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THE ILLUSORY PROTECTIONS OF THE POISON PILL

William J. Carney*
Leonard A. Silverstein†

INTRODUCTION

Thousands of firms have adopted shareholder rights plans, also known as poison pills.¹ These plans were initiated and promoted by some of Wall Street's best-known corporate law firms, and their models have been almost slavishly followed by other lawyers across the country.

From the beginning, rights plans were seen as the most powerful of takeover defenses.² The Delaware Chancery Court has apparently viewed them as preclusive deal killers that must be redeemed when

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1 By December 1991, at least 1577 corporations had adopted rights plans. Robert Comment & G. William Schwert, *Poison or Placebo? Evidence on the Deterrence and Wealth Effects of Modern Antitakeover Measures*, 39 J. FIN. ECON. 3, 11 (1995). As of 2002, at least 2592 firms have rights plans in place. JOY MARLENE BRYAN, CORPORATE ANTI-TAKEOVER DEFENSES: THE POISON PILL DEVICE app. A (2002). Institutional Shareholders Services (ISS) puts the number at over 3000. Shirley Westcott & Edward Seaton, *Bear Market Leads to Poison Pill Abuse 1* [hereinafter ISS Study] (on file with author). Of the 140 companies that adopted new rights plans in the first six months of 2001, 46% were technology companies. Kris Frieswick, *Poison Pill Popping: The Latest Hostile Takeover Defenses Defy the Usual Justifications*, at <http://www.cfo.com/Article?article=5216> (last visited Oct. 15, 2001).

2 See, e.g., RONALD J. GILSON & BERNARD S. BLACK, *THE LAW AND FINANCE OF CORPORATE ACQUISITIONS* 58 (2d ed. Supp. 2003) (“[The poison pill] effectively stops a hostile tender offer”); Lucian Bebchuk et al., *The Powerful Antitakeover Force of Staggered Boards: Theory, Evidence, and Policy*, 54 STAN. L. REV. 887, 904 (2002):

threats are no longer serious.³ Many financial economists undertook studies of the stock price effects of these plans, and generally concluded that these plans were indeed powerful takeover defenses.⁴ Proxy fights, led by organizations such as College Retirement Equities

These rights are explicitly *not* exercisable by the acquiring person, so the resulting dilution in his voting power and economic stake may make the acquisition of the target through market purchases too expensive to pursue. . . . In practice, then, the pill provides an impenetrable barrier to control acquisitions. As long as the pill remains in place, no other defensive measures are necessary because the bid is completely blocked.

Id.; Steven J. Fink, *The Rebirth of the Tender Offer?* Paramount Communications, Inc. v. QVC Network, Inc., 20 DEL. J. CORP. L. 133, 166 n.190 (1995) (referring to "preclusive defenses such as a poison pill"); Marcel Kahan & Edward B. Rock, *How I Learned to Stop Worrying and Love the Pill: Adaptive Responses to Takeover Law*, 69 U. CHI. L. REV. 871, 875 (2002) ("[A] pill made a company takeover-proof unless redeemed by the target board."); Reinier Kraakman, *Taking Discounts Seriously: The Implications of "Discounted" Share Prices as an Acquisition Motive*, 88 COLUM. L. REV. 891, 923 (1988) ("The modern defensive tactics at the disposal of target managers—arranging from poison pills to defensive capitalizations, street sweeps, and the assistance of state legislatures—can sometimes defeat hostile bids outright."); Mark J. Loewenstein, *The SEC and the Future of Corporate Governance*, 45 ALA. L. REV. 783, 790 (1994) ("No bidder has proceeded, or indeed can proceed, with a tender offer in the face of a poison pill, because, if the pill is triggered, the resulting dilution is too great a cost for any bidder to bear."); Park McGinty, *Replacing Hostile Takeovers*, 144 U. PA. L. REV. 983, 993 (1996) ("Today, management can normally prevent any unsolicited takeover it disfavors"); Randall S. Thomas, *Judicial Review of Defensive Tactics in Proxy Contests: When Is Using a Rights Plan Right?*, 46 VAND. L. REV. 503, 505 n.6 (1993) ("Rights Plans are one of the most powerful antitakeover defenses available to a target company. . . . Subsequently, their use has spread to precluding shareholders from accepting all-cash, all-shares, premium-priced tender offers."); Gilbert L. Henry, Note, *Continuing Directors Provisions: These Next Generation Shareholder Rights Plans are Fair and Reasoned Responses to Hostile Takeover Measures*, 79 B.U. L. REV. 989, 991 (1999) ("Shareholder rights plans, once triggered, massively dilute the target's shares and unacceptably raise the bidder's cost of acquiring the target."). *But see* Julian Velasco, *Just Do It: An Antidote to the Poison Pill*, 52 EMORY L.J. 849 *passim* (2003) (arguing that a bidder can swallow a pill with a "low-ball" bid for the minimum shares required to trigger the rights plan).

3 See *In re Gaylord Container Corp. S'holders Litig.*, 753 A.2d 462, 481 (Del. Ch. 2000) ("[A] poison pill absolutely precludes a hostile acquisition so long as the pill remains in place"); *Grand Metro. PLC v. Pillsbury Co.*, 558 A.2d 1049, 1058 (Del. Ch. 1988); *City Capital Assocs. v. Interco, Inc.*, 551 A.2d 787, 798 (Del. Ch. 1988); see also *Moran v. Household Int'l, Inc.*, 500 A.2d 1346, 1354 (Del. 1985) (implicitly concluding that a pill precludes acquisition by stating that "they will not be able to arbitrarily reject the offer," and that the board's redemption decision would be subject to judicial scrutiny under *Unocal Corp. v. Mesa Petroleum Co.*, 493 A.2d 946 (Del. 1985)).

4 John C. Coates IV, *Takeover Defenses in the Shadow of the Pill: A Critique of the Scientific Evidence*, 79 TEX. L. REV. 271 *passim* (2000) (summarizing studies and suggesting that they ask the wrong question); see also WILLIAM J. CARNEY, *MERGERS AND ACQUISITIONS* 289–92 (2000) (summarizing studies).

Fund and Institutional Shareholders Services, have been waged to persuade boards to redeem rights plans or make them less powerful.⁵ Some have attributed the decline in the number of hostile takeovers to the widespread adoption of rights plans.⁶

John Coates has recently provided trenchant criticism of these conclusions, as well as a critical reading of the event studies themselves.⁷ Coates correctly observes that a poison pill is only as good as the surrounding takeover defenses—primarily those that assure that the adopting directors have sufficient tenure to make the rights plan stick—including a staggered board, protection against removal except for cause, and protections against board-packing by a hostile bidder.

We add the observation that a poison pill is only as good as the dilution of a bidder that it provides, and that many pills provide surprisingly little. To our knowledge, no one has systematically examined the operation of rights plans. We do so in this Article. We conclude that the typical poison pill will make many bidders nauseous, but that it will not be fatal in most cases. Under the most plausible scenario for a typical rights plan, it would add between 6% and 12% to the cost of an acquisition, which is well within typical reservation prices in hostile takeovers. We explore the reasons for this relatively modest effect, and explain why the present generation of mild pills has not been swallowed by aggressive bidders.

These plans were created by lawyers, not investment bankers. They are elaborate contracts that reflect the accumulated wisdom of experienced corporate lawyers about drafting in the area of convertible securities and options. Their complexity may explain why so little commentary has appeared about their workings. The event studies

5 For a summary of proxy fights see ISS Study, *supra* note 1, at 7–10 (Charts 2, 3).

6 Joseph A. Grundfest, *Just Vote No: A Minimalist Strategy for Dealing with Barbarians Inside the Gates*, 45 STAN. L. REV. 857, 858 (1993) (“The takeover wars are over. Management won. . . . This remarkable transformation in the market for corporate control resulted from the emergence of the ‘poison pill’ as an effective anti-takeover device, the rapid proliferation of state anti-takeover statutes and the development of financial market conditions inimical to hostile control contests.”); Robert W. Hamilton, *Corporate Governance in America 1950–2000: Major Changes but Uncertain Benefits*, 25 J. CORP. L. 349, 358 (2000) (“Takeover bids are no longer a major device for eliminating under-performing management because management has devised effective defensive tactics that make purchase-type takeovers impractical. The principal defensive weapon today is a ‘poison pill’”); Manuel A. Utset, *Towards a Bargaining Theory of the Firm*, 80 CORNELL L. REV. 540, 555 n.54 (1995) (“The reasons for the demise of the market for corporate control are many. They include the following: . . . (3) the improvements in certain anti-takeover mechanisms”).

7 Coates, *supra* note 4 *passim*.

that have examined their impact are virtually devoid of any discussion of the details of their operation. It is possible that economists are deterred from this exercise by the legal complexity these plans present. We undertake what we believe to be the first close examination of the operation of rights plans.⁸

Part I provides a brief explanation of the mechanics of the typical rights plan. We focus primarily on the "flip-in" feature of rights plans, which is designed to prevent a bidder from gaining either a significant toe-hold or actual control of a target.⁹

In Part II, we examine the impact of the typical rights plan on a bidder's costs. Our examination reveals that typical rights plans are less effective than conventional wisdom suggests at deterring hostile bidders, because the dilution that the bidder suffers has been examined in a static model that ends with the dilution of the bidder's initial investment. A dynamic model, in which the bidder completes the acquisition of the target after suffering dilution, produces quite a different impression. First, the ability of a rights plan to add to a bidder's costs, and thus to the amounts received by target shareholders, is limited to the amount spent by the bidder in reaching the triggering ownership level—typically 15% of the target's stock.¹⁰ The obvious intuition is that even total dilution of a bidder holding 15% cannot add more than 15% to the cost of a takeover—which means that a conventional rights plan cannot raise the cost of an undervalued target to an acceptably fair price in many cases. Second, the mechanics of the typical rights plan mean that the bidder will lose only a fraction, rather than all, of that initial investment.

In Part III, we explore some variations on the conventional rights plan that are designed to ameliorate these problems. While these variations can increase the amount of dilution somewhat, they are limited in effect. These exercises lead to a final conclusion: a poison pill has all the power of a tablet with a four-hour duration, taken once.

8 Authors of rights plans have provided limited examples of their operation, but always in a static rather than a dynamic model. We discuss their calculations briefly. They are consistent with our own first-stage calculations.

9 The "flip-over" feature of rights plans discussed in Part II.B.7, in which rights become exercisable in a bidder's stock after a merger or similar event, provides no additional dilution; it is simply an anti-destruction provision that assures the dilutive effect of rights will continue even if a target corporation disappears in a merger.

10 As we will point out, the bidder's loss is limited to the value of its percentage ownership in the target; thus, if the market value of the target's shares increases, the bidder's losses from dilution may exceed the cost of its original investment, but the percentage of the total value of the target lost from dilution will not change. See discussion *infra* Part III.

Once the pill's effectiveness ends, the illness is free to resume its course.

In Part IV, we address the obvious objection to our analysis—if the poison pill is so weak, why hasn't any bidder swallowed one in a hostile takeover? We show first that the widespread adoption of poison pills has not diminished acquisition activity, including acquisitions of pill-equipped targets. The move away from hostile tender offers is better explained by a variety of changes in the market, as well as by the use of proxy fights, stock mergers (favored in current Delaware law), and management compensation as substitutes for hostile tender offers.

I. THE OPERATION OF A RIGHTS PLAN

Rights are issued as pro rata distributions to all common stockholders.¹¹ The right is typically the right to purchase one unit of a new series of preferred stock.¹² The preferred stock unit has rights that are essentially equivalent to those of the common stock, with minor distinctions.¹³ These rights are exercisable at the projected "long term value" of the common stock—the price the stock is predicted to reach at the end of the ten-year life of the rights—a price typically three to five times higher than the current market price of the common stock.¹⁴ To reach these valuations, financial advisers to the adopting company's board are required to make heroic assumptions

11 The date of the declaration of the dividend of rights is generally called the "Record Date" or the "Rights Dividend Declaration Date."

12 While there are no legal barriers to using whole shares of preferred stock, many companies lack sufficient authorized but unissued shares to accomplish this, and thus use fractions of a share.

13 Each unit has the same dividend and liquidation rights as the common, with the theoretical difference that the preferred's rights to payment are "prior" to those of the common, to satisfy what are thought to be legal requirements of a priority of some kind.

14 See, e.g., MARTIN LIPTON & ERICA H. STEINBERGER, TAKEOVERS & FREEZEOUTS § 6.03[4][b][i], at 6-62 (2002); Wachtell, Lipton, Rosen & Katz, *The Share Purchase Rights Plan*, reprinted in GILSON & BLACK, *supra* note 2, at 58, 62. A recent study of 341 rights plans adopted in 1998 showed median exercise prices were 5.1 times the price of the common stock at the time of the announcement, but only 3.5 times the high stock price for the twelve months preceding adoption of the rights plan, suggesting that declining stock prices may be a primary motivating factor in the adoption of rights plans. HOULIHAN LOKEY HOWARD & ZUKIN, STOCKHOLDER RIGHTS PLAN STUDY 4 (1999).

about growth rates for company profits—typically in excess of 17% per year, compounded for the ten-year life of the rights plan.¹⁵

These rights are initially “stapled” to the common stock, in the sense that they can only be transferred with the common stock, and are not immediately exercisable on issue.¹⁶ The rights separate from the common stock certificates and rights certificates are issued and become transferable apart from the common stock on a “Distribution Date.” This occurs when a bidder appears, either by making a tender offer for a significant block of target shares—typically 30%¹⁷—or by becoming an “Acquiring Person” by acquiring a somewhat smaller block—typically 15%—on the “Acquisition Date.”¹⁸ This makes it more difficult for a bidder to make a tender offer for a package that includes both the common stock and the rights because those who hold rights certificates are no longer necessarily identical with the shareholders. Prior to the Acquisition Date, the rights are redeemable for a nominal amount.¹⁹

The board’s power to redeem the rights for a nominal amount generally terminates on the Acquisition Date.²⁰ This prevents a bidder that has taken a substantial position from waging a proxy fight to replace the board with new members, who will redeem the rights using the bidder’s newly acquired shares to win the contest.²¹

15 The implied annual growth rate for earnings required to achieve these valuations was 17.7%. HOULIHAN LOKEY HOWARD & ZUKIN, *supra* note 14, at 4.

16 By the terms of the rights agreement, the rights are initially represented by the common stock certificates, which contain a notation to this effect.

17 In some plans, the rights separate ten days after the date of first announcement that the bidder either acquires the triggering amount of shares or announces a tender offer that would result in such ownership. Wachtell, Lipton, Rosen & Katz, *supra* note 14, at 62.

18 A survey of rights plans adopted in 1998 found thresholds ranging from 10% to 35%, with a median of 15% and a mean of 16%. HOULIHAN LOKEY HOWARD & ZUKIN, *supra* note 14, at 2. In 1999, the triggers may have been somewhat lower. More than 75% of the firms adopting or amending rights plans in 1999 set the trigger at or below 15%, with two-thirds of all adopting firms selecting the 15% level. Pat McGurn, *Poison Pills: The Storm of 1999 Trickles into 2000*, INVESTOR REL. BUS., Mar. 20, 2000, at 16. The ISS Study shows that approximately 95 out of 115 plans used a 15% threshold, while approximately ten set the threshold at 10%. See ISS Study, *supra* note 1, at 4.

19 McGurn, *supra* note 18, at 16.

20 *Id.*

21 It does not prevent a bidder who has not yet reached the triggering amount from waging such a proxy fight, however, as AT&T did in its fight for control of NCR, and as Farley Industries did in its successful attempt to take over West Point-Pepperell, a fabric manufacturer. See CARNEY, *supra* note 4, at 253. This threat was the inspiration for the “dead hand” pill, which attempted to protect the tenure of incumbent directors who were not otherwise protected by provisions for a staggered board, re-

More importantly, at the Acquisition Date, the rights are no longer exercisable to acquire a preferred stock unit at an unrealistic price—it was never contemplated that the preferred stock rights would be exercised on their original terms.²² In the event the bidder acquires a specified substantial block and becomes an “Acquiring Person,” the rights “flip in” and become exercisable for the target’s common stock (the “flip-in”) at a discount, typically 50% of current market value.²³ The exercise price for the preferred becomes the exercise price for multiple shares of common stock. Thus, if the exercise price was \$100 per unit of preferred, the holder right now has the right to purchase common stock with a market value (pre-Acquisition Date) of \$200 for \$100.²⁴ The key to the operation of this plan is discrimination against the bidder—rights are void in the bidder’s hands.

removal only for cause, and prohibitions against board-packing. See Jeffrey N. Gordon, “Just Say Never?” *Poison Pills, Dead Hand Pills, and Shareholder-Adopted Bylaws: An Essay for Warren Buffet*, 19 CARDOZO L. REV. 511, 531–32 (1997).

22 The Internal Revenue Service has concluded that the probability of exercise of these rights is so remote that the distribution of the rights as a dividend does not constitute the distribution of stock or property to shareholders, and thus has no tax consequences. Shareholders do not realize any taxable income on the receipt of rights. Rev. Rul. 90-11, 1990-1 C.B. 10, 11.

23 Thus the holder of a right would obtain the right to purchase \$200 worth of target common stock at an exercise price of \$100. See LIPTON & STEINBERGER, *supra* note 14, at 6-62; Wachtell, Lipton, Rosen & Katz, *supra* note 14, at 62.

24 Because companies may lack sufficient authorized but unissued shares of common stock to honor the rights, some plans now provide for a flip-in to be exercisable in “common stock equivalents,” which are generally preferred share units with terms comparable to common stock. See, e.g., BRYAN, *supra* note 1, § 3-2 (describing the rights agreement of Bowen Companies, Inc.). The number of preferred units is increased, so the exercise obtains for the rights-holder a number of units equal to the number of shares of common stock that two times the exercise price could acquire. Because “blank check” preferred shares can be divided by the board into as many units as the board determines, and because these preferred units are the economic equivalent of the common stock, there is no limit to the number of shares that can be issued on exercise of the rights. See GILSON & BLACK, *supra* note 2, at 75–76 (§11(a) of the Rights Plan). Another solution provided by many rights plans is to allow the board to exchange the rights for one share of common stock. This avoids forcing shareholders to pay cash to exercise the rights. The difficulty, as we will show, is that the smaller number of dilutive shares issued reduces the dilution of the bidder’s investment. See *infra* Table 5. Finally, many rights plans provide that in the event the issuer lacks sufficient shares to honor all the rights, it will be obligated to pay rights-holders “damages”—the difference between the value of what they actually receive on exercise and the value of that to which they were entitled. To avoid insolvency issues, these obligations are generally conditioned on the availability of sufficient cash, and create a continuing obligation to pay cash as it becomes legally available for payment.

These rights have an important anti-destruction provision—a merger of the target into the bidder does not destroy the rights. Instead they “flip over” to become exercisable in the bidder’s common stock, on the same bargain basis as the flip-in rights—a 50% discount, using the same exercise price. Thus, the dilution of the bidder’s shareholders is identical, whether the flip-in or flip-over rights are triggered.²⁵

II. THE IMPACT OF A RIGHTS PLAN

A. *Introductory Problems*

We now examine how a rights plan would operate if triggered. We begin with a simple observation: a rights plan can only dilute the investment that a bidder has already made when it crosses the threshold that triggers the rights. If the threshold is 15%, that is the most that can be taken from a bidder through dilution, hardly enough to deter a determined bidder prepared to pay a premium for a target it perceives to be undervalued. Because most rights plans only provide a 50% discount from market price, they will not appropriate all of the bidder’s initial investment.

One of the difficulties in examining the operation of rights plans is that none have operated. In the 1980s, Sir James Goldsmith acquired a sufficient amount of the stock of Crown Zellerbach Corporation to make its flip-over rights non-redeemable, but did not engage in a self-dealing event, such as a takeout merger, that allowed exercise of the flip-over rights.²⁶ No flip-in plan has ever been deliberately triggered,²⁷ although the authors experienced a close call in one case, and there have been a few other apparently inadvertent triggering events.²⁸ Several uncertainties present themselves in assessing the im-

25 See *infra* Part II.B.7. Both the flip-in and flip-over rights have antidilution protection for rights holders of the type commonly found in convertible securities and options.

26 See CARNEY, *supra* note 4, at 264. The earliest rights plans lacked a flip-in feature; they only operated if the bidder engaged in a merger or other business combination with the target. *Id.*

27 See 1 ARTHUR FLEISCHER, JR. & ALEXANDER R. SUSSMAN, TAKEOVER DEFENSE § 5.02[A], at 5-18 to 5-19 (6th ed. 2002).

28 In our case, the investor that crossed the triggering threshold also failed to file a timely Schedule 13D, so there was no public announcement of the acquisition of the amount that would have made the investor an “Acquiring Person,” which allowed for a settlement. One issuer that experienced inadvertent triggering events is *Pediatrix Medical Group*. Michele Chandler, *Shareholder Nearly Triggers a Poison Pill at Ailing Pediatrix*, MIAMI HERALD, Sept. 21, 1999, at 3C; see also *Business Briefs*, CHARLOTTE OBSERVER, Mar. 29, 2000, available at 2000 WL 17761404 (Worldtex, Inc.); David Iva-

pact of a rights plan. If the rights plan flips in, will rights-holders exercise immediately or will they wait until immediately before expiration, as rational holders of conventional options would do? While shares should be valued on a fully diluted basis in efficient markets, uncertainty about the target's receipt of cash and its investment or disposition by the target could influence the market value of its stock after the flip-in, and thus the cost of acquisition. We discuss this issue in Parts II.B.2 and II.B.6.

Because of the lack of operational experience, several other questions cannot be answered definitively. What will a target do with proceeds received from the exercise of the rights? If rights are exercised, the target will receive cash representing a multiple of the aggregate market value of its current equity, and will be unlikely to have any massive positive net present value projects in which to invest. In essence, it will probably hold cash or equivalents. If the proceeds are simply held by the target, the bidder can recapture them upon obtaining 100% control. If they are distributed to other shareholders in a discriminatory manner, the bidder's dilution losses are increased. We explore this in Part II.B.6. Similarly, what if rights are not exercised immediately, but are only exercised after the bidder has increased its ownership beyond the minimum amount required to trigger the rights? The obvious answer is that the bidder has a larger investment subject to dilution, and thus larger losses. This is also explored in Part II.B.6.

B. *Calculating Bidder Dilution*

We begin our discussion of bidder dilution with a caution: it is only half the picture. Too often analysis stops with an observation that a hostile bidder's initial investment will be massively diluted by crossing the threshold that permits exercise of the flip-in rights. While this is true, it gives an incomplete picture of the costs imposed by a rights

novich, *BJ Services Swallows Poison Pill: Takeover Defense Set Off by Mistake*, HOUSTON CHRON., Jan. 7, 1994, at 1D (BJ Services); *News Digest*, RUBBER & PLASTICS NEWS, July 24, 2000, at 4 (Newcor Inc.); Al Stamborski, *Rawlings and 2 Investors Avoid Triggering Poison Pill*, ST. LOUIS POST DISPATCH, May 7, 1999, at C11 (Rawlings Sporting Goods Co. Inc.); Craig Woker, *Illinois Bank Sweeps Legal Doubleheader*, AM. BANKER, Mar. 3, 2000, at 5. Harold Simmons did trigger separation of a flip-in, flip-over plan of NL Industries in the 1980s by acquiring 20% of its shares, but the flip-in rights did not become exercisable until the occurrence of a business combination or the bidder's increase in its holdings by more than 1%. See *Amalgamated Sugar Co. v. NL Indus.*, 644 F. Supp. 1229, 1232 (S.D.N.Y. 1986). Newell Co. announced that it would swallow a poison pill of Wm. E. Wright Co., but there is no indication whether it was a flip-in pill. *Newell to Swallow "Poison Pill"*, CHI. TRIB., Oct. 21, 1985, § 4, at 3.

plan on a determined bidder; it is a static rather than a dynamic analysis. As we noted earlier, the typical rights plan's flip-in rights are triggered by a 15% acquisition. If a bidder's initial investment is totally destroyed by the exercise of the rights, the rights plan has added only 15% to the bidder's costs of a total acquisition. Dilution is never 100% because the bidder remains the owner of some diminished percentage of the outstanding shares, so the bidder's actual losses (added costs) will be somewhat less.²⁹

We begin our analysis by examining the operation of a typical preferred stock rights plan, with flip-in rights triggered at the 15% level, and with the rights exercisable at a 50% discount from market price. We assume that rights have been issued at an exercise price four times the current (pre-bid) market price of the common stock. We further assume immediate exercise of the rights, and receipt of the proceeds by the target. We will then show that triggering flip-in rights at the minimum ownership level is a dominant strategy, because triggering with the bidder owning larger amounts always puts more of the bidder's investment at risk—at least until unrealistically high levels of ownership are attained. Table 1 below sets out the assumptions in our examples:

TABLE 1. ASSUMPTIONS FOR A TYPICAL PREFERRED STOCK RIGHTS PLAN

1. Target shares outstanding:	1,000,000
2. Pre-bid market price per share:	\$10.00
3. Bidder's per share cost for the first 15%:	\$15.00 ³⁰
4. Expected takeover bid price per share:	\$15.00
5. Exercise price for preferred stock rights:	\$40.00
6. Assumed market value per share of target shares for calculating common stock acquisition price:	\$15.00
7. Flip-in trigger:	15%
8. Flip-in discount:	50%
9. Shares issuable per right if the market price is \$15 (\$80 / 15):	5.3333333

²⁹ It is impossible for a rights plan to destroy the bidder's entire investment because whatever the percentage, the bidder retains some shares in the target.

³⁰ This is a simplifying assumption; it is likely that the bidder's average cost per share for the first 15% will be less than \$15 per share. The differences in results are modest, however. See *infra* Part II.B.4.

1. The Operation of a Flip-In Rights Plan

We now assume that a bidder acquires the minimum amount of shares necessary to trigger the rights, so that shares now trade on a fully diluted basis. Because the bidder receives no rights and suffers dilution, its percentage ownership is severely diluted, from 15% to 2.7%. But, unlike prior examples, we assume that the bidder is determined, and that it then proceeds to acquire the remaining public shares at the takeover premium of 50% over the pre-bid value of the target.

Table 2 shows the bidder's costs of a complete acquisition using these assumptions:

TABLE 2. BIDDER'S COST OF ACQUISITION USING A MINIMUM PURCHASE WITH A PREFERRED STOCK RIGHTS PLAN

Bidder's initial acquisition of 150,000 shares at \$15.00:	\$2,250,000
Rights flip in at 5.333333 shares for 850,000 rights—	
Shares Outstanding:	
New shares	4,533,333.333
Original shares	1,000,000
Total shares	5,533,333.333
Proceeds of exercise (850,000 x \$40) =	\$34,000,000
Market's estimate target value:	\$49,000,000
Value per fully diluted share ($\$49,000,000 / 5,533,333$) =	\$8.855421
Value of bidder's 150,000 shares:	\$1,328,313
Bidder's dilution losses:	\$921,688
Bidder's costs for remaining shares ($5,383,333 \times \$8.855422$) =	\$47,671,688
Total Cost to Bidder:	\$49,921,688

If we assume that the proceeds from exercising the rights have been retained intact by the target, once the bidder has gained control it can capture the \$34,000,000 proceeds. This leaves a net cost of \$15,921,688. The dilution loss, \$921,688, represents 41% of the bidder's initial investment.³¹ Put another and more dynamic way, it represents 9.2% of the target's pre-bid value, or 6.1% of the bidder's original estimate of the cost of an acquisition, absent the rights plan. Premiums of this general magnitude are supported by studies of the

31 If the target immediately dividended the proceeds, before the bidder completed the acquisition, the bidder would receive a small portion (2.71%) of the \$34,000,000 dividend. This would amount to \$921,400, virtually eliminating the dilution of the bidder's investment (but not ownership percentage) previously suffered. See discussion *infra* Part II.B.6.

premiums added to the cost of acquisitions by the presence of rights plans.³²

The expected cost of a rights plan to a bidder is the bidder's cost per share times the number of shares held by the bidder, minus the post-issue (fully diluted) market value of the target's shares held by the bidder, which is a function of the market value of the entire company divided by the post-issue number of target shares. This can be expressed as equation (1):

$$L = ca - \frac{(mx + p)(a)}{x + d}$$

where L = bidder's loss through dilution; c = bidder's average pre-trigger cost per share; m = pre-trigger market price; a = bidder's share ownership at the time flip-in rights are triggered; x = shares outstanding before dilutive issuance; d = number of shares issued in dilutive distribution; p = proceeds from exercise of rights $(x-a)e$, and e = exercise price of rights.

Equation (1) expresses the obvious truth that the bidder's loss can be no more than the bidder's investment in the target (ma) at the time the rights become exercisable, ameliorated by the new value received upon exercise of the rights (p), and limited by the fact that the

32 According to a study of premiums obtained between 1992 and 1996, the presence of a rights plan increased premiums by almost 8% of firm value. GEORGESON S'HOLDER COMMUNICATIONS, INC., *MERGERS & ACQUISITIONS: POISON PILLS AND SHAREHOLDER VALUE 1992-1996*, at 1 (1997), available at <http://www.georgeson.com/pdf/M&Apoisonpill.pdf>. An earlier study found bid improvements of 14% for targets with pills that were subsequently taken over. OFFICE OF THE CHIEF ECONOMIST, SEC. AND EXCH. COMM'N, *THE EFFECTS OF POISON PILLS ON THE WEALTH OF TARGET SHAREHOLDERS* 41 (1986). This study examines early versions of rights plans in a small sample, given the date of the study. A Morgan Stanley study of deals between 1988 and 1995 reported gains to firms with pills of approximately 16%. Mark S. Porter, *Poison Pills Add Premium to Deal Pricing*, *MERGERS & ACQUISITIONS REP.*, Aug. 4, 1997, at 2; see also John C. Coates IV, *Empirical Evidence on Structural Takeover Defenses: Where Do We Stand?*, 54 U. MIAMI L. REV. 783, 794 n.44 (2000). Coates notes an update that produced similar results. *Id.* at 795 n.45 (citing Kenneth A. Bertsch, *Poison Pills*, in INVESTOR RESPONSIBILITY RESEARCH CENTER, *CORPORATE GOVERNANCE SERIES 1998 BACKGROUND REPORT E*, at 21 (June 25, 1998)); see also Comment & Schwert, *supra* note 1, at 30-31 (finding premium increases in this range). These percentage gains are higher than the dilution inflicted by our model. This may be a result of the issuance of more shares than our model suggests. A J.P. Morgan study of acquisitions since 1997 showed a median premium for firms with pills of 35.9% vs. 31.9% for firms without pills. Emily Thornton et al., *The Bids Sure Are Getting Hostile*, *BUS. WK. ONLINE*, Jan. 4, 2002, at http://www.businessweek.com/magazine/content/02_02/b2765083.htm. See *infra* Table 3 (demonstrating how increasing the number of shares issued can increase bidder dilution).

bidder will retain some percentage ownership in the firm absent issuance of an infinite number of new shares at a zero-exercise price.

2. The Effect on Other Shareholders

We pause here to discuss the incentives of rights holders to exercise. We can only speculate about the probabilities of immediate exercise of these rights, but we believe the probability is high. Typical stock options have an exercise price at or above the current market value of the stock when issued, and thus there is typically no incentive to exercise immediately, because the stock can be obtained in the market at a lower price at the time of option issuance. Further, rational holders will not exercise until the end of the option period, when they can determine whether exercise remains beneficial.

In contrast, there is no good economic reason for shareholders to delay the exercise of rights once triggered. Unlike conventional options, preferred stock poison pill rights are not rights to purchase a specified number of shares at a specified price. Virtually all of the preferred stock plans employ a formula for the flip-in rights: whatever the exercise price, it is the right to buy shares with a market value double the exercise price at the date the rights become exercisable in the target's common stock.³³ If the exercise price is \$40, the market value of shares to be purchased is \$80 as determined on date of exercisability. Thus, in contrast to conventional options, it is the number of shares, rather than the profit from exercise, that will vary with the price of the underlying common stock.

Because shareholders (other than the bidder) can gain immediately from the exercise of the flip-in rights, regardless of the stock's current price, and because the size of the profit on exercise will be

33 LIPTON & STEINBERGER, *supra* note 14, at H-23 (reprinting § 11(a)(ii) of the Rights Agreement). The 1999 rights plan of Mellon Bank contains the following language concerning the flip-in from the right to purchase a unit of preferred stock to the right to purchase common stock:

3.1 *Flip-in*. (a) In the event that prior to the Expiration Time a Flip-in Date shall occur, except as provided in this Section 3.1, each Right shall constitute the right to purchase from the Company, upon exercise thereof in accordance with the terms hereof (but subject to Section 5.10), that number of shares of Common Stock having an aggregate Market Price on the Stock Acquisition Date equal to twice the Exercise Price for an amount of cash equal to the Exercise Price (such right to be appropriately adjusted in order to protect the interests of the holders of Rights generally in the event that on or after such Stock Acquisition Date an event of a type analogous to any of the events described in Section 2.4(a) or (b) shall have occurred with respect to the Common Stock).

BRYAN, *supra* note 1, § 3-27.

constant, we assume immediate exercise in the examples below. This is particularly likely in the context of a hostile takeover battle, where arbitrageurs will want to be able either to tender shares to the bidder³⁴ or dispose of their shares (including those subject to flip-in rights) as soon as possible after a bid fails. This is a risk-free arbitrage opportunity, which should assure that a high percentage of rights are promptly exercised. On the other hand, individual shareholders may not be so quick to exercise flip-in rights because of transaction costs in raising funds to exercise, a reluctance (even short-term) to put so many eggs in one basket, or simple inertia.³⁵ Nevertheless, the dilutive effects remain similar regardless of the time of exercise.

Simply put, the profits from exercise are the pro rata share of the bidder's dilution losses, assuming all holders exercise. Thus, if the bidder's losses are \$921,688, this sum is divided among the 850,000 remaining shares to produce a gain from exercise of \$1.084 per share. This can be expressed as equation (2):

$$G = \frac{mx + p}{x + d} - e - \frac{(d)}{x - a} - (m - \frac{(mx + p)}{x + d})$$

In our example in Table 2, the \$40 exercise price produces 5.33 shares per right, at a cost of \$7.50 per share. On a fully diluted basis, the post-exercise shares are worth \$8.855422. The gains from exercise are $\$8.855422 - \$7.50 \times 5.33 = \$7.22$, minus the loss on the original \$15.00 share held, which is \$6.144578. Thus, the net gain is $\$7.22 - \$6.144578 = \$1.084339$. While this gain is not huge, the alternative for a shareholder who chooses to hold his rights and not exercise is a loss of \$6.144578 per share, so the difference between exercising and not exercising is \$7.2289—enough to make this an offer a shareholder cannot refuse. The shareholder who chooses not to exercise will be able to sell her rights for a price close to \$7.22, and avoid a commitment to invest more in the company.

3. The Impact on the Percentage of the Bid Premium

Our discussion thus far has not considered the reduction in the magnitude of the bid premium as a percentage of the target's fully diluted stock price. If, using the example in Table 2, the proceeds from the exercise of the rights are \$34,000,000, the total value of the target, excluding the takeover premium, will be approximately

34 Because the rights will not be exercisable by the bidder, the arbitrageurs can be expected to exercise and then tender all of the shares they own.

35 Because the rights are transferable after the Distribution Date, reluctant shareholders should be able to sell these rights in the market.

\$44,000,000. If the bidder persists in offering a premium of \$5 million for the entire company, the premium is now only approximately 11.3% of target value without a control premium. Whether this dramatic percentage reduction in the bid premium is sufficient to defeat a bid depends on whether the bidder can convince the remaining shareholders that the premium for the target's core business assets is still 50% over the pre-bid market price of the target, and that no premium will ever be paid for that portion of the target represented by the proceeds from exercise. In short, the cash received is worth just what it is (at best), and target management cannot be expected to use such huge amounts in positive net present value projects.

4. The Impact of a Creeping Tender Offer

We now introduce a second complication. We relax our assumption of a single price for the target's shares throughout a takeover. We have thus far assumed that the bidder paid the full takeover premium for all shares acquired, which maximizes the bidder's investment available for dilution. In most cases, the bidder will quietly acquire shares in the market in a "creeping tender offer," at a price the bidder hopes will not be influenced by any signal of an impending takeover. We assume, for purposes of our example, that the bidder is able to acquire 10% of the target's shares at a price uninfluenced by the signal, and that at this point the bidder files its Schedule 13D revealing its intent to take control, so that additional purchases will reflect the full takeover premium.³⁶ The effect of this is to reduce the bidder's initial investment below the amount stated in equations (1) and (2) and in Table 1, in our examples by \$500,000. This weakens the dilutive power of a rights plan.³⁷

5. Bidders' Dominant Strategies

Courts and commentators have mentioned the possibility that a rights plan could be defeated through a tender offer for a high minimum number of shares and rights, so that fewer rights would remain

³⁶ We ignore for our calculations the inhibiting effect of section 16(b) of the Securities Exchange Act, 15 U.S.C.A. § 78p(a)-(b) (West 1997 & Supp. 2003), providing that if a holder of more than 10% of a class of equity security engages in purchases and sales within six months, any profits inure to the target.

³⁷ Reducing the bidder's investment by \$500,000 would reduce the bidder's dilution losses to \$421,686.85, or 4.2% of the pre-bid market value of the target. The bidder's loss on its initial 100,000 shares is \$1.144579 per share (\$114,457.90), while its loss on the remaining 50,000 shares is \$6.144579 per share (\$307,228.95).

outstanding to create dilution.³⁸ At the same time, the bidder's investment that is subject to dilution is much larger, and it is this effect that dominates over a very broad range. Table 3 demonstrates this effect at very high levels of ownership—levels that are unrealistic goals for a hostile tender offer. In all other respects the assumptions of Table 1 continue to apply.

TABLE 3. BIDDER'S DILUTION WHEN SHARES ARE ISSUED AT HIGHER LEVELS OF BIDDER OWNERSHIP

Bidder's Percent Ownership	Bidder's Dilution Losses	Percent Investment Lost
20%	\$1,215,100	40.5%
30%	\$1,774,513	39.4%
40%	\$2,285,537	38.0%
50%	\$2,727,055	36.4%
85%	\$2,833,057	22.2%
90%	\$2,347,583	17.4%
95%	\$1,493,285	10.5%
97%	\$1,003,331	6.9%
98%	\$ 708,349	4.8%

In absolute dollar losses through dilution, the bidder would have to acquire 98% of all target shares in order to reduce dilution losses below those imposed by simply acquiring the minimum amount of 15% required to trigger the rights. The first lesson for bidders, then, is to minimize the investment made to trigger the rights. Courts that have viewed a high minimum ownership condition for a tender offer as a way around the rights have simply failed to do any calculations.³⁹

38 *Moran v. Household Int'l, Inc.*, 500 A.2d 1346, 1354 (Del. 1985) ("The evidence at trial also evidenced many methods around the Plan ranging from tendering with a condition that the Board redeem the Rights, tendering with a high minimum condition of shares and Rights . . ."); see also *Gelco Corp. v. Coniston Partners*, 652 F. Supp. 829, 849 (D. Minn. 1986) (citing *Moran*, 500 A.2d at 1354); Richard A. Booth, *The Problem with Federal Tender Offer Law*, 77 CAL. L. REV. 707, 729 (1989) ("Faced with such a poison pill, the bidder would need to acquire between 85% and 90% of the target's stock . . . to be completely assured of control of the company. . . a poison pill will not block a takeover if the bidder is willing to buy a large enough percentage of target shares."); Martin M. Cohen, Note, "*Poison Pills*" as a *Negotiating Tool: Seeking a Cease-Fire in the Corporate Takeover Wars*, 1987 COLUM. BUS. L. REV. 459, 464 n.21.

39 One judicial opinion contains a hint of a calculation. In *Amalgamated Sugar Co. v. NL Indus.*, 644 F. Supp. 1229, 1238 (S.D.N.Y. 1986), Judge Broderick suggested that it would take an unrealistically high percentage of ownership to avoid serious dilution—in the range of 95%.

6. Variations

Here we relax two assumptions in the model presented above that could affect our results. One involves issuer repurchases of shares with the proceeds of the exercise of rights so the bidder cannot recapture all of the proceeds. The second involves the development of a trading market in rights certificates so the bidder cannot effectively tender for shares with rights attached.

There is no reason to expect the target to have any positive net present value projects in which to invest the proceeds of the exercise of rights when received. The proceeds will be several times the current equity of the firm, because the exercise price has been set at a multiple of the value of the common stock at the record date. Any funds received can, in all likelihood, only be invested by the target in negative net present value projects. A prompt distribution to shareholders during a takeover seems more likely. Such a distribution would probably be discriminatory, excluding the bidder, in the form of a self-tender or market repurchases intended to drive the market price above the bid price.⁴⁰ Nevertheless, our previous calculations assumed that the proceeds added to the value of the target on a dollar-for-dollar basis. Distributions to shareholders, if made in the form of a *Unocal*-type selective stock repurchase,⁴¹ would increase the bidder's dilution losses by the bidder's pro rata share of the repurchase expenditure, post dilution, which, in the example given in Table 2, is 2.7%. Thus, if \$20,000,000 were spent on stock repurchases, this would add another \$542,168 to the bidder's cost of acquisition and dilution losses, as shown in Table 2. Total losses would then rise to \$1,463,856, representing 14.6% of the target's pre-bid value, or 9.7% of the bidder's estimate of the cost of acquisition absent a rights plan. If, in the most extreme case, the target employed the entire \$34,000,000 proceeds to repurchase shares, the bidder's losses in excess of Table 2 would rise to \$918,000. Total losses would rise to \$1,839,688, or 18.4% of the target's pre-bid value, or 12.3% of the bidder's anticipated cost absent a rights plan. While dramatic as a

40 In the 1980s, these distributions frequently emulated the strategies of financially motivated bidders' leveraged takeover bids. See, e.g., *Unitrin, Inc. v. Am. Gen. Corp.*, 651 A.2d 1361 (Del. 1995); *Revlon, Inc. v. MacAndrews & Forbes Holdings, Inc.*, 506 A.2d 173 (Del. 1986); *Unocal Corp. v. Mesa Petroleum Co.*, 493 A.2d 946 (Del. 1985); *City Capital Assocs. Ltd. v. Interco, Inc.*, 551 A.2d 787 (Del. Ch. 1988); *AC Acquisitions Corp. v. Anderson, Clayton & Co.*, 519 A.2d 103 (Del. Ch. 1986).

41 *Unocal*, 493 A.2d at 958 (approving a self-tender offer that excluded the bidder).

percentage of the bidder's original \$2.25 million investment (81.7%), this added cost is unlikely to be prohibitive in many acquisitions.

The second variation is more problematic for bidders. Our previous examples have assumed immediate exercise of the rights. But shareholders might not exercise immediately, even to obtain the certain wealth transfer achievable with exercise. Thus, the bidder's acquisition of the amount required to trigger exercise, 15% in our example, might not result in the prompt issuance of the additional shares shown in Table 2. If the bidder wishes to acquire control of the target by owning 50% plus one share, in the face of non-exercise of the rights, the amount the bidder places at risk of dilution increases, similar to the manner shown in Table 3, but with a larger number of rights subject to dilutive exercise.

If a bidder acquired shares in excess of the triggering amount, say enough to gain control (50% plus 1), dilution would increase. Equation (1) would be applied so that a would represent the amount held by the bidder at the time rights were exercised, rather than at the time they were triggered. If the bidder acquired 50% of the outstanding shares, the equation would read as follows:

$$L = \$7,500,000 - \frac{(49,000,000)(500,000)}{5,533,333} = \$4,427,711$$

While this would wipe out most of the \$5 million premium the bidder was prepared to pay, it seems unrealistic, because the bidder would decline to accept tendered shares unless accompanied by the rights, except at a discount representing their fully diluted value. One alternative for the bidder, once having acquired the triggering amount, is to acquire rights in the market for \$7.2289 and offer the fully diluted value of the shares, \$8.855421 for a total per share of \$16.084321. If the bidder acquires one right for each share acquired, the total cost of acquiring the remaining 85% of the shares is increased by \$921,672 ($\$1.084 \times 850,000$). Except for a \$16 rounding error, this is the same cost as shown in Table 2. To the extent the bidder cannot match rights with shares, expected costs to the bidder rise.

7. Post-Script: The Flip-Over Feature

Thus far we have focused exclusively on the impact of a rights plan on the first stage in a hostile takeover—the acquisition of a controlling interest but less than all of the shares of the target. The second stage—the “takeout merger”—is restricted by the “flip-over” feature of rights plans. This feature makes unexercised rights exercis-

able in the bidder's stock on the same bargain basis as the flip-in rights previously provided, and thus protects them from destruction through a merger or other business combination if the target disappears. Rights plans provide a fixed profit for the rights holder upon exercise. The analysis does not change in the event of a merger in which the rights flip over. Using our example in Table 1, the rights simply become exercisable for \$80 worth of bidder stock rather than target stock.

III. CAN RIGHTS PLANS BE MADE MORE EFFECTIVE?

We now explore possible alterations in preferred stock rights plans designed to give them more dilutive power. These changes have been employed in a number of rights plans, but again, no formal analysis has yet been offered. While some of these changes are marketed as making rights plans more powerful, all are limited by the size of the bidder's initial investment.

A. *Reducing the Exercise Price*

In this section, we show that dilution of the bidder can be doubled simply by reducing the exercise price from the conventional 50% of market value to zero. While a zero exercise price, equivalent to a discriminatory dividend, may create problems from a legal capital perspective, it demonstrates the limits of the typical rights plan. Because of the difficulties with a zero exercise price (in effect a discriminatory stock dividend), we show the impact on dilution of various exercise prices greater than zero. If the exercise price were zero, equation (1) would be modified by eliminating p , as follows:

$$L = ma - \frac{(mx)}{x+d} (a)$$

Table 4 shows increasing levels of dilution as the exercise price declines. It also demonstrates that even zero price plans have only a modest impact on the power of a rights plan to deter bidders.

TABLE 4. BIDDER'S DILUTION AT VARYING DISCOUNTS⁴²

Discount from Market Price	Bidder's Dilution Losses	Percent Investment Lost	Percent Added to Cost
50%	\$ 921,688	41%	6%
60%	\$1,106,024	49%	7%
70%	\$1,290,361	57%	9%
80%	\$1,474,699	66%	10%
90%	\$1,659,036	74%	11%
100%	\$1,843,373	82%	12%

Thus, in our minimum acquisition example, the bidder's losses through dilution are doubled as a percentage of the initial investment if the rights are exercisable at a 100% discount, compared to the dominant model.⁴³ This represents approximately 18% of the pre-bid value of the target—hardly an insuperable barrier to typical bids, where premia have averaged 50% or more in hostile bids.⁴⁴ While free shares are obviously the strongest deterrent, such large distributions would likely be treated as stock dividends, which would pose several legal problems. First, such a dividend would be discriminatory, and while there is precedent for discriminatory treatment of bidders,⁴⁵ each variation creates new uncertainties.⁴⁶ Second, in many jurisdictions, a stock dividend would require assignment of surplus,

42 The bidder's original estimated cost based on \$15 per share. The percentages are rounded.

43 Wachtell, Lipton, Rosen & Katz employ an example that reveals bidder dilution of 43.2%. The slight variation from the 41% shown above is a function of a 20% triggering threshold and a different relation between current market prices and the exercise price of the rights. Wachtell, Lipton, Rosen & Katz, *supra* note 14, at 64–65.

44 Kraakman, *supra* note 2, at 908.

45 See *Moran v. Household Int'l, Inc.*, 500 A.2d 1346 (Del. 1985) (discriminatory rights plan); *Unocal Corp. v. Mesa Petroleum Co.*, 493 A.2d 946 (Del. 1985) (discriminatory repurchase); *Seibert v. Gulton Indus., Inc.*, 1979 WL 2710 (Del. Ch. June 21, 1979) (discriminatory voting rules), *aff'd*, 414 A.2d 822 (Del. 1980).

46 Prior to amendments of the relevant statutes, a number of courts in jurisdictions other than Delaware had voided rights plans as discriminatory. See, e.g., *W. Point-Pepperell, Inc. v. Farley, Inc.*, 711 F. Supp. 1088 (N.D. Ga. 1988) (applying Georgia law); *Amalgamated Sugar Co. v. NL Indus., Inc.*, 644 F. Supp. 1229 (S.D.N.Y. 1986) (applying New Jersey law); *Minstar Acquiring Corp. v. AMF Inc.*, 621 F. Supp. 1252 (S.D.N.Y. 1985) (applying New Jersey law to a "poison put" rights plan); see also *Asarco Inc. v. Court*, 611 F. Supp. 468 (D.N.J. 1985) (voiding discriminatory voting plan under New Jersey law). Delaware has held that discriminatory stock issues are invalid under some circumstances. *Condec Corp. v. Lunkenheimer Co.*, 230 A.2d 769, 776 (Del. Ch. 1967). But see *Seibert v. Gulton Indus., Inc.*, 1979 WL 2710 (Del. Ch. June 21, 1979) (holding that discriminatory voting rules are not invalid), *aff'd*, 414 A.2d 822 (Del. 1980).

which may not be available in the huge amounts necessary for a dividend of this size.⁴⁷

The conclusion must be that rights exercisable at 50% of market value remove much of the power of a rights plan. The lower the exercise price, the greater the power of the rights plan. But rights plans with little or no exercise price are not generally observed. Even if they were, they could not take more than the bidder has invested.

B. Varying the Number of Shares Issuable Per Right

In this section we ask what happens if more or fewer shares are issuable per right. Typically this effect can be obtained by increasing the original exercise price as a percentage of the market value of target shares. We have calculated this plan's effects on a bidder's dilution at various levels, beginning with one share per right. This calculation has relevance because many rights plans permit the target (in the absence of sufficient authorized but unissued shares to fully honor the rights) to exchange the rights for one share per right. If, for example, rights are honored by the issuance of a single share per right for no consideration, the bidder's dilution loss is \$1,033,784, or 46% of its \$2,250,000 investment. Table 5 shows the bidder's losses through dilution at various levels of share issuance to the holders of the remaining 850,000 shares, assuming a purchase at 50% of market value. These calculations should be compared with the effective rate shown in previous examples, which was 5.333 shares per right, given the assumptions about market prices. All other assumptions remain unchanged from those used in Table 1.

47 To the extent that shares are distributed to shareholders without consideration, this will be treated as a dividend, payable in many jurisdictions only from surplus. See, e.g., DEL. CODE ANN. tit. 8, § 173 (2001); see also N.Y. STOCK EXCH., LISTED COMPANY MANUAL § 703.02(A) (1998) (requiring assignment of retained earnings equal to the market value of the shares to permanent capital). Accounting standards impose similar requirements. AMERICAN INSTITUTE OF ACCOUNTANTS, ACCOUNTING RESEARCH BULL. NO. 43, at 49-54 (1953).

TABLE 5. BIDDER'S DILUTION WITH VARYING LEVELS OF SHARES ISSUED PER RIGHT—SHARES ISSUED AT THRESHOLD TRIGGER LEVEL

Number of Shares Issued per Right	Bidder's Dilution Losses	Percent Investment Lost
4	\$ 579,545	25.8%
8	\$1,307,692	58.1%
10	\$1,476,316	65.6%
12	\$1,593,750	70.8%
16	\$1,746,575	77.6%
32	\$1,989,362	88.4%

Rights plans typically have a ten-year life, and many are not amended or updated during that term. But if the target's stock price rises during this period, it can seriously diminish the dilutive impact of the rights. The typical plan permits exercise at a price that is three to five times the current market price of the target's shares at the time of adoption. But if the market price of the target's shares doubles during the life of the rights, the exercise price may drop to two-times the current market value of the target's shares or less. Thus, using the numbers in Table 5, if the market price rises from \$10 to \$20, an exercise at \$40 produces four shares of common stock rather than the original eight, and significantly less dilution. Further, the bidder's dilution declines as a percentage of the total value of the target.

C. Raising the Flip-In Threshold

The increments to a bidder's cost added by a rights plan appear quite modest in our examples. Our polar examples, however, may have failed to capture some increases in these costs that are possible. What happens if the flip-in rights become exercisable at points in between 15% and 90% ownership? Table 3 contains some interim positions—flip-in rights set at thresholds of 20–50%—that demonstrate that meaningful dilution can be obtained by raising the threshold for the exercise of these rights.

The difficulty with a higher threshold for the exercise of flip-in rights is that it allows bidders to obtain a more substantial ownership position without fear of dilution. This can block a future negotiated transaction with a third party, as well as form a strong base for proxy fights.

One possible solution to this problem is to set the ownership level at one level for the separation of the rights from the common stock and the termination of the board's power to redeem, and at another level for triggering flip-in rights. Thus, rights could separate at the 15% level, and become exercisable in common stock at the 40% or

50% level.⁴⁸ A bidder would hesitate to move past the first threshold because the board's power to redeem the rights would terminate, and the bidder would be unable either to negotiate a friendly transaction or effect a change in the board that would allow redemption of the rights. There are several legal problems with this strategy that would preclude its effective use in some jurisdictions. If a hostile bidder moves through the first threshold, thus making the rights non-redeemable, the board may be locked into a position where it cannot redeem the rights or effectively negotiate with certain other bidders for the balance of the ten-year life of the rights plan. This was the essence of the rights plan of NL Industries (NLI) that was successfully challenged by Harold Simmons under New Jersey law.⁴⁹ Recent Delaware decisions concerning "dead hand" and "slow hand" rights plans that limit or preclude boards from redeeming rights also raise troubling questions about the viability of this strategy to the extent that it prevents a board from redeeming rights.⁵⁰

D. Common Stock Rights Plans

As Table 5 demonstrated, if the exercise price is fixed in advance, increases in market value of shares will erode the number of dilutive shares that can be issued. In order to cure this problem, one could abandon the conventional preferred stock rights plan as unduly complex and as contributing nothing to the dilutive effect of rights, and simply issue rights to purchase common stock. To ensure continuing dilutive power, in the following example we simply specify the number of common shares per right that can be purchased, and specify a percentage discount from the market price of the shares as the exercise price. We eliminate the unnecessary step of having rights first exercis-

48 See, e.g., Charles M. Yablon, *Poison Pills and Litigation Uncertainty*, 1989 DUKE L.J. 54, 60 n.26 (describing rights plan of Federated Department Stores, which provides that rights separate when an Acquiring Person owns 20%, and the flip-in becomes exercisable when the Acquiring Person acquires 50% or more of Federated's stock).

49 *Amalgamated Sugar Co.*, 644 F. Supp. at 1232, 1238. Here, the rights separated and became non-redeemable at the 20% level and exercisable at the 21% level. The court condemned this structure: "In structuring the rights plan, the board of directors, advisedly or otherwise, abdicated future control or responsibility with respect to tender offers by simply making them impossible." *Id.* at 1239.

50 See *Quickturn Design Sys., Inc. v. Shapiro*, 721 A.2d 1281, 1291 (Del. 1998) (rejecting a "slow hand" rights plan that precluded redemption by a newly elected board for six months on the ground that Delaware law did not permit limitations on directors' power except in the charter); see also *Carmody v. Toll Bros., Inc.*, 723 A.2d 1180 (Del. Ch. 1998) (invalidating a "dead hand" rights plan that completely precluded a newly elected board from redeeming the rights on similar grounds).

able in preferred stock and simply provide the right to purchase common stock.

For purposes of our illustration we use ten shares of common stock per right. Additionally, we use an exercise price of 20% of market value. In our calculations below we use a market price of \$15.00 when the rights become exercisable, which leads to an exercise price of \$3.00 per share, for proceeds of \$30.⁵¹

To be absolutely certain that no bidder seeks to reduce the impact of dilution by acquiring virtually all shares, we employ a formula that increases the number of shares to be purchased (N) as the bidder acquires greater amounts of the target stock. This is shown in equation (4):

$$N = \frac{r x}{x - a}$$

Where r = the number of target shares for which a right is initially exercisable.

This formula increases the total dilution the bidder suffers in the unlikely event of a maximum purchase (increases in dilution over the preferred stock plan are modest for minimum acquisitions at lower percentages). For example, if the rights are initially exercisable to purchase 10 shares, once the bidder owns 15% of the target's shares, the plan would provide that each right is exercisable for:

$$R = 10 \left(\frac{1,000,000}{1,000,000 - 150,000} \right) = 11.764 \text{ shares per right}$$

Use of this formula has the effect of increasing the number of shares that can be purchased by the remaining public shareholders as the bidder's ownership increases. This formula holds the number of shares to be issued for the rights constant regardless of the bidder's percentage of ownership. Because, in our example, the rights would be based on the issuance of ten times as many shares as are currently outstanding, exercise of the rights would always put the bidder back below 10% on a fully diluted basis. In our example, the rights would always be exercisable for 10,000,000 shares, regardless of the number of rights outstanding in the hands of the public shareholders. This can be demonstrated by assuming acquisition of 95% of all shares by the bidder:

51 The rights exercise price would be set once the rights are exercisable, and the target would announce the exercise price when the rights separate and rights certificates are issued.

$$R = 10 \left(\frac{1,000,000}{1,000,000 - 950,000} \right) = 200 \text{ shares per right}$$

With 11,000,000 fully diluted shares outstanding, the bidder's ownership is reduced to 8.6%. In effect, the bidder would have to restart its acquisition effort virtually from the beginning. Because this is well below the triggering threshold of most rights plans, it would be possible for a target to adopt a second rights plan, although we caution in Part IV.D about the legal difficulties that attempts to adopt a second rights plan might encounter.

IV. WHY HAVE RIGHTS PLANS SURVIVED UNSCATHED?

We recognize that this is an “emperor has no clothes” story. No bidder, no matter how determined, has challenged a rights plan by simply going ahead with an acquisition, acquiring the triggering amount of shares, and “swallowing” the pill. If our analysis is correct, how can determined bidders have ignored the relatively modest costs of a rights plan? We argue that the widespread employment of poison pills did not reduce acquisition activity, but merely directed bidders to employ substitutes for the hostile cash tender offer. These substitutes include bidding for other more vulnerable targets, coupling tender offers with proxy fights where boards are not staggered, and negotiating acceptable terms (including side payments to target managers) rather than initiating hostile cash tender offers. But the hostile cash tender offer remained as an ultimate threat. Next, shifts in relative prices of assets—from a market with what seemed in the 1980s to be relatively low stock prices to a market in the 1990s that many believe was overpriced—may have changed bidders' willingness to engage in high-cost, high-premium cash bids, and pushed many bidders toward stock exchanges and stock-for-stock mergers. This was accompanied by changes in corporate governance that reduced target management resistance to attractive bids. We hesitate to make a “market failure” argument, although we will outline it below with skepticism. We give more credence to what John Coates has called the “shadow pill” argument—that all transactions for control occur in light of the possibility that a board could swiftly adopt a rights plan, or a second or third such plan, in the face of a determined bidder.⁵²

52 Coates, *supra* note 4, at 286.

A. *The Substitution Argument*

The advent of the poison pill and its widespread adoption did not stop all acquisition activity, even though a strong set of takeover defenses might give a target board the power to “just say no.” Major drops in acquisition activity seem to coincide with the market fall of 1988, the credit crunch of the late 1980s and early 1990s,⁵³ and the market drop of 2001. Table 6 summarizes overall acquisition activity and tender offer activity.

TABLE 6. ACQUISITION & TENDER OFFER ACTIVITY, 1984–2002

Year	All Deals	Value (billions) ⁵⁴	Tender Offers ⁵⁵	Hostile Tender Offers	Success Rate
1984	2255	\$ 152.3	79	18	56%
1985	1728	\$ 148.4	84	32	44%
1986	2521	\$ 220.1	150	40	38%
1987	2513	\$ 194.8	116	31	58%
1988	3008	\$ 271.5	217	46	59%
1989	3798	\$ 311.0	132	28	77%
1990	4287	\$ 200.4	56	8	38%
1991	3513	\$ 138.3	20	2	100%
1992	3678	\$ 124.8	18	2	50%
1993	3930	\$ 168.7	32	3	67%
1994	5301	\$ 282.8	70	10	60%
1995	6712	\$ 390.5	85	11	55%
1996	7839	\$ 570.4	166	8	25%
1997	9115	\$ 782.8	160	14	36%
1998	10,806	\$1,373.3	179	22	59%
1999	9608	\$1,433.7	204	16	50%
2000	9293	\$1,792.2	184	14	50%
2001	6499	\$1,148.4	106	7	57%
2002	5488	\$ 612.6	12	65	20%

It should be obvious that there is no positive correlation between the presence of poison pills and acquisition activity. By 1986 there were 380 pill adoptions, with 300 of them in 1986, after the *Moran*

53 See Comment & Schwert, *supra* note 1, at 8–10 (describing the decline in junk bond financing).

54 See *1993 M&A Profile*, MERGERS & ACQUISITIONS, May–June 1994, at 48; see also *M&A Almanac*, MERGERS & ACQUISITIONS, Feb. 2002, at 13, 15. These numbers differ somewhat from those provided by Mergerstat. See Mergerstat, *Mergerstat Free Reports: M&A Activity*, at http://www.mergerstat.com/new/free_reports_m_and_a_activity.asp (last visited Aug. 23, 2003).

55 *Tender Offers*, 2002 MERGERSTAT REV. 39, 39; *Tender Offers*, 1996 MERGERSTAT REV. 38, 38; *Tender Offers*, 1989 MERGERSTAT REV. 74, 74. The success rate refers to contested tender offers.

decision.⁵⁶ By 1989 the number had exceeded 800,⁵⁷ and by 1991 there were approximately 1600 adoptions, including 35% of all NYSE and AMEX firms.⁵⁸ We have previously noted that the current number is between 2600 and 3000.⁵⁹ While hostile tender offers dropped precipitously in 1990 and remained at levels well below the 1980s, acquisition activity was generally influenced by other factors.⁶⁰ The so-called high water mark of 1989 (at least in dollar volume) was exceeded in every year after 1994, and was more than quadrupled ten years later in 1999.⁶¹ There appears to be little if any impact of pills on success rates in hostile bids, either: the success rate for 1984–1990 was 52.9%, while the success rate for 1991–2002 was 52.4%.⁶² Comment and Schwert have addressed the deterrence question more broadly, and concluded that the evidence does not support the hypothesis that the decline in takeover activity was caused by a combination of state antitakeover statutes and poison pills.⁶³ They note, as others have, that the negative stock price reactions to announcements of adoption of rights plans have been trivial.⁶⁴

While some attribute the decline in takeover activity to the Delaware Supreme Court's decision validating pills⁶⁵ and its later decision allowing boards to "just say no" if they believed the company was worth more than an otherwise attractive bid,⁶⁶ others attribute it to an economic slowdown, the collapse of the junk bond market, and the credit crunch following the Savings & Loan crisis.⁶⁷ Table 6 makes it

56 Michael Ryngaert, *The Effect of Poison Pill Securities on Shareholder Wealth*, 20 J. FIN. ECON. 377, 386–87 (1988).

57 Blaine V. Fogg et al., *Poison Pill Update*, in 1 HOSTILE BATTLES FOR CORPORATE CONTROL 617, 619 (Dennis J. Block & Harvey L. Pitts eds., 1989).

58 John M. Bizjak & Christopher J. Marquette, *Are Shareholder Proposals All Bark and No Bite? Evidence from Shareholder Resolutions to Rescind Poison Pills*, 33 J. FIN. & QUANTITATIVE ANALYSIS 499, 502 (1998).

59 See *supra* text accompanying note 1.

60 See *supra* notes 53–59 and accompanying text.

61 See *supra* Table 6.

62 See *supra* Table 6.

63 Comment & Schwert, *supra* note 1, at 5–6, 37–38.

64 *Id.* at 7–8, 37–38.

65 See authorities cited *supra* note 6; *Moran v. Household Int'l, Inc.*, 500 A.2d 1346, 1357 (Del. 1985). Because only about half of all publicly traded corporations are incorporated in Delaware, changes in Delaware law could explain no more than that percentage of any decline, assuming that change was the only causal factor. See Del. Dep't of State, *Delaware Division of Corporations*, at <http://www.state.de.us/corp/default.shtml> (last visited Oct. 21, 2003).

66 *Paramount Communications, Inc. v. Time Inc.*, 571 A.2d 1140, 1150 n.12, 1152 (Del. 1989).

67 Kahan & Rock, *supra* note 2, at 879.

clear that the decline in the total value of acquisition activity coincided with a recession in the early 1990s. Indeed, the decline in the number of deals did not occur until 1991, and was only off 18% from the 1990 high. By 1994, the number of deals had eclipsed the 1980s' best years, and the total value of deals had more than recovered by 1995. The evidence seems to strongly support the explanation that market changes explained takeover activity declines.

Georgeson's 1996 study of premia obtained with and without pills found 105 targets with a poison pill that were acquired.⁶⁸ Further, targets with poison pills had a larger proportion of hostile bids than those without pills.⁶⁹ Even more interesting, the presence of a poison pill did not reduce bid completion rates.⁷⁰ Table 6 shows that there were five hostile bids in 2002. We have been able to identify only four tender offers in 2002 that qualified as hostile, of which all four targets had poison pills in place. Two of the bidders acquired the targets,⁷¹ in one case the target agreed to merge with a white knight,⁷² and in the fourth the bidder and a white knight combined some of their properties with those of the target in a new entity.⁷³ On June 5, 2003, Oracle Corp. began a hostile tender offer for PeopleSoft Inc., which has a rights plan in place.⁷⁴ All of this suggests that rights plans are not the deal killers that commentators have thought they were.

What, then, explains the reduction in cash tender offers? First, during the 1980s, when many acquisitions were apparently driven by financial restructuring motives, bidders found substitutes for any target with burdensome takeover defenses, because not all targets were

68 GEORGESON S'HOLDERS COMMUNICATIONS, INC., *supra* note 32, at 2.

69 *Id.*

70 *Id.*

71 Mentor Graphics acquired IKOS Systems, Inc. and CGI Group, Inc. acquired Cognicase, Inc. See Thomas Hoffman, *Merger Wave Hits Energy IT Vendors*, COMPUTERWORLD, Feb. 17, 2003, available at <http://www.computerworld.com/industrytopics/energy/story/0,10801,78604,00.html>; Press Release, Mentor Graphics, Mentor Graphics and IKOS Systems Sign Merger Agreement (Mar. 12, 2002), available at http://www.mentor.com/press_releases/mar02/mentor_ikos_pr.html.

72 Shaner Hotel Group Limited Partnership abandoned its bid after Interstate Hotels Corporation agreed to be acquired by MeriStar Hotels & Resorts Inc. *Shaner Hotel Group's Tender for Interstate Hotels Expires*, HOTEL NEWS RESOURCE, June 3, 2002, available at <http://www.hotelnewsresource.com/article983.html>.

73 Fording Inc. was combined with Teck Cominco Limited, Westshore Terminals Income Fund and Sherritt Coal Partnership II in February 2003, after a bid first announced on October 21, 2002. See Press Release, Teck Cominco Ltd., Fording Completes Transactions: Creates Fording Canadian Coal Trust (Feb. 28, 2003), available at <http://www.teckcominco.com/news/03-archive/03-05-tc.htm>.

74 Mylene Mangalindan et al., *Software Assault: Oracle's Bid for PeopleSoft Offers Possible Taste of Future*, WALL ST. J., June 9, 2003, at A1.

so armed and cash tender offers for unprotected targets were cheaper and easier.⁷⁵ In an era of financial motivations for acquisitions, many targets possessed a sufficiently general set of attractive characteristics so that there were likely to be numerous substitutes for many bidders.

Second, where particular targets offered specific benefits, such as operating synergies, to particular bidders, tender offers coupled with proxy fights to replace boards with directors willing to redeem rights apparently offered a lower cost substitute at companies where boards were not staggered and otherwise effectively protected.⁷⁶ The power of this approach was demonstrated by the shift to dead hand poison pills as substitutes for staggered boards.⁷⁷

Third, if many initially hostile takeover bids ultimately become negotiated transactions, the pill's added costs for bidders may simply be reflected in acquisition premiums or termination payments to target managers to obtain their consent to the transaction.⁷⁸ Evidence supports the conclusion that the presence of pills has raised takeover premiums, but we are unaware of any studies that show increased gains to managers of firms with pills.⁷⁹ Comment and Schwert have shown that in the period 1983–1990, 19.4% of firms adopting pills were put in play within one year of the adoption date—hardly a sign of powerful deterrence.⁸⁰

75 *But see* Coates, *supra* note 4, at 286–91 (arguing that the potential for quick adoption of a rights plan—the “shadow pill”—deters bidders as effectively as a previously adopted pill).

76 *See, e.g.,* Bebchuk et al., *supra* note 2, at 914, 950 (noting that this was not a realistic option at targets that had “effective” staggered boards).

77 *See generally* *Invacare Corp. v. Healthdyne Techs., Inc.*, 968 F. Supp. 1578, 1580–81 (N.D. Ga. 1997) (upholding a “continuing director provision” of a poison pill plan); *Quickturn Design Sys., Inc. v. Shapiro*, 721 A.2d 1281, 1291 (Del. 1998) (rejecting a “slow hand” rights plan that precluded redemption by a newly elected board for six months on the ground that Delaware law did not permit limitations on directors’ power except in the charter); *Carmody v. Toll Bros., Inc.*, 723 A.2d 1180, 1189–95 (Del. Ch. 1998) (invalidating a “dead hand” rights plan that completely precluded a newly elected board from redeeming the rights on similar grounds); *Bank of N.Y. Co. v. Irving Bank Corp.*, 528 N.Y.S.2d 482, 485–86 (N.Y. Sup. Ct. 1988) (invalidating a rights clause limiting the ability of future board members to redeem rights).

78 *See* Henry G. Manne, *Mergers and the Market for Corporate Control*, 73 J. POL. ECON. 110, 117–18 (1965) (anticipating the use of “side payments” to secure the consent of incumbent managers).

79 *See supra* note 32 for studies showing additional takeover premia from 8% to 16% when targets have pills in place.

80 Comment & Schwert, *supra* note 1, at 22–23.

B. Market Changes

Here we argue that relative prices of assets at least partly explain the reduced numbers of hostile cash tender offers during an era of expanding acquisition activity in the 1990s. We do not propose to recite the entire history of takeovers in the 1980s, when poison pills were developed. We note only that it was an era when enormous profits from takeovers—whether hostile cash bids or leveraged buyouts (LBOs)—were possible.⁸¹ Gains to target shareholders provide part of the evidence of these opportunities.⁸² The other side showed remarkable gains to early LBO buyers who identified underperforming companies, bought them and restructured them.⁸³

While there is evidence that, on average, bidders did not do so well during the 1980s⁸⁴ (earning either normal or slightly below normal returns on their investments in targets), averages sometimes mask

81 During the 1980s, leveraged buyouts produced premiums for pre-buyout investors of 40–50%. See generally Krishna G. Palepu, *Consequences of Leveraged Buyouts*, 27 J. FIN. ECON. 247, 248 (1990) (“Research shows that pre-buyout investors reap substantial wealth gains from LBOs . . . [f]or 76 management buyouts completed in the period 1980–1986, pre-buy-out equity holders earn a median premium of 42% over the equity value two months before the buyout.”) (citations omitted).

82 See generally Gregg A. Jarrell et al., *The Market for Corporate Control: The Empirical Evidence Since 1980*, J. ECON. PERSP., Winter 1988, at 49, 51–52 (citing several studies concluding that from 1981 to 1986, premiums paid to shareholders in change-of-control transactions totaled \$118.4 billion, with estimates of average positive returns at 19% in the 1960s, between 27% and 30% in the 1970s, and between 21% and 53.2% in the early 1980s); Michael C. Jensen, *The Takeover Controversy: Analysis and Evidence*, in KNIGHTS, RAIDERS, AND TARGETS: THE IMPACT OF THE HOSTILE TAKEOVER 314, 315 (John C. Coffee, Jr. et al. eds., 1988) (estimating shareholder gains from mergers and acquisitions at \$40 billion between 1981 and 1985); Press Release, Sec. & Exch. Comm’n., Grundfest Study Shows Takeovers Sharply Increase Shareholder Wealth (Sept. 29, 1987) (on file with author) (reporting that Grundfest study found total shareholder gains of \$167 billion between 1981 and 1986). A recent study found average premiums around 35% for both cash transactions and stock mergers. Lawrence Hamermesh, *Premiums in Stock for Stock Mergers and Some Consequences for the Law of Director Fiduciary Duties*, 152 U. PA. L. REV. (forthcoming 2004).

83 Gains to buyers apparently came from improved post-buyout profitability. See Palepu, *supra* note 81, at 249. The underlying theory was provided by Henry G. Manne, *supra* note 78, at 113. One detailed account of how these gains were achieved appears in Joel M. Stern et al., *The EVA Financial Management System*, 8, No. 2 BANK OF AM. J. APPLIED CORP. FIN., Summer 1995, at 32. The gains in the LBO of Safeway were reported to have been more than \$5 billion on an equity investment of \$130 million, while KKR’s investors in the buyout of Beatrice Foods were estimated to have earned a 43% return on their investments. Tony Ablum & Mary Beth Burgis, *Leveraged Buyouts: The Ever Changing Landscape*, 13 DEPAUL BUS. L.J. 109, 113–14 (2000).

84 See generally Bernard S. Black, *Bidder Overpayment in Takeovers*, 41 STAN. L. REV. 597, 602, 637–38 (1989).

high profits for the innovators because imitators compete these profits away in later transactions. Large profits were available for some buyers, and some of these transactions were driven by gains from improved management and financial restructuring—gains available to a wide range of potential buyers.⁸⁵

It is, however, indisputable that hostile tender offer activity declined after 1989. The prevalence of rights plans is suspect as an explanation when one considers that the success rate on hostile bids was at an all-time high in 1989, as shown in Table 6. As stock market prices rose dramatically during the 1990s, cash tender offers and LBOs became a much smaller portion of the mergers and acquisition picture and were replaced by negotiated mergers.⁸⁶ Asset prices had risen to the point where cash purchases seemed too costly for many bidders, who may have preferred to use their own highly valued stock as the medium of exchange.⁸⁷ Further, the Delaware courts favored stock “mergers of equals” over alternatives by according target management greater discretion in selecting a favored partner.⁸⁸ Mergers are necessarily negotiated transactions where rights plans, which depend on outright ownership of target company shares by a bidder, play no role except to the extent that the redemption of rights is a condition of the agreement. Subramanian argues that negotiated transactions were facilitated in the 1990s by the widespread use of golden parachutes, and by the fact that target managers’ stock options were often deep in the money and would vest on a change in control.⁸⁹ In some cases, mergers for synergies were risky, and buyers could share the risk with sellers by using stock rather than cash. Finally, mergers are more tax efficient for target shareholders, which may explain some of the reduction in premiums observed in the past

85 The story of declining returns to LBOs over time is recounted in Stern et al., *supra* note 83.

86 The Dow Jones Industrial Average opened 1990 at 2810.15, and closed 1999 at 11,497.12. Dow Jones & Co., *Dow Jones Averages*, at <http://www.djindexes.com/jsp/industrialaverages.jsp?sideMenu=true.html> (last visited Sept. 3, 2003).

87 See Guhan Subramanian, *The Drivers of Market Efficiency in Revlon Transactions*, 29 J. CORP. L. (forthcoming 2003) (manuscript at n.25) (providing examples of acquisitions using what in hindsight appears to have been over-valued stock).

88 See *Paramount Communications, Inc. v. Time Inc.*, 571 A.2d 1140, 1153–54 (Del. 1989). But see William T. Allen et al., *Function Over Form: A Reassessment of Standards of Review in Delaware Corporation Law*, 56 BUS. LAW. 1287, 1291 & n.11 (2001) (criticizing *Paramount* opinion for giving “inadequate guidance to corporate lawyers”).

89 Subramanian, *supra* note 87.

when compared to cash tender offers.⁹⁰ As stock prices rose in the 1990s the burden of taxes on capital gains became relatively greater, making tax-free reorganizations relatively more attractive than cash bids.

Some commentators have suggested that corporate governance changes have also played a role in the reduction of management's resistance to bids, and thus, the reduction in hostile tender offers.⁹¹ These changes include increases in the number and independence of outside directors.⁹² Compensation of executives has changed over the past decade—with increasing portions of compensation composed of stock and stock options, both of which align managers' incentives with those of stockholders and tend to reduce resistance to bids.⁹³ With rising stock prices putting more options "in the money" and widespread use of golden parachute severance agreements, managers had increased incentives to agree to sales of their companies. None of these forces are related to the prevalence of rights plans in the 1990s.

C. *The Market Failure Argument*

We are loathe to make general claims of market failure in the market for corporate control. There is the possibility that no pills were swallowed because most legal advisers have regarded the rights plan as an impregnable defense when coupled with a staggered board. We have previously cited the legal literature about rights plans that generally describes them as deal killers.⁹⁴ There is almost no legal literature that acknowledges that rights plans are anything less.⁹⁵ While lawyers developed rights plans, and presumably those who de-

90 Compare Michael C. Jensen & Richard S. Ruback, *The Market for Corporate Control: The Scientific Evidence*, 11 J. FIN. ECON. 5, 10–14 (1983) (stating that returns to target shareholders in tender offers averaged 29.1%, while returns to target shareholders in mergers averaged 15.9%), with Hamermesh, *supra* note 82 (finding equivalent premiums in cash and stock mergers).

91 Kahan & Rock, *supra* note 2, at 881–84.

92 *Id.*

93 *Id.* at 884; see also Ralph A. Walkling & Michael S. Long, *Agency Theory, Managerial Welfare and Takeover Bid Resistance*, 15 RAND J. ECON. 54, 60–61 (1984) (finding that executives who do not contest offers stand to gain from two to six times as much as executives who oppose offers).

94 See *supra* notes 2, 6.

95 But see I FLEISCHER & SUSSMAN, *supra* note 27, at 5-17 ("What the pill achieves . . . is a meaningful degree of economic deterrence."); Velasco, *supra* note 2, at 868 ("The antidote proposed in this Article would allow the acquirer to anticipate the dilution of the poison pill and account for it in the initial bid. By doing so, it would allow the acquirer to trigger the poison pill without ingesting its economic poison.").

veloped them understand them, the lawyers appear reticent about the plans' limits—not a surprising position for those who have developed profit centers for their law firms. Whether other lawyers understand the limits of rights plans is less obvious. Indeed, the widespread acceptance of the “deal killer” story suggests that most lawyers, and perhaps especially academic lawyers who write much of the commentary, have not done the relatively simple arithmetic contained in this Article.

Whether investment bankers suffer from the same disabilities is much more problematic. The calculations necessary to determine the costs of swallowing a pill are well within the competence of every young analyst at every investment banking firm that advises bidders. But are these calculations as obvious when faced with a forty-page, single-spaced product of the best lawyers? Few documents are as impenetrable as a rights plan, with its elaborate definitions (often buried within the text) and its antidilution and antidestruction provisions, much less its extraneous matter, such as rights to purchase preferred stock that will never be exercised. Do the lawyers' onslaughts of boilerplate put off the analysts who work primarily with financial calculators? While this is a possibility, especially in the face of highly confident takeover defense lawyers who assert the invulnerability of these plans, we have difficulty making a very strong argument along these lines.

One piece of evidence of failure in the market for information about rights plans comes from the resources spent opposing them. TIAA-CREF has waged a four-year war against “dead hand” pills—pills that cannot be redeemed by a board elected through a bidder's successful proxy fight.⁹⁶ Since 1998, fifty-seven companies have yielded to TIAA-CREF's demand to remove dead hand pills. The most recent company to come under pressure from TIAA-CREF in the 2002 proxy season was PRG-Schultz International, Inc.⁹⁷

The latest target of corporate governance activists is Aetna, and the attackers are the California Public Employees' Retirement System (CALPERS) and Providence Capital, Inc., a New York investment bank under the leadership of Herbert Denton.⁹⁸ Both want Aetna to allow their shareholders to vote on whether to implement a poison

96 Ron Orol, *TIAA's Iron Fist on 'Dead-Hand,'* THE DEAL.COM, May 8, 2002, at <http://www.thedeal.com/NASApp/cs/Con. . ./PrinterFriendly&ArtID=102072604370> (last visited Nov. 21, 2003).

97 *Id.*

98 Ron Orol, *CALPERS Wants Aetna to Change Governance Measures,* THE DEAL.COM, Apr. 2, 2002, at <http://www.thedeal.com/NASApp/cs/Con. . ./StandardArticle&c=TDDArticle&cid=10176724837> (last visited Nov. 21, 2003).

pill. Most recently, Denton and Providence were successful in persuading the boards of Alaska Air and Great Lakes Chemical to remove their poison pills after threatening proxy fights for positions on the board.⁹⁹ Great Lakes' board succumbed only after shareholders at the 1999 and 2000 annual meetings opposed poison pills in non-binding votes.¹⁰⁰ Denton has a new and more controversial approach to the battle over pills: he has asked several fund managers to support a bylaw proposal that would bar directors from running for re-election if they refuse to remove poison pills after shareholders vote to eliminate them.¹⁰¹

All this maneuvering is costly for both sides. Proxy battles consume considerable resources, and Denton's request for financial contributions to a proposed \$1 million war chest is the best evidence of these costs.¹⁰² Is it worth it? Or is this a tempest in a teapot? Do the opponents really understand the device they are criticizing? The increase in sale proceeds where targets have adopted rights plans is convincing evidence that bidders do understand them. These premia are reported to range between 8% and 16%, which is consistent with our model.¹⁰³

D. *The "Shadow Pill" Argument*

We begin with the obvious question: if a bidder is willing to suffer the dilution costs of a single rights plan on its way to a complete acquisition, why cannot a target simply adopt a new rights plan each time one set of rights is exhausted? John Coates has called the possibility of quick adoption of a rights plan by any firm the "shadow pill."¹⁰⁴ But there are problems with Coates' analysis when it is extended to the repeated adoption of rights plans in the face of a determined bidder.

The shadow pill must be adopted with the formality of the original pill, which requires a board to consider once again any threats currently posed, most importantly the inadequacy of the bid, and perhaps to obtain a new valuation opinion from investment bankers which may in some cases require a higher valuation than the banker had previously given—an embarrassment, if not a fatal flaw, in the

99 *Id.*

100 *Providence Announces Shareholder Victory at Great Lakes Chemical*, PR NEWSWIRE, Feb. 13, 2002, available at LEXIS, Wire Service Stories File.

101 Charles Sisk, *Poison Pills May Be Deadly for Directors*, THE DEAL.COM, Oct. 11, 2001, at <http://208.185.43.170/NASApp/cs/Cont.../StandardArticle&c=TDDArticle&cid=100386515991> (last visited Nov. 21, 2003).

102 *Id.*

103 See *supra* note 32 and accompanying text.

104 Coates, *supra* note 4, at 277.

processes surrounding adoption.¹⁰⁵ In the meantime, a determined bidder may be in a position to engage in a “street sweep,” in which it purchases a controlling interest in the target through arbitrageurs—a process that may be completed in a single day.¹⁰⁶ The likelihood that this will be feasible is increased by the bidder’s strategy of announcing its intended takeover efforts before triggering the rights, in order to increase the market price and reduce the number of shares for which they are exercisable.¹⁰⁷ Once the bidder has gained control, Delaware law imposes strict constraints on any attempt to dilute the voting power of a new controlling shareholder.¹⁰⁸

Other problems also weaken the deterrent power of the shadow pill. Conventional preferred stock rights plans require the presence

105 For a recounting of cases in which investment bankers have ratcheted up valuation opinions, see William J. Carney, *Fairness Opinions: How Fair Are They and Why We Should Do Nothing About It*, 70 WASH. U. L.Q. 523, 524, nn.4–10 (1992). A valuation opinion may be required to show that, even taking into account the additional funds transferred to target shareholders by the bidder’s dilution, the bid price is still inadequate. A valuation is also generally required for the standard preferred stock pill, where the exercise price is set at the long-term expected value of the common stock. See *supra* notes 14–15 and accompanying text. These numbers, as we point out, tend toward absurdity.

106 See *Hanson Trust PLC v. SCM Corp.*, 774 F.2d 47, 52 (2d Cir. 1985) (recounting the acquisition of 25% of the shares of SCM in two hours, in five negotiated transactions with arbitrageurs). This was not unique in this era. Consolidated Gold Fields PLC swept the street for 23.7% of the stock of Newmont Mining Corporation in two days, increasing its ownership to 49.7%. *Ivanhoe Partners v. Newmont Mining Corp.*, 535 A.2d 1334, 1336–37, 1340 (Del. 1987). Most impressively, Campeau Corporation bought 48% of the stock of Allied Stores Corporation in 27 minutes. Dale A. Oesterle, *The Rise and Fall of Street Sweep Takeovers*, 1989 DUKE L.J. 202, 202.

107 See *supra* Part II.B.4. Among the difficulties to be surmounted are avoiding regulation as a tender offer and the notice requirements of the Hart-Scott-Rodino Antitrust Improvements Act (HSR) of 1976, Pub. L. No. 94-435, 90 Stat. 1383 (codified as amended at 15 U.S.C. § 18a (2000)). See generally *Wellman v. Dickinson*, 475 F. Supp. 783, 823–24 (S.D.N.Y. 1979) (finding that the purchase of 34% of another company’s stock qualified as a tender offer for purposes of the Williams Act), *aff’d on other grounds*, 682 F.2d 355 (2d Cir. 1982). HSR requirements include thirty days’ notice of significant acquisitions (fifteen days if a cash tender offer), which presumably would apply to most hostile acquisitions. While HSR filings will notify markets of intended purchases at an early stage, we have assumed such notice in our examples.

108 Once a bidder gains control, the target (subsidiary) board owes it a fiduciary duty not to issue new shares to dilute its control. *Frantz Mfg. v. EAC Indus.*, 501 A.2d 401, 408 (Del. 1985); *Condec Corp. v. Lunkenheimer Co.*, 230 A.2d 769, 775 (Del. Ch. 1967); *Canada S. Oils, Ltd. v. Manabi Exploration Co.*, 96 A.2d 810, 813 (Del. Ch. 1953). More recent cases impose a strict, almost insurmountable burden on a target board under such circumstances. See *MM Cos. v. Liquid Audio, Inc.*, 813 A.2d 1118, 1128–32 (Del. 2003); *Blasius Indus. v. Atlas Corp.*, 564 A.2d 651, 660–63 (Del. Ch. 1988).

of an investment banker or other financial expert to render an opinion on the long-term value of the company—a number that will grow less credible with each increase in the takeover bid, and a number that must increase the estimate of long-term value to four or five times the present value in order to give a subsequent rights plan sufficient dilutive power. While investment bankers may earn their fees for such heroic assumptions, they add little value to the credibility of the adoption of a second or third rights plan.¹⁰⁹

There are serious, if not insurmountable, difficulties in defending the adoption of a second rights plan in the middle of a takeover battle. Since the *Unocal* decision, at least Delaware courts have engaged in heightened scrutiny of takeover defense tactics because of the “omnipresent specter that a board may be acting primarily in its own interests”¹¹⁰ The seminal Delaware decision on the legality of rights plans noted that the adoption of a plan “to ward off possible future advances and not a mechanism adopted in reaction to a specific threat” was entitled to the protection of the business judgment rule, after first applying the *Unocal* test.¹¹¹ The lesson of current Delaware law, from a target board’s standpoint, is that adopting a rights plan before any threat appears obtains the maximum deference for the board’s decision. The board, with help from its advisers, can simply imagine all the possible threats a bidder might pose, and adopt a rights plan to protect against all of them.¹¹²

With few exceptions,¹¹³ in the 1980s courts applying the *Unocal* test were relatively permissive in allowing boards to decline to redeem existing rights plans, to the point that it appeared the “Nancy Reagan Defense” (“just say no”)¹¹⁴ was a viable option for many target boards.

109 Recall the Chancery Court’s description of some estimates of Time Inc.’s financial advisers, about the expected value of the Time-Warner merger, as involving “a range that a Texan might feel at home on [sic].” *Paramount Communications, Inc. v. Time Inc.*, 15 DEL. J. CORP. L. 700, 724 (Del. Ch. July 17, 1989), *aff’d*, 571 A.2d 1140 (Del. 1989).

110 *Unocal Corp. v. Mesa Petroleum Co.*, 493 A.2d 946, 954 (Del. 1985).

111 *Moran v. Household Int’l, Inc.*, 500 A.2d 1346, 1350 (Del. 1985).

112 *Id.*

113 *See, e.g., City Capital Assocs. v. Interco, Inc.*, 551 A.2d 787, 798 (Del. Ch. 1988) (holding that once a rights plan had bought a target’s board sufficient time to formulate an alternative transaction, the board was obligated to redeem the rights and allow the shareholders to exercise their own judgment about the preferable choice). *But see* *Paramount Communications, Inc. v. Time Inc.*, 571 A.2d 1140, 1153 (Del. 1989) (disapproving “of such a narrow and rigid construction of *Unocal*”).

114 *See* Robert A. Prentice & John H. Langmore, *Hostile Tender Offers and the “Nancy Reagan Defense”: May Target Boards “Just Say No”? Should They Be Allowed To?*, 15 DEL. J. CORP. L. 377, 382 n.22 (1990) (explaining the “Nancy Reagan Defense”).

Boards were permitted to reject bids where they determined that the stock was undervalued by the market,¹¹⁵ and where boards determined that shareholders might misunderstand management's representations of intrinsic values and future expectations.¹¹⁶

The negative implication of *Moran* is clear. Once a bidder appears, the Delaware Chancery Court is likely to be far more skeptical about the "threats" posed by a bidder. In the past, the Chancery Court has also been more skeptical about the preclusiveness of some defenses.¹¹⁷ Where a bid is not structurally coercive, as in the case of a two-tier bid (and today none are), the only remaining threat is "substantive coercion"—that the price is too low, and that naive shareholders will be fooled into tendering.¹¹⁸ The negative implications were

115 See, e.g., *Unitrin, Inc. v. Am. Gen. Corp.*, 651 A.2d 1361, 1370, 1385 (Del. 1995) (noting that the record appeared to support Unitrin's argument that its board adopted the plan in response to a number of threats: (1) the board's belief that the stock was worth more than the bid price; (2) the tender offer did not reflect the long term business prospects of the target; (3) the "true value" of the target was not reflected in its market price; (4) the target was well positioned, by virtue of its financial strength, to "pursue [hypothetical] strategic and financial opportunities"; and (5) that the merger would have anticompetitive effects).

116 See, e.g., *Moore Corp. v. Wallace Computer Servs., Inc.*, 907 F. Supp. 1545, 1560–61 (D. Del. 1995):

The favorable results from the board's *past* actions are now beginning to be translated into financial results which even surpass management and financial analyst projections, and the financial data which manifests these results are facts only known to [the directors]. . . . The Court therefore finds that Moore's tender offer poses a threat to Wallace that shareholders, because they are uninformed, will cash out before realizing the fruits of the substantial technological innovations achieved by Wallace.

Id.; *Shamrock Holdings, Inc. v. Polaroid Corp.*, 559 A.2d 278, 289–90 (Del. Ch. 1989) (finding that the board, having won the liability portion of a patent infringement suit, was entitled to prevent shareholders from tendering their shares in the absence of the board's ability to disclose the settlement value of the case); *MAI Basic Four, Inc. v. Prime Computer*, 14 DEL. J. CORP. L. 1086, 1093 (Del. Ch. Dec. 20, 1988), available at 1988 WL 140221, *4 ("Prime has recently obtained new management and is only now on the verge of reaping the economic benefits of its recent acquisition of Computervision.").

117 *Compare* *AC Acquisitions Corp. v. Anderson, Clayton & Co.*, 519 A.2d 103, 114 (Del. Ch. 1986) (holding a self-tender was an unreasonable reaction to a bid because of its coerciveness), *with* *Unocal Corp. v. Mesa Petroleum Co.*, 493 A.2d 946, 954 (Del. 1985) (holding that a corporation may deal selectively with its stockholders).

118 Ronald J. Gilson & Reinier Kraakman, *Delaware's Intermediate Standard for Defensive Tactics: Is There Substance to Proportionality Review?*, 44 BUS. LAW. 247, 267 (1989). See generally *Paramount Communications, Inc. v. Time Inc.*, 571 A.2d 1140, 1153 n.17 (Del. 1989) (noting the concept of "substantive coercion" as coined by Gilson and Kraackman); *Chesapeake Corp. v. Shore*, 771 A.2d 293, 324 (Del. Ch. 2000) (acknowledging the concept of "substantive coercion" as coined by Gilson and Kraackman).

fully realized in *Chesapeake Corp. v. Shore*, where Shorewood Corporation adopted a series of takeover defenses in addition to its poison pill.¹¹⁹ While the defenses in question, which were designed to protect a staggered board, did not involve a poison pill (which had already been adopted),¹²⁰ the case emphasizes the current judicial skepticism about the need for harsh takeover defenses once a battle has begun. Vice Chancellor Strine, applying the *Unocal* test, held that Shorewood's board faced "only a modest threat of price inadequacy,"¹²¹ in view of the fact that 80% of its stock was held by management and institutional investors, that the stock was followed by analysts who had discussed all of Shorewood's underappreciated developments, and that Shorewood management had "strong credibility" within the investment community that allowed it to communicate anything to its stockholders.¹²²

Once an initial rights plan has been put in place, objections to further rights plans based on a lack of a plausible threat may well plague many attempts to adopt subsequent rights plans, using the arguments employed by Vice Chancellor Strine in *Chesapeake*.¹²³ First, many target firms will have a majority of their stock held by sophisticated institutional investors capable of understanding the target's disclosures about its business prospects. Second, the beginning of a takeover battle will push shares formerly held by many shareholders, including less informed individuals, into the hands of risk arbitrageurs, also sophisticated investors. Third, the presence of a following by a number of analysts, who periodically report on the target, will further undermine arguments that the target's stock is undervalued and that investors don't appreciate its prospects. Fourth, at some time after the beginning of a takeover battle, some courts will conclude that target management has had ample time to inform investors or to undertake alternative strategies to enhance shareholder value.¹²⁴ Finally, because of the perception of some courts that conventional rights plans are deal killers that render a target invulnerable, a bidder's willingness to absorb the initial round of dilution might con-

119 *Chesapeake*, 771 A.2d at 296.

120 *Id.*

121 *Id.* at 297.

122 *Id.* at 307-08.

123 *Id.*

124 *See, e.g.,* Sutton Holding Corp. v. DeSoto, Inc., 16 DEL. J. CORP. L. 434, 447-48 (Del. Ch. Feb. 5, 1990); City Capital Assocs. v. Interco Inc., 551 A.2d 787, 798 (Del. Ch. 1988); *see also* Hilton Hotels Corp. v. ITT Corp., 978 F. Supp. 1342, 1351 (D. Nev. 1997) (applying Nevada law). *But see* Paramount Communications, Inc. v. Time Inc., 571 A.2d 1140, 1152-53 (Del. 1989) (criticizing the *City Capital Assocs.* decision).

vince a court that a repeat performance, especially after the onset of a takeover battle, is an excessive (or preclusive) response.

One could argue that cases such as *Chesapeake Corp. v. Shore*, and other cases in which the Chancery Court has rejected takeover defenses under the *Unocal* standard,¹²⁵ are departures from the Delaware Supreme Court's more relaxed review under *Unitrin v. American General Corp.*,¹²⁶ and its progeny. *Unitrin* appeared to review each takeover defense separately, rather than in the context of a panoply of defenses, and only frowned on those found "preclusive" or "coercive."¹²⁷ But the matter is not so simple, as demonstrated by two recent cases in which the Supreme Court applied a stricter standard of review than the Chancery Court. In *MM Cos. v. Liquid Audio, Inc.*,¹²⁸ the Supreme Court reversed a Chancery Court holding that the strict standard of scrutiny ("compelling justification") required by *Blasius Indus., Inc. v. Atlas Corp.*¹²⁹ was not implicated in board action to add two directors to a staggered board in advance of a proxy fight.¹³⁰ At least in the context of shareholder voting, the court found that the *Blasius* standard must be applied within *Unocal's* proportionality requirement.¹³¹

Recently, in *Omnicare Inc. v. NCS Healthcare, Inc.*,¹³² the Supreme Court reversed the Chancery Court and held that a deal protection device—a voting agreement with controlling shareholders approved by the target corporation—was to be scrutinized under *Unocal*. The device failed that scrutiny because it precluded public (minority) shareholders from voting in a meaningful manner on a merger proposal. In its analysis, the court first broadened the scope of a *Unocal* review to include the full range of takeover defenses in place.¹³³ Second, and perhaps most importantly for our analysis, the court clarified that a "preclusive or coercive" examination was not the end of *Unocal* scrutiny, but was to occur before the court's "focus shifts to the 'range of reasonableness' in making a proportionality determination."¹³⁴ In effect, the court may have reversed the relaxed standard of propor-

125 See, e.g., *City Capital Assocs.*, 551 A.2d at 790–91.

126 651 A.2d 1361 (Del. 1995).

127 See *Unitrin v. Am. Gen. Corp.*, 651 A.2d 1361, 1367 (Del. 1995).

128 813 A.2d 1118 (Del. 2003).

129 564 A.2d 651 (Del. Ch. 1988).

130 *MM Cos.*, 813 A.2d at 1120.

131 *Id.* at 1131.

132 818 A.2d 914 (Del. 2003).

133 *Id.* at 932 ("If a 'board's defensive actions are inextricably related, the principles of *Unocal* require that such actions be scrutinized collectively as a unitary response to the perceived threat." (quoting *Unitrin*, 651 A.2d at 1387)).

134 *Id.* at 932.

tionality employed in *Unitrin*. This decision illustrates the difficulty in predicting the level of, as well as the result of, judicial scrutiny in the control transaction area. Corporate advisers will be hard pressed to assure target boards that they can adopt a second rights plan in the middle of a contest with any degree of confidence.¹³⁵

The irony of a discussion of the feasibility of a second rights plan is that even a second rights plan adds only about 40% to the bidder's initial estimate of the cost of an acquisition, which, in the case of a seriously undervalued target, may not be enough to assure shareholders receive full value for their company.¹³⁶ While undervaluation by as much as 40% may seem extreme, the recent NASDAQ bubble saw such disparities in relative values of "old economy" and "new economy" companies that led, in some cases, to takeovers using overvalued stock.¹³⁷ By March 2000, airline stocks had fallen 43% from their fifty-two week highs. The ten major U.S. airlines had 1999 profits of \$4.8 billion, with a total market capitalization of only \$25 billion, or a little more than five times trailing earnings.¹³⁸ Chemical companies faced similar problems, with the price of companies such as W.R. Grace &

135 Even Chancery Court judges have been known to complain about the difficulties of applying the various standards of judicial review of director action that are now part of Delaware corporate jurisprudence. See Allen et al., *supra* note 88, at 1298.

136 We assume that the bidder acquires the initial 15% as before which is diluted as before. Then we assume the bidder acquires sufficient fully diluted shares to once again reach 15%, only to be diluted again, before acquiring all remaining shares in an any and all tender offer followed by a takeout merger at the same price—a 50% premium over the pre-acquisition market price (adjusted for dilution). The following equation demonstrates the bidder's expected costs of returning to a 15% ownership position after an initial dilution:

$$L = ma - \frac{(mx + p)}{x + d} (a) + m'a' - \frac{(m'x' + p')}{x' + d'} (a')$$

where primes indicate the second transaction. This results in an added cost for the bidder of \$6,136,350, using our previous example of a bidder that, after suffering the first round of dilution, accepts a second round of dilution at the 15% ownership level after adopting a second rights plan.

137 See Subramanian, *supra* note 87:

Using stock valued at \$31 per share, Worldcom outbid GTE and British Telecom to acquire MCI in November 1997. By 2001, Worldcom was trading at \$15 per share; in July 2002 it filed for bankruptcy protection. Using stock trading at \$74 per share, AOL acquired Time Warner in January 2000; by October 2000, it was trading at \$45 per share and by June 2002 AOL-Time Warner was trading at \$10.

Id. (manuscript at n.25).

138 Scott McCartney et al., *Flight Plans: Feeling Undervalued, Some Airlines Consider Bumping Stockholders*, WALL ST. J., Mar. 10, 2000, at A1. In hindsight, airline stocks may well have been overvalued at \$25 billion, in view of the subsequent Chapter 11 filings

Company dropping by more than 50% from their fifty-two week highs by early 2000.¹³⁹ Borders Book Group, frustrated by its stock price (probably in comparison with money-losing Amazon.com), announced that it would consider a leveraged buyout.¹⁴⁰ Even some stocks that might well have been treated as “new economy” stocks suffered by comparison to others. In early 2000, 3Com was apparently out of favor with high tech investors because it made dowdy products such as modems, switches and basic components for computer networks. Its wholly-owned subsidiary, Palm, Inc., made Palm organizers, a more glamorous product. 3Com made an initial public offering of 4.1% of its Palm stock, which had an aggregate market value of \$32 billion by March 14, 2000—greater than the market value of 3Com (\$19 billion), which owned the remaining 95% of Palm’s stock.¹⁴¹ With this kind of market valuation, Palm could have acquired the entire U.S. airline industry for 78% of its stock (assuming no control premium). In 2000, shareholders of Digex brought a derivative action alleging that Digex’s parent seized a corporate opportunity by selling itself rather than its more valuable subsidiary at a time when the market capitalization of the parent, Intermedia Communications, Inc., was \$1.2 billion and the market value of its 54% interest in Digex was worth \$3.3 billion.¹⁴² In none of these cases would a second rights plan have raised the targets’ prices high enough to deter bidders who believed the targets were undervalued.

E. *The Uncertain Bidder Argument*

For bidders at the margin—uncertain of success either because of doubts about whether a target is worth a substantial premium or if they are the highest valuing potential bidders, early indications of lack of success at low premium levels might lead to an unwillingness to trigger the rights plan. If a bidder were required to invest as much as 15% of the value of the target and risked losing 40% or more of that investment if it were unsuccessful, the risk may add substantially to the bidder’s anticipated costs in the event of failure.¹⁴³ But we must emphasize that for determined bidders able to pay a premium of a substantial size for a target, this added cost might not be a deterrent. At

of major carriers. But before Sept. 11, 2001, managers of airlines could have reasonably believed that their firms were undervalued compared to dot.com stocks.

139 *Id.*

140 *Id.*

141 Frank Partnoy, *Strange New Math of Palm, Inc.*, N.Y. TIMES, Mar. 15, 2000, at A23.

142 Derivative Complaint at 3–4, *Sinha v. Ruberg* (Del. Ch. 2000) (No. 1839INC), available at <http://webman.widener.edu/documents/complaints/18391-001.pdf>.

143 We thank Julian Velasco for this suggestion.

the very least it should not deter all bids. Further, a cautious bidder, concerned that a competing bidder might make a higher bid after the first bidder had accepted the costs of dilution, can acquire just under the triggering amount¹⁴⁴ and await competing bids before proceeding to accept the dilution imposed by the pill. But this only makes our initial point—that the bidder losses from triggering pills, while significant, will only deter some bidders at the margin, where their valuations of targets are on the low end of the distribution of target valuations or where the bidder lacks unique synergies with the target that would allow it to outbid potential competitors.

CONCLUSION

We have demonstrated that typical rights plans have modest power to deter a determined bidder willing to pay a significant premium. First, low thresholds for the exercise of rights mean that the bidder's initial investment that is subject to dilution is relatively small. Second, the relatively high exercise price, typically at 50% of market, has the effect of causing one-half of the shares subject to the rights to be issued at full market value, leaving a much smaller number of diluting shares. Third, as the target's stock price rises over time, the number of shares to be issued per right can decline and further reduce the dilutive effect of exercise if the exercise price is set at the initiation of the rights plan.

We have shown that the growth of rights plans as takeover defenses is likely not the explanation for a decline in hostile takeover bids, and that, indeed, such bids continue for companies with rights plans. The decline in the employment of hostile cash tender offers is more likely explained by other factors, such as rising stock prices during the 1990s, the greater inclination of target boards and managers to accept takeover offers, and the use of proxy fights to secure redemption of rights plans. One wonders what percentage of the pill's expected costs are represented by increased side payments to target management, in the form of agreements to pay out golden parachutes without contest, or consulting arrangements.

One legal question remains. If current rights plans are as mild as we suggest, what effect does this conclusion have on judicial attitudes about duties of boards to redeem rights which were formerly thought to be preclusive of bids?

144 Or under 9.9%, to avoid exposure to short-swing trading liability under 15 U.S.C. § 78p(a) (2000).