attempt by the United Steelworkers of America to unionize its plants.

7/29/81 DuPont announced that it received tenders for more than half (143.7 million shares) of Conoco's common stock. Those shares tendered before midnight 7/24/81 will be allowed to choose between cash or stock. Additional shares tendered would be purchased for cash until 45% of Conoco is obtained. Remaining shares tender will receive stock.

Conoco stockholders can tender to Seagram and receive $92 in cash which exceeds the $77.78 value on the 1.7 shares of DuPont that would be obtained by tendering to DuPont.

7/30/81 DuPont announced that it received tender for more than 56% of Conoco's common stock. Seagram appears to hold tenders for 15 million to 17 million shares of Conoco. Mobil has tenders for two million Conoco shares.

The tax free status of the DuPont-Conoco merger is questioned.

Cities Services Company arrange over $3 billion in new credit. Says that they will oppose any takeover attempt.

Mobil's earnings rose 2% for the second quarter.

7/31/81 Rumors that DuPont, if it successfully acquires Conoco, might sell off Conoco's Consolidation Coal Company. DuPont might trade the coal company for the Conoco shares held by Seagram.

Speculation that DuPont will announce early anti-trust clearance or raise its offer to $100 a share. Also, rumors that Seagram will raise its offer to $96 a share.

8/3/81 Seagram received 15.5 million Conoco shares before its withdrawal deadline and began purchasing them for $92. Also, Seagram is now purchasing Conoco shares for $92 on a first-come, first-serve basis.

Justice Department requests more information from Mobil and thereby postpones Mobil's purchase of Conoco's stock by at least 10 days.
Also, the Justice Department said that its only anti-trust concerns in a DuPont-Conoco merger involves a joint venture between Conoco and Monsanto Company. DuPont plans to file a consent decree which would eliminate this problem.

8/4/81
Mobil raised the cash portion of its Conoco offer to $115 a share. Rumor that DuPont may raise its cash bid to $100. Also, DuPont lowered the minimum number of shares it would accept to 41% from 50%.

On 8/3/81 Conoco closed a $96 a share on the Pacific Coast Stock Exchange as a result of late tradings. On the NYSE Conoco closed at $93.75.

8/5/81
Mobil raised its cash offer for Conoco to $120 a share. Mobil lost legal challenges to DuPont's bid.

DuPont increased its cash offer for 45% of Conoco to $98. DuPont agreed to pay $275 million for Monsanto's share of a joint venture with Conoco. The Justice Department granted clearance for the DuPont-Conoco merger.

The Pacific Coast Stock Exchange is investigating the late trading in Conoco on 8/3/81. Only 1400 Conoco shares were traded at the closing price of $96 and investigators are concerned that the transaction was made to adversely effect DuPont's $95 bid.

8/6/81
DuPont received tenders for 55% of Conoco's common stock and began purchasing them. DuPont is the apparent victor in the battle for Conoco.

Mobil said it will tender the 735,000 Conoco shares it purchased in the open market to Seagram. Seagram extended the expiration of its offer until midnight on 8/7/81.

Seagram is expected to get tenders for about 25 million shares of Conoco. Seagram could tender these shares to DuPont and obtain a substantial minority interest in DuPont or try to trade the shares for Consolidation Coal Company.

8/7/81
Conoco's chairman, Ralph E. Baily, said that DuPont will not sell Consolidation Coal Company.

DuPont exercised its option to buy 15.9 million shares of Conoco at $87.50 DuPont now owns 62% of Conoco.

Five major oil firms have credit lines totaling $24.7 billion. More takeovers of energy firms is predicted. Uncertainty of anti-trust issues remains.
8/11/81 The Justice Department's anti-trust chief, William Baxter, said that policy toward horizontal mergers has not changed substantially. He also said that vertical mergers will not be opposed unless they create horizontal problems.

8/18/81 DuPont stockholders overwhelmingly approved the merger with Conoco. Seagram Company may seek representation on DuPont's board of directors. After Seagram tenders its 28 million Conoco shares to DuPont, Seagram will own about 20% of DuPont.

Conoco purchased a 20% interest in Continental Carbon Company for an undisclosed amount of cash.

8/19/81 DuPont received tenders for 90% of Conoco's outstanding common stock.

Moody's Investment Service Inc. lowered its rating on DuPont's senior unsecured debt to double-A from triple-A.

8/21/81 Options Clearing Corporation orders its first ever cash settlement. The settlement orders sellers of naked Conoco to pay buyers $92. The order presents substantial problems for investors who tendered Conoco shares to Seagram and covered the tenders by purchasing options. Seagram says that the difference between the number of Conoco shares tendered and delivered is not substantial, but in the cash market (same day delivery of traded stock) Conoco traded for $93. In the regular market Conoco traded for $83.50.

8/24/81 Conoco acquired Monsanto Company's share of their joint venture to complete the terms of a consent agreement with the Justice Department.

Conoco to build a $10 million natural gas processing plant.

8/26/81 Fluctuations in Conoco's stock in regular and cash markets are due to a shortage of Conoco shares to deliver to Seagram.

8/27/81 Seagram received 27,677,389 certificates for Conoco shares. Seagram extended its delivery deadline for the remaining 386,486 shares of Conoco that have been tendered, but not delivered.

8/28/81 Seagram's shortage in delivered shares of Conoco drops below 180,000. Seagram stopped accepting Conoco shares. Future action by Seagram is uncertain.
References


