Are Stockholders Harmed by Mergers and Takeovers?

The recent wave of corporate mergers and takeovers that has occurred in the United States has generated much financial and political controversy. Some observers argue that corporate acquisitions are the expected result of well-functioning competitive markets. Others claim that these methods of changing corporate control can be harmful – to the efficient operation of the targeted firms, to the efficient functioning of capital and product markets, and to third-parties[1]. This sense of unease is apparent in recent regulatory and legislative proposals to govern the process more closely as well as in the value-laden terms used to describe these methods of changing corporate control (see 'The Language of Corporate Takeovers' in Appendix)[2].

In this article, we review the economic theory and evidence concerning the effects of mergers and takeovers on the share prices of target and bidding firms[3]. Changes in share prices provide evidence on whether stockholders of firms gain or lose as a result of the change in control. We use this evidence to help assess the effect that the change in control has on corporate management efficiency, to show that the market for corporate control serves to allocate resources to higher valued uses, and, finally, to establish the negative answer to the title question: Stockholders are benefitted, not harmed by competition in the market for corporate control.

The Current Wave of Acquisitions

Figure 1 illustrates the recent increase that occurred in corporate acquisitions in the United States. The solid line in the figure plots the dollar value of *all* corporate acquisitions as a percent of the total market value of common and preferred stock of all publicly traded firms. In the case of the broken line, the numerator is the dollar value of acquisitions of all *publicly traded corporations*[4].

As shown in Figure 1, the dollar value of all corporate acquisitions as a percent of the market value of all publicly traded firms declined from a level of about 5.5 percent in 1968 to about 1.5 percent in 1971. The current acquisition wave appears to have begun in the mid-1970s, and in 1985 (the latest year for which these data are available) this measure of corporate acquisitions had risen to over 9 percent.

The Market for Corporate Control: Theory

Corporate control is the right to manage corporate assets[5]. The market for corporate control is simply the arena in which various management teams compete for this right. In the case of a publicly traded firm, the arena is the market for the firm's stock. A fundamental economic principle that underlies analysis of the market for corporate control is the existence of a high positive correlation between increases in managerial efficiency and the market value of the firm's stock[6]

Passive Stockholders

An essential element of this theory is that shareholders (including those of poorly managed firms) have little use for detailed knowledge of the firms in which they hold ownership rights.

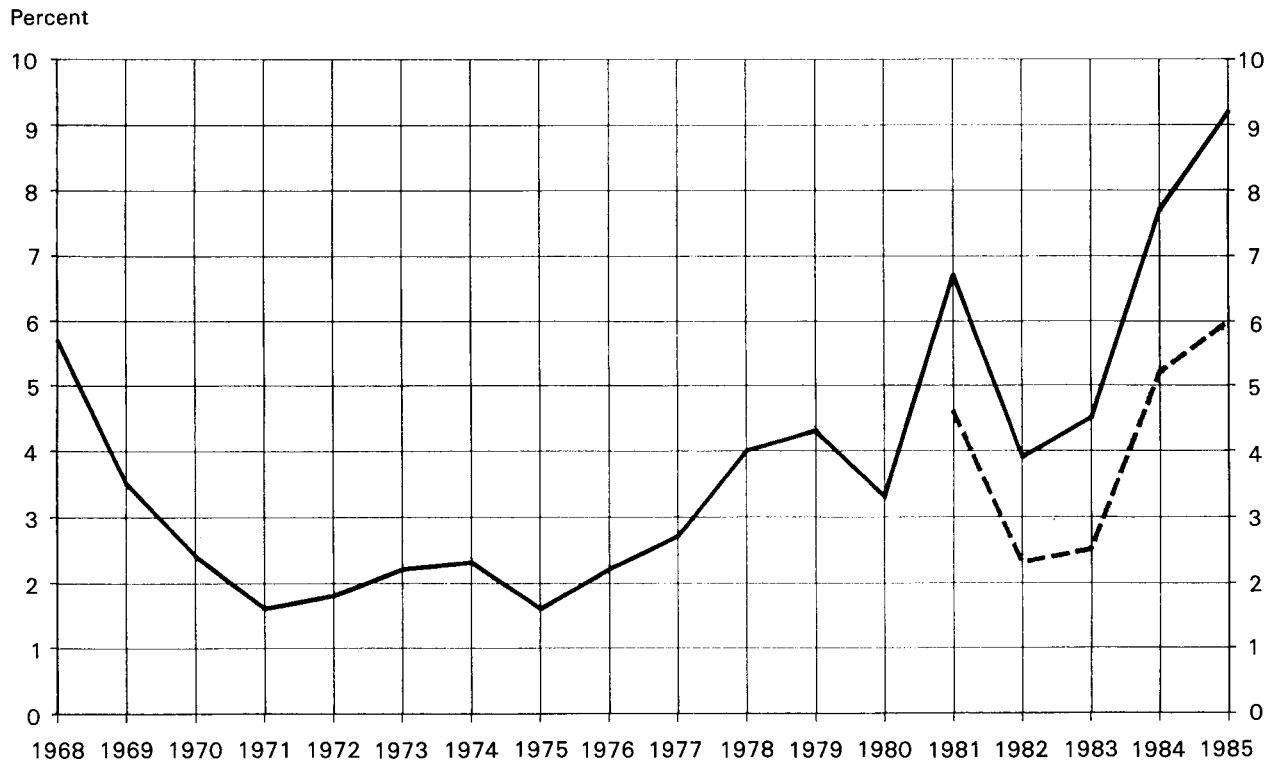

Figure 1: Merger and Takeover Activity. Solid line = Dollar value of all corporate acquisitions as a percent of the total market value of all publicly traded firms. Broken line = Dollar value of acquisitions of all publicly traded firms as a percent of the total market value of all publicly traded firms. (Source: 'Mergerstat Review' and U.S. Securities and Exchange Commission, annual report.)

This passive attitude is rational: The costs of acquiring and maintaining detailed knowledge of the firm's management decisions are substantial and would almost certainly outweigh the benefits of the additional precision that a stockholder could bring to bear on his diversified portfolio. Rather, stockholders simply choose from competing management teams the one that offers the highest dollar value per share, i.e., charges the lowest management fee per dollar of stockholder return. Competition in a well functioning market for corporate control squeezes the management fee to lower and lower levels that eventually eliminate economic rent[7]. It follows, quite directly, that to impede this competitive process abrogates the benefits it generates for stockholders.

Takeover Candidates and Agency Costs

Economic rents collected by management are sometimes called agency costs. A poorly managed firm is one in which agency costs are high[8]. Such firms are potential acquisition targets. The market price of the shares of firms with high agency costs will be low relative to what they would be under some other feasible management team (one that charged a competitive fee). The lower price per share is necessary to assure that stockholders earn a normal rate of return on their investment in the firm. This theory is summarized in equations (1) and (2):

$$V = \Pi/i, \tag{1}$$

$$P^*S = V - A/i = (\Pi - A)/i. \tag{2}$$

Equation (1) gives the *potential* present value (V) of the firm's resources, efficiently allocated, and managed with zero agency costs. That is, net income (Π) is net of competitive management costs which would include normal returns to skills and completely diligent stewardship. The market rate of interest is i. Equation (2) gives the *market* value of the firm. It is the product of the market price of the firm's shares (P) and the number of shares outstanding (S). The market value of the firm is the difference between V and the present value of agency costs, A/i.

If A is greater than zero and if some other management team is willing to charge lower

fees (lower agency costs, A′), the firm is a potential acquisition target. The reservation price of the alternative management team is P′*S while that of the stockholders of the target is, initially, P*S. Since the alternative management's agency costs are lower, $A' < A$, we can see from (2) that the implied market value of the firm under the new management team will be higher. The expected gain (G) to the stockholders from the organization under new management is the difference between the capitalized agency costs of the existing and new management teams:

$$G = P^*S - P'^*S,$$
$$= V - A/i - (V - A'/i),$$

or

$$G = (A - A')/i. \quad (3)$$

Implications of the Theory

The theory of the market for corporate control has several testable implications which we outline in this section; in the following section, evidence bearing on these implications is reviewed.

The Distribution of the Gains

If the market for corporate control is competitive, the bulk of the gain from acquisition activity will accrue to the stockholders of the acquired firm. Competition among competing management teams for the right to manage the target will push the acquisition price of the firm toward V. Since agency costs are economic rents – that is extra-normal returns – a competitive market for corporate control will constantly provide competing management teams offering terms at lower agency costs.

The theory also suggests that acquisition attempts will result in significant abnormal increases in the stock prices of target firms while abnormal changes in the stock prices of bidding firms will not be significant. The competitive nature of the market for corporate control tends to drive the acquirer's rent to zero, much the same as competitive markets for other inputs – labor, raw materials, machines, land – imply an absence of economic rent in their acquisition. An alternative theory for the absence of rent for the acquiring firm is that the acquisition must fit within the same guidelines as other investment activities of the acquiring firm. If so, the rate of profit on the acquisition will be no less than its rate on other investments and if competition forces the acquiring firm to offer its reservation price, then the return will be no greater than its return on other assets. With no change in rate of return, the final offer will be such as to just add sufficient income and equity to leave the acquiring firm's share price unchanged.

Unsuccessful Acquisitions Attempts

The theory of the market for corporate control suggests that stockholders choose from competing management teams the one that offers the highest present value. According to this theory, it is competition in the market for corporate control that reveals information about the existence and magnitude of management rent, that is agency costs. Once this information is out, share price adjusts. That is, the revelation that the current management's fee (agency cost A) is too high can only be inferred from knowledge of an alternative, lower management fee (agency cost A′) proffered by a competitive management team. This information, by equation (3), implies a rise in the share price by the capitalized agency cost reduction[9].

Acquisition attempts may be successful (the original management team is replaced) or unsuccessful (the original team maintains control). According to the theory, acquisition attempts occur because bidders believe the target firm management is collecting rent. If the acquisition attempt is unsuccessful, it suggests that either the bidders revised their expectations regarding management rents or that the bid for the target succeeded in disciplining its management team. In the first case, any abnormal increase in the share price of the target that occurred upon announcement of the acquisition attempt will vanish when the acquisition fails. However, if the acquisition attempt fails simply because it competes away the rent collected by the target firm's management, the price of the target's shares will rise even though the acquisition attempt is unsuccessful. Thus, without more information, the theory is ambiguous concerning the effect on target share prices of unsuccessful acquisition attempts.

A Measure of Agency Cost

The observed abnormal increase in the market value of the target firm (G) is a measure of the decrease in the present value of the agency cost that the management team had previously collected. This follows because competition in the market for corporate control implies that the bidding firms offer to pay V – A′ for control. Thus, the winning bidder in the auction of the target firm will be the team offering management services at fees containing the least rent. This implies that the abnormal change in the target's share price is a measure of the reduction in agency cost. Conversely, as argued above, competition between bidders (and potential bidders – e.g. White Knights) pushes the acquiring firm's offer to its reservation price. At this reservation price, the acquisition of the target does not increase the per share value of the acquiring firm. Bidding firms experience no abnormal increase in the value of their shares.

Implications for Social Efficiency

The market for corporate control does not necessarily imply that the *resources of target firms* will be allocated more efficiently, although improvements in target efficiency are not inconsistent with the theory[10]. As the above discussion indicates, the abnormal increase in the target's share price is independent of an improvement that raises Π and V.

The social gain results from lowering the cost of corporate management and the extension of this organizational form to firms that would have organized as proprietorships or partnerships if the price of corporate management had been higher. Note that this also implies that defensive measures by the incumbent management team are justified – that is, socially efficient – to the extent that they induce higher bids: Since high agency costs raise the likelihood of takeovers, competition in the market for corporate control (i.e., mergers and takeovers) reduces the expected agency costs of the corporate organizational form. Consequently, the incumbent management team's resistance to the initial offer can be viewed as the initial response in a sequence of auction bids by one of the competing management teams. Some commentators have argued that this management response is unjustified and inefficient because it raises the costs of takeovers, reducing their incidence and making the market for corporate control less efficient[11].

Yet, this characterization is incomplete for it overlooks the social benefit of reducing the agency cost to stockholders from encouraging competitive auctions in the market for corporate control. The existence of high severance benefits – Golden Parachutes – is consistent with the claim that stockholders choose to provide incentives to management not to resist too much; conversely, the general absence of corporate rules proscribing resistance to tenders also implies stockholder support for resistance. Ultimately the justification for resistance depends upon whose agent management is. To the extent that resistance implies a stockholder-wealth increasing auction, it is justified. The social efficiency of takeovers, after all, relies on this same tenet.

Some Evidence

Acquisition Methods

A change in corporate control may result from a merger, tender offer or proxy contest. Mergers are negotiated directly with the target's management team – that is, officers and Board of Directors – and are ultimately voted on by the target's shareholders. Tender offers are acquisition attempts that go around the target's management by offers to purchase shares directly from the target's stockholders. A proxy contest is an internal takeover attempt by some of the existing stockholders. In a proxy contest, an alternative slate of directors is proposed, and its proponents attempt to oust the existing board.

Empirical tests have examined the effect on stock prices of each of the various methods of corporate acquisition. In addition, the tests distinguish between successful and unsuccessful attempts and between attempts that initially failed but were subsequently successful versus those that initially failed and were not resumed.

Abnormal Returns

Empirical studies of the effect of acquisitions on stock prices measure abnormal returns in stock prices around the announcement date of an acquisition attempt (the event) or the termination date of the attempt. Abnormal returns

are percentage changes in price that exceed general movements in stock prices[12].

The Event Period

The empirical studies summarized below differ somewhat in terms of the time period (event period) over which the abnormal returns are measured. For successful tender offers, the period is roughly one month before to one month after the offer. For successful mergers, the event period is one month before the offer to the offer date. In the case of unsuccessful acquisitions, the event period runs from about one month before the offer through the announcement that the offer has been terminated. For proxy contests, the period is 60 days prior to and including the contest announcement date through the day of the announcement of the election outcome.

Successful Acquisition Attempts: Targets

Returns to the common stocks of *merger* targets around the announcement dates of *successful* acquisition attempts were examined by ASQUITH and KIM (1982), ASQUITH (1983), ECKBO (1983), and ASQUITH, BRUNER and MULLINS (1983). In each case, the studies find statistically significant positive abnormal returns for the stock prices of targets which average about 20 percent across the studies[13].

Returns to the common stocks of *tender offer* targets around the announcement of *successful* acquisition attempts were studied by DODD and RUBACK (1977), BRADLEY (1980), and BRADLEY, DESAI and KIM (1982). Each of these studies find statistically significant positive abnormal returns for the stock prices of targets. The abnormal return averages about 30 percent across the studies[14]. DODD and WARNER (1983) find similar results for the stock prices of firms engaged in successful proxy contests. In this case, the abnormal return was about 8 percent (statistically significant). Each of these results is consistent with the theory of the market for corporate control which implies positive returns for the stock prices of target firms in the event of a successful acquisition.

Successful Acquisition Attempts: Bidders

Studies by ASQUITH and KIM (1982), ASQUITH (1983), MALATESTA (1983), ECKBO (1983) and ASQUITH, BRUNER and MULLINS (1983) examine returns to common stocks of bidding firms that were involved in successful mergers. With the exception of the study by ASQUITH, BRUNER and MULLINS (1983), each of the above find that the abnormal returns to the bidding company are not significantly different from zero. ASQUITH, BRUNER and MULLINS find small positive abnormal returns that are statistically significant for the bidding firms.

Studies by DODD and RUBACK (1977), BRADLEY (1980) and BRADLEY, DESAI and KIM (1982) examine the returns to the common stocks of bidding firms that were involved in successful tender offers. Each of these studies finds that the stocks experience small but statistically significant positive returns. The returns average about 4 percent across the studies[15].

The evidence on the returns to bidding firms is somewhat mixed. The theory of the market for corporate control argues that competition will keep the returns to bidding firms close to zero, and this is generally the case for bidding firms that are parties to successful mergers. However, this is not true for bidding firms that are involved in successful tender offers[16]. As noted, the returns to these firms are significantly positive. However, they are small in comparison to the returns earned by targets.

JENSEN and RUBACK (1983) have summarized the results of these individual studies concerning the share price effects of successful acquisitions. Their summary is shown in Table 1. The results are roughly consistent with the implications of the theory. The share prices of target firms show substantial abnormal gains for each of the three acquisition techniques. While statistical significance levels cannot be assigned to these averages across various studies, the individual studies of share prices of bidding firms show significant but small abnormal increases for successful tender offers and are roughly unaffected by successful mergers.

Table 1: Abnormal Returns Associated with Successful Acquisitions

Technique	Target	Bidder
Tender Offer	30 %	4 %
Merger	20	0
Proxy Contest	8	N. A.

Note: Abnormal returns are stock price changes adjusted to eliminate the effect of market wide changes. Significance levels cannot be computed since these are simple averages of results in dispute studies. Source: JENSEN and RUBACK (1983), p. 7.

Unsuccessful Acquisition Attempts: Announcement Effects

DODD (1980), ASQUITH (1983), ECKBO (1983), ASQUITH, BRUNER and MULLINS (1983), DODD and RUBACK (1977), BRADLEY (1980) and BRADLEY, DESAI and KIM (1983) have examined the returns to targets and bidders around the announcement of acquisition attempts that ultimately fail. Since information regarding the eventual failure of the attempt is not available at the time of the announcement, these studies should find results similar to those found for acquisitions that are ultimately successful, and this is generally the case.

Each of these studies finds significantly positive abnormal returns to stockholders of target companies regardless of the acquisition technique. The weighted average abnormal returns to targets are about 35 percent of the initial price of the common shares in the case of tender offers and about 17 percent for mergers. These returns are about the same as those found for successful acquisitions. As with successful acquisitions, the results for unsuccessful bidding firms are mixed. Most studies find *no* significant abnormal return to bidders. However, DODD (1980) and ECKBO (1983) find significant but small positive returns of about 4 percent[17].

A summary of the announcement effects for unsuccessful acquisition attempts is presented in Table 2. A comparison of the data shown in Tables 1 and 2 indicates that the effect on share prices of acquisition announcements is quite similar regardless of the ultimate success or failure of the attempt. The gains to the shareholders of targets are positive and substantial while the returns to the shareholders of bidders are close to zero. The summary results in Tables 1 and 2 conform to the implications of the theory of the market for corporate control.

Table 2: Abnormal Returns Associated with Unsuccessful Acquisitions: Initial Offer Announcement Effects

Technique	Target	Bidder
Tender Offer[1]	35 %	−1 %
Merger[1]	17	2
Proxy Contest[2]	9	

[1] JENSEN and RUBACK (1983), pp. 12–13.
[2] DODD and WARNER (1983), p. 417.

Unsuccessful Acquisition Attempts: Outcome Effects

The theory of the market for corporate control is ambiguous regarding the stock price response to the information that the offer failed. The offer may fail because new information leads bidding firms to lower their estimates of the agency cost of the target firm's management or because the defensive bid of the target's existing management team, which is a competitor also, results in the greater wealth gain to stockholders. In the first case, the initial gains experienced by targets will evaporate but they will not in the second case. Unfortunately, it is difficult to discriminate between these two cases with the empirical evidence that has been gathered to date.

DODD (1980), ASQUITH (1983) and WIER (1983) examine the returns to merger targets for the period just preceding the announcement of the initial offer through the termination of the offer. Each finds that the abnormal return is not significantly different from zero. Note that these estimates include the initial announcement effect. This result appears to be most consistent with the proposition that unsuccessful acquisition attempts are explained by new information that leads bidders to lower their estimates of management rent. However, when DODD and WARNER (1983) examined similar data for the targets of unsuccessful proxy contests they found significant positive abnormal returns to the shareholders. This result appears to be most consistent with the alternative explanation that these takeovers were unsuccessful because the contest disciplined the existing management team, inducing them to offer a bid that results in the greater wealth gain to stockholders[18].

The empirical results are mixed when the abnormal returns to bidders in unsuccessful mergers are examined over the above event period. DODD (1980) and ASQUITH (1983) find significant but small negative returns while WIER (1983) finds that bidder returns do not differ significantly from zero. The finding that returns to unsuccessful bidders are negative is not surprising. Competition in the market for corporate control suggests that bidder returns will not differ substantially from zero, and since the bidding process is costly, unsuccessful bidders will pay for their mistakes.

Table 3: Abnormal Returns Associated with Unsuccessful Acquisitions: Outcome Effects[1]

Technique	Target	Bidder
Merger[2]	−3 %	−5
Proxy Contest[3]	8	N. A.

[1] The event period is just prior to the initial announcement of the acquisition attempt through its unsuccessful outcome.
[2] Source: JENSEN and RUBACK (1983), p. 13.
[3] Source: DODD and WARNER (1983), p. 417.

These results are summarized in Table 3. The data are abnormal returns to targets and bidders measured from just prior to the initial announcement of an acquisition attempt through its unsuccessful outcome.

Stockholder Wealth Effects: Summary

The data summarized in Tables 1–3 indicate that the stockholders of target firms experience significant wealth gains during acquisition attempts. In the case of proxy contests, this result continues to hold even though information regarding the failed attempt is revealed. The wealth effects for shareholders of bidding firms are small and mixed. Most studies find that they do not differ significantly from zero. On the whole, 'the evidence seems to indicate that corporate takeovers generate positive gains (to stockholders), that target firm shareholders benefit, and that bidding firm shareholders do not lose'[19].

An Alternative Explanation: Market Power

The theory of the market for corporate control implies that shareholder gains associated with corporate acquisitions result from a reduction in management rent. This result is produced by competition among alternative management teams for the right to control corporate resources. While the data appear to conform fairly well to the implications of this theory, others have suggested that the stockholder gains associated with acquisition result from the effect of the acquisition on the firm's market power[20]. According to this argument, the combination of the two firms increases the monopoly power of the remaining firms producing a higher product price. Stockholder gains reflect the capital value of the monopoly rent that is expected to result.

Fortunately, there is evidence that permits an evaluation of this hypothesis. First, it would seem that the market power hypothesis applies only to cases of horizontal acquisitions. Consequently, it leaves much of the data unexplained. Second, the monopoly power argument suggests that the bidding firm (one of the remaining firms) will share in the gain that results from the acquisition. If this were not the case, a free-rider problem would exist. Each firm in the industry would like one of the others to engage in a horizontal acquisition but would not do so itself.

This implication regarding the distribution of the gains is different than the distribution implied by the theory of the market for corporate control. Recall that competition among management teams pushes the acquisition price ever closer to V – see equation (2) – suggesting that the shareholders of target firms collect the entire gain from the acquisition. The share prices of bidding firms are expected to show *no* abnormal change. On the whole, the data examined above appear to conform more closely to the distributional implications of the market for corporate control[21]. That evidence suggests that the share prices of target firms experience significant positive abnormal returns while the share prices of bidding firms are roughly unaffected by acquisitions.

Conclusions

This article has reviewed the theory of the market for corporate control and compared its implications to some evidence regarding the effects of corporate acquisitions on stockholder wealth. By-and-large, the evidence is consistent with the theoretical implications. In terms of the question raised in the title to this paper, the evidence is quite clear. The stockholders of target firms gain from corporate acquisitions.

The theory of the market for corporate control suggests that agency costs are constrained by competition among alternative management teams. Corporate acquisitions are a reflection of this competition. Hence, there is reason to believe that the benefits of this activity extend well beyond the observed benefits experienced by target firm shareholders, and this is a question deserving its own detailed review. However, in the narrow issue of stockholder well be-

ing, it is clear that stockholders benefit from the lower agency costs produced by this competition.

Appendix: The Language of Corporate Takeovers

Crown Jewel: The most valued asset held by an acquisition target; divestiture of this asset is frequently a sufficient defense to dissuade takeover.

Fair Price Amendment: Requires super majority approval of non-uniform, or two-tier, takeover bids not approved by the board of directors; can be avoided by a uniform bid for less than all outstanding shares (subject to prorationing under federal law if the offer is oversubscribed).

Going Private: The purchase of publicly owned stock of a company by the existing or another competing management group; the company is delisted and public trading in the stock ceases.

Golden Parachutes: The provisions in the employment contracts of top-level managers that provide for severance pay or other compensation should they lose their job as a result of a takeover.

Greenmail: The premium paid by a targeted company to a raider in exchange for his shares of the targeted company.

Leveraged Buyout: The purchase of publicly owned stock of a company by the existing management with a portion of the purchase price financed by outside investors; the company is delisted and public trading in the stock ceases.

Lockup Defense: Gives a friendly party (see White Knight) the right to purchase assets of firm, in particular the crown jewel, thus dissuading a takeover attempt.

Maiden: A term sometimes used to refer to the company at which the takeover is directed (target).

Poison Pill: Gives stockholders other than those involved in a hostile takeover the right to purchase securities at a very favorable price in the event of a takeover.

Proxy Contest: The solicitation of stockholder votes generally for the purpose of electing a slate of directors in competition with the current directors.

Raider: The person(s) or corporation attempting the takeover.

Shark Repellants: Antitakeover corporate charter amendments such as staggered terms for directors, super-majority requirement for approving merger, or mandate that bidders pay the same price for all shares in a buyout.

Standstill Agreement: A contract in which a raider or firm agrees to limit its holdings in the target firm and not attempt a takeover.

Stripper: A successful raider who, once the target is acquired, sells off some of the assets of the target company.

Target: The company at which the takeover attempt is directed.

Targeted Repurchase: A repurchase of common stock from an individual holder or a tender repurchase that excludes an individual holder; the former is the most frequent form of greenmail, while the latter is a common defensive tactic.

Tender Offer: An offer made directly to shareholders to buy some or all of their shares for a specified price during a specified time.

Two-Tier Offer: A takeover offer that provides a cash price for sufficient shares to obtain control of the corporation, then a lower non-cash (securities) price for the remaining shares.

White Knight: A merger partner solicited by management of a target who offers an alternative merger plan to that offered by the raider which protects the target company from the attempted takeover.

Footnotes

[1] This paper does not address the alleged third-party effects. For general discussions of this issue see JENSEN (1984), pp. 113–14; COOK (1987), pp. 5 and 20–21; and OTT and SANTONI (1985), pp. 24–25. For the legal view, see EASTERBROOK and FISCHEL (1981), pp. 1190–92. They provide recent citations which fundamentally adhere to the view advanced in a 1914 decision involving Ford Motor Co.: 'A business corporation is organized and carried primarily for the profit of the stockholders. The powers of the directors are to be employed for that end. The discretion of the directors is to be exercised in the choice of means to attain that end and *does not extend to a change in the end itself*...' (Note 86, p. 1191, emphasis added).

[2] See MANNE (1965), EASTERBROOK and FISCHEL (1981), JENSEN and RUBACK (1983), JENSEN (1984), Council of Economic Advisers (1985) and MARTIN (1985) for discussions of the public issues surrounding mergers and takeovers.

[3] A major distinction between mergers and takeovers is that mergers are generally the result of voluntary agreements between the top level managements of two firms while takeovers usually involve hostile management groups and are accomplished by tender offers directly to stockholders, i.e., by 'going around the management' of the target firm. See DENNIS and MCCONNELL (1986), pp. 144–45, and JENSEN and RUBACK (1983), pp. 6–7.

[4] Data on this are not available prior to 1981.

[5] See JENSEN and RUBACK (1983), p. 5.

[6] See MANNE (1965), p. 112.

[7] See MANNE (1965), p. 112, and JENSEN and RUBACK (1983), p. 6.

[8] The particular form of the agency costs is immaterial to the analysis. It is likely not to be in the form of cash since this is easily detected and, hence, competed away. It may be in the form of liberal expense accounts, plush offices, a company (executive) jet, shirking, etc. Alternatively, it may entail inefficient resource allocation, insufficient specialization, or inappropriate investment strategies. For examples, see

EHRLICH (1985), especially p. 51, and DOBREYNSKI (1985), especially p. 55. For more general discussions of agency cost, see ALCHIAN and DEMSETZ (1972), JENSEN and MECKLING (1976), or EASTERBROOK and FISCHEL (1981), especially pp. 1169–71.

[9] See FAMA, FISHER, JENSEN and ROLL (1969).

[10] See JENSEN (1984), JENSEN and RUBACK (1983) and OTT and SANTONI (1985).

[11] See EASTERBROOK and FISCHEL (1981), pp. 1175, 1188–90. DODD and RUBACK (1977), pp. 362–63, offer evidence of higher stock prices where management resists the initial tender offer. If the more socially efficient allocation of resources were the only criterion by which to judge the utility of constraints on the incumbent management, then buying back the shares of a raider at a premium over market ('greenmail') would be deemed appropriate. Such a case, the target corporation's inefficient control of resources is reduced and raids would be encouraged; however, EASTERBROOK and FISCHEL (1981) condemn this management response as do JARRELL, POULSEN and DAVIDSON (1985).

[12] These studies are sometimes referred to as event studies. See DENNIS and MCCONNELL (1986), pp. 150–152, for a detailed discussion of the measurement technique.

[13] See JENSEN and RUBACK (1983), p. 7.

[14] Ibid.

[15] Ibid.

[16] The literature on mergers and takeovers generally views the zero return to bidding firms in mergers as more puzzling than the positive return to bidding firms in successful takeovers: see JENSEN and RUBACK (1983), p. 22. If the market for corporate control were *perfectly* competitive, the nonzero return in takeovers would be the puzzle. As shown in Tables 1 and 2, part of this positive yield may simply compensate for the risk of negative return if the tender is unsuccessful.

[17] The returns vary depending on the period over which they are measured. For example, DODD (1983) finds a significant but small *negative* announcement return to unsuccessful bidders when the event period is the day before and day of the offer announcement.

[18] Unfortunately, tender offer studies do not examine abnormal returns from just prior to the announcement of the initial offer through the termination of the offer. For additional discussion of post outcome effects in the case of tender offers see JENSEN and RUBACK (1983), p. 15, and BRADLEY, DESAI and KIM (1983).

[19] JENSEN and RUBACK (1983), p. 47.

[20] MANNE (1965), who disputes this notion (pp. 110–12), suggests that this has been advanced as a justification for applying antitrust restraints to mergers among competitors.

[21] See STILLMAN (1983) and ECKBO (1983) for additional evidence on this issue.

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