33

Takeover Attack and Defens

INTRODUCTION

This chapter presents a tactical perspective on hostile takeovers. This complemen earlier chapters focused on the influence of economics, laws or regulations, an bidding behavior in M&A.[1] The tactical perspective enriches the picture of how th structure of the takeover problem and the conduct of players influence M&A re sults. Though contested acquisitions are a small fraction of the total volume c M&A activity, these cases illuminate lessons that have wider significance to th M&A practitioner:

- *Use of defensive tactics is widespread.* Most large firms have erected some forr of antitakeover defense. This reflects the fact that the first, and perhaps mos important, role of defenses is to discourage potential bidders from making a attempt. If defenses are the rule rather than the exception, the practitioner mus anticipate the impact of defenses on the contest.
- *Tactics derive their power by influencing speed of closure, costs to the buye and perceptions about certainty to the investor.* The preceding chapter empha sizes the great sensitivity of hostile bidders and arbitrageurs to profit, delays and uncertainty about the outcome. Through the use of these tactics, the buye seeks to accelerate the consummation and increase certainty; conversely, th target seeks to delay the process and create uncertainty. In effect, these tactic attempt to tilt the payoffs and probabilities in one's favor—in the parlance c Chapter 32, tactics can affect one's assessment of the important benchmark EVNT (expected value of not tendering).
- *Tactics create or neutralize* control options. Defensive tactics give discretionar rights to the target management and board. Tactics of attack seek to offse those rights. The discussion of control as an option outlined in Chapter 15 un derpins some of the insights developed here: These tactics create or destro value; the value will be contingent on uncertainty and time.
- *Whether defensive tactics create or destroy value for target shareholders de pends on governance and uncertainty.* The options perspective gives a frame work for anticipating the creation or destruction of value associated witl defensive tactics. The effect depends on the degree of uncertainty about the tar get's intrinsic value, and the quality of corporate governance (i.e., whether i truly aligns management and shareholders).

- *A high offering bid is the most persuasive attack. A high stock price is the best defense.* While some defenses are stronger than others, the most effective means of repelling a bidder is to offer no incentive in the first place—executives afraid of takeovers should attend to running their firms well enough to create value for shareholders. For the same reason, attackers who truly want to win should exploit the desire of shareholders to maximize value, and offer a high bid.

PREVALENCE AND DISSUASIVE INFLUENCE OF ANTITAKEOVER DEFENSES

Exhibit 33.1 reveals that the use of antitakeover defenses is widespread, with the most popular defenses employed in more than 80 percent of public companies. Some defenses, such as golden parachutes, show a marked increase during the 1990s; other defenses remain relatively constant. Coates (2000b) suggests that most of the defenses were emplaced in the 1980s, but argues that some of these defenses (such as the *poison pill*) can be emplaced on short notice by the board of directors. Therefore, such data may understate the influence and role of defenses on the moves of players in the hostile takeover scenario.

The high rate of placement of antitakeover defenses is remarkable in light of the fact that most public corporations have not participated in a hostile takeover contest (either as buyer or as target). Why, then, are defenses so prevalent? First, they seem to give target boards and management some flexibility in their efforts to maximize shareholder value during a takeover—evidence for this is surveyed later in this chapter. Second, they raise the ante for bidders, thus forestalling "nuisance" bids and discouraging all but the stouthearted from making an assault.

The dissuasive power of defenses derives from their influence on timing, likelihood of success, and cost or profit to the bidder. To illustrate, consider the logic of the bidder: Attack if it is likely to be profitable. "Profitable" literally means the difference between the intrinsic value of the target and the price paid for it plus the transaction costs that the bidder is likely to incur. "Likely" reminds us that the bidder can fail to acquire the target. These elements can be reduced to a simple equation. Attack if:

$$\begin{aligned}&[\text{Prob}(\text{Intrinsic value} - \text{Price} - \text{Transaction costs})]\\&\quad - [(1 - \text{Prob})\text{Transaction costs}] > 0\end{aligned} \tag{1}$$

where *"prob"* is the probability of a successful takeover. In words, this equation says that the bidder should attack if the expected payoff is positive. The equation gives an overview of tactical thinking for the attacker and defender. For instance, the implications for the defender are as follows (those for the attacker are the opposite):

- Use defenses to decrease "prob," the probability of the attacker's success. Likelihood of success is affected by time delays, the entry of friendly parties (*white knights*, *white squires*, etc.), and the preparation of alternatives to takeover, such as restructuring programs.

EXHIBIT 33.1 Percentage of Firms Employing Takeover Defenses

	1999	1997	1995	1993	1990
Number of companies in sample	1,900	1,922	1,500	1,483	1,487
Blank check preferred stock	89%	88%	85%	N/A	N/A
Golden parachutes	65%	56%	53%	N/A	N/A
Advance notice requirement	62%	49%	44%	N/A	N/A
Classified board	59%	58%	60%	58%	57%
Poison pill	56%	52%	53%	54%	51%
Limit right to call special meeting	37%	34%	31%	29%	24%
Limit action by written consent	35%	32%	31%	28%	24%
Fair price	25%	26%	32%	33%	32%
Supermajority vote to approve merger	15%	15%	18%	18%	17%
Dual class stock	11%	11%	8%	8%	8%
Confidential voting	10%	9%	12%	9%	3%
Cumulative voting	10%	11%	14%	16%	18%
Eliminate cumulative voting	9%	8%	10%	10%	9%
Consider nonfinancial effects of merger	7%	7%	7%	7%	6%
Antigreenmail	4%	5%	6%	6%	6%
Unequal voting rights	2%	2%	2%	2%	2%

Source of data: Virginia K. Rosenbaum, *Corporate Takeover Defenses 2000*, Investor Responsibility Research Center, October 1999, page viii.
Comment: The sample consists of publicly held firms in the United States, especially the larger and more prominent corporations, including the "Super" S&P 1500 plus another 400 firms chosen on the basis of large market capitalization and high levels of institutional ownership. Many of the defenses listed in this exhibit are defined in the chapter text or in other chapters. Defenses not elsewhere described in this book are:

- *Blank check preferred stock.* The ability of the board of directors to issue preferred stock to friendly shareholders. Like the poison pill, this raises the cost of takeover to the hostile bidder.
- *Advance notice requirement.* Imposes a window for submission of nominations of directors and resolutions to be brought before a shareholder meeting. Failure to meet the window requirements grants the board the right to disregard the nomination or resolution.
- *Limit right to call special meeting.* This constrains the hostile bidder's ability to demand a special meeting of shareholders (that is, a meeting at which the bidder might try to disable takeover defenses).
- *Limit action by written consent.* This constrains the hostile bidder's ability to obtain a vote of the shareholders by means of proxy solicitation in lieu of a meeting.
- *Consider nonfinancial effects of merger.* This permits the board of directors to widen its scope of consideration from simply a focus on shareholder welfare to include, possibly, impact on employees, community, and so on.
- *Unequal voting rights.* Like dual-class stock, this provision triggers super-voting rights of some shareholders for those who have held the stock for a long period of time, such as four years, or in special circumstances, such as a proposed takeover.

- Use defenses to decrease the perception of intrinsic value of the target to the attacker. Spin-offs, special dividends, asset sales, and options to sell "crown jewels" might accomplish this. Threats of union opposition or of customer defections[2] may decrease intrinsic value. If the attacker and target are in the same industry it may be possible to present arguments to antitrust regulators that would prevent the attacker from acquiring the entire target firm. Finally, any delays imposed by defenses must reduce the intrinsic value of the target—intrinsic value is the present value of expected future cash flows. Synergies and other benefits may only become available following a thorough takeover of operations, restructuring, and integration with the buyer. If these benefits are delayed by, say, a staggered board, supermajority provision, or waiting period imposed by law or regulation, the present value of these benefits must be smaller than if realized quickly.

- Use defenses to raise the price paid by the attacker. Payments required under *golden parachutes*, poison puts, and topping or breakup agreements have the effect of directly raising the price to the attacker. Less directly, target management may have knowledge of hidden values not known to the investing public, such as dormant land carried at historical cost rather than market value on the target's books. Disclosure of these hidden values might help to persuade target shareholders that the attacker's bid is inadequate. The best defense that raises the price to the attacker is the poison pill.
- Use defenses to increase transaction costs. For instance, defensive litigation and defensive appeals to regulators may increase the cost of the legal work necessary to support the transaction. Protracted defenses will generally raise the cost of advisers.

INVESTOR REACTION TO ANNOUNCEMENTS OF ANTITAKEOVER DEFENSES

One gauge of the economic impact of defenses is the reaction of investors to the announcement of takeover defense placements. Several studies suggest that the strength of the target's governance mechanisms is a strong determinant of the market reaction to takeover defenses: where the board of directors is strong and independent, and where the CEO's interests are strongly aligned with those of shareholders, the reaction is positive; where governance is poor and/or the CEO is poorly aligned with shareholders, the reaction is negative.

- Governance strength is positively associated with the investor reaction to the announcement of takeover defenses (see McWilliams 1990, 1993)—strong governance is associated with positive reaction of investors at the announcement of antitakeover defenses; weak governance is associated with negative reaction. Bhaghat and Jefferis (1991) found that voting power of ESOPs and the CEO play a prominent role in whether a firm will adopt antitakeover charter amendments.
- Targets of hostile bids have lower percentages of insider shareholdings; see Song, Stulz, and Walkling (1990) and Mikkelson and Partch (1989). For contrasting findings, see Ambrose and Megginson (1992).
- CEO shareholdings are inversely related to resistance to a tender offer and positively related to the likelihood of bidder success; see Cotter and Zenner (1994). Models estimated to predict takeover find that larger CEO shareholdings reduce the likelihood of a hostile bid; see Mikkelson and Partch (1989) and Shivadasani (1993). And the percentage of ownership held by insiders is negatively related to the number of takeover defenses (Boyle et al. 1998).

- Size is directly associated with the likelihood of receiving a hostile bid. Schwert (2000) suggests that this could reflect a tendency toward greater managerial entrenchment within large firms.
- The number of takeover defenses placed by a firm is inversely related to the percentage of shares held by insiders (Boyle et al. 1998). And the more shares that managers own, the more reluctant they are to support of the repeal of antitakeover provisions (Sundaramurthy and Lyon 1998).
- The announcement of takeover defenses benefits shareholders where internal governance mechanisms work well; see Malekzadeh and McWilliams (1995) and Malekzadeh et al. (1998).

The net implication of these findings is that defenses can help shareholders of good firms by enhancing the bargaining power of management to extract high prices from bidders; this is the argument of Coates (2000b). But defenses also may harm shareholders of bad firms by entrenching managers who disrespect their duty to shareholders. To make sense of market responses to announcements about takeover defenses, one must have a view about the efficiency and governance of the target firm.

ECONOMIC EFFECTS OF ATTACK AND DEFENSE

Why defensive tactics can affect the target's value[3] and why the impact varies cross-sectionally or across time are among the most interesting research questions in M&A. It would seem, after all, that defenses are merely intangible and innocuous, and have an impact at best some point distant in the future. Why might we anticipate *any* market reaction to the announcements of defenses?

Consider, for instance, the basic aims of tactics of attack and defense:

- Defense tactics seek to delay the outcome and increase uncertainty about whether the target will be sold, and if so, at what price. Recall from the Chapter 32 that arbitrageurs hate delays and uncertainty. Defense tactics are particularly discouraging to arbs and thus may help to suppress the stampede to tender shares into the bidder's offer.
- Attack tactics seek to accelerate the outcome and resolve uncertainty. These tactics serve the interests of arbitrageurs and thereby improve the fluidity in the exchange of votes.

There are at least two ways to think about the economic effect of tactics. One way is the traditional perspective of the arb: Anything that creates uncertainty or delay reduces the present value of the payoff on a risk arbitrage position. Thus, it might seem that defenses would destroy value. But if the defense buys time for the target to look for higher bidders or negotiate with the bidder for a higher price, then defenses might create value. This is consistent with the perspective developed in Chapter 32.

The second way to think about the impact of tactics is in terms of the *optionality*[4] created in their design and implementation.

- *Defenses are control options* (i.e., call options on the strategy of the target firm). They grant management and directors discretion (i.e., rights or options) to determine whether, how, and when the transaction will be struck. Chapter 15 discusses the optionality in control and its effect on share values.
- Defenses will be more valuable *the longer the delay, and the greater the uncertainty* about the value of the underlying asset (i.e., the enterprise). This is consistent with option pricing theory: Time and uncertainty drive option value.
- *Tactics of attack aim to negate defenses* and thereby destroy the option value that the defenses create. The logic of hedging explains how this occurs: One acquires an option with payoffs that are countervailing to the risks one faces. In effect, the attack seeks to prevent the exercise of the control option.

From this perspective, hostile takeover battles are significantly contests over option value.

The options perspective might explain the apparently conflicting findings about the value impact of defenses:

- ***Variations in uncertainty about the target firm's value.*** The classic drivers of option value, such as time and uncertainty, could vary significantly from one company to the next and from one data set to the next. For instance, announcement of new defenses by a firm probably would not have much effect where there is a tight consensus among analysts, investors, company management, and potential bidders about the intrinsic value of the firm. But where there is wide disparity in the assessment of intrinsic value, the economic impact of announcing defenses could be material.[5]
- ***Variations in governance.*** These would suggest who captures the option value of defenses. As a practical matter, management and the directors retain the exercise rights on control options. In the absence of a proxy contest or consent solicitation in the bidder's favor, shareholders have relatively little say in the disposition of their firm. The economic impact of these rights on shareholder welfare hinges on whether management seeks to maximize shareholder welfare (in which case the control options will be exercised in their interest) or whether management is entrenched (in which case the control options will be exercised in management's interest).
  - In the case of management alignment, shareholders benefit from defenses (i.e., they share in the option value created by the defenses). The counterparty, or loser, is the bidder—intuitively, this is because the defenses extract from the bidder high payment.
  - In the case of management entrenchment, shareholders lose when defenses are put in place; they are the counterparty from whom option value is extracted.

Combining these effects, the analyst can derive an economic framework regarding defenses that encompasses the entire range of market reactions to the announcement of defenses: gains, losses, and no change. Exhibit 33.2 casts these into a two-dimensional space with quality of governance represented on the horizontal axis, and degree of uncertainty about the intrinsic value of the firm on the

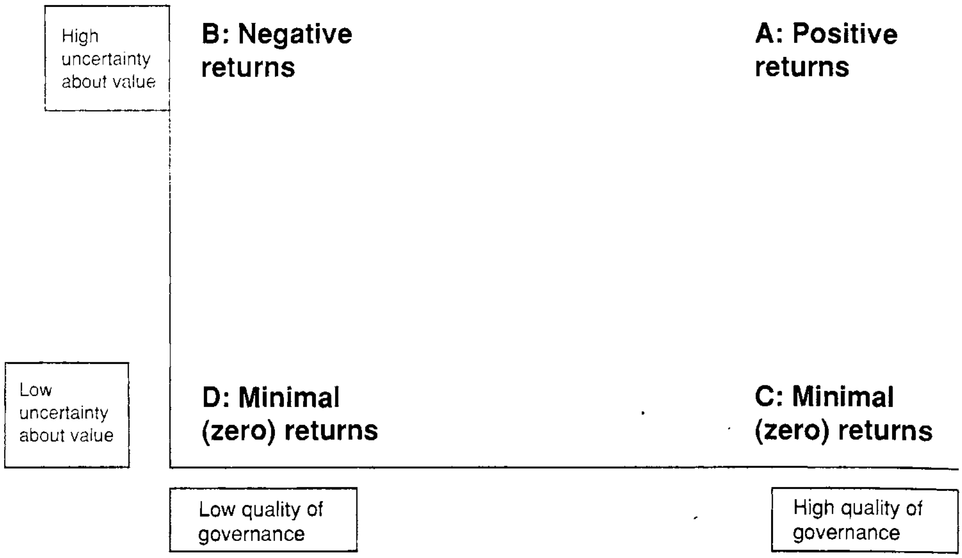


EXHIBIT 33.2 Gains or Losses in Wealth to Target Firm Shareholders According to Uncertainty about the Target's Intrinsic Value and Quality of Governance

vertical axis. While the space so defined is continuous, the figure gives four illustrative cases:

A—High uncertainty/good governance. Here defenses arguably create value. Defenses grant management rights to delay and bargaining power to negotiate, all of which would serve the maximization of shareholder value. Comment and Schwert (1995), for instance, found a reaction to the announcement of poison pill defenses consistent with creation of value.

B—High uncertainty/bad governance. Here defenses arguably destroy value. Defenses simply entrench management, thereby imposing an opportunity cost on shareholders. Bruner (1991) explored this case with simulation analysis and determined that antitakeover defenses were materially costly when management is entrenched.

C—Low uncertainty/good governance and D—Low uncertainty/bad governance. In these two final cases, the announcement of defenses has a negligible effect on value—it neither creates nor destroys value. This does not mean that there is no optionality in defenses, but rather that the option value is immaterial.

From this perspective, the reaction of investors to the announcement of takeover defenses is significantly an indication of investor assessment of management's relative alignment or entrenchment: Positive reactions are associated with alignment; negative reactions are associated with entrenchment. Larger reactions are associated with longer delays and greater uncertainty about value.

Some writers have argued that antitakeover defenses are "free."[6] The options perspective lends a more nuanced conclusion: Defenses are never free, though under some circumstances they may be inexpensive, such as to those firms that are governed well. Options theory teaches that rights are valuable even when out of the money. Thus, the issue of whether defenses are free or costly hinges on quality of governance and the degree of alignment of interests between management and shareholders.

TACTICS OF TAKEOVER ATTACK

The hostile bidder typically seeks to consummate the acquisition quickly, before other bidders can enter or the target can mount stronger defenses. The tactics of the bidder aim for speed and closure.

- ***Purchase of shares directly in the market.*** In the absence of any constraints (such as takeover defenses or government regulations), a buyer could simply purchase control of a target on the open market. This is called a *street sweep*. A *drop and sweep* is a street sweep that follows the withdrawal of a buyer's tender offer—it seeks to exploit the panic selling by arbitrageurs. A *block purchase* or *toehold* purchase of target shares in the market seeks to obtain a sizable position in order to signal the seriousness of the bidder's intent, to influence the target board, to fend off other possible bidders, and to earn a "consolation profit" in the event that the target is won by another, higher, bidder. Still, the purchase of the target directly in the market is rarely used. Under the Williams Act, the bidder must notify the SEC upon surpassing a 5 percent stake in the target; this sacrifices the element of surprise. And it can be time-consuming to amass shares from the daily trading float in the market.
- ***Offer directly to the target board of directors.*** Some buyers will seek to gain the endorsement of the board of directors in an effort to persuade the target to drop its defenses. The price, publicity, and life of the offer are varied to heighten the pressure on the board. The *Saturday night special* is a surprising offer to the target board left open for only a brief period of time; the name alludes to a pistol that is "cheap and [goes off] quickly."[7] The *bear hug* is an offer made to the board without a concurrent public announcement. The *strong bear hug* includes a public announcement and a call for negotiations. A *superstrong bear hug* threatens to reduce the offering price in the event of opposition or delay. A *godfather offer* is a cash offer so high that the directors feel unable to refuse it.
- ***Tender offer directly to target shareholders.*** This is an invitation to shareholders to tender or submit their shares for sale to the buyer. The offer typically expresses a price, form of payment, and length of time that the offer will be outstanding (in the United States, the length of time is governed by SEC rules). Some tender offers can be friendly, following mutual agreement between managements of the buyer and target firm. Other tender offers are called *unsolicited* until the intentions of the buyer and the attitude of the target are known. A *hostile* tender offer is simply unwanted by the target firm, and if successful usually entails firing the senior management of the target firm.
- ***Coercive tender offer structures.*** As described in the preceding chapter, the two-tier, front-end-loaded tender offer is designed to exploit the prisoner's

dilemma problem facing target shareholders. Bradley (1980) and Grossman and Hart (1980) argue that this offering structure creates an incentive to tender early into the bidder's offer and penalizes free-riding shareholders who would hold back from the offer on the chance that higher bids might be forthcoming. The target has the option of implementing a fair price provision antitakeover defense; this aims to negate two-tier offers by requiring that the same price be paid to all shareholders. Comment and Jarrell (1987) found that two-tier offers were relatively rare in their sample, but that they more frequently resulted in negotiation between the parties than did any-or-all offers. They also found that the average blended premium for two-tier offers was insignificantly different from the average premium in any-or-all offers. They concluded that target shareholders are not disadvantaged by the seemingly coercive two-tier structure.

- ***Proxy contest and consent solicitation.*** In advance of the target's annual meeting, the buyer may submit an acquisition proposal for approval by the target shareholders, and then seek to obtain the votes ("proxies" are legal documents by which shareholders vote an absentee ballot). A *proxy contest* can resemble a political election campaign, run by investment bankers and proxy solicitation firms who contact shareholders directly. Some corporate charters and bylaws permit changes in the board of directors by written consent of the shareholders, thus bypassing a shareholder meeting. Like the proxy contest, this strategy is essentially a political campaign. In some legal jurisdictions, it may be possible for the bidder to obtain a faster resolution of the contest by *consent solicitation* than by a proxy contest. A critical difference between the proxy contest and consent solicitation lies in the basis for determining a winning majority: For the proxy contest it is judged in terms of the number of shares voted at the meeting of shareholders; for the consent solicitation, it is judged in terms of all shares outstanding. Given that some shareholders never vote, it may be harder for a raider to win by means of a consent solicitation than by a proxy contest.
- ***Challenge the target's defenses through litigation.*** Courts have disallowed some takeover defenses put in place during a contest. Arbitrageurs and institutional investors are easily encouraged to participate in litigation aimed at invalidating the target's defenses. Occasionally, the courts go along. In 2000, the Delaware Chancery Court disallowed a supermajority amendment that had been approved by the directors of Shorewood Packaging Corporation during a hostile bid by Chesapeake Corporation. The Court objected to the use of the defense without a vote of the shareholders and to the directors' hasty vote during the contest.

The choice among forms of attack is influenced by at least four considerations:

1. ***Attitude of target management and board.*** The strength with which target management is likely to resist the unsolicited offer will dictate how much time and effort will be devoted to trying to win their support. For instance, a bear hug offer to the board might be warranted where sentiment is neutral or only mildly opposed to the bidder. An appeal directly to shareholders would be warranted where the attitude of management and the board is strongly opposed to the bidder.

2. ***Distribution of voting power.*** A few large shareholders with relatively high voting power (e.g., large institutional investors or founding families) know one another and communicate during a control contest. These voters are probably well informed and sophisticated. In appealing to them, the bidder would be well advised to undertake a direct, in-person vote solicitation campaign such as seen in a proxy contest or consent solicitation. On the other hand, atomistic dispersion of a large number of voting shareholders would warrant a tender offer—as suggested in the previous chapter, this exploits the "prisoner's dilemma" phenomenon to the bidder's advantage.
3. ***Strength of target defenses in place.*** Of particular interest is the poison pill defense, which, as is discussed later in this chapter, many practitioners view as a "showstopper." The pill is placed and rescinded by action of the board of directors. Therefore, takeover attempts against targets with pills will typically entail a bear hug approach to the board, a tender offer contingent on removing the pill, or efforts to change the composition of the board through a proxy contest or consent solicitation.
4. ***Presence of competing bidders and/or a white knight.*** The entry by a competitor into the bidding, especially a bidder favored by management and directors, will necessitate an appeal directly to shareholders through a tender offer, proxy fight, or consent solicitation.

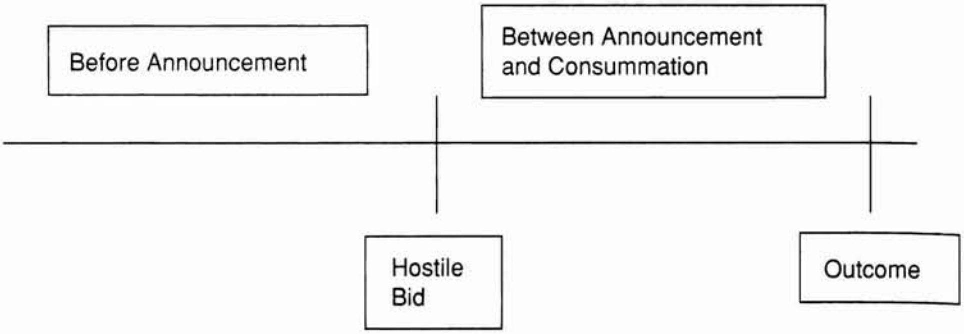
TACTICS OF TAKEOVER DEFENSE

The numerous tactics available to a target firm can be described along many dimensions. But the analyst and deal designer may find it helpful to characterize the tactics by degree of focus or tailoring to a specific situation—this is associated with the typical timing of announcement of the tactic and its impact. Exhibit 33.3 outlines a hypothetical distribution of these defenses across the time frame of a bid. A key distinction among the defenses is in their degree of tailoring to the identity of the hostile bidder.

- ***Proactive defenses*** typically are put in place in response to a general concern about a potential takeover attempt. Their aim is to discourage or deter potential bidders from attacking. They do not discriminate among potential bidders. By implicitly challenging all potential bidders, these defenses signal the intent of management and directors to preserve the independence of the firm or at least the discretion of its leaders in determining the firm's future control.
- ***Deal-embedded defenses*** may or may not discriminate among bidders. These appear as features of definitive agreements and are intended to raise the ante for an intruder. Generally, these defenses are intended to deter potential competing bidders.
- ***Reactive defenses*** respond directly to the identity of the hostile bidder and/or the characteristics of the hostile bid. In contrast to the preceding two classes of defense, reactive defenses are aimed at repelling known specific bidders.

The following sections outline the specific defenses within each category. The impact on value and the efficacy of the individual defenses varies widely. However,

EXHIBIT 33.3 Placement of Takeover Defenses across a Deal Episode



Proactive Tactics (Before a Hostile Bid)	Tactics Embedded in a Friendly Deal	Reactive Tactics (After a Hostile Bid)
Charter amendments:	Breakup or topping fees	Litigation
1. Classified board	Asset lockups	Regulatory protection
2. Supermajority	Equity lockups	Legislative protection
3. Fair price	Toehold stakes	Countertender (Pac-Man)
4. Dual-class recap		Asset restructuring
Golden parachute		White knight/squire
ESOPs and labor agreements		Share repurchase/greenmail
Poison pill		Leveraged recapitalization
Dual-class recapitalization		Going private/LBO

the modern use of defenses is to employ combinations, or "cocktails," of tactics, about which more is said after the survey of individual defensive tactics.

Proactive Defenses: Charter Amendments, Golden Parachutes, Poison Pills

CHARTER AMENDMENTS Changes can be made to a corporation's charter that limit the ability of an attacker to gain control of the firm.[8] This class of defense is obtained only by shareholder vote.[9] The role of a shareholder vote is vital in assessing the desirability of this class of defense, since the outcome of such a vote is uncertain. However, the advantages of charter amendment defenses may override the risk of a shareholder vote.

- A favorable vote signals a likely resolute defense by shareholders, board, and management. The shareholders, having committed through the voting process, suggest that they are likely to resist aggressively an attack.
- The defense itself will impede takeover by a control-oriented bidder and frustrate a creeping buyer.
- Some provisions (e.g., fair price) may extract a higher total payment from the buyer, and thereby impede a financially weak attacker. These provisions also protect the interests of a minority of shareholders who hang onto their shares in the face of an attack—this frustrates an attempted minority freeze-out.

- A shareholder vote protects directors under the business judgment rule from their recommendation of charter amendments.

Generally, research finds that charter amendments are only mildly effective[10] in reducing the likelihood of takeover bid. Charter amendments include four varieties: classified board, supermajority, fair price, and dual-class recapitalization.

1. ***Classified board.*** In an unclassified board, all directors are elected annually by shareholders. In contrast, classified (or staggered) boards are elected fractionally each year (e.g., one-third of the board each year over a span of three years). This amendment delays the bidder's ability to control the board and thereby rescind defenses (such as the poison pill), replace management, implement a restructuring, and so on. In general, the announcement of adoption of a staggered board has little impact on either shareholder wealth or firm performance.[11] When a staggered board is announced as a takeover defense, investors react neutrally—unless the staggered board is accompanied by material share ownership by insiders and directors, in which case the reaction is positive.[12] Firms with a staggered board are slightly less likely to attract a takeover bid.[13] Nevertheless, shareholder rights activists have been increasing the pressure on companies with staggered boards to eliminate them in favor of yearly board elections.[14] A study by the National Association of Corporate Directors found that the incidence of one-year board terms is increasing due to pressure from institutional investors and corporate governance activists.[15] In contrast, as of 2000, 40 states had enacted antitakeover laws that affect board composition.[16]
2. ***Supermajority provision.*** This charter amendment typically specifies that mergers must be approved by an extra-large majority of votes (e.g., 85 or 67 percent versus a simple majority of 51 percent). The intent of this amendment is to give a minority of shareholders a stronger voice with which to protect their interests in the face of a strong attack. At the very least this has the effect of delaying the bidder's consummation of a deal (i.e., it takes more time to amass a supermajority). And it may grant a relatively small minority disproportionate power to block a deal. Typically, supermajority amendments include a "board-out" clause that gives directors discretion to rescind the supermajority requirement, which is intended to favor friendly bids. Linn and McConnell (1983) found that the announcement reduces stockholder wealth by 5 percent. But over the longer term, Johnson and Rao (1999) found that the supermajority decision, along with other antitakeover charter amendments, had no adverse consequences for the firm or the shareholders. Ambrose and Megginson (1992) found that firms with supermajority amendments are insignificantly less likely to attract a takeover bid.
3. ***Fair price provision.*** The fair price amendment requires that all selling shareholders receive the same price from a buyer. This prevents a discriminatory offer from a bidder that seeks to stampede the target shareholders into selling (e.g., the two-tier or freeze-out tender offer in which a controlling block of shares is purchased at a premium and the remaining minority is purchased at a discount). This is a mildly effective takeover defense but plays a crucial role in thwarting two-tier takeover attempts.[17] Many states in the United States now require a takeover bid to carry a "fair price" for all shareholders. Early

research suggested that the stock price effect of adopting a fair price amendment is negligible, but slightly negative. More recent research found a still negligible but now positive effect from implementing a fair price amendment.[18] Ambrose and Megginson (1992) found that firms with fair price amendments are insignificantly more likely to attract a takeover bid.

4. ***Dual-class recapitalization.*** As described in Chapter 26, this amendment creates two classes of stock with different voting rights. For instance, the lower class will have one vote per share, and a higher class will have 10 votes per share. The superior voting shares are typically held by management and shareholders friendly to management who thereby retain strong voting power and can block propositions at shareholder meetings that are hostile to management. Research on dual-class recapitalization shows a statistically significant negative impact on shareholder wealth due to the loss of voting rights.[19] Shum, Davidson, and Glascock (1995) found no overall market reaction to the announcement of a second class of stock. They did find that the stock market reacts negatively when original shareholders lose voting power and are not compensated for the loss of control. However, when shareholders who lose voting power receive compensation (e.g., through increased dividends) the market reacts positively. Bacon, Cornett, and Davidson (1997) found that the market reaction to the announcement of dual-class recapitalizations is associated with composition of the board of directors: Boards with a large component of independent directors are associated with positive announcement returns; boards dominated by insiders are associated with negative returns. Finally, Ambrose and Megginson (1992) found that dual-class recapitalization does not decrease the likelihood of an eventual takeover bid.
5. ***Other charter amendments.*** The range of charter amendments extends further and will not be discussed in detail here other than to identify its reach. Amendments can limit the ability of dissident shareholders (or an attacker) to call special meetings of shareholders, to take action by consent without a shareholder meeting, and to pay *greenmail* or otherwise eliminate a hostile bidder through repurchasing shares. Further, some amendments can require a board of directors to consider other factors beyond price in evaluating a hostile bid; these could include the possible impact on employees, community, creditors, customers, and others, effectively liberalizing the range of considerations guiding the board's actions.

GOLDEN PARACHUTES Golden parachutes grant target management generous severance payments if they are fired following an acquisition that changes control[20] of the target. Parachutes are granted by the board of directors and unlike the charter amendments do not need a vote of the shareholders. Positive motives for the golden parachute include increasing employee retention during a takeover fight, motivating employees to focus on shareholder interests rather than personal concerns, and improving the company's ability to recruit new talent. Critics of the golden parachute regard it as a reward for failure in that it generously compensates managers for allowing the company to be a target of a takeover. Research concerning the effect of adopting golden parachutes on shareholder wealth and the probability of attracting takeover bids had been split. In the 1970s, announcement of a golden parachute was associated with positive stock returns; in the 1980s, the reaction had turned from positive to negative.[21] But in the 1990s, adoption of golden parachutes was associated with zero returns—and when golden parachutes were adopted by boards consisting of insiders or affiliated outsiders, the reaction tended to be more negative than with a board of independent outsiders.[22]

Timing of the golden parachute adoption also affects returns to shareholders. Born, Trahan, and Faria (1993) found that when golden parachutes are announced and a company is already engaged in a takeover bid, the wealth effects are neutral, but they are wealth increasing when the firm is not in play. In contrast, Hall (1998) found that the wealth effects of parachute announcements are negative when a firm is in play, but neutral when a firm is not in play. Both studies agree that the wealth effect is zero when firms adopt a golden parachute as a preemptive measure. This is supported by Schnitzer (1995) who suggests that the wealth effect of golden parachutes is neutral with positive returns for efficiently managed firms. Born, Trahan, and Faria (1993) found that the adoption of a golden parachute increases the probability that a firm will receive a takeover bid, perhaps because it is a sign of weakened management. But Schnitzer (1995) concluded that the likelihood would be lower for firms with efficient management teams.

EMPLOYEE STOCK OWNERSHIP PLANS (ESOPs) AND LABOR AGREEMENTS Targets can exploit agreements with employees for the sake of takeover defense. One avenue is to deploy retirement funds into the firm's own shares, effectively creating a large block of insider ownership. An example would be an *employee stock ownership plan (ESOP)* that borrows to buy the firm's shares, and then uses the stream of pension payments by the firm to service the debt. Bruner and Brownlee (1990) describe perhaps the most famous use of the ESOP to deter takeover, by Polaroid Corporation in the face of a bid by Shamrock Holdings. A supermajority provision in Polaroid's charter required an 85 percent vote of shareholders to approve a business combination. Polaroid established an ESOP with a 14 percent interest in the firm and with the Polaroid CEO as trustee of the ESOP; the CEO therefore had the right to vote unvested shares. Shamrock backed out of the bid when the Delaware Supreme Court refused to grant an injunction against the defense.

Agreements with labor unions may place union representatives on the target firm's board of directors or raise other provisions that prevent a takeover. In 1990, UAL Corporation struck such a collective bargaining agreement with the machinists' union in order to thwart a hostile bid by a raider acting in concert with the pilots' union. Federal courts invalidated the UAL defensive agreement, calling it a "doomsday bomb," that is, out of proportion to the threat posed by the raider as judged under the standard of "enhanced scrutiny" defined by the court (see Chapter 26 for a discussion of this standard).

POISON PILL The poison pill is arguably one of the most significant financial innovations in recent decades and is probably the single most effective defense in the target's arsenal. The apparent infallibility of the pill derives from the fact that since 1982 (when the first pill was placed) no pill has been triggered by any hostile bidder.[23] Indeed, the SEC has argued that this defense is adopted with the intention of not implementing it[24]—rather like a nuclear weapon. Most large U.S. corporations have a poison pill defense in place. The pill figures in litigation in almost all hostile takeovers—but the courts have yet to deny the placement of any pill. On the other hand, many firms with poison pill defenses do get sold; the pill is not a showstopper defense in the face of a truly compelling bid from a hostile buyer.

Proponents of this defense argue that it simply prevents a raider from acquiring a substantial position without approval of the target's board. The pill forestalls tender offers for the whole firm as well as creeping acquisitions and street sweeps. Since the board has the power to rescind the pill,[25] it encourages the bidder to negotiate with the board. Generally, the pill preserves time and flexibility for the board to negotiate a more advantageous deal with the raider—as well as with other potential buyers.

The pill has several disadvantages. First, it is a magnet for litigation during a hostile takeover attempt; legal challenges are inevitable. Second, it potentially alienates some investors, including arbitrageurs and institutions, as it appears to entrench management and deny value to investors. Annually, the shareholder-meeting season features shareholder proposals to rescind the pill defense. In the 1990s poison pills came under increasingly heavy opposition from shareholder rights groups as pills originally placed in the 1980s began coming up for renewal. After a wave of poison pill renewals in 1997–1998, shareholder voting to rescind poison pills increased, especially in the volatile technology sector. Designs, Inc. directors voted to drop a poison pill after shareholders approved a resolution calling for the pill's removal; and in an unusual move, Oregon Steel Mills disclosed that its board had chosen not to adopt a pill due to shareholder concerns. In 1998, AlliedSignal Inc. was able to acquire control of AMP Inc. after a Pennsylvania court ruled that AMP had to allow its shareholders the right to vote to repeal the poison pill.

The poison pill is a nondetachable shareholder right to obtain common shares at nominal cost upon the occurrence of a triggering event. All shareholders participate in the right except for an "interested person" who triggers the rights by acquiring more than the threshold percentage of shares allowed under the rights plan. Thus, the plan discriminates against an unwanted acquirer in favor of all other shareholders, making the acquisition more expensive (e.g., 25 to 50 percent more) than otherwise. Typically the right is effective for 10 years unless extended by the board of directors. Nondetachable rights are distributed pro rata to all common stockholders as a stock dividend. The rights are automatically transferred with the shares of common stock to which they relate but do not become exercisable (and indeed are not even represented by separate instruments) until the occurrence of the triggering event. At that point, separate instruments representing the rights are distributed to shareholders. The rights detach from the common shares and become separately tradable.

- ***Triggering event, "interested person."*** The triggering event is defined as the acquisition by any person (or group of persons acting in concert) of a certain percentage (today, typically 10 percent) of outstanding common stock without the prior consent of the firm's board of directors. Such an acquirer is known as an "interested person." An interested person may not exercise the rights.
- ***"Flip in" and "flip over" provisions.*** The rights plan may contain "flip in" and/or "flip over" provisions. The latter apply only when the interested person, having acquired voting control of the firm, attempts to merge the firm into the buying firm. At that point, holders of the rights become entitled to purchase common shares of the surviving firm at nominal value. "Flip in" provisions en-

title the holders to purchase common shares of the target firm at nominal value. Both the "flip in" and "flip over" provisions impose significant economic dilution on the interested person.

- ***Redemption.*** The board of directors may redeem the rights at any time prior to the triggering event and for 10 days thereafter at a negligible redemption price such as $0.01 per right. The rights become irredeemable after a 10-day window.
- ***Qualified offer, "dead hand" provision.*** The board may also choose to exempt a qualified offer from the operations of the rights plan. A "qualified offer" might be defined as an all-cash, any-and-all-shares tender offer or a merger proposal that has been approved by the board. After a change of control, defined as the replacement of 50 percent of the board in a proxy contest, the rights may be redeemed only by a majority of (at least two) "continuing directors." A "continuing director" is defined as a person who was a member of the target board at the time the rights plan was adopted or was nominated by a majority of the directors then in office or their nominees.
- ***Chewable poison pills.*** A variant of the poison pill, the chewable pill is similar to the straight pill, except that it "dissolves" in the face of a very high bid. The chewable pill will become void if a certain event occurs, such as a fully financed offer at a generous premium to the current price; or it can shift the decision from the board of directors to the shareholders, who can vote by a supermajority to accept the bid. The prime case of the use of a chewable pill was that of Pennzoil Co., which adopted such a pill in response to Union Pacific Resources Group's unsolicited bid for the company. The Pennzoil chewable pill dissolved in the face of a more attractive offer from Quaker State Corp.

An example of how a "flip in" poison pill imposes dilution on the bidder is presented in Exhibit 33.4. The example assumes that for each old share of common stock in the firm, the nonraider shareholders may purchase common stock worth $100 for an exercise price of $10, if a raider acquires 20 percent of the shares outstanding. Given other assumptions in the example, triggering the pill has three main effects:

1. ***Voting dilution.*** Triggering the pill dilutes the raider's voting percentage from 20 percent down to 5 percent of all shares outstanding (compare lines 17 and 18).
2. ***Economic dilution.*** The raider's economic interest falls by 69 percent, regardless of whether the bid succeeds or the pill exercise cash flow is "dividended" back to shareholders (see lines 22 and 29).
3. ***Cost to acquire.*** Triggering the pill makes the remaining shares 14 percent more expensive to acquire (line 30).

Sensitivity analysis of the model suggests that the key drivers of variations in dilution imposed on the bidder are the trigger percentage, the discount, and the exercise price multiple (exercise price of the rights plan divided by the bidder's bid price).[26] This example illustrates the conventional wisdom that the poison pill is potentially very costly to the raider.

Shareholder returns associated with the announcement of poison pills have

EXHIBIT 33.4 Illustration of the Dilution Imposed upon a Hostile Bidder after Triggering a Poison Pill

Assumption		
1 Stock price of target before pill is triggered	$ 25.00	
2 Number of shares outstanding before attempted raid	1,000,000	
3 Discount at which nonraider shareholders have the right to purchase shares	90%	
4 Purchase shares worth	$ 100	
5 By paying	$ 10	
6 Poison pill trigger	20%	
7 Assumption about whether pill exercise proceeds will be dividended to shareholders	**No Dividend**	Dividend
8 Market value of equity before trigger	$ 25,000,000	$25,000,000
9 Cash received upon exercise of poison pill rights	$ 8,000,000	$ 8,000,000
10 Dividend paid	$ —	$ (8,000,000)
11 Market value of equity after trigger	$ 33,000,000	$25,000,000
12 Number of shares held by the raider when the pill is triggered	200,000	200,000
13 Number of shares held by investors other than the raider after the pill is triggered	4,000,000	4,000,000
14 Total number of shares outstanding after the pill is triggered	4,200,000	4,200,000
15 Price per share after trigger	$ 7.86	$ 5.95
16 Dilution in price per share	69%	76%
Analysis of Voting Dilution Imposed on Raider		
17 Raider voting interest just before pill is triggered	20%	
18 Raider voting interest after pill is triggered	5%	
Economic Dilution Imposed on Raider If Pill Is Triggered and Bid Fails		
19 Change in raider's value of shares after pill is triggered	$ (3,428,571)	$ (3,809,524)
20 Raider's share of dividend from pill exercise proceeds	$ —	$ 380,952
21 Raider's total economic dilution after pill is triggered	$ (3,428,571)	$ (3,428,571)
22 Raider's total economic dilution as a percent of outlay	–69%	–69%

Economic Dilution Imposed on Raider If Pill Is Triggered and Bid Succeeds			
23 Value of nonraider shares before pill is triggered	$20,000,000		
24 Value of nonraider shares after pill is triggered	$31,428,571		
25 Change in raider's cost to acquire rest of shares		$(11,428,571)	$ (3,809,524)
26 Raider's share of dividend from pill exercise proceeds			$ 380,952
27 Raider applies cash from rights toward purchase price		$ 8,000,000	$ —
28 Raider's total economic dilution after pill is triggered		$ (3,428,571)	$ (3,428,571)
29 Raider's total economic dilution as a percent of outlay pretrigger		–69%	–69%
30 Change in cost to acquire remaining: 80%		14%	14%

Note: This example estimates in lines 28 and 29 the economic dilution to the hostile bidder (raider) from triggering a poison pill. Lines 1 to 6 give the underlying assumptions. The reader may consult the Excel spreadsheet accompanying this book, "Poison Pill Dilution.xls," for more detail, and try different sets of assumptions. The model estimates economic dilution in two scenarios:

1. The "no dividend" column simply assumes that the pill is triggered, the rights are exercised, and the cash received by the target from the rights exercise simply sits in its bank account. This is like buying a car that has a large wad of cash in the glove compartment. The cash balance defrays the cost of acquisition (see line 27).
2. The "dividend" column assumes a more rational scenario: The target simply dividends the cash back to all shareholders before the raider proceeds to acquire the target. Thus, the raider gets a small dividend (line 26).

The comparison reveals that disposition of the cash proceeds has no economic effect on the raider.

Line 13: Equal to the percentage of shares held by shareholders other than the raider (1 minus line 6) times the number of shares before the raid (line 2), times one plus the purchase amount (line 4) times the current stock price (line 1).

varied over time. For instance, Jarrell and Poulsen (1987) found statistically significant negative stock prices following announcements of poison pill amendments in the 1980s. In contrast, several studies have found that in the 1990s the effect of poison pills on shareholder value was nil.[27] Comment and Schwert (1995) observed larger negative returns before 1985 and smaller negative returns after 1985—as an earlier section of this chapter argues, the event returns at the announcement of poison pills are reasonably related to the quality of the target firm's governance and attention to shareholder value creation. Ambrose and Megginson (1992) found that the pill strongly deters takeover bids. Danielson and Karpoff (2002) examined earnings before interest and taxes (EBIT) and operating margin for five years after the adoption of a pill and found that the operating performance of firms improved after pill adoptions; based on cross-sectional analysis, they concluded that the pill has little relation to a firm's operating performance. The adoption of pills seems to occur at a time when insiders anticipate improved fortunes.

POISON PUTS Poison puts trigger the repayment of debt at or above par value in the event of a change in control. These deter bids by forcing the bidder to arrange more financing, and possibly to pay a premium for the target's debt. The poison put was a response by institutional lenders to the aggressive use of leverage by some bidders—such use typically destroyed value for incumbent bondholders. Thus, the poison put simultaneously provides a sense of security to bondholders (by hedging some of the risk of devaluation) and triggers an immediate cash drain for the bidder. This has been seen as a moderately effective antitakeover provision, especially when combined with other cash and asset provisions. The research finds that the issuing of bonds with poison puts attached has a statistically significant negative impact on stockholder wealth and a statistically significant positive impact on bondholder wealth.[28] Finally, Ambrose and Megginson (1992) find that event risk covenants ultimately have a small, negative impact on the frequency of bid offers.

Embedded Defenses

Some antitakeover defenses appear as provisions in an announced definitive agreement. These terms anticipate the possible intrusion of one or more competing buyers, and either make it more costly for the intruder or diminish the attractiveness of the target to the intruder.

TERMINATION FEES Termination fees award a payment (usually sufficient in size to cover expenses) to the jilted party. A *breakup fee* is triggered if one party exits from the pending transaction. A *topping fee* is a form of breakup fee awarded to the buyer in the event that another buyer successfully acquires the target with a higher bid, one that has topped the buyer's offer. Exhibit 30.1 in Chapter 30 reveals that termination fees average around 3.5 percent of the deal value. Perhaps the record payment of a termination fee was $1.8 billion, triggered by Pfizer's abandonment of American Home Products (AHP) for Warner Lambert (WL) in 1999. AHP had bid $75 billion for WL and was topped by Pfizer's eventual $90 billion bid; Pfizer agreed to pay WL's termination fee. Coates and Subramaniam (2000) reported a rising trend in the use of termination fees. They found that in the late 1990s, two-thirds of deals contained breakup fees, but that on average from 1988 to 1998 just over one-third of all deals contained this provision. They also revealed that the completion of deals with the friendly bidder is higher in the presence of breakup fees. Lemmon and Bates (2002) reported that in the late 1990s, more than 60 percent of deals contained a termination fee payable by the target to the bidder, while in only 13 percent of deals were fees payable by the bidder to the target.

Including a termination fee in a deal could have several motives. Some fees are structured as if to reimburse expenses of deal negotiation. These fees also help deter nuisance bids that are just a small amount above the buyer's bid: a nuisance bidder who wins will be saddled with paying the breakup, or topping, fee. Also, termination fees may be a means of locking in the deals with friendly bidders and preempting hostile bids. Officer (2003) rejected the notion that termination fees are management entrenchment devices and concluded from an empirical study that target termination fees serve to motivate the bidder to invest in deal development. He found that takeover premiums to target shareholders are on average 4 percent *higher* in the presence of target fees than without and that they increase the likelihood of successful consummation of the deal. Lemmon and Bates (2002) find that the incorporation of a target termination fee is associated with a higher probability of completion of a deal. They note that target fees are likely to be used in larger deals, stock deals, and where targets have large growth opportunities. They find that returns to target shareholders are unaffected by the inclusion of target fees in a deal. But the deal premiums *are* affected by bidder fees: Premiums are negatively correlated with the presence of bidder termination fees, suggesting that targets make a concession on price in return for the risk reduction of a bidder termination fee provision.

TOEHOLD STAKES Here, the target permits the friendly buyer to acquire shares of the target, possibly in excess of the poison-pill trigger (i.e., without triggering the pill). This gives the buyer a head start in accumulating a majority stake in the target. Ravid and Spiegel (1999) hypothesize that bidders will purchase toeholds when they fear intrusion by a rival bidder. But surprisingly, Jarrell and Poulsen (1989) find that only about 40 percent of bidders do acquire a *toehold stake* in their targets. Two studies (Betton and Eckbo 1999; Walkling and Edmister 1985) report that toeholds are associated with lower tender offer premiums to target shareholders. But Walkling (1985) found that toeholds are associated with a higher probability of success for the tender offer.

ASSET LOCKUP OPTIONS: THE "CROWN JEWEL" DEFENSE The merger agreement may include the right of the buyer to acquire certain key assets of the target in the event a competitor successfully acquires the target. One of the prominent cases featuring an asset lockup was the bidding in 1986 to acquire Revlon. The target had granted Forstmann, Little, the friendly buyer, an option to purchase two of Revlon's divisions if another bidder acquired 40 percent of Revlon's shares. The purchase price of $525 million was claimed to be at a 20 percent discount from intrinsic value. The Delaware Supreme Court enjoined the lockup on grounds that it would destroy competition rather than enhance it. In 1989, the Delaware Supreme Court struck down another prominent lockup provision in the deal between Kohlberg, Kravis, and Roberts and the Macmillan Publishing Company, which sought to fend off Robert Maxwell, the unwanted intruder. The Court applied the *Unocal* test to the use of asset lockups and required directors to ask whether the use of this tactic was proportional to the threat, whether the price was fair, when was the lockup granted, and whether the board was maximizing shareholder value. The use of the *crown jewel defense* is not per se illegal, but is such a showstopper to a competing bidder that target boards must meet the enhanced scrutiny of these tests. Since *Macmillan*, the asset lockup has virtually disappeared as a defensive tactic.

STOCK LOCKUP OPTIONS The target may grant the buyer rights to accumulate more target shares at an attractive price. In effect, a *stock lockup option*[29] is similar to a poison pill, but with benefits that flow to the friendly buyer rather than the target shareholders. Similar to the pill, exercise of the options dilutes the return to the intruder. Coates and Subramaniam (2000) found that the median stock lockup is priced slightly in the money, and that it represents a right to buy 19.9 percent of the target's stock, just below the 20 percent trigger of most major exchanges at which a target firm would be required to gain a shareholder vote on the sale. A prominent example of the use of a lockup option to thwart an intruder occurred in 1993 in the competition between Viacom and QVC Network to acquire Paramount Communications. Paramount granted Viacom the right to buy 24 million shares (compared to 120 million outstanding) in the event that QVC acquired Paramount, and then to sell the shares to QVC. Though the Delaware Supreme Court invalidated the Paramount lockup, this defense later appeared prominently in the agreement between Conrail and CSX and in other large transactions. The research on share lockups suggests that they are used infrequently—on the order of 8 to 13 percent of all deals.[30] Burch (2001) reported finding that lockup options appear to discourage competing bidders and that returns to target shareholders are larger in deals that contain lockups. As with the asset lockup, target boards should anticipate the possibility of enhanced scrutiny of stock lockups (as opposed to mere application by the courts of the business judgment rule)[31] in terms of their proportionality, timing, and use of terms that would heavily compensate the favored buyer.

Reactive Defenses

LITIGATION Litigation is a common tactic in takeover defense, raising the transaction costs to the buyer (especially if the litigation is conducted in many venues), delaying the buyer's ability to consummate the deal, raising uncertainty about the final outcome, increasing the disclosure of material information by the bidder, heightening the publicity of the defense, and generally demonstrating a scorched-earth level of resistance. Bidders can respond in kind, countersuing to neutralize the target's litigation. Litigation creates a bargaining chip in the sense that lawsuits can be suspended in return for friendly dealings and an increased bid price. On the other hand, litigation is surprisingly costly, rising into the millions of dollars for defenses of even limited duration and narrow geographical scope.

A target's defensive litigation can cover a number of possible claims:[32]

- Violation of Section 13(d): failing to disclose promptly a share interest greater than 5 percent, intent to control, and full membership of a group of investors.

- Failure to comply with tender offer disclosure requirements, especially regarding the bidder's plans or proposals for operation or restructuring of the target company, the bidder's financial condition, and its source of financing.
- Use of inside information and/or breach of confidentiality commitments to the target.
- A purchase program seen as the equivalent of a tender offer. For instance, an accumulator who has approached many shareholders privately may have substantially breached rules on tender offers.
- Violations of antitrust law, or of rules and laws specific to regulated industries. For instance, the target could seek to enjoin the hostile tender offer on grounds that a combination of the firms would unduly concentrate an industry and produce anticompetitive results. A court has ruled, "If the effect of a proposed takeover may be substantially to lessen competition, the target company is entitled to fend off its suitor and preserve its separate existence."[33] Successful antitrust litigation is a showstopper defense.

The impact of defensive litigation on shareholder welfare is mixed. Jarrell (1985) found that where the target was sold, litigation was associated with a final price that was 17 percent higher than where there was no litigation. But where the target remained independent, target shareholders lost the entire bid premium plus the costs of litigation. Also, the use of legal maneuvers to stop a takeover does not necessarily decrease the probability of attracting a takeover bid in the future.[34]

REGULATORY AND/OR LEGISLATIVE PROTECTION Similar to the "white knight" defense, governments can give external protection to the target—but in the case of government the mechanism is through the implementation of discriminatory laws and regulations. When James Goldsmith mounted a hostile bid for Goodyear Tire in 1986, the target lobbied the state legislature to enact an antitakeover law favorable to the in-state firm. In 1989, the Pennsylvania legislature enacted an antitakeover law at the behest of Armstrong World Industries, which was fighting a takeover bid from the Belsberg family. In both cases the defenses succeeded.

Dahya and Powell (1998) found that 42 states had adopted some form of antitakeover legislation, with many having more than one form on the books. In 1987, the U.S. Supreme Court upheld an Indiana antitakeover law in the case of *CTS Corporation v. Dynamics Corporation of America*. Antitakeover laws also provide a kind of "political defense." Karpoff and Malatesta (1989) found that in 40 antitakeover bills passed by various states in the late 1980s, 75 percent of these cases were introduced on behalf of at least one large firm headquartered in the state and having noticeable goodwill with the constituents. This use of both the existing legal system and the political system to create laws has proven a very effective defense, but it has had some unforeseen outcomes.

Karpoff and Malatesta also found a small but significant negative return to shareholders of firms headquartered in states that enacted antitakeover laws between 1982 and 1987. Ryngaert and Netter (1988) reported a significant decline in value for firms headquartered in Ohio upon enactment of the Ohio legislation; Szewczyk and Tsetsekos (1992) found significant losses to shareholders of Pennsylvania firms at the time of enactment. Comment and Schwert (1995) revealed that the laws did not materially alter the probability of takeover of protected firms, but that the takeover bid premiums tended to be higher. Hoi, Lessard, and Rubin (2000) found that following the enactment of state antitakeover laws, protected firms also increased the number of independent directors. As for the wealth generation effect of antitakeover legislation, Karpoff and Malatesta (1989) reported that the announcement of antitakeover legislation negatively affected stock price of firms in the state (small and significant change). They went on to find that firms with preexisting takeover defenses suffered no significant stock price reactions. The effects of antitakeover laws have also had some effects outside of shareholder wealth. Garvey and Hanka (1999) found that legal barriers erected by antitakeover laws might be increasing managerial slack. They found that managers in states where these laws are available reduce their use of financial management strategies such as debt management. In a completely different arena, Bertrand and Mullainathan (1999) revealed that the enactment of antitakeover laws is associated with an increased annual wage expense of 1 to 2 percent. They reason that these laws entrench managers who then pay higher wages.

Just as targets can lobby legislatures for protection, they can also seek protection from regulatory agencies. For instance, the Federal Communications Commission (FCC) was lobbied energetically by two competing bidders for DirectTV, the satellite television business of Hughes Electronics, a subsidiary of General Motors. EchoStar, the second-largest operator in the United States, had negotiated a friendly deal to acquire DirectTV. But Rupert Murdoch's News Corporation also sought to acquire DirectTV. Several journalists reported heavy or intense lobbying with the FCC.[35] On October 10, 2002, the FCC denied the EchoStar/DirectTV deal.

COUNTERTENDER OFFER: "PAC-MAN" The "*Pac-Man*" defense entails an effort by the target to simultaneously seek to acquire the bidder. The name was drawn from a computer game in which each of two players seek to eat up the opponent's resources before being eaten themselves. It first appeared in 1980 in the hostile takeover attempt on Midway Manufacturing Company. In 1982 five[36] contests featured this defense. Since then, the defense has been rarely used. The advantages of the countertender offer are that it demonstrates aggressive resistance, raises the possibility of success by the target, and affords yet one more bargaining chip in dealings with the hostile bidder. The countertender offer has three chief disadvantages: It may appear to acknowledge the desirability of a combination between the two firms, thus eliminating a range of claims and defenses that the target otherwise might make; it exposes the original target to the same range of defenses as outlined in this chapter; and there is little clarity about how this defense gains closure. Fleischer and Sussman (1995) wrote, "Unresolved is the question of how counter tender offers, each pursued to the end, would be unwound by courts in the absence of an agreement among the parties; if both bidder and counter-bidder own a majority of the other, who controls whom when the contest concludes?"[37]

Successful execution of this tactic depends on being able to buy and take control first, or at least claim to be the first buyer. Delays could spring from other defenses such as a staggered board or the ability to call a special meeting, and from state law regarding the ability of a subsidiary to vote shares held in the parent corporation. This last is a particularly nettlesome point that probably explains the limited use of this tactic. The most famous example of this problem was the Bendix/Martin-Marietta takeover fight in 1982. Bendix, the attacker, had opened with a bid for Martin-Marietta. Martin responded with a counterbid for Bendix, financed in part by a white squire, Allied Corporation. At the end, Martin and Bendix owned a majority of shares of each other. The laws in Maryland (where Martin was incorporated) and Delaware (where Bendix was incorporated) forbade the voting of shares by a subsidiary in a parent—and it seemed that each was the subsidiary of the other. The impasse was broken by Allied Corporation, which, through a complicated stock swap, acquired Bendix and then swapped the Martin shares owned by Bendix back to Martin in return for Martin shares owned by Bendix. Allied remained a substantial shareholder in Martin but agreed to a standstill provision that would limit further acquisition of Martin shares.

SHARE REPURCHASES AND LEVERAGED RECAPITALIZATION A *leveraged recapitalization* by the target entails borrowing heavily and paying a large one-time dividend to target shareholders. This can be an attractive defense in that it delivers cash to shareholders (i.e., arbitrageurs) and leaves in its wake a more highly levered company that presumably earns higher returns on equity. Thus, the tactic tends to raise the target's share price. Also, it means that the attacker would assume a large debt burden from the target. Some debt provisions in highly leveraged recapitalizations include poison puts that make the debt immediately payable upon a change of control of the target firm. Thus, the bidder must be prepared to refinance the target's debt upon acquisition. Denis and Denis (1993) found that stockholders incur losses of about 1 percent around the time that a leveraged recapitalization is announced. Walker (1998) found that leverage, when used as a takeover defense, is associated with improved managerial performance later.

Share repurchase[38] plans act as a defense by levering the target firm and raising its return on equity. Investors react favorably to this tactic. It should be noted that this is often used as a preoffer defense to stay out of the takeover market; but it can also be used as part of a postoffer defense in the form of a counteroffer to stockholders by the target firm or a targeted repurchase of a selective group of shares such as those already owned by the bidder. Many companies conduct share repurchase programs in lieu of dividend payments. As a postoffer defense, share repurchases financed by a combination of debt financing and asset sales can be quite effective, as illustrated earlier in the Hilton-ITT case. Research on the effect of stock repurchases on shareholder wealth finds gains to shareholders.[39] Kirch, Bar-Niv, and Zucca (1998) report that size of repurchase matters: Buying back at least 5 percent of the shares has a larger effect than smaller repurchase programs. Ambrose and Megginson (1992) find that a stock repurchase plan is associated with a lower likelihood of takeover bid, although the effect is not statistically significant.

An example of the financial analysis of a leveraged recapitalization is given in Chapter 13. Also, Chapter 34 discusses in detail the leveraged recapitalization defense of American Standard in a hostile takeover.

ASSET RESTRUCTURING The defending target could dispose of assets through spin-offs, divestiture of tangible assets or subsidiaries, or complete liquidation. These alter the attractiveness of the target to the bidder by disposing of key assets (e.g., crown jewels) or ruining opportunities for synergies between the target and buyer. The sale of undervalued assets (e.g., unused land, operating rights, patents, etc.) may monetize resources that the bidder had hoped to exploit. Of course, any sale of assets could provide the cash to fund an extraordinary dividend, share repurchase, greenmail payment, or other defense. Research has found that the announcement of asset restructuring is associated with a significant decline in shareholder wealth of about 2 percent.[40]

In March 2000, International Security Products (ISP) made a hostile bid to purchase Dexter Inc. Dexter immediately began a plan to sell off both tangible assets as well as subsidiary companies. The sales of various parts of the company enabled Dexter to fight off ISP until a friendly acquirer was found. In 1978, UV Industries took the more draconian asset restructuring strategy of liquidating completely in the face of a hostile bid,[41] which generated a dramatically higher value to shareholders than given in the bid.

Asset *purchases* are another form of defensive restructuring. The target could acquire assets to make the company a less desirable target. Examples of this would be assets pertaining to a regulated industry where regulations limit horizontal acquisitions—such regulations have prevailed from time to time in industries such as banking, broadcasting, and transportation. In other settings, asset purchases could forestall hostile takeovers on grounds of national defense concerns (the "Pentagon play")—for more on this, see the discussion of the Exon-Florio Amendment in Chapter 28.

WHITE KNIGHT, WHITE SQUIRE The target company seeks a friendly buyer with which to merge, a white knight. This friendly company typically agrees not to break the company up or lay off employees. Often a white knight is a horizontal or vertical peer of the target firm and is motivated to bid by the prospect of synergies in the combination and/or the desire to preserve a strategic relationship or deny such a relationship to a competitor. But a white knight can also be motivated by purely financial considerations. One example is Berkshire Hathaway's acquisition of Scott & Fetzer in 1986. The managers of Scott & Fetzer had attempted a leveraged buyout of the company in the face of a rumored hostile takeover attempt. When the U.S. Department of Labor objected to the company's use of an employee stock ownership plan to assist in the financing, the deal fell apart. Soon the company attracted unsolicited proposals to purchase it, including one from Ivan F. Boesky. Warren Buffett, CEO of Berkshire Hathaway, offered to buy the company for $315 million (compared to its book value of $172.6 million). Following the acquisition, Scott & Fetzer yielded a return on investment for Berkshire Hathaway of about 36 percent.[42] Buffett noted that in terms of return on book value of equity, Scott & Fetzer would have easily beaten the Fortune 500 firms.[43]

A white squire merely purchases a large block of stock in the target, but does not take control. The white squire typically agrees to vote in alignment with target management and not purchase more stock for a specified period of time. The white knight/squire defense succeeds by preempting the hostile bidder of control. In the hostile fight for control of Polaroid, the target solicited an investment from corporate partners that, in combination with Polaroid's ESOP, locked up a block of 33 percent of Polaroid's voting shares and stopped the hostile bid.[44] Warren Buffett has acted as a white squire in a number of cases where a hostile bid existed or was threatened—these included Gillette, First Empire State, USAir, Salomon Brothers, and Champion International.

GOING PRIVATE TRANSACTION/LEVERAGED BUYOUT (LBO) Management could simply acquire the target company and continue to operate it as a private entity. Typically this entails significant use of debt financing to purchase the shares, as well as the participation of a financial partner to contribute equity financing. Kohlberg, Kravis, and Roberts and Forstmann, Little are two of the largest and best-known leveraged buyout practitioners. The bid premium in a leveraged buyout is derived from the aggressive exploitation of debt tax shields, reduced costs (i.e., from being a private, as opposed to public, company), and operating efficiencies. Whether this premium is sizable enough to outbid the hostile bidder depends on the synergies that the intruder had hoped to exploit. While LBOs were a common defensive tactic in the 1980s, they receded significantly in the 1990s as strategic buyers exploited synergies to outbid the LBO proposals. Furthermore, the LBO raises questions of self-dealing on the part of the target management, necessitating heightened scrutiny by independent directors.[45] See Chapter 13 for more discussion of the going private alternative.

GREENMAIL OR TARGETED SHARE REPURCHASE Here, the target buys back shares from the acquirer at a premium to the current asking price. As the name implies, greenmail, like blackmail, pays the intruder to go away. This defense has prompted sharp criticism and legal disputes with stockholders who did not obtain the premium price for their shares. In reaction, several states now prohibit or discourage paying greenmail. Some companies have amended their charters to prohibit greenmail payments. And the U.S. Congress imposed a 50 percent tax on the gain received by the greenmailer. While greenmail succeeds in repelling the intruder and buying a little time for target management to implement a restructuring, it does not protect the company from further takeover attempts, as do other kinds of defenses. Chapter 2 offers a detailed discussion of the greenmailing of Walt Disney Company in 1984.

The research findings on the announcement effects of greenmail use show a significant negative response of 2 to 3 percent.[46] On the other hand, Eckbo (1990) found that in the three months leading up to the proxy mailing date, the greenmail announcement culminated in positive returns to shareholders. Also, companies who are engaged in a takeover fight and have a stated precommitment not to pay greenmail have abnormally positive returns as well. In contrast, Ang and Tucker (1988) found that target firms paying greenmail and remaining independent realized a zero abnormal return over time. It would seem that targets that pay greenmail would attract follow-on hostile bids, much as happened in the case of Walt Disney Company. But the empirical evidence on this is mixed. Mikkelson and Ruback (1991) suggest that there is no correlation between the use of greenmail and future takeover bids. Ambrose and Megginson (1992) claim the opposite, that there is a strong positive correlation between greenmail and future bids.

Combinations of Defenses

The inference from Exhibit 33.1 is that a given firm probably employs a number of defensive tactics. Bebchuk, Coates, and Subramaniam (2002) examined a set of hostile bids occurring between 1996 and 2000, and found that a combination of staggered board and poison pill was associated with sharply higher defense success. The odds of remaining independent rose from 34 percent to 61 percent, and the odds that a first bidder would be successful declined from 34 percent to 14 percent. Target shareholder wealth, though, declined between 8 and 10 percent associated with the use of this defense. Key to this heightened defense is a staggered board structured so that the bidder must win two successive elections rather than just one in order to rescind the poison pill defense. This imposes costly delay on the bidder. The interaction between the two tactics, a defensive "cocktail," produces a powerful joint defense. Bebchuk, Coates, and Subramaniam write,

> *A pill provides relatively weak takeover protection if the target is vulnerable to a rapid proxy fight, because the target's board can redeem the pill at any time; a staggered board without a pill is likewise ineffective against a bid, given the unlikelihood that target directors will continue to resist if a bidder has acquired a majority of the target's stock. In combination with an effective staggered board, however, a pill provides significant antitakeover protection: the pill blocks any stock acquisition beyond the trigger level, and the staggered board forces the bidder to go through two proxy contests in order to gain control of the board and redeem the pill.*[47]

The case of Hilton Hotels' attempted takeover of ITT[48] illustrates the strategic role of the "cocktail" defense. On January 27, 1997, Hilton offered an unsolicited bid of $55 per share of ITT. ITT's board was unclassified, and the company had a poison pill defense in place. Hilton therefore conditioned its bid on the successful outcome of a proxy fight in which Hilton would unseat the entire board, seat new directors friendly to Hilton's offer, rescind the poison pill, and consummate the tender offer. In response, ITT simply refused to call a meeting of the shareholders and for almost a year stonewalled Hilton's attack while implementing a restructuring defense and searching for a white knight. When it appeared that ITT would need shareholder approval for a major breakup of the firm, it simultaneously requested approval for a charter amendment that would stagger the election of its directors. ITT succeeded in finding a friendly buyer who topped Hilton's bid.

How do firms choose their defenses? The chief finding is that there is rather little herdlike behavior: Firms vary in their adoption of defenses. Several studies—Coates (2000), Field and Karpoff (2000), and Daines and Klausner (2001)—looked at the adoption of defenses "at birth," when firms go public. Daines and Klausner (2001) found that half the firms adopt strong defenses; another 18 percent adopt mild defenses; and the balance adopt no defenses at all at the initial public offering (IPO). Daines and Klausner found support for no hypothesis about defense adoption. Field and Karpoff (2000) found that 53 percent of the IPOs had at least one antitakeover defense in place and that managers who were not tightly monitored by pre-IPO investors (such as venture capitalists) tended to deploy more defenses. Also, Coates (2000) found that firms advised by larger law firms with more takeover experience adopted more defenses at the IPO, that firms with high-quality venture backers and financial advisers also adopted more defenses, and that the adoption of defenses at the IPO generally increased during the 1990s. Generally Coates' findings agreed with the conclusions of the other studies: There is a high variance in defensive practices among firms that go public. Hannes (2001, 2002) argues that the divergence in adoptions of takeover defenses is rational as a means of differentiating targets from one another.

- While the efficacy of individual tactics may vary, these tactics may gain strength when combined into "cocktails" of defense. Thus, the architect of takeover defenses should attend to the ways in which the defensive tactics can combine to greatest effect.
- Defenses can be emplaced across time: well in advance of a hostile bid, embedded in the terms of a friendly deal, and in reaction to a bid. The implication here is that the defensive strategy is not merely a matter of what is done in advance; agile response to a hostile bid may matter as much as premeditated defense.
- Still, planning one's defenses makes a large difference in quality of execution at the time of a hostile bid. Fleischer and Sussman (1997, pages 2-3 to 2-5) note that such planning could cover a range of actions: retain counsel and investment bankers; put in place a comprehensive range of proactive defenses; study your shareholder base, giving attention to key block holders, turnover among holders, and monitoring of daily stock trading; survey any restrictive covenants in debt issues that might limit actions such as spin-offs or asset sales; check liability insurance policy for officers and directors for coverage of takeover costs; form a contingency team of decision makers; and prepare a "black book" manual with lists of key coordinates, procedures for discussions with press and analysts, means of calling an emergency board meeting, items to be reviewed at board meeting, and means of contacting shareholders.
- At the end of the day, the single best defense against a hostile raid is a high stock price. Defenses already in place should not lull you into indifference about a potential raid—or worse, indifference toward the welfare of your own shareholders.

This survey offers some practical implications for bidders as well. As the preceding chapter shows, the raider succeeds only about one-third of the time. This is because antitakeover defenses, while not perfect, are material.

- Remember that your key audience consists of arbitrageurs and other sophisticated players. The object of your attacking strategy should be to win their support through a succession of moves. Takeovers are games.
- The point of tactics of attack should be to reduce time and uncertainty about value and success of your bidding.
- Research and expert legal counsel are enormously important in crafting a strategy of attack.
- At the end of the day, the single tactic that best ensures successful takeover is to offer a high bid. Money talks—but within reason. As emphasized elsewhere in this book, one must set limits on what one will bid in order not to destroy value for the bidder's shareholders.

NOTES

1. See Chapters 26, 27, 31, and 32.
2. For instance, in 2003 PeopleSoft enlisted customers to publicly express their resistance to Oracle's proposed takeover of the firm.

3. For reasons suggested in this section, one could hypothesize that the use of tactics has a symmetric effect (adjusted for relative size) on the bidder.
4. Optionality is the right to take action, the triggering of which is contingent on some other event.
5. It would be natural to extend this framework into a third direction, intrinsic value or "moneyness." The defensive option is "out of the money" if the firm is an unlikely target and the probability of attack is low. A defensive option is "in the money" if the firm is under hostile attack or close to it. Case law suggests that the emplacement of defenses *during* an attack may warrant the enhanced scrutiny of the court. This discussion will not complicate the presentation with this third dimension, moneyness, simply because logic suggests that it is likely to be an amplifier: Where the defense can buy time for a well-governed firm to negotiate a higher price, the placement of the defense is likely to have a positive effect. But where there is no hostile attack, the immediate benefit (or cost) of a defense is likely to be smaller.
6. "The [poison pill] right has no economic value" in Arthur Fleischer Jr. and Alexander R. Sussman, *Takeover Defense*, 5th ed., Aspen Law and Business, 1997, page 5-7.
7. A quotation of publicist Richard Cheney, referring to a hostile offer by Colt Industries, the maker of firearms, in Larry Gurwin, "The Scorched Earth Policy," *Institutional Investor*, 34 (June 1979), page 33.
8. For more information on charter amendment defenses, see Fleisher and Sussman (1997), from which this discussion abstracts selected points.
9. In some states it may be possible to obtain these defenses by amending the corporation's *bylaws* instead of its charter. Some states permit amendment of bylaws without a vote of shareholders.
10. See Johnson and Rao (1999), Born and Ryan (2000), Linn and McConnell (1983), and Ambrose and Megginson (1992).
11. See Bhagat and Black (1999).
12. See Markides (1992) and Bacon, Cornett, and Davidson (1997).
13. See Garvey and Hanka (1999).
14. See Bhagat and Black (1999).
15. See *Investor Relations Business* (2000).
16. See Hoi, Lessard, and Robin (2000).
17. See Linn and McConnell (1983), McWilliams (1990, 1993), and Markides (1992).
18. See Linn and McConnell (1983), McWilliams (1990, 1993), and Markides (1992).
19. See Heron and Lewellen (1998), McWilliams (1990), Malezadeh and McWilliams (1995), Sundaramurthyu and Lyton (1998), Brickley and Lease (1998), and Sridaram (1997).
20. "Change of control" can be defined in many possible ways, including number or percentage of shares, turnover in board directors, shareholder vote approving sale or merger, and triggering of the poison pill.
21. See Mogavero and Toyne (1995).
22. Davidson, Pilger, and Szakmary (1998).
23. In fact, the only instance of a pill ever being triggered occurred in September 1990 when the management of Instron Corporation inadvertently triggered the

company's poison pill when they announced that a bloc of management and founding family members owned 39 percent of Instron stock.

24. Cited in Friedman and Sussman (1995), page 5-16.
25. It's not clear who can rescind the pill generally. But lawyers and practitioners believe that the board actually controls both the implementation and removal of the pill.
26. The percentage dilution can be estimated using the following equation, where X is the trigger percentage, D is the percentage discount, and Y is the purchase multiple (the value of shares to be purchased under one right divided by the current share price of the target):

$$\text{Percentage dilution} = \frac{X \times Y \times D(1-X)}{1+Y(1-X)}$$

27. See Lee and Pawlukiewicz (2000), Datta and Iskandar-Datta (1996), and Brickley, Coles, and Terry (1994).
28. See Roth and McDonald (1999), Perumpral, Davidson, and Sen (1999), Cook and Easterwood (1994), and Bjorn and Ryan (2000).
29. Coates and Subramaniam (2000) note that "lockup" implies a degree of efficacy that is not accurate (i.e., not all deals with lockups are completed in favor of the desired buyer) and would likely be illegal if it were so completely successful.
30. Burch (2001) reports the 8 percent average over 1988 to 1995. Coates and Subramaniam (2000) report 12.9 percent of the deals contain share lockup provisions from 1988 to 1998.
31. For a more detailed discussion of the business judgment rule and enhanced scrutiny by the courts, see Chapter 26.
32. This list is abstracted from Chapters 11 and 12 in Fleishman and Sussman (1997).
33. *Consolidated Gold Fields PLC v. Minorco, S.A. 871 F.2d 252* (2d Cir. 1989)
34. See Markides (1992) and Berkovitch and Khanna (1990).
35. "Derailing the agreement would be a huge victory for Mr. Murdoch's News Corporation, which has lobbied intensively to halt the merger." ("Murdoch Wins Second Chance to Gain DirectTV," MediaGuardian.co.UK, September 25, 2002; http://media.guardian.co.uk /rupertmurchoch/story/0,11136,798646,00.html).
36. Fleischer and Sussman (1995) call 1982 the peak year for countertender offers, and cite these contests: American General/NLT, Cities Service/Mesa Petroleum, Olympia Brewing/Pabst, Heublein/General Cinema, and Bendix/Martin-Marietta.
37. Fleischer and Sussman (1995), pages 9-29 and 9-30.
38. A variation on the share repurchase defense is the share *issuance* defense. This is typically connected with a white squire defense, discussed later in the chapter.
39. See Bagnoli, Gordon, and Lipman (1989), Stulz (1988), and Sinha (1991).
40. See Ambrose and Megginson (1992) and Dann and DeAngelo (1983, 1986).
41. See Bruner (1980), "UV Industries" (Harvard Business School Publishing case study 4-280-072).
42. See Bruner (1995), "Warren E. Buffett, 1995" and associated teaching note for details of this calculation.

43. This exempts from the comparison firms emerging from bankruptcy in recent years. Buffett's observation was made in Berkshire Hathaway's 1994 annual report.
44. See Bruner and Brownlee (1990) for a detailed discussion of the Polaroid defense.
45. See Bruner and Paine (1988) for a detailed discussion of the potential conflicts of interests in LBOs, and a possible remedy.
46. See Dann and DeAngelo (1983), Mikkelson and Ruback (1985, 1986, 1991), Bradley and Wakeman (1983), Eckbo (1990), and Ang and Tucker (1988).
47. Bebchuk, Coates, and Subramaniam (2002), page 899.
48. See Bruner and Vakharia (1998) for a detailed discussion and analysis of the Hilton/ITT contest.