

THE MARKET FOR CORPORATE CONTROL

The Scientific Evidence*

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This paper reviews much of the scientific literature on the market for corporate control. The evidence indicates that corporate takeovers generate positive gains, that target firm shareholders benefit, and that bidding firm shareholders do not lose. The gains created by corporate takeovers do not appear to come from the creation of market power. With the exception of actions that exclude potential bidders, it is difficult to find managerial actions related to corporate control that harm shareholders. Finally, we argue the market for corporate control is best viewed as an arena in which managerial teams compete for the rights to manage corporate resources.

1. The analytical perspective

1.1. Definition

Corporate control is frequently used to describe many phenomena ranging from the general forces that influence the use of corporate resources (such as legal and regulatory systems and competition in product and input markets) to the control of a majority of seats on a corporation's board of directors. We define corporate control as the rights to determine the management of corporate resources — that is, the rights to hire, fire and set the compensation of top-level managers [Fama and Jensen (1983a, b)]. When a

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bidding firm acquires a target firm, the control rights to the target firm are transferred to the board of directors of the acquiring firm. While corporate boards always retain the top-level control rights, they normally delegate the rights to manage corporate resources to internal managers. In this way the top management of the acquiring firm acquires the rights to manage the resources of the target firm.

1.2. Managerial competition

We view the market for corporate control, often referred to as the takeover market, as a market in which alternative managerial teams compete for the rights to manage corporate resources. Hence, the takeover market is an important component of the managerial labor market; it complements the internal and external managerial labor markets discussed by Fama (1980). Viewing the market for corporate control as the arena in which management teams compete is a subtle but substantial shift from the traditional view, in which financiers and activist stockholders are the parties who (alone or in coalition with others) buy control of a company and hire and fire management to achieve better resource utilization. The managerial competition model instead views competing management teams as the primary activist entities, with stockholders (including institutions) playing a relatively passive, but fundamentally important, judicial role. Arbitrageurs and takeover specialists facilitate these transactions by acting as intermediaries to value offers by competing management teams, including incumbent managers. Therefore, stockholders in this system have relatively little use for detailed knowledge about the firm or the plans of competing management teams beyond that normally used for the market's price setting function. Stockholders have no loyalty to incumbent managers; they simply choose the highest dollar value offer from those presented to them in a well-functioning market for corporate control, including sale at the market price to anonymous arbitrageurs and takeover specialists. In this perspective, competition among managerial teams for the rights to manage resources limits divergence from shareholder wealth maximization by managers and provides the mechanism through which economies of scale or other synergies available from combining or reorganizing control and management of corporate resources are realized.

Takeovers can occur through merger, tender offer, or proxy contest, and sometimes elements of all three are involved. In mergers or tender offers the bidding firm offers to buy the common stock of the target at a price in excess of the target's previous market value. Mergers are negotiated directly with target manager's and approved by the target's board of directors before going to a vote of target shareholders for approval. Tender offers are offers to buy shares made directly to target shareholders who decide individually

whether to tender their shares for sale to the bidding firm. Proxy contests occur when an insurgent group, often led by a dissatisfied former manager or large stockholder, attempts to gain controlling seats on the board of directors.

1.3. Overview of the issues and evidence

Manne's (1965) seminal article initiated an interest in how the market for control influences large corporations, and knowledge about many facets of the market for corporate control has recently increased considerably. This body of scientific knowledge about the corporate takeover market provides answers to the following questions:

1. How large are the gains to shareholders of bidding and target firms?
2. Does opposition to takeover bids by the managers of target firms reduce shareholder wealth?
3. Do takeovers create market power in product markets?
4. Does antitrust opposition to takeovers impose costs on merging firms?
5. Is shareholder wealth affected by proxy contests?
6. Are corporate voting rights valuable?

A brief overview of the evidence provides a useful guide to the more detailed discussion that follows. Numerous studies estimate the effects of mergers and tender offers on the stock prices of the participating firms. Tables 1 and 2 present a summary of stock price changes (measured net of marketwide price movements) for successful and unsuccessful takeovers in these studies. The returns in the tables represent our synthesis of the evidence. Discussion of the details of the studies and the issues that lie behind the estimates in the tables is contained in section 2, 'The Wealth Effects of Takeover Activities'.

Table 1
Abnormal percentage stock price changes associated
with successful corporate takeovers.^a

Takeover technique	Target (%)	Bidders (%)
Tender offers	30	4
Mergers	20	0
Proxy contests	8	n.a. ^b

^aAbnormal price changes are price changes adjusted to eliminate the effects of marketwide price changes.

^bNot applicable.

Table 2
Abnormal percentage stock price changes associated
with unsuccessful corporate takeover bids.^a

Takeover technique	Targets (%)	Bidders (%)
Tender offers	-3	-1
Mergers	-3	-5
Proxy contests	8	n.a. ^b

^aAbnormal price changes are price changes adjusted to eliminate the effects of marketwide price changes.

^bNot applicable.

Table 1 shows that target firms in successful takeovers experience statistically significant abnormal stock price changes of 20% in mergers and 30% in tender offers. Bidding firms realize statistically significant abnormal gains of 4% in tender offers and zero in mergers. Table 2 shows that both bidders and targets suffer small negative abnormal stock price changes in unsuccessful merger and tender offer takeovers, although only the -5% return for unsuccessful bidders in mergers is significantly different from zero. Stockholders in companies that experience proxy contests earn statistically significant average abnormal returns of about 8%. Somewhat surprisingly, these returns are not substantially lower when the insurgent group loses the contest.

The contrast between the large stock price increases for successful target firms and the insignificant stock price changes for unsuccessful targets indicates that the benefits of mergers and tender offers are realized only when control of the target firm's assets is transferred to a bidding firm. This suggests that stockholders of potential target firms are harmed when target managers oppose takeover bids or take other actions that reduce the probability of a successful acquisition. Moreover, since target managers replaced after takeovers lose power, prestige and the value of organization-specific human capital, they have incentives to oppose a takeover bid even though shareholders might benefit substantially from acquisition. However, management opposition to a takeover bid will benefit stockholders if it leads to a higher takeover price or otherwise increased stock prices. Thus, the effect of management opposition on shareholder wealth is an empirical matter.

The evidence indicates that the effect of unsuccessful takeover attempts varies across takeover techniques, and the reasons for these differences are not currently known. In unsuccessful mergers the target's stock price falls to about its pre-offer level. In unsuccessful tender offers the target's stock price remains substantially above its pre-offer level, unless a subsequent bid does not occur in the two years following the initial offer. If such a subsequent bid

does not occur, the target's stock price reverts to its pre-offer level. Finally, in proxy contests the 8% increase in equity values does not depend on the outcome of the contest.

The abnormal stock price changes summarized in tables 1 and 2 indicate that transfer of the target-firm control rights produces gains. The evidence reviewed in section 3, 'Antitrust and the Source of Merger Gains', indicates that the merger gains do not come from the creation of product market power. This is an important finding since the evidence also indicates antitrust opposition to takeovers imposes costs on merging firms by restricting transfers of corporate control. The takeover gains apparently come from the realization of increased efficiencies or synergies, but the evidence is not sufficient to identify their exact sources.

Section 4 contains a discussion of conflicts of interest between management and stockholders as well as estimates of the effects on stock prices of various managerial actions and proxy contests, and estimates of the value of corporate voting rights. Evidence presented in section 4 indicates that some actions that reduce the probability of takeovers, such as corporate charter changes, do not reduce shareholder wealth. In contrast, managerial actions that eliminate potential bidders, such as targeted large-block repurchases or standstill agreements, apparently are costly to shareholders. Section 5 discusses unsettled issues and suggests directions for future research.

2. The wealth effects of takeover activities

Numerous studies estimate the effects of takeovers on stock prices of bidder and target firms around the time of announcement of takeover attempts. Such 'event studies' use estimates of the abnormal stock price changes around the offer announcement date as a measure of the economic effects of the takeover. Abnormal returns are measured by the difference between actual and expected stock returns. The expected stock return is measured conditional on the realized return on a market index to take account of the influence of marketwide events on the returns of individual securities.¹

Early event studies of takeovers, including Mandelker (1974), Ellert (1976), and Langetieg (1978), use the effective date of merger (the date of final

¹Fama, Fisher, Jensen and Roll (1969) first used this methodology in their study of the price effects of stock splits. Brown and Warner (1980, 1983) provide a detailed discussion of the techniques and various methodological issues regarding their use and interpretation. For simplicity we avoid discussing the details of the abnormal return estimation technique used in each of the studies summarized here. The techniques used in the papers to calculate the abnormal returns are generally similar and, more importantly, the results appear robust with respect to the various estimation techniques used although Malatesta (1983) raises some interesting questions regarding the effects of the use of constrained estimation techniques. The methodologically oriented reader is referred to the original studies for details on these matters.

approval by target shareholders) as the event date. The expected price effects will occur on or before the first public announcement of a takeover. Therefore, because the announcement date occurs at random times prior to the effective date, using the latter as the event date makes it difficult to identify changes in security prices that are due to the takeover event itself. [See Dodd and Ruback (1977).] Because of this difficulty, we focus on studies that, following Dodd and Ruback, analyze abnormal returns around the time of the first public announcement of a takeover.

Table 3 summarizes the estimated abnormal returns for successful and unsuccessful bidding and target firms around announcements of tender offers and mergers. Panel A of table 3 reports the results of the tender offer studies. The results of the merger studies are contained in panels B.1 through B.3 of table 3, which provide measures of abnormal price changes for different time periods around the merger offer announcement. The table identifies the author(s) and year of publication of each study, the time period of the sample, the timing of the event period over which the abnormal returns are estimated, the sample size and *t*-statistic. In some cases the abnormal returns are obtained from studies whose primary purpose is to examine other issues,² for example, the antitrust implications of mergers. In some of these cases the numbers of interest for table 3 are not directly presented and we have calculated the relevant abnormal returns and *t*-statistics from data in the articles. In several cases authors have provided estimates not published in the study. Italicized *t*-values are calculated by us using the methods described in footnote a to table 3. Unavailable data are denoted by 'n.a.'.

2.1 Target-firm stockholder returns

Successful target returns. The thirteen studies summarized in table 3 indicate that targets of successful takeover attempts realize substantial and statistically significant increases in their stock prices. The estimates of positive abnormal returns to targets of *successful tender offers*³ in the month or two surrounding the offer shown in table 3, panel A, are uniformly positive ranging from 16.9% to 34.1%, and the weighted average abnormal return across the seven studies is 29.1%.⁴

For targets of *successful mergers*, the estimated abnormal returns immediately around the merger announcement in panel B.1 of table 3 range

²Eckbo (1983), Malatesta (1983), Wier (1983), Ruback (1983a), Bradley (1980), Bradley, Desai and Kim (1982, 1983), and Jarrell and Bradley (1980).

³Various definitions of a successful offer are used by the authors. Generally an offer is considered successful if the bidder acquires a substantial fraction of the number of shares initially sought.

⁴The weighted average abnormal return uses sample sizes as weights and ignores the issues associated with overlapping samples. Available data do not allow the calculation of *t*-values for any of the weighted averages.

Table 3
Abnormal returns associated with mergers and tender offers: sample size and *t*-statistic^a are given in parentheses.

Study	Sample period	Event period	Bidding firms		Target firms	
			Successful (%)	Unsuccessful (%)	Successful (%)	Unsuccessful (%)
<i>Panel A. Tender offers: Announcement effects</i>						
Dodd and Ruback (1977)	1958-1978	Offer announcement month	+2.83 (124, 2.16)	+0.58 (48, 1.19)	+20.58 (133, 25.81)	+18.96 (36, 12.41)
Kummer and Hoffmeister (1978)	1956-1974	The month of and month following offer announcement	+3.12 (124, 2.24)	-1.71 (48, -0.76)	+21.15 (133, 15.75)	+16.31 (36, 6.32)
Bradley ^b (1980)	1962-1977	Offer announcement month	+5.20 (17, 1.96)	n.a.	+16.85 (50, 10.88)	+21.09 (38, 11.87)
Jarrell and Bradley (1980)	1962-1977	Twenty days before through twenty days after the offer announcement	+4.36 (88, 2.67)	-2.96 (46, -1.31)	+32.18 (161, 26.68)	+47.26 (97, 30.42)
Bradley, Desai and Kim (1983)	1962-1980	Forty days before through twenty days after the offer announcement	+6.66 (88, 3.35)	n.a.	+34.06 ^c (147, 25.48)	n.a.
Bradley, Desai and Kim (1982)	1962-1980	Ten days before through ten days after the offer announcement	n.a.	-0.27 (94, 0.24)	n.a.	+35.55 ^d (112, 36.61)
Ruback (1983a)	1962-1981	Ten days before through ten days after the offer announcement	+2.35 (161, 3.02)	n.a.	+31.80 (162, 36.52)	n.a.
Weighted average abnormal return ^{e, h}		Five days before through the offer announcement	n.a.	-0.38 (48, -0.63)	n.a.	n.a.
			+3.81 (478, n.a.)	-1.11 (236, n.a.)	+29.09 (653, n.a.)	+35.17 (283, n.a.)

Table 3 (continued)

Study	Sample period	Event period	Bidding firms		Target firms	
			Successful (%)	Unsuccessful (%)	Successful (%)	Unsuccessful (%)
<i>Panel B.1. Mergers: Two-day announcement effects</i>						
Dodd (1980)	1970-1977	The day before and day of the offer announcement	-1.09 (60, -2.98)	-1.24 (66, -2.63)	+13.41 (71, 23.80)	+12.73 (80, 19.08)
Asquith (1983)	1962-1976	The day before and day of the offer announcement	+0.20 (196, 0.78)	+0.50 (89, 1.92)	+6.20 (211, 23.07)	+7.00 (91, 12.83)
Eckbo (1983)	1963-1978	The day before through the day after the offer announcement	+0.07 ^f (102, -0.12)	+1.20* (57, 2.98)	+6.24 ^f (57, 9.97)	+10.20* (29, 15.22)
Weighted average abnormal return ^b						
			-0.05 (358, n.a.)	+0.15 (212, n.a.)	+7.72 (339, n.a.)	+9.76 (200, n.a.)
<i>Panel B.2. Mergers: One-month announcement effects</i>						
Dodd (1980)	1970-1977	Twenty days before through the first public announcement	+0.80 (60, 0.67)	+3.13 (66, 2.05)	+21.78 (71, 11.93)	+22.45 (80, 10.38)
Asquith (1983)	1962-1976	Nineteen days before through the first public announcement day	+0.20 (196, 0.25)	+1.20 (87, 1.49)	+13.30 (211, 15.65)	+11.70 (91, 6.71)
Eckbo (1983)	1963-1978	Twenty days before through ten days after the public announcement	+1.58 ^f (102, 1.48)	+4.85* (57, 3.43)	+14.08 ^f (57, 6.97)	+25.03* (29, 12.61)
Asquith, ⁱ Bruner and Mullins (1983)	1963-1979	Twenty days before the announcement day through the announcement day	+3.48 (170, 5.30)	+0.70 (41, 0.41)	+20.5 (35, 9.54)	+10.0 (19, 3.45)
Malatesta (1983)	1969-1974	Public announcement month	+0.90 (256, 1.53)	n.a.	+16.8 (83, 17.57)	n.a.
Weighted average abnormal return ^b						
			+1.37 (784, n.a.)	+2.45 (251, n.a.)	+15.90 (457, n.a.)	+17.24 (219, n.a.)

Panel B.3. *Mergers: Total abnormal returns from offer announcement through outcome*

Dodd (1980)	1970-1977	Ten days before offer announcement through ten days after outcome date	-7.22 (60, -2.50)	-5.50 (66, -2.05)	+33.96 (71, 7.66)	+3.68 (80, 0.96)
Asquith (1983)	1962-1976	The day before offer announcement through outcome date	-0.10 (196, -0.05)	-5.90 (89, -3.15)	+15.50 (211, 6.01)	-7.50 (91, -1.54)
Wier ¹ (1983)	1962-1979	Ten days before offer announcement through ten days after cancellation date	n.a.	+3.99 (16, 0.89)	n.a.	-9.02 (17, -1.82)
Weighted average abnormal return ^b						
			-1.77 (256, n.a.)	-4.82 (171, n.a.)	+20.15 (282, n.a.)	-2.88 (188, n.a.)

^aNot available = n.a.

The non-italicized *t*-statistics were obtained directly from the cited study or calculated using standard errors reported in the study. In the absence of this information, we have approximated the *t*-statistics. The italicized *t*-statistics in panel A are calculated as: $t = \bar{X} \sqrt{N/S} \sqrt{T}$, where \bar{X} is the reported abnormal return, N is the number of observations in the sample, T is the number of days over which the abnormal returns are cumulated, and S is the per day per observation standard deviation. $S = 2.39\%$ and is calculated as the average of the implied per day observation standard deviation in all of the studies. The italicized *t*-statistics in panel B.w were calculated as: $t = \bar{X} \sqrt{N/S} \sqrt{\bar{T}}$, where \bar{T} is the average number of days in the average cumulative return, and the standard deviation is from the original study.

^bThese data are plotted in Bradley (1980). Bradley provided the numerical values in private correspondence.

^cThe abnormal return for successful targets is measured over the period forty days before through five days after the offer announcement.

^dThe abnormal return for unsuccessful targets in the announcement month.

^eThe weighted average excludes the announcement month results of Dodd and Ruback (1977) and includes their results for the month of and month following the announcement.

^fIncludes mergers which were not challenged by antitrust authorities.

^gSample consists of mergers that were challenged by antitrust authorities. Eckbo (1983) reports that most of these acquisitions were not completed.

^hThe abnormal returns are weighted by samples in calculating the weighted average. Overlapping sample problems are ignored.

ⁱAsquith, Bruner and Mullins (1983) provided the data for successful and unsuccessful target firms in private correspondence.

^jSample includes only mergers that are cancelled after antitrust complaints under Section 7 of the Clayton Act.

from 6.2% to 13.4%, and the weighted average abnormal return is 7.7%.⁵ Abnormal returns measured over holding periods of approximately one month surrounding the merger announcement are presented in panel B.2. The weighted average one-month return is 15.9% which is about twice the magnitude of the two-day abnormal returns. This comparison suggests that almost half of the abnormal returns associated with the merger announcements occur prior to their public announcement.⁶

Panel B.3 presents abnormal returns from the first public announcement through the outcome day that incorporate all effects of changing information regarding the offer that occur after the initial announcement. These returns are the most complete measures of the profitability of the mergers to target shareholders in table 3,⁷ but they underestimate the gains to target shareholders because they do not include the premium on shares purchased by the bidder prior to the completion of the merger.⁸ Dodd (1980) and Asquith (1983) report these total abnormal returns for successful targets as 34% and 15.5% respectively, and the weighted average of the two estimates is 20.2%.

Unsuccessful target returns. The weighted average abnormal returns to stockholders of target firms involved in *unsuccessful tender offers* shown in table 3, panel A, is 35.2%. The comparable one-month abnormal return for targets of *unsuccessful mergers* in panel B.2 is 17.2%. As panels A, B.1 reveal, these weighted average abnormal returns for targets of unsuccessful takeover attempts are approximately equal to those for targets of successful takeovers. Hence, on average the market appears to reflect approximately equal expected gains for both successful and unsuccessful takeovers at the time of the first public announcement. However, one-month announcement abnormal returns are an insufficient measure of stock price changes associated with unsuccessful takeover attempts because they do not include

⁵The *Wall Street Journal* publication date is conventionally used as the announcement date even though the actual announcement of the offers often occurs on the day prior to the publication day.

⁶Keown and Pinkerton (1981) also find that roughly half of the price adjustment occurs prior to the public announcement date. They incorrectly conclude that 'impending merger announcements are poorly held secrets' and that the pre-announcement price adjustments reflect insider trading and the leakage of inside information. They provide no tests of the plausible alternative hypothesis that the price adjustments prior to the 'announcement day' are unbiased responses to public information that increases the probability of a takeover. For many purposes the relatively crude characterization of an event as the *Wall Street Journal* announcement date or the company's formal announcement date is satisfactory. However, for many events there is literally no single 'event day', only a series of occurrences that increase or decrease the probability of an outcome such as a takeover. Inferences about insider trading or leakage require careful consideration of these issues.

⁷Interestingly the target stock price changes appear to capture all of the target value changes associated with the merger. See Kim and McConnell (1977) and Asquith and Kim (1982) who find no merger announcement effects on publicly-traded bond prices.

⁸See Ruback (1982) for calculation of gains to target shareholders that appropriately includes the proceeds to the tendering shareholders on repurchased shares.

the stock price response to the information that the offer failed. The correct measure of the wealth effects, therefore, is the cumulative return from the offer through the termination announcement. The weighted average return to *unsuccessful merger* targets from the initial announcement through the outcome date presented in panel B.3 is -2.9% . Thus, all of the announcement gains are lost over the time that the merger failure becomes known.

In contrast to the behavior of stock prices of targets of unsuccessful mergers, stock prices of targets of *unsuccessful tender offers* remain substantially above their pre-offer level even after the failure of the offer. Unfortunately, the tender offer studies do not present data on the cumulative abnormal return for unsuccessful tender offers from the initial announcement through the outcome date. Nevertheless, some information can be extracted from the abnormal returns following the initial announcement. Dodd and Ruback (1977) find an abnormal return of -2.65% for targets of unsuccessful tender offers in the month following the initial announcement, but the cumulative abnormal return over the entire year following the announcement is only -3.25% ($t=0.90$).

Bradley, Desai and Kim (1983) analyze the post-failure price behavior of a sample of 112 targets of *unsuccessful tender offers* that they segment into two categories: 86 targets that received subsequent takeover offers and 26 targets that did not receive such offers.⁹ Returns in the announcement month for the two subsamples are 29.1% and 23.9% respectively, and both are statistically significant. From the announcement month of the initial unsuccessful offer through the following two years, the average abnormal return for the targets that *received* subsequent offers is 57.19% ($t=10.39$). In contrast, the average abnormal return over the same two-year period for targets that *did not receive* subsequent offers is an insignificant -3.53% ($t=-0.36$), and recall this return includes the announcement effects. Thus, the positive abnormal returns associated with unsuccessful tender offers appear to be due to the anticipation of subsequent offers; target shareholders realize additional positive abnormal returns when a subsequent offer is made, but lose the initial announcement gains if no subsequent offer occurs.¹⁰

Summary: The returns to targets. In summary, the evidence indicates that targets of *successful tender offers* and *mergers* earn significantly positive abnormal returns on announcement of the offers and through completion of the offers. Targets of *unsuccessful tender offers* earn significantly positive

⁹These data seem to indicate that the probability of becoming a takeover target rises substantially after an initial unsuccessful offer occurs.

¹⁰This evidence casts doubt on the earlier conjectures by Dodd and Ruback (1977) that unsuccessful tender offers lead to target shareholder gains through the disciplining of existing inefficient managers. It is also inconsistent with the argument made by DeAngelo, DeAngelo and Rice (1982) that part of the target price change in takeover offers represents the value of implicit information about target profitability that is revealed by the offer announcement.

abnormal returns on the offer announcement and through the realization of failure. However, those targets of unsuccessful tender offers that do not receive additional offers in the next two years lose all previous announcement gains, and those targets that do receive new offers earn even higher returns. Finally, targets of *unsuccessful mergers* appear to lose all positive returns earned in the offer announcement period by the time failure of the offer becomes known.

2.2 Bidding-firm stockholder returns

Successful bidders. The abnormal returns for bidders in *successful tender offers* summarized in panel A of table 3 are all significantly positive and range from 2.4% to 6.7%, with a weighted average return of 3.8%. Thus, bidders in successful tender offers realize significant percentage increases in equity value, although this increase is substantially lower than the 29.1% return to targets of successful tender offers.

The evidence on bidder returns in *mergers* is mixed and therefore more difficult to interpret than that for bidders in tender offers. On the whole it suggests that returns to bidders in mergers are approximately zero. The two-day abnormal returns associated with the announcement of a merger proposal summarized in panel B.1 of table 3 differ considerably across studies. Dodd (1980) finds a significant abnormal return of -1.09% for 60 successful bidders on the day before and the day of the first public announcement of the merger — indicating that merger bids are, on average, negative net present value investments for bidders. However, over the same two-day period, Asquith (1983) and Eckbo (1983) report slightly positive, but statistically insignificant, abnormal returns — suggesting that merger bids are zero net present value investments. In contrast to the mixed findings for the immediate announcement effects, all five estimates of the one-month announcement effects in panel B.2 of table 3 are positive, but only the estimate of 3.48% by Asquith, Bruner and Mullins (1983) is significantly different from zero. The weighted averages are 1.37% for the one-month announcement effects and -0.05% for the two-day announcement effects.

Panel B.3 of table 3 contains the results of two studies that report the total abnormal return for successful bidding firms from the initial announcement day through the outcome announcement day. If the initial announcement is unanticipated, and there are no other information effects, this cumulative abnormal return includes the effects of all revisions in expectations and offer prices and therefore is a complete measure of the equity value changes for successful bidders. The weighted average of the two estimates is -1.77% , and the individual estimates are -7.22% for 60 successful bidders and -0.1% for 196 successful bidders.

The estimated abnormal returns to successful bidding firms in all six

studies summarized in panels B.1 through B.3 of table 3 suggest that mergers are zero net present value investments for bidders¹¹ — except for the Dodd (1980) estimates in panels B.1 and B.3. It is difficult to understand the reason for the substantial difference between Dodd's estimates and the others. His sample period and methodology are similar to those of the other studies, although his sample is restricted to acquisition proposals for NYSE firms that 'are initially announced in the form of a merger' and is therefore somewhat more restrictive than others. His sample 'does not include merger proposals that were preceded by a tender offer and does not include "defensive mergers" where a target firm finds a merger partner in response to a tender offer by a third firm' [Dodd (1980, p. 107)]. Lacking obvious clues to explain the difference in Dodd's estimates, we're left with the conjecture that his results are sample specific even though there is no apparent reason why this should be induced by his sample selection criteria.¹²

Malatesta (1983) provides estimates of total abnormal *dollar* returns to the equity holders of successful bidding firms in the period 1969–1974 that are consistent with Dodd's results. He reports an average loss of about \$28 million ($t = -1.85$) in the period four months before through the month of announcement of the merger outcome (indicated by announcement of board/management approval) of the merger.

Unsuccessful bidders. Inferences about the profitability of takeover bids can also be made from the behavior of bidding-firm stock prices around the time of termination announcements for unsuccessful acquisition attempts. Positive abnormal returns to a bidding firm in response to the announcement that a takeover attempt is unsuccessful (for reasons other than bidder cancellation) are inconsistent with the hypothesis that takeovers are positive net present value investments. Dodd reports insignificant average abnormal returns of 0.9% for 19 bidders on the day before and day of announcement of merger termination initiated by targets. If mergers are positive return projects, these target-termination announcement returns should be negative. Dodd also reports positive termination announcement returns of 1.38% for 47 bidders in his bidder-termination subsample. These positive returns are consistent with the hypothesis that bidders maximize shareholder wealth and cancel mergers after finding out they overvalued the target on the initial offer.

Ruback (1983a) uses data on unsuccessful bidders to test directly for value-maximizing behavior of bidders. He argues that wealth-maximizing bidders

¹¹There are, however, classic examples which seem to contradict the conclusion that merger bids are zero net present value investments. For example, see the detailed examination of the 1981 DuPont–Conoco merger by Ruback (1982) in which DuPont paid \$7.54 billion, the largest takeover in U.S. corporate history. The value of DuPont fell by \$789 million (–9.9%) over the takeover period, and \$641 million of the decline occurred on the day of the announcement of DuPont's first offer.

¹²After discussing the issues with us, Dodd was kind enough to recheck and replicate his results — no data or computer programming errors were found.

will abandon takeover attempts when increments in the offer price would make the takeover a negative net present value investment. For 48 bidders in competitive tender offers (defined by the presence of multiple bidders), he finds the average potential gain to the unsuccessful bidder from matching the successful offer price is $-\$91$ million ($t = -4.34$). The potential gain is calculated as the abnormal bidder equity value change associated with the original announcement of the unsuccessful bid minus the additional cost if the higher successful bid were matched. Furthermore, 41 bidders did not match higher offer prices that would have resulted in a negative net present value acquisition.¹³ These results are consistent with value-maximizing behavior by bidding firms.

Problems in measuring bidder returns. There is reason to believe the estimation of returns is more difficult for bidders than for targets. Since stock price changes reflect changes in expectations, a merger announcement will have no effect if its terms are fully anticipated in the market. Furthermore, targets are acquired once at most, whereas bidders can engage in prolonged acquisition programs. Malatesta (1981, 1983) and Schipper and Thompson (1983a) point out that the present value of the expected benefits of a bidder's acquisition program is incorporated into the share price when the acquisition program is announced or becomes apparent to the market. Thus, the gain to bidding firms is correctly measured by the value change associated with the initial information about the acquisition program and the incremental effect of each acquisition. The abnormal returns to bidding firms associated with mergers reported in table 3 measure only the incremental value change of each acquisition and are therefore potentially incomplete measures of merger value to successful bidders.

Bidding firms do not typically announce acquisition programs explicitly; this information is generally revealed as the bidders pursue takeover targets. However, Schipper and Thompson (1983a) find that for some firms the start of a takeover program can be approximately determined. They examine the stock price behavior of 30 firms that announced acquisition programs during the period 1953 through 1968. The information that these firms intended to pursue an acquisition program was revealed either in annual reports or specific announcements to the financial press, or in association with other corporate policy changes. For 13 firms in their sample, Schipper and Thompson are unable to identify a specific month in which the acquisition program was adopted. For these firms, December of the program-adoption year is used as the announcement month. Four of the remaining 17 firms

¹³In the remaining 7 observations, the unsuccessful bidders did not match the successful offer price even though the data suggest that the matching would have been a positive net present value investment. The average potential gain for these 7 observations is $\$23$ million ($t = 0.64$). The low t -value suggests that these 'mistakes' are not statistically significant. However, as noted in Ruback (1983a), the measured potential gains are likely to underestimate the actual potential gains when the probability of success is less than one.

had multiple announcements of their programs and the date of the last announcement is used for these firms.

The difficulties in identifying the exact announcement date imply that the capitalized values of the acquisition program are impounded into stock prices prior to the Schipper and Thompson 'announcement month'. Consistent with the hypothesis that mergers are positive net present value investments for bidding firms, they find abnormal returns of 13.5% ($t=2.26$) for their sample of 30 firms in the 12 months prior to and including the 'event month'. However, the imprecise announcement month, the resultant necessity for measuring abnormal returns over a 12-month interval, and contemporaneous changes in corporate policy make it difficult to determine with confidence the association between positive abnormal returns and initiation of the acquisition program. For example, suppose 'good luck' provided bidder management with additional resources to try new projects such as mergers. As Schipper and Thompson discuss, in this case stock prices would show the pattern evidenced in their study even if the mergers have zero net present value.¹⁴

Asquith, Bruner and Mullins (1983) also examine the profitability of merger programs. They focus on the abnormal returns associated with the first four bids after the initiation of a merger program, arguing that the earlier bids in a merger program should contain more information about the profitability of the program than later bids. This suggests that the price response associated with the first few bids should be greater than the price response associated with later bids. They analyze the abnormal returns for successive merger bids (up to four) of 156 firms that initiated merger programs in the period 1963–1979 after eight years without a bid. Their results indicate that merger bids (both successful and unsuccessful) are positive net present value investments, as evidenced by significant average bidder gains of 2.8% ($t=5.20$) in the 20 days prior to and including the first public announcement. However, there is little evidence that the major gain to the acquisition program is capitalized into the bidder's stock price on announcement of the early mergers. The returns, sample size and t -statistics by merger sequence number are:

	Merger sequence number			
	1	2	3	4
Abnormal return	2.4%	3.7%	2.4%	2.8%
(N, t -statistic)	(70, 2.21)	(59, 3.13)	(47, 1.37)	(38, 2.38)

¹⁴Schipper and Thompson conclude that negative abnormal stock price changes for their acquiring firms around times of restrictive regulatory changes help resolve this ambiguity and

In addition to the problems caused by prior capitalization of the gains from takeover bids, measuring the gains to bidding firms is also difficult because bidders are generally much larger than target firms. Thus, even when the dollar gains from the takeover are split evenly between bidder and target firms, the dollar gains to the bidders translate into smaller percentage gains. Asquith, Bruner and Mullins (1983) report that the abnormal returns of bidding firms depend on the relative size of the target. For 99 mergers in which the target's equity value is 10% or more of the bidder's equity value, the average abnormal return for *bidders* is 4.1% ($t=4.42$) over the period 20 days before through the day of announcement. For the 115 remaining mergers in which the target's equity value is less than 10% of the bidder's equity value, the average abnormal return for bidders is 1.7% ($t=2.00$). Furthermore, the precision of the estimated gains is lower for bidders than for targets because the normal variation in equity value for the (larger) bidder is greater, relative to a given dollar gain, than it is for the target. Thus, even if the gains are split equally, the relative sizes of bidding and target firms imply that both the average abnormal return and its t -statistic will be smaller for bidding firms.

Returns to bidders also show evidence of other measurement problems. Several studies show indications of systematic reductions in the stock prices of bidding firms in the year following the event. These post-outcome negative abnormal returns are unsettling because they are inconsistent with market efficiency and suggest that changes in stock price during takeovers overestimate the future efficiency gains from mergers. Table 4 presents the cumulative abnormal returns in the year following takeovers in six different studies. One of the post-announcement abnormal returns in the two tender offer studies in panel A of table 4 is not significantly different from zero. In addition, the post-outcome abnormal returns for the merger studies reported in panel B of table 4 provide evidence of systematic reductions in stock price. Langetieg (1978) and Asquith (1983) report significant negative abnormal returns in the year following the outcome announcement. Malatesta (1983) finds insignificant negative abnormal returns in the year following the merger announcement for his entire sample, although he finds significant negative abnormal returns for bidders in mergers occurring after 1970 and for bidders with smaller equity value.

There are several potential explanations for the negative post-outcome abnormal returns. One hypothesis is that the studies impose ex post selection bias by using information that is not available at the announcement date to

make the evidence that the programs were positive net present value projects for acquirers 'more compelling'. However, this conclusion cannot be drawn. Negative returns on the imposition of regulatory changes that impose higher future costs on bidders would also be observed if the original acquisition programs were negative net present value projects as long as the regulatory changes do not cause the bidders to abandon their acquisition programs.

Table 4
 Summary of post-outcome abnormal returns for tender offers and mergers; sample size and *t*-statistic^a are given in parentheses.

Study	Sample period	Event period	Bidding firms		Target firms	
			Successful (%)	Unsuccessful (%)	Successful (%)	Unsuccessful (%)
<i>Panel A. Tender offers</i>						
Dodd and Ruback (1977)	1958-1978	Month after through 12 months after the offer announcement	-1.32 (124, -0.41)	-1.60 (48, -0.52)	+7.95 (133, 0.85)	-3.25 (36, 0.90)
Bradley, Desai and Kim (1983)	1962-1980	Month after through 12 months after the offer announcement	n.a.	-7.85 ^b (94, -2.34)	n.a.	+3.04 (112, 0.90)
<i>Panel B. Mergers</i>						
Mandelker (1974)	1941-1962	Month after through 12 months after the effective date	+0.60 (241, 0.31)	n.a.	n.a.	n.a.
Langstieff (1978)	1929-1969	Month after through 12 months after the effective date	-6.59 (149, -2.96)	n.a.	n.a.	n.a.
Asquith (1983)	1962-1976	Day after through 240 days after the outcome announcement	-7.20 (196, -4.10)	-9.60 (89, -5.41)	n.a.	-8.7 (91, -2.11)
Malatesta (1983)	1969-1974	Month after through 12 months after approval for entire sample	-2.90 (121, -1.05)	n.a.	n.a.	n.a.
		Month after through 12 months after approval for mergers occurring after 1970	-13.7 (75, -2.88)	n.a.	n.a.	n.a.
		Month after through 12 months after approval for firms with equity value under \$300 million	-7.70 (59, -1.51)	n.a.	n.a.	n.a.

^aNot available = n.a.

The *t*-statistics either come directly from the cited study or were calculated from implied standard deviations available in the cited study, or come from an earlier draft of the study.

^bThis abnormal return covers the period from the day after through 180 days after the offer.

select samples. Alternatively, the negative drift could be caused by non-stationary parameters or other forms of model misspecification, but Langetieg (1978) finds these factors do not explain the negative post-outcome returns in his sample. Schipper and Thompson (1983a) argue that regulatory changes that reduced the profitability of mergers could explain the negative abnormal returns, but Malatesta (1983) finds significant negative abnormal post-outcome returns of -13.7% ($t=2.88$) for mergers occurring after the regulatory changes. Explanation of these post-event negative abnormal returns is currently an unsettled issue.

Summary: The returns to bidders. The reported positive returns to *successful bidders* in *tender offers* and the generally negative returns to *unsuccessful bidders* in both *mergers* and *tender offers* are consistent with the hypothesis that mergers are positive net present value projects. The measurement of returns to bidders in mergers is difficult, and perhaps because of this the results are mixed. The evidence suggests, however, that returns to *successful bidding firms* in *mergers* are zero. Additional work on this problem is clearly warranted.

2.3. *The total gains from takeovers*

The evidence indicates that shareholders of target firms realize large positive abnormal returns in completed takeovers. The evidence on the rewards to bidding firms is mixed, but the weight of the evidence suggests zero returns are earned by successful bidding firms in mergers and that statistically significant but small positive abnormal returns are realized by bidders in successful tender offers. Since targets gain and bidders do not appear to lose, the evidence suggests that takeovers create value. However, because bidding firms tend to be larger than target firms, the sum of the returns to bidding and target returns do not measure the gains to the merging firms. The dollar value of small percentage losses for bidders could exceed the dollar value of large percentage gains to targets.

Malatesta (1983) and Bradley, Desai and Kim (1982) measure the changes in total dollar value associated with completed takeovers. Malatesta examines a matched sample of targets and their bidders in 30 successful mergers and finds a significant average increase of \$32.4 million ($t=2.07$) in their combined equity value in the month before and month of outcome announcement. The acquired firms earned \$18.6 million ($t=5.41$) of the combined increase in equity value, and acquiring firms earned \$13.8 million ($t=0.91$). Bradley, Desai and Kim (1982) report positive but statistically insignificant total dollar gains to bidders and targets in 162 tender offers of \$17.2 million ($t=1.26$). However, the average percentage change in total value of the combined target and bidder firms is a significant 10.5% ($t=6.58$). This evidence indicates that changes in corporate control increase the combined market value of assets of the bidding and target firms.

3. Antitrust and the source of merger gains

The evidence indicates that, on average, takeovers result in an upward revaluation of the target's equity, and that shareholders of target firms realize a substantial increase in wealth as a result of completed takeovers. Understanding the source of the gains to merging firms is important since acquisition attempts often meet strong opposition, sometimes from target management, sometimes from antitrust authorities. Target managers, for example, often argue that target shareholders are harmed by takeovers; indeed, the common use of the emotion-laden term 'raider' to label the bidding firm suggests that the bidder's gains are coming at the expense of the target firm's shareholders. The evidence summarized above indicates that this argument is false; the bidder's gains (if any) do not appear to be simple wealth transfers from target shareholders.¹⁵ Acquisition attempts are also opposed by target firms, competitors, and antitrust authorities, among others, who argue that mergers are undesirable because they reduce competition and create monopoly power.¹⁶ Such opposition has delayed merger completion, caused merger cancellations, and resulted in court-ordered divestiture of previously completed acquisitions.¹⁷ In addition, the evidence indicating positive net benefits to merging firms, together with the zero or positive abnormal returns to bidding firms, is inconsistent with the hypothesis that takeovers are motivated by non-value-maximizing behavior by the managers of bidding firms.

3.1. *The source of takeover gains*

Various sources of gains to takeovers have been advanced. Potential reductions in production or distribution costs, often called synergies, could occur through realization of economies of scale, vertical integration, adoption of more efficient production or organizational technology,¹⁸ increased utilization of the bidder's management team, and reduction of agency costs by bringing organization-specific assets under common ownership.¹⁹

¹⁵See Bradley (1980) for an extended discussion of these issues in the context of tender offers.

¹⁶Arguments by target management that a takeover should be prohibited on antitrust grounds seems particularly self-interested and inconsistent with maximization of shareholder wealth.

¹⁷For example, the Justice Department's request for additional information from Mobil during the Conoco takeover prohibited Mobil from buying Conoco common stock and prevented Mobil from actively competing with DuPont and Seagram for control of Conoco, even though Mobil's offer was approximately one billion dollars higher. Ruback (1982) analyzes this takeover in detail.

¹⁸See Chandler (1962, 1977) and Williamson (1975, 1981) for discussion of advantages of the multidivisional form of organization which seems common to merged firms. Bradley, Desai and Kim (1982) investigate the role of specialized resources in merger gains.

¹⁹See Klein, Crawford and Alchian (1978) for discussion of the agency costs of outside ownership of organization-specific assets.

Financial motivations for acquisitions include the use of underutilized tax shields, avoidance of bankruptcy costs, increased leverage, and other types of tax advantages.²⁰ Takeovers could increase market power in product markets. Finally, takeovers could eliminate inefficient target management. Each of these hypotheses predicts that the combined firm generates cash flows with a present value in excess of the sum of the market values of the bidding and target firms. But the abnormal returns do not identify which components of the present value of net cash flows have changed. Studies of the abnormal returns to takeover participants cannot, therefore, distinguish between these alternative sources of gains.

Two important exceptions are the studies by Stillman (1983) and Eckbo (1983), which use the equity price changes of firms that *compete* in product markets with the merged target to reject the hypothesis that takeovers create market power. The market power hypothesis implies that mergers increase product prices thereby benefiting the merging firms and other competing firms in the industry. Higher prices allow competing firms to increase their own product prices and/or output, and therefore the equity values of competing firms should also rise on the offer announcement.

Stillman (1983) examines the abnormal returns for rival firms in 11 horizontal mergers. The small sample size arises from his sample selection criteria. Of all mergers challenged under Section 7 of the Clayton Act, these 11 are the merger complaints in unregulated industries whose rivals were identified in the proceedings and for which constraints on data availability were met. While this screening process creates a small sample, it reduces ambiguity about the applicability of the test and the identity of rivals. He finds no statistically significant abnormal returns for rival firms in nine of the mergers examined. Of the remaining two mergers, one exhibits ambiguous results and the other is consistent with positive abnormal returns for rivals. Stillman's evidence, therefore, is inconsistent with the hypothesis that the gains from mergers are due to the acquisition of market power.

Eckbo (1983) uses the stock price reaction of rivals at the announcement of the antitrust challenge as well as at the announcement of the merger to test the market power hypothesis. Eckbo's final sample consists of 126 challenged horizontal mergers and, using product line classifications rather than records of court and agency proceedings, he identifies an average of 15 rivals for each merger. He also identifies rivals for 65 unchallenged horizontal mergers and 58 vertical mergers.

Eckbo's results indicate that rival firms have positive abnormal returns around the time of the first public announcement of the *merger*. Rivals of unchallenged mergers realized abnormal returns of 1.1% ($t=1.20$) and rivals of challenged mergers realized abnormal returns of 2.45% ($t=3.02$) in the

²⁰See Benston (1980, p. 21).

period 20 days prior to and 10 days following the first public announcement. These results are consistent with the market power hypothesis.

Eckbo uses the stock price reactions of *rivals* at announcement of the *antitrust challenge* to reject the market power hypothesis. The market power hypothesis predicts negative abnormal returns for rival firms at the time the complaint is filed because the complaint reduces the probability of completion of the merger (which, it is assumed, would have generated market power), and the concomitant increase in output prices is then less probable. In the period 20 days before through 10 days after the antitrust challenge, the rivals to 55 challenged mergers realize statistically insignificant average abnormal returns of 1.78% ($t=1.29$). This finding is inconsistent with the market power hypothesis, which implies the returns of rivals should be significantly negative at the complaint announcement. Furthermore, Eckbo reports that rivals with a positive market reaction to the initial merger announcement do not tend to have negative abnormal returns at the time of complaint. Thus, Eckbo's evidence is inconsistent with the market power hypothesis.

Although the evidence in Eckbo (1983) and Stillman (1983) is inconsistent with the market power hypothesis, identification of the actual source of the gains in takeovers has not yet occurred. There is evidence in Asquith (1980, 1983), Malatesta (1983), Langetieg (1978), Ellert (1976), and Mandelker (1974) that target firms experience negative abnormal returns in the period prior to approximately six months before the acquisition.²¹ This below normal performance is consistent with the hypothesis that inefficient target management caused target firms to perform badly, but there is currently no evidence that directly links these negative pre-merger returns to inefficiency. Eckbo's results, moreover, are inconsistent with the target inefficiency hypothesis. His evidence indicates that the gains are more general, extending to rivals in the industry as well as to the specific target firm, and removal of inefficient target management is unlikely to be an industry-wide phenomenon.

It would be surprising to find that all the gains reflected in table 3 are due to a single phenomenon such as elimination of inefficient target management. Some of the gains are also likely to result from other synergies in combining two or more independent organizations, and discovery of the precise nature of these synergies is a complicated task. Ruback (1982), for example, examines the DuPont–Conoco merger to determine the source of the revaluation that occurred; the stockholders of the target, Conoco, realized gains of about \$3.2 billion whereas stockholders of the bidder, DuPont, incurred losses of almost \$800 million. The DuPont–Conoco merger, therefore, 'created' about \$2.4 billion of additional market value. Ruback

²¹The declines reported by Asquith (1983), Malatesta (1983), Langetieg (1978) and Ellert (1976) are statistically significant.

explores a variety of different explanations for the revaluations, including synergy, the release of new information, undervalued oil reserves, replacement of inefficient target management, and departures from stockholder wealth maximization by the management of DuPont. None of these hypotheses provide an adequate explanation for the revaluation, although it is impossible to reject the hypothesis that DuPont had some special new information about Conoco's assets. These results suggest it is difficult to identify the source of the gains from takeovers — even in the context of a single takeover.

Information effects of various kinds might also play a role in explaining the behavior of stock prices at times of takeovers. For example, DeAngelo, DeAngelo and Rice (1982) conjecture that information effects associated with bidder management's possession of inside information about its own value might help explain the difference in bidder returns in tender offers and merger proposals. The evidence indicates that bidders in successful tender offers earn small positive returns and that successful merger bidders earn approximately zero returns. Tender offers are frequently cash offers,²² and mergers are usually stock and other security exchange offers. When bidder management's inside information (unrelated to the acquisition) indicates its stock is undervalued it will prefer a cash offer and vice versa for a stock offer.²³ Therefore, astute market participants will interpret a cash offer as good news and a stock offer as bad news about the bidder's value and incorporate this information into bidder stock prices along with the estimated value of the acquisition. This argument implies that returns to bidders in cash tender offers will be higher than in mergers, if other aspects of the deals are approximately equivalent.

The inside information argument is as yet untested. However, it implies that stock prices fall when new shares are sold and rise when shares are repurchased, and this implication is consistent with the price effects associated with intrafirm capital structure changes found by a growing number of authors. For example, prices generally fall on the exchange of common and preferred stock for bonds [Masulis (1980a)], on the call and conversion of convertible bonds to stock [Mikkelson (1981, 1983)], on the issuance of convertible debt [Dann and Mikkelson (1982)], on the issuance of stock through rights offerings [Smith (1977)], and on the sale of common stock in secondary offering [Scholes (1972)], while prices generally rise on repurchases of common stock [Dann (1981), Vermaelen (1981), Masulis (1980b) and Rosenfeld (1982)]. The only inconsistent evidence is the

²²Bradley (1980), Jarrell and Bradley (1980) and Bradley, Desai and Kim (1983) sample only cash offers; Dodd and Ruback (1977) and Ruback (1983a) sample both cash and security exchange tender offers.

²³See Myers and Majluf (1981) who argue that sale of shares by a target through merger can reveal negative information about the target's value.

significant negative returns associated with targeted buybacks of large blocks of stock documented by DeAngelo and Rice (1983) and Bradley and Wakeman (1983). However, the targeted buyback evidence seems well explained by other factors, as discussed in section 4.5 below.

3.2. *The costs of antitrust actions*

The evidence indicates that merger gains do not come from the acquisition of market power, but rather from some source of efficiencies that also appears to be available to rival firms in the industry. Given this evidence it is of interest to examine the effects of antitrust actions on merging firms.

In their studies of antitrust merger actions, Ellert (1976), Wier (1983) and Eckbo (1983) demonstrate that antitrust opposition to takeovers imposes substantial costs on target firm shareholders. Wier examines the abnormal returns for firms involved in mergers which were opposed by antitrust authorities under Section 7 of the Clayton Act. Her sample contains mergers involving 16 bidding firms and 17 target firms that were cancelled after antitrust complaints. The cumulative abnormal return from 30 days before through the proposal announcement is 9.25%. During the period *following* the proposal announcement through the complaint period and the cancellation day, all the previous target firm announcement gains are eliminated; the cumulative abnormal return is -12.43%. Bidding firms in her sample appear to show no abnormal returns at the time of proposal announcement or cancellation.

Wier (1983) also examines the abnormal returns associated with the announcement of antitrust complaints for 111 completed mergers, and her data reveal significant abnormal returns of -2.58% for the day before through the day after the complaint announcement. Ellert (1976) reports an abnormal return of -1.83% ($t = -3.24$) in the complaint month for 205 defendants in antitrust merger cases over the period 1950-1972. Similarly, Eckbo (1983) reports an average abnormal return of -9.27% ($t = -7.61$) for 17 target firms on the day before through the day after the announcement of an antitrust complaint. In addition, Wier finds that the abnormal return for 32 firms that completed their mergers and were later convicted of antitrust violations is -2.27% ($t = -4.11$) from the day before through the day after the conviction announcement. However, she finds no significant abnormal returns on announcement of the outcome for 30 firms whose antitrust suits were dismissed and for 66 firms that settled their antitrust suits. Dismissal or settlement of a suit, unless fully expected, would generally represent good news. As Wier points out, the absence of significant abnormal returns at these announcements is puzzling.

There is also evidence consistent with the hypothesis that Federal Trade Commission antitrust actions benefit rivals of merging firms by restricting

competition. Eckbo (1983) finds that rivals of mergers challenged by the Federal Trade Commission earn essentially zero abnormal returns on the day of the merger announcement and significantly positive abnormal returns on the day of the complaint announcement. In contrast, rivals of mergers challenged by the Justice Department earn significantly positive abnormal returns on the merger announcement and essentially zero abnormal returns on the complaint announcement. Eckbo (1983) concludes: 'This evidence strongly contradicts the [market power] hypothesis and gives some support to a "rival producer protection" rationale for the behavior of the FTC towards these mergers.'

In sum, the negative abnormal returns associated with antitrust complaints, Section 7 convictions, and cancellations of mergers induced by antitrust actions indicate that antitrust opposition to takeovers imposes substantial costs on the stockholders of merging firms. This finding is particularly interesting given that the evidence indicates merger gains do not arise from the creation of market power but rather from the acquisition of some form of efficiencies.

3.3. The effects of takeover regulation

In addition to antitrust regulation, the imposition of security regulations governing takeovers appears to have reduced the profitability of takeovers. The effect of changes in tender offer regulations (such as the Williams Amendment and state tender offer laws) on the abnormal returns to bidding and target firms, is examined in Smiley (1975) and Jarrell and Bradley (1980). Smiley finds that the Williams Amendment increased the abnormal returns to target firms by 13%. Jarrell and Bradley find that the target's average abnormal return increased after the Williams Amendment and the bidder's average abnormal return decreased. They find that average abnormal returns for 47 target firms prior to the Williams Amendment were 22% ($t=12.9$) in the period 40 days before through five days after the first public announcement of the takeover. In comparison, the average abnormal return for 90 targets subject to regulation under the Williams Amendment is 40% ($t=19.2$) and the returns to 20 targets subject to both the Williams Amendment and state tender offer laws is 35% ($t=5.1$). For bidders, the average abnormal return in the period 40 days before through 20 days after the first public announcement is 9% ($t=3.5$) for 28 unregulated offers, 6% ($t=2.1$) for 51 offers regulated by the Williams Amendment, and 4% ($t=0.7$) for 9 offers regulated by the Williams Amendment and state tender offer laws. Asquith, Bruner and Mullins (1983) provide similar evidence. For mergers prior to October 1, 1969, they report average abnormal returns to bidders of 4.40% over the period 20 days before through the first public announcement and average abnormal returns of 1.7% to bidders in mergers after October 1, 1969.

The evidence seems to indicate that the regulations increased the returns to the target's shareholders at the expense of the shareholders of bidding firms, but the tests are not sufficient to draw this conclusion from the data. Suppose the regulations have no effect whatsoever except to eliminate the low-value offers. By raising transactions costs and imposing restrictions on takeovers, the regulations could simply truncate the distribution of takeovers that would actually occur. This truncation of less profitable takeovers would reduce the returns to shareholders of firms that do not become targets and have no effect on the returns to those that do become targets, but it would increase the *measured* average abnormal returns for targets of completed takeovers. The effect of such truncation on the abnormal returns to bidding firms is less clear since no well-developed theory exists that determines the division of the net benefits between target and bidding firms.

Schipper and Thompson (1983a) examine the effect of four regulatory changes that occurred in 1968–1970: Accounting Principle Board Opinions 16 and 17, the 1969 Tax Reform Act, the 1968 Williams Amendment, and its 1970 extension. Each of these regulatory changes restricts bidders and thereby reduces the profitability of bidding firms. The abnormal return for bidders engaged in merger programs at the time of four regulatory changes is interesting because, in an efficient market, the effect of the regulatory changes is impounded in the bidder's stock price on announcement of the changes. They find an average abnormal return of -1.3% ($t=4.5$) during the 15 months in which events related to regulatory change occurred between January 1967 and December 1970. Schipper and Thompson (1983b) use an alternative technique to estimate the effects of the regulatory changes. They report that the Williams Amendment reduced the equity values of acquiring firms by about 6%. The Schipper and Thompson event-type tests are more precise than the comparison of abnormal returns to bidders before and after regulation, and they indicate that the regulatory changes impose costs on bidding firms. Their approach cannot be used to assess the effect of the regulations on target firms because it is difficult, if not impossible, for the market to identify future target firms.²⁴ If market participants cannot identify targets prior to the bids, appreciable changes in stock price will not be observed for targets of future takeovers at times of regulatory changes.

4. Manager–stockholder conflicts of interest

4.1. *Corporate control: The issues*

Takeovers serve as an external control mechanism that limits major

²⁴Palepu (1983) uses a binary logit model to identify determinants of the probability of acquisition. While he finds several variables that are statistically significant, the overall explanatory power of the model is negligible.

managerial departures from maximization of stockholder wealth.²⁵ It is unlikely, however, that the threat of takeover ensures complete coherence of managerial actions and maximization of stockholder wealth. Because of the existence of other control mechanisms, the inability of the takeover market to eliminate all departures from maximization of stockholder wealth does not imply that these departures are prevalent in modern corporations.²⁶ The limitations of the takeover market also do not imply that the departures, when they occur, are costly to shareholders; some of the costs are borne by managers themselves through reductions in their salaries.²⁷

Measurement of the costs of manager-stockholder conflict by direct examination of managerial decisions is difficult for reasons that include the difficulty in identifying the benefits to managers that emanate from particular decisions, the difficulty in determining the information base for the decision, errors in the stock market assessment of value, and the difficulty in ex post auditing of decisions. For example, suppose the announcement of a capital investment is associated with a decline in the firm's stock price, suggesting that the investment reduces shareholder wealth. There is no particular reason in this case to suspect that the decision benefits managers.²⁸ Furthermore, the price decline could be an error due to the market's lack of inside information possessed by managers. Alternatively, even if the investment is value-maximizing, the decline in price could result from an exogenous reduction in profitability that the investment reveals to the market. Finally, even when the investment proves to be a negative net present value

²⁵The average abnormal returns to target shareholders in tables 1 and 3 are not measures of the extent of managerial departures from stockholder wealth maximization. For example, in addition to the gains from eliminating inefficient managers, they include the gains from efficiency innovations and synergies available to the combined firm.

²⁶See Fama and Jensen (1983a, b, c) and Jensen (1983) for discussions of agency costs, control and survival in a theory of organizations that views conflicts of interests in a general fashion.

²⁷See Jensen and Meckling (1976, p. 328) and Fama (1980). However, unless the cost of perfectly enforcing managerial contracts is zero, the agency costs of managerial discretion will not be zero. Zero costs of managerial discretion imply zero costs of constructing a managerial performance measurement, evaluation and compensation system that perfectly reflects in the manager's salary all deviations from shareholder wealth maximization. Contrary to Fama's (1980) argument, this implication holds even for the monitoring performed by the managerial labor market. Consider, for example, a case in which the value of a manager's human capital that is specific to his current organization is large relative to the value of his general human capital. (The value of general human capital means the value of human capital in its highest-value use outside the manager's current organization.) In this case, fluctuations in the value of his general human capital, even if they perfectly reflect the manager's deviations from maximization of shareholder wealth, will have no direct effect on his welfare. Therefore, the managerial labor market will not eliminate the agency costs between managers and stockholders in such situations.

²⁸For example, the evidence presented by Mikkelsen (1981, 1983) and Masulis (1980a) indicates that call and conversion of convertible bonds to common stock and exchange of common and preferred stock for bonds is associated with statistically significant stock price declines. Except for cases in which managerial compensation depends on earnings per share, it is difficult to see how managers benefit from such capital structure changes.

investment, it is difficult, given uncertainty, to distinguish between managerial incompetence, managerial opportunism or mere bad luck.

Some evidence on the costs of managerial departures from maximization of stockholder wealth can be obtained by focusing on changes in the rules that govern manager–stockholder interactions. Corporate charter changes that affect the probability of a future outside takeover are good examples. The evidence summarized in section 2 indicates that shareholders in successful takeover targets realize substantial wealth increases. Managers of potential targets, however, can suffer welfare losses in takeovers — for example, through their displacement as managers and the resulting loss of organization-specific human capital. In such situations, managers have incentives to take actions that reduce the probability of an outside takeover and thereby benefit themselves at the expense of shareholders.

However, the conflict between shareholder interests managerial opposition to takeovers is not clear cut. Corporate charter changes that increase the ability of target managers to control the outcome of a takeover bid can enable managers to extract a higher offer price from the bidder or to solicit higher offers from other bidders. Jarrell and Bradley (1980) and DeAngelo and Rice (1983) argue that uncoordinated wealth-maximizing decisions by individual shareholders can result in takeovers that grant a larger share of the takeover gains to the shareholders in the bidding firm.

Suppose a firm has 100 shares of common stock with a market price of \$9.50 per share and a total market value of \$950. Economies with total value of \$50 can be realized only if the firm is merged with firm A. Firm A makes a two-part takeover bid, offering \$12 per share for up to 51 shares and \$7 per share for the remaining 49 shares.²⁹ Note that if the offer is successful, the bidder obtains the target firm for \$955 — an amount only \$5 over its market value. Shareholders of firm A therefore receive \$45 of the \$50 total takeover gain. As table 5 illustrates, each shareholder faces the classic ‘prisoner’s dilemma’ problem. Acting independently, each shareholder maximizes his wealth by tendering, although all target shareholders are better off if nobody tenders until they receive a larger fraction of the takeover gains.³⁰ This problem is reduced by requiring bidders to get

²⁹Such two-part offers were used in the Conoco, Marathon and Brunswick takeover attempts, perhaps to reduce minority shareholder blocking power. Dodd and Ruback (1977) present evidence that non-selling target shareholders receive positive abnormal returns of 17.4% ($t=6.68$) in subsequent ‘cleanup’ offers of outside minority interests. DeAngelo, DeAngelo and Rice (1982) find abnormal returns of 30.4% to minority shareholders and indications of minority blocking power in going private transactions. (See section 4.7 below.) Others have argued [see Grossman and Hart (1980)] that shareholders face free-rider problems when there is a holdout premium available. They argue that if holdout premiums exist, free-rider problems prevent takeovers from succeeding even when they are profitable for all parties. In such a situation shareholders as a group would be better off if two-part offers are made by potential bidders.

³⁰If less than 51% of the shares are tendered and the offer is therefore unsuccessful, the tendering shareholder receives \$12 per share as compared to the \$9.50 market value if he does not tender. This assumes, for simplicity, that the bidder does not abandon the takeover effort. If

Table 5
Per share dollar payoff to individual shareholder who either tenders his shares or keeps his shares.

Individual action	Offer outcome	
	Unsuccessful (\$)	Successful (\$)
Tender	12.00	9.55
Don't tender	9.50	7.00

simultaneous approval of more target shareholders, and enabling management to act as agent for target shareholders can help accomplish this. If antitakeover amendments increase the bargaining power of target managers to elicit a higher offer price they could benefit target shareholders.³¹

It is worth noting that firm A in the example cannot take advantage of the target shareholder's prisoner's dilemma problems to acquire the target at less than its market value of \$950 (perhaps by offering \$12 for 51 shares and \$5 for the rest for a total of \$857). If firm A attempts this action, competition from other firms will drive the total offer to the target's current market value of \$950 if there are no gains from merger. Thus as Bradley (1980) argues, competition prevents corporate raiding or corporate piracy.³²

The remainder of this section discusses several studies that estimate the effects on stock price of managerial actions that can affect the probability that a firm will be a takeover target — including changes in the state of incorporation, adoption of antitakeover charter amendments, managerial opposition to takeovers, going private transactions, standstill agreements, and targeted large block repurchases. The results of the studies are mixed. On the one hand, there is little or no evidence of a decline in stock price that is associated with either changes in the state of incorporation, or adoption of antitakeover charter amendments, and outside selling shareholders gain substantially in going private transactions. On the other hand, there is

abandonment occurs the target firm could then become the bidder and use the same strategy to take over firm A. If the offer is successful and 100% of the shares are tendered, the shareholder expects to receive a minimum of \$9.55 per share (\$12 per share on 51% of his shares and \$7 per share on 49% of his shares if he tenders immediately). If he does not tender immediately he will receive only \$7 per share. Since, independent of the outcome, immediate tendering has higher value, the optimal non-collusive decision is to tender.

³¹For simplicity we have assumed the \$50 gain is independent of the takeover bargaining procedures. Easterbrook and Fischel (1982a) examine the implications of various gain-sharing rules for the creation of gains.

³²The timing of the offer expiration is obviously important to the bidding process because it could limit competition and is worthy of additional analysis.

evidence that shareholders are harmed by targeted large block repurchases and standstill agreements. Overall, the evidence indicates that negative returns are associated with managerial actions regarding takeovers (1) if the action eliminates a takeover bid or causes a takeover failure, or (2) if the action does not require formal stockholder approval either through voting or tendering decisions.

4.2. Changes in state of incorporation

Corporate charters specify the governance rules for corporations, including rules that establish conditions for mergers (such as the percentage of stockholders that must approve a takeover). Individual states specify constraints on charter rules that differ from state to state. This variation in state law means that changing the state of incorporation affects the contractual arrangement among shareholders effected through the corporate charter, and these changes can affect the probability that a firm will become a takeover target.

Dodd and Leftwich (1980) investigate changes in stockholder returns associated with changes in the state of incorporation for 140 firms during the period 1927–1977. Of these firms, 126 reincorporated in Delaware, a state that provides few constraints on charter rules and therefore provides greater contractual freedom for shareholders and managers. Delaware also provides a set of well-defined legal precedents that facilitate contracting and resolution of disputes. Only six firms left Delaware, and there were only eight changes in states of incorporation that did not involve Delaware.

One explanation for reincorporation in Delaware is that managers use Delaware's minimal restrictions on charter rules to exploit shareholders. An alternative explanation is that the more lenient Delaware code enables managers to take actions to increase shareholder wealth that are not possible (or are more costly) under the more restrictive charters in other states. For example, for a portion of the sample period Delaware required only simple majority stockholder approval for mergers, while many other states required greater than majority approval. Under these conditions, reincorporation in Delaware reduces the costs of merger approval and thereby raises the probability of becoming a bidder or a target in a takeover.

Dodd and Leftwich attempt to isolate the first public announcement of a change in the state of incorporation, but in many instances it is likely that the announcement date they identify is not the first public announcement of the reincorporation. Therefore, the market reaction to the change is likely to be incorporated in stock prices prior to the 'event day' and this prior response reduces the power of their tests. They find abnormal returns to shareholders of firms that changed their state of incorporation of about 30% ($t=7.90$) over the period 24 months prior to and including the

announcement month — abnormal returns that seem too large to be caused solely by changes in the state of incorporation. Dodd and Leftwich use a variety of tests to determine the source of these gains, including examination of 50 firms for which precise *Wall Street Journal* announcement dates are obtainable, analysis of changes in systematic risk, and elimination of the largest positive abnormal return for each firm over the 25-month interval. These additional tests suggest that firms changed their state of incorporation after a period of superior performance and that the change itself is associated with small positive abnormal returns. Importantly, they find no evidence of a decline in stockholder wealth at times when the state of incorporation is changed — an observation inconsistent with the hypothesis that the changes are motivated by managerial exploitation of shareholders.

4.3. Antitakeover amendments

Firms can amend their charters to make the conditions for shareholder approval of mergers more stringent. These antitakeover amendments include super-majority provisions and provisions for the staggered election of board members. By increasing the stringency of takeover conditions, such amendments can reduce the probability of being a takeover target and therefore reduce shareholder wealth. However, as explained above, by increasing the plurality required for takeover approval, the amendments could benefit shareholders by enabling target management to better represent their common interests in the merger negotiations.

DeAngelo and Rice (1983) and Linn and McConnell (1983) examine the effect of the adoption of antitakeover amendments on stock prices of the adopting firms. DeAngelo and Rice examine 100 firms that adopted super-majority, staggered board, fair price, and lock-up provisions over the period 1974–1978. Shareholders of these firms realized statistically insignificant abnormal returns of -0.16% ($t = -0.41$) on the day of and the day after the mailing date of the proxy containing the proposals. Over the period 10 days before through 11 days after the proxy mailing date the cumulative abnormal returns are an insignificant -0.90% ($t = -0.70$). These results suggest the adoption of antitakeover provisions does not reduce stockholder wealth, although DeAngelo and Rice point out that the results might be positively biased if the proposal of the amendment communicates to target shareholders an increased probability of a takeover attempt and its associated gains.

Linn and McConnell (1983) find no significant abnormal returns on the proxy mailing date for a sample of 388 firms that adopted antitakeover amendments over the period 1960–1980. They argue, however, that it is difficult to identify the precise date on which information about the antitakeover provisions is released. The information could be released on the

date the board approves the amendments (which occurs prior to the proxy mailing date) or on the date of stockholder approval (which follows the proxy mailing date). Hence, they examine the abnormal stock returns throughout the amendment process. For 170 firms in which the day of board approval is available, the cumulative abnormal returns from the day of board approval through the day before the proxy mailing date is an insignificant 0.71% ($t=1.20$). For 307 firms they find significant average abnormal returns of 1.43% ($t=3.41$) over the period from the proxy mailing date through the day before the stockholders meeting. In the 90-day period beginning with the stockholders meeting, the cumulative abnormal returns are an insignificant 0.86% ($t=1.65$). These results provide weak evidence in favor of the hypothesis that antitakeover amendments increase stockholder wealth. The results also suggest that the proxy mailing date is not the date when the information is incorporated in stock prices, a finding that is inconsistent with market efficiency.

Linn and McConnell also examine the abnormal returns to 49 firms that removed previously enacted antitakeover amendments. Over the period between board approval and proxy mailing, these firms experienced a statistically significant average abnormal return of -3.63% ($t=-2.33$). This result implies shareholders benefit from the presence of antitakeover amendments, but leaves a puzzle in understanding why they were removed in these 49 cases. In a related test, Linn and McConnell examine the abnormal stock returns of 120 firms incorporated in Delaware when the fraction of shareholders required to approve a merger was reduced by Delaware from two-thirds to a simple majority. The average abnormal return in the month of the change in the Delaware law is -1.66% ($t=-2.15$), and each of these 120 firms subsequently adopted antitakeover amendments. However, these 120 firms were selected because they adopted antitakeover amendments. This selection bias means that these returns are also consistent with the hypothesis that changes in the Delaware law on average had no effect on stockholder wealth.

Consistent with the DeAngelo and Rice results, the Linn and McConnell results imply that on average antitakeover amendments do not decrease stockholder wealth. In addition, the Linn and McConnell evidence is weakly supportive of the hypothesis that on the average such amendments increase shareholder wealth.³³

4.4. *Managerial opposition to takeovers*

Target firm managers can make outside takeovers more difficult in ways

³³H. DeAngelo and E. Rice have suggested to us that when a super-majority provision grants acquisition blocking power to a manager or other stockholder (for example a manager holding 21% of the stock when an 80% super-majority provision is implemented) the stock price effects will be more pronounced. This hypothesis has not as yet been studied.

other than through adoption of antitakeover corporate charter amendments. Since target shareholders benefit from takeovers, explicit managerial actions to prevent a takeover *independent of the price offered* appear to be an instance of managerial pursuit of self-interest at the expense of shareholders. Managerial opposition to a takeover in order to elicit a larger premium can increase the benefits of the takeover for shareholders. Such opposition can take the form of press releases and mailings that present the manager's position, the initiation of certain court actions, and the encouragement of competing bids.³⁴ However, it is difficult to argue that actions which *eliminate* a potential bidder are in the stockholder's best interests. Actions that can eliminate a takeover bid include cancellation of a merger proposal by target management without referral to shareholders, initiation of antitrust complaints, standstill agreements, or premium repurchases of the target's stock held by the bidder.

Kummer and Hoffmeister (1978) examine the abnormal returns associated with tender offers that are opposed and unopposed by target management. The average abnormal return of target shareholders in the announcement month is 16.45% ($t=15.16$) for the 44 successful targets in which managers did not oppose the offer, versus 19.80% ($t=13.62$) for 21 targets in which managers opposed the offer. Thus, managerial resistance is associated with higher premiums for offers that proved successful. However, fifteen of the 21 targets in which managers opposed the offer were not acquired within ten months, and the shareholders of these firms incurred abnormal losses of 11.7% in the ten months following the initial offer. This pattern of abnormal returns is consistent with our earlier interpretation of the stock price behavior of unsuccessful targets and with the results of Bradley, Desai and Kim (1983): Stock prices rise at the announcement of the initial bid and then decline if future takeover bids do not materialize. The Kummer and Hoffmeister results are consistent with the hypothesis that, on average, management opposition benefits target shareholders. The question remains, however, whether the shareholders of the targets of unsuccessful takeover bids could be made better off by less intensive managerial opposition — opposition that would allow their mergers to succeed without reducing the higher premiums in the otherwise successful offers. There appears to be an interesting free-rider problem here; although it might pay targets in general to establish a credible opposition threat, the costs to a particular target's

³⁴See Easterbrook and Fischel (1981a, b, 1982a, b), Gilson (1981, 1982a, b), Bebchuk (1982a, b) and the references therein for discussion of various antitakeover tactics of target management and arguments regarding whether target management should remain passive in the presence of tender offers or whether they should take actions to help run an auction for the firm by encouraging competing bids. The effects of target management actions on the rewards to investment in takeover activities and therefore on the overall frequency of bids is an important aspect of this issue.

shareholders imply they would not want a manager to let an above market offer fail.

The higher average return to targets with managerial opposition to takeovers is also consistent with the hypothesis that such opposition harms stockholders of target firms by reducing the frequency of takeover offers. For example, the higher returns could arise because only the more highly profitable takeovers are pursued when bidders believe managerial opposition will lower the probability of success and raise the expected costs.³⁵ If managerial opposition simply raises costs, bids will be lower than they would be otherwise and low profit takeovers would not occur. As explained earlier, this truncation of the distribution of takeovers would raise the measured average profitability of manager-opposed takeovers. Since the target's board and management must approve a merger offer before it can go to a shareholder vote, hostile takeovers must be accomplished by gaining control of the board either through tender offers or other accumulation of shares or proxies. The evidence in tables 1 and 3 indicates that premiums to targets in tender offers are greater than premiums to targets in mergers. This could be due to the truncation phenomenon. Moreover the truncation hypothesis is consistent with the evidence that the gains to *bidders* are also larger in tender offers.

Dodd's (1980) evidence indicates that managerial opposition harms stockholders. He partitions his sample into 26 mergers that appear to be terminated by targets and 54 mergers that are terminated by either bidders or an unidentified party. In the target-terminated subsample, the cumulative abnormal returns from ten days prior to the first public announcement of the offer through ten days after termination is about +11% for the target firms. In contrast, the abnormal return over the same period for the 'bidder-terminated' subsample is an insignificant 0.2%. The average abnormal target return on the day before and day of termination announcement is a significant -5.57% for the cancellations by the target and a significant -9.75% for the cancellations by the bidder. If targets cancel mergers in anticipation of more profitable future takeover bids that will benefit stockholders, the abnormal returns to targets on announcement of cancellation would be positive rather than negative. The negative returns are consistent with the hypothesis that target managers who cancel such mergers are not acting in the stockholder's interest. In addition, the complete loss of gains to targets where bidders cancel indicates that when bidders back out (perhaps because they find they overestimated the value of the target), the target price returns to its pre-offer level.

³⁵The costs associated with making an unsuccessful takeover bid sometimes go far beyond the search costs and the administrative, legal and other out of pocket expenses. See Ruback (1983b) for a discussion of the losses incurred by Gulf when they withdrew their bid for Cities Service.

4.5. Targeted large block stock repurchases

Currently available evidence suggests that managerial opposition to a takeover does not reduce shareholder wealth unless the resistance eliminates potential takeover bids. Two papers, Dann and DeAngelo (1983) and Bradley and Wakeman (1983), examine the effect on stockholder returns of privately negotiated or targeted stock repurchases. In a privately negotiated or targeted repurchase, a firm repurchases a block of its common stock from an individual holder, generally at a premium. These premiums can be interpreted as payments to potential bidders to cease takeover activity. The evidence indicates that such repurchases are associated with significantly negative abnormal stock returns for the shareholders of the repurchasing firm, and significantly positive abnormal returns for the sellers. Dann and DeAngelo report an average premium over the market price of 16.4% on 41 negotiated repurchases involving a premium, and for these 41 repurchases they report an average abnormal return on the repurchasing firm's stock of -1.76% ($t = -3.59$) on the day before and day of announcement. For 17 instances of non-premium targeted large block repurchases in which the price was equal to or below the market price, Dann and DeAngelo report insignificant average abnormal returns of -0.34% ($t = -0.33$) on the day before and day of announcement. Bradley and Wakeman report abnormal returns of -2.85% ($t = -5.82$) for 61 firms that repurchased a single block of common stock and abnormal returns of 1.40% ($t = 2.24$) for 28 selling firms. They also present regression estimates indicating the total value of non-participating shareholders' stock declines dollar for dollar with increases in the premium paid to the seller, and that selling firm shareholders gain commensurately. The combined evidence presented by Dann and DeAngelo, and Bradley and Wakeman indicates that premium targeted large block repurchases reduce the wealth of non-participating stockholders.

The reductions in shareholder wealth associated with targeted repurchases suggest that explicit managerial actions to eliminate takeover bidders are costly to non-participating stockholders. Bradley and Wakeman reinforce this interpretation by examining 21 firms whose targeted repurchases were associated with a takeover cancellation. For these firms the average abnormal return the day prior to through the day after announcement of the repurchase is -5.50% ($t = -7.14$). Over the same event period, 40 firms that made targeted repurchases unaccompanied by merger cancellations experienced average abnormal returns of -1.39% ($t = -1.97$). Thus, targeted repurchases are more costly to non-participating stockholders when they are used to thwart takeover attempts.

The evidence on the negative effect of targeted repurchases on shareholder wealth is especially interesting when contrasted with the large positive abnormal returns ranging from 12.4% to 18.9% from the day before to 30 days after the announcement of non-targeted repurchase tender offers

documented by Masulis (1980), Dann (1981), Vermaelen (1981) and Rosenfeld (1982).³⁶ Moreover, Dann and Vermaelen document positive abnormal returns of 4.1% and 3.4% for 121 and 243 open-market repurchases over the same event interval. Bradley and Wakeman report abnormal returns of 1.9% for repurchases from insiders, 1.6% for repurchases of small shareholdings, and 0.6% for 40 targeted repurchases where no merger bid is involved (all over the same 32-day event period). All these estimates of repurchase effects are positive and are in striking contrast to the average abnormal returns of -12.5% over the same 32-day event interval for two targeted share repurchases which involve a merger bid. The evidence provides fairly strong indications that targeted large block repurchases at premiums over market price reduce the wealth of non-participating shareholders.

4.6. Standstill agreements

Dann and DeAngelo (1983) examine the effects of standstill agreements on stock prices. Standstill agreements are voluntary contracts in which a firm agrees to limit its holdings of another firm, and, therefore, not to mount a takeover attempt. The 30 firms in their sample that obtained standstill agreements earned average abnormal returns of -4.52% ($t = -5.72$) on the day before and day of announcement of the agreement. In addition, the 19 firms entering standstill agreements that were unaccompanied by repurchases earned average abnormal returns of -4.04% ($t = -4.49$) in the same event period. Bradley and Wakeman (1983) present regression evidence suggesting that the 'news of the merger termination and the announcement of a standstill agreement have the same informational content'. This evidence also supports the hypothesis that managerial opposition that thwarts takeover bids reduces the wealth of non-participating stockholders.

4.7. Going private transactions

DeAngelo, DeAngelo and Rice (1982) examine the returns to stockholders in 72 'going private' proposals for firms listed on the New York or American Stock Exchanges in the period 1973-1980. In pure going private proposals the public stock ownership is replaced by full equity ownership by an incumbent management group and the stock is delisted. In leveraged buyouts (also included in their sample) management shares the equity with private outside investors. They find abnormal returns for the public stockholders of 30.4% ($t = 12.4$) in the period 40 days before through the announcement of the going private proposal — gains that are virtually identical to the 29.1% weighted average returns in interfirm tender offers shown in table 3, panel A.

³⁶Sample sizes range from 119 to 199.

They argue that the gains from going private are due to 'savings of registration and other public ownership expenses, and improved incentives for corporate decision makers under private ownership'. There is no evidence that outside stockholders are harmed in these transactions, which are commonly labeled 'minority freezeouts'. Moreover, the fact that stockholder litigation occurred in over 80% of the going private proposals that did not involve third parties provides a hint that these premiums are due to the blocking power typically accorded minority stockholders in going private transactions.

4.8. *Direct evidence on stockholder control*

The evidence on takeovers and actions that affect the probability of takeovers suggests that takeovers serve to limit managerial departures from maximization of stockholder wealth. Conflicts of interest between owners and managers can, however, be limited in the absence of takeovers through mergers or tender offers. Stockholders elect the board of directors and the board of directors directly monitors managers. Stockholders can change managers by electing a different board of directors, and voting rights and proxy contests are therefore important aspects of the general control process.

In this section we first examine the empirical evidence on internal transfers of control provided in the study by Dodd and Warner (1983) of the abnormal equity returns around the time of 96 proxy fights over the period 1962–1978. We then discuss the Lease, McConnell and Mikkelsen (1983) study of the value of voting rights.

Proxy contests. In a proxy fight, dissident shareholders solicit votes to elect directors who differ from management's proposed slate. If the proxy fight results in dissidents obtaining a majority of seats on the board of directors, some change in corporate control occurs. Since both takeovers and proxy fights transfer control over assets, it is likely that the announcement of a proxy fight will be associated with an increase in equity value if the assets are to be put to superior uses. However, in a takeover the bidder offers a premium to target shareholders so that the stock price of the target can rise even if no higher value uses for the target's assets exists — the premium representing in this case a wealth transfer from bidding firm shareholders to target firm shareholders. Thus, examination of changes in equity value associated with proxy fights provides direct evidence on the gains resulting from changes in management and presumably, therefore, from changes in managerial decisions on resource utilization.

Dodd and Warner (1983) study a sample of 96 proxy contests in the period 1962–1978. They report that stockholders of firms realize a significant positive average abnormal return of 1.2% ($t = 2.52$) on the day before and day of the first *Wall Street Journal* announcement of a control contest.

Furthermore, Dodd and Warner argue that information about the forthcoming proxy contest is available prior to the initial *Wall Street Journal* announcement, and that 1.2% is therefore a downward-biased estimate of the abnormal stock price increase due to the contest. Over the period 59 days before through the initial announcement of the contest the abnormal return is 11.9% ($t=5.09$). The significant positive abnormal return on the announcement day and the period prior to it suggests that proxy contests increase equity values and redirect the assets of the firm to more profitable uses. This implication is strengthened by the positive abnormal returns of 8.2% ($t=2.78$) over the period 59 days prior to contest announcement through the day of the election outcome announcement in the *Wall Street Journal*.

If the gains to stockholders associated with a proxy fight are due solely to potential changes in management, equity prices should decline when dissidents do not obtain board representation. The results in Dodd and Warner indicate that the acquisition of even partial dissident representation on the board is associated with positive abnormal returns, and complete failure to obtain representation results in negative abnormal returns. In 56 contests in which dissidents obtained seats on the board of directors, the abnormal return on the day before and day of the outcome announcement is 1.1% ($t=2.38$). Alternatively, in the 40 contests in which the dissidents failed to obtain seats, stock prices fell by 1.4% ($t=-1.67$) on the day before and day of the outcome announcement. However, the holding-period returns throughout the entire control contest indicate that the positive average effect of the contest is realized regardless of the outcome. Over the period sixty days prior to the initial announcement through the outcome announcement, the average abnormal return for contests in which dissidents win seats is virtually identical to that for contests in which dissidents win no seats. (These contest period estimates, of course, have much higher standard errors than the outcome announcement effects.)

Thus, while the relation between the revision in stock prices and announcement of the election outcome supports the importance of board representation, the magnitude of the revision is small relative to the total gains. The combined implication of the Dodd and Warner results is that, independent of the outcome, control contests increase equity values and the increase is larger when the dissidents win seats.

The value of control. We define corporate control as the rights to determine the management of corporate resources, and these rights are vested in the corporation's board of directors. Lease, McConnell and Mikkelsen (1983) examine an important aspect of control, the value of rights to vote in elections to select the board of directors and to vote on other matters that require stockholder approval. They identify 30 firms that have two classes of common stock that differ only in their voting rights. Both

classes have identical claims to dividends and are treated equally on liquidation. They calculate the ratio of month end prices for the two classes of stock over the time in which the two classes traded in the period 1940–1978. For 18 firms with voting and non-voting common stock and without voting preferred stock, the average premium for the voting stock is 3.79%. Of the 360 month end price ratios in their sample, 336 indicate that the voting stock traded at a premium. For the 9 firms without voting preferred stock that have two classes of voting common stock which differ only in voting rights, the common stock with superior voting rights traded at an average premium of 6.95% and 393 of the 468 month end price ratios indicate a premium for the stock with superior voting rights. Finally, for four firms with voting preferred, the class of common stock with superior voting rights traded at an average discount of 1.17%.

While the discount for stock with superior voting rights in firms that have voting preferred remains an unexplained puzzle, the weight of the Lease, McConnell and Mikkelson evidence indicates that voting rights are valuable. In addition, Dodd and Warner (1983) present evidence that voting rights are valuable. For 42 proxy contests with record dates that follow the initial announcement of the proxy contest, they report that stock prices fall on average by 1.4% ($t = -3.02$) on the day after the record date (the day the stock goes ex-vote).

5. Unsettled issues and directions for future research

Careful examination of the reaction of stock prices to various control-related events has greatly increased our understanding of the market for corporate control. Nevertheless, much remains to be learned, and the measurement of effects on stock prices will continue to play an important role in this research effort. We are, however, reaching the point of rapidly diminishing returns from efforts that focus *solely* on stock price effects. Further progress toward understanding the market for corporate control will be substantially aided by efforts that examine other organizational, technological and legal aspects of the environment in addition to the effects of takeovers on stock prices. Of course, the relationship between these other factors and stock price effects will be of continuing importance to future research. This section is devoted to discussion of a number of unsettled issues and suggests some directions for future research.

5.1. Competition among management teams

In our view the takeover market is an arena in which alternative management teams compete for the rights to manage corporate resources.³⁷

³⁷This phenomenon is made particularly evident by the simultaneous mutual tender offers that have become common recently, the so-called 'Pac Man' defense. See Herzel and Schmidt (1983) for a penetrating discussion of these offers.

In small takeovers management teams can consist of a single proprietor (with staff) or a partnership of managers. Competing management teams are also commonly organized in the corporate form, especially in large takeovers. In these cases the managerial team consists of the top-level internal managers and a board of directors. The board acts as the top-level control device and is the repository of the control rights acquired by the team. The competition among management teams is complex, and it is not yet fully described by theory or evidence. The following discussion, however, suggests an analytical approach and directions for future research.

The contractual setting. Analysis of the competition among management teams in the market for corporate control must begin with a specification of the analytically important aspects of the institutional and contractual environment.³⁸ In particular, the nature of the rights of each of the parties in the set of contracts that define the open corporation are important to the functioning of the market for corporate control. The corporation is a legal entity that serves as the nexus for a set of contracts among independent agents. One implication of this view is that the corporation has no owners. Instead, stockholders are agents in the nexus of contracts who specialize in riskbearing. Indeed, unrestricted common stock residual claims are the unique contractual aspect of the open corporate form that distinguishes it from all other forms of organization. Its residual claims are unrestricted in the sense that they are freely alienable and do not require the claimant to have any other role in the organization -- in contrast, for example, to the residual claims of closed corporations that are generally restricted to agents with other roles in the organization. This unrestricted alienability enables separation of the riskbearing and management functions and therefore facilitates the realization of the benefits of specialization of these two functions. In this view, control of the agency problems of separation of residual riskbearing from management functions requires separation of the management function (initiation and implementation) from the control function (ratification and monitoring). Observation indicates this always occurs and that boards of directors or trustees are the common institutional device for accomplishing this separation.

The board of directors in the open corporation is elected by vote of the residual claimants who, while retaining the rights to ratify certain major decisions by shareholder vote, delegate most management and control rights to the board. The board in turn delegates most of its management and control rights to the internal managers while retaining the rights to ratify certain major decisions. Most importantly, the board of directors always retains the top-level control rights, that is, the rights to hire, fire and set the compensation of the top-level managers. Board membership consists of

³⁸This discussion draws on the analysis in Jensen and Meckling (1976, 1979), Fama (1980), and especially Fama and Jensen (1983a, b).

internal managers and external agents with expertise of value to the organization. Moreover, the complex contractual arrangements that define the open corporation are embedded in a legal system that further defines the contracts and rights of the parties. For example, the legal system imposes fiduciary responsibility on board members and managers and delineates the legal rights and remedies available to shareholders who challenge the actions of board members and managers.

The unrestricted alienability of the common stock residual claims of the open corporation is essential to the existence of the market for control. Unrestricted alienability allows the existence of a stock market that facilitates transfer and valuation of the claims at low cost. Low cost transferability makes it possible for competing outside managers to bypass the current management and board of directors to acquire the rights to manage the corporation's resources. These control rights can be acquired by direct solicitation of stockholders, either through tender offers or proxy solicitation. Outside management teams can also acquire the management rights by merger negotiations with the target's management and board subject to ratification by vote of the stockholders.

The internal control system has its foundation in the corporate charter and is strengthened or weakened by day to day operating practices and procedures and by the quality of the individuals who hold board seats and positions in top management. Competition from alternative management teams in the market for corporate control serves as a source of external control on the internal control system of the corporation. Alternative institutional forms such as professional partnerships, non-profit organizations and mutuals do not receive the benefits of competition from alternative management teams in an external control market.³⁹ Of course, internal competition in each of these organizations and the external regulatory environment (such as in banking) contributes to the control function. But the corporation alone receives the benefits of the private external control market in addition to the internal control mechanisms.

When a breakdown of the internal control system imposes large costs on shareholders from incompetent, lazy or dishonest managers, takeover bids in the market for corporate control provide a vehicle for replacing the entire internal control system. Competing managers who perceive the opportunity to eliminate the inefficiencies can offer target shareholders a higher-valued alternative than current management while benefiting their own shareholders and themselves. Similar incentives come into play when the acquisition of substantial synergy gains requires displacement of an efficient current management team.

³⁹Fama and Jensen (1983a, b, c) provide detailed analyses of these alternative organizational forms and their survival properties. Mayers and Smith (1981, 1982) and Smith (1982) provide a discussion of conflict resolution, contracting practices and the differences between mutual and corporate organizational forms in the insurance and banking industries.

Management teams receive the assistance of legal and financial institutions with expertise in both offensive and defensive takeover strategies. Sometimes this assistance is acquired under direct contract (for example, legal services) and on other occasions the assistance is provided by independent agents acting in their own interest. Takeover specialists, sometimes referred to as 'raiders' — who acquire specialized expertise in takeover strategy and in ferreting out and amassing a controlling block of shares — perform an important function in facilitating transfers of control. Such agents may or may not take control of a firm. They can succeed solely by developing expertise in discovering companies where potential takeover gains exist and in amassing blocks of shares sufficient to enable other management teams to acquire the control rights. The takeover specialists' gains come from transferring their shares to these other acquirers at the takeover price. Arbitrageurs perform an important role by specializing in valuing the competing offers and providing a market that allows investors to delegate both the valuation and riskbearing function during the takeover period.

5.2. Directions for future research

Many interesting and important research issues are suggested by the managerial competition view of the market for corporate control. It also suggests new perspectives on a number of unresolved issues that promise significant advances in the development of a theory of organizations.⁴⁰

Examination of the costs and benefits to competing management teams of success or failure in the takeover market will aid in understanding the forces that determine when and why takeovers are initiated, and why target managers oppose or acquiesce to such proposals. Factual knowledge about the career paths and compensation experience of bidder and target management personnel will be valuable in such efforts. For example: How does management turnover frequency in takeover situations compare with that in non-takeover conditions? Do target managers lose their jobs more frequently in unfriendly takeovers than in friendly or 'white knight' acquisitions? What happens to the managers of targets who successfully avoid takeover? When target managers remain with the merged firm, how do they fare in compensation, rank and rapidity of promotion in the merged firm? How do target managers who leave the merged entity fare in the external labor market? What happens to managers of successful and unsuccessful bidding firms, and how does their experience (compensation, promotion, etc.) relate to the stock price effects of the outcomes? What is the relative frequency with which takeovers are motivated by inefficient target management versus the acquisition of other economies or synergies? What

⁴⁰See Jensen (1983) for a discussion and overall perspective on organisation theory and methodology and the emerging revolution in the science of organizations.

are the synergies that contribute to takeover gains? How are takeover frequency and terms affected by (1) antitakeover amendments, (2) golden parachutes (that is, contractual employment guarantees and compensation in the event of control changes), and (3) various other managerial actions to oppose takeovers?

The definition of the market for corporate control as the arena in which managers compete for resources to manage raises a variety of questions regarding the form of the competition. Takeover strategies, both offensive and defensive, have received relatively little attention in the academic literature. The managerial competition model provides an interesting framework for the evaluation of alternative strategies. For example, bidders in hostile takeovers typically try to reduce the time that the offer is outstanding by keeping it secret prior to its announcement and by structuring offers (e.g., two-part offers) so that early tendering is beneficial to shareholders. Incumbent managers attempt to lengthen the time that an offer is outstanding. These opposing strategies are consistent with managerial competition; the bidder tries to reduce the incumbent management team's ability to compete, and targets want more time to respond to the bid or to seek out other bidders that offer better opportunities for themselves and their shareholders. This is consistent with the observation that potential targets prepare takeover defenses prior to the occurrence of a hostile bid.

The managerial competition perspective also helps explain the types of defensive strategies used by target firms. For example, suppose the incumbent management team has reliable information that its equity is underpriced. If this information cannot be made public, the managerial competition model predicts that incumbent managers will attempt to find a white knight. The information could be released to the white knight, perhaps through a confidential information center, and both the incumbent management team and the shareholders of the target would benefit. While this analysis is preliminary and speculative, the interactions between the incentives of competing management teams and the strategies they adopt is an interesting area for future research. Knowledge resulting from such research will allow us to understand better the determinants of the offer, such as structure (single or two part, cash or exchange of securities), timing, type of offer (tender, merger, or proxy contest), and tax effects. Understanding takeover strategy also requires more detailed knowledge of the effects of voting rules [see Easterbrook and Fischel (1983)], the determinants of effective control, the effects of institutional ownership, and the effects of specialized takeover agents and arbitrageurs [see Wyser-Pratte (1982)].

Detailed knowledge of the control market should also provide insights regarding the reasons for spinoffs and divestitures, and why joint ventures, which can be thought of as partial mergers, are used in some cases and not in others. Why, for example, are joint ventures often used for new ventures

and not for ongoing operations, for example, by divestiture of a corporate division into a joint venture with outside partners? A thorough understanding of spinoffs, divestitures, takeovers and joint ventures should also help us understand the discounts and premiums on closed-end funds and, in particular, why closed-end funds selling at substantial discounts are not either liquidated or turned into open-end funds [see Thompson (1978)].

Finally, a number of more familiar issues require substantial additional research to complete our knowledge. No one as yet has studied the prices paid by white knights in mergers; folklore holds that embattled target managers search out such friendly merger partners to rescue them from an unfriendly takeover. But if the takeover premiums paid by white knights are generally no lower than other offers, shareholders are not harmed. In addition, precise measurement of the returns to bidders in takeovers is still an unsettled issue. Finally, knowledge of the sources of takeover gains still eludes us.

5.3. Conclusions

Many controversial issues regarding the market for corporate control have yet to be settled and many new issues have yet to be studied. It is clear, however, that much is now known about this market. Indeed, it is unlikely that any set of transactions has been studied in such detail. In brief, the evidence seems to indicate that corporate takeovers generate positive gains, that target firm shareholders benefit, and that bidding firm shareholders do not lose. Moreover, the gains created by corporate takeovers do not appear to come from the creation of market power. Finally, it is difficult to find managerial actions related to corporate control that harm stockholders; the exceptions are those actions that eliminate an actual or potential bidder, for example, through the use of targeted large block repurchases or standstill agreements.

While research on the market for corporate control has mushroomed, it is, in our opinion, a growth industry. Much exciting and valuable knowledge remains to be discovered, and there are valuable prospects for beneficial interdisciplinary exchange among lawyers, economists, accountants, and organization theorists. An important result of this research will be a greatly expanded set of knowledge about the functioning of this enormously productive social invention: the corporation.⁴¹

⁴¹See also Meckling and Jensen (1982).

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