Designing Optimal Takeover Defenses

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Abstract

More than three decades have passed since the hostile takeover wave of the 1980s began, but debate over takeover defenses and the appropriate legal standard is still alive going strong. This paper makes an affirmative case for designing takeover defenses to balance two competing interests: the interest that shareholders have in the exploitation of management's insider information, and the entrenchment interest of management. It argues that the empirical evidence against takeover defenses is not determinative of their desirability in all cases, and develops a simple model to demonstrate the value of defensive measures arising from the use of insider information. The model is used to make three practical points about takeover defenses: (1) current legal standards are satisfactory, (2) simply informing shareholders of management's discontent with a hostile offer is unsatisfactory, and (3) intermediate takeover defenses can be designed through the use of supermajority clauses and dual class share structures.

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I. Introduction

The debate over the desirability of takeover defenses has drawn significant attention from all corners of the legal community.[1] At issue is whether and to what extent a firm's management should be able to block a hostile bid that would otherwise have been accepted by shareholders.[2] As the DGCL has remained silence on the issue, the case law has been forced to take a policy position, and has proven quite management friendly, upholding some nearly preclusive antitakeover arrangements.[3]

This paper argues that the Delaware takeover standards are sufficient, and that the choice over takeover defense policy is best left to practitioners. In Part II, I briefly examine the empirical evidence on takeover defenses. While the bulk of the evidence leans against takeover defenses, I show that using this evidence to unequivocally condemn takeover defenses in unjustifiable. First, I discuss possible benign explanations for the two most compelling empirical results. Critically, this paper contributes to the literature by showing that a negative correlation between takeover defenses and firm value can result from a selection bias in the sample if we assume two basic premises: that takeover defenses work,

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[1] See William T. Allen, Jack B. Jacobs, and Leo E. Strine, The Great Takeover Debate: A Meditation on Bridging the Conceptual Divide, 69 U. Chi. L. Rev. 1067 (2002) (three Delaware judges commenting on the debate); Ronald J. Gilson, Unocal Fifteen Years Later (and What We Can Do About It), 26 Del. J. Corp. L. 491 (2001) (a law professor arguing against takeover defenses); and Martin Lipton and Paul K. Rowe, Pills, Polls, and Professors: A Reply to Professor Gilson, 27 Del. J. Corp. L. 1 (2002) (two practitioners arguing in favor of takeover defenses).

[2] Although there is an important distinction between a firm's management and its board, this paper uses the two terms interchangeably; they are the same for the purposes here.

[3] See e.g., Air Products & Chemicals, Inc. v. Airgas, Inc., 16 A.3d 48 (Del. Ch. 2011) (upholding the combined use of the poison pill and staggered board).

and that lower value firms are more attractive takeover targets. As both of these premises receive strong empirical support, this selection bias is bound to be present (but has not been acknowledged) in several high profile studies linking takeover defenses to lowered firm value. Second, Part II makes the simple observation that empirical averages should not inform situational policy. The DGCL functions as an enabling statute precisely because a one-size-fits-all approach fails when it comes to the corporate contract. Even if takeover defenses are bad for the average firm, that doesn't mean that they should disallowed for all firms.

In Part III, I develop a simple model of takeovers and takeover defenses that demonstrates the basic value of a management-driven takeover defense. The basic insight is this: if markets were perfectly (strong-form) efficient, then it is obvious that giving shareholders the power on any material decision will lead to the optimal result; but if managers were perfect fiduciaries, it is obvious that that giving management that power will also lead to the optimal result. Thus, relatively more market efficiency favors shareholders, whereas relatively more alignment of incentives favors management. Between the two extremes, there is a lot of middle ground: markets for corporate stock differ immensely, and so do insider interests and governance arrangements. Thus, it is argued that takeovers are an area in which the corporate law should be as it always has been: enabling in nature.

Part IV builds upon Part III to discuss takeover defenses in practical terms. This part concludes the paper by arguing that the statutory and judicial standards currently in place are sufficient, and that it is up to practitioners to design efficient takeover defenses. The model in Part III calls for intermediate takeover defenses with strengths that can be measured in terms of premiums over the market price, but the poison pill and effective staggered board are more akin to a veto. Thus, it might seem like the "defense of communication"—that is, management communicating to shareholders that they believe a takeover is unwise, but still allowing the shareholders to vote—is preferable. I argue that the defense of communication is not really comparable to the price premium defense modeled in part III and not always superior to a complete veto. However, I propose that a board-driven supermajority clause or a dual class share structure that provides management with special voting rights can both be used to effectively imitate a price premium defense.

II. Problems with the Empirical Evidence against Takeover Defenses

At the core of the argument against takeover defenses lies a vast array of empirical studies. The studies come in a number of flavors, some more general than others, and some with more conflicting evidence than others.[4]   The line of studies most often relied upon to argue against takeover defenses originated with Gompers et al. (2003) and links takeover

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[4] An excellent review of the empirical evidence can be found in Miroslava Straska and Gregory Waller, Antitakeover Provisions and Shareholder Wealth: A Survey of the Literature (Journal of Financial and Quantitative Analysis, forthcoming). Straska and Waller categorize the studies into five different genres: short-term event studies examining the impact of firm and state antitakeover amendments on firm values, studies linking managerial policies and performance to takeover defenses, studies focusing on the impact of takeover provisions on takeovers, studies linking firm characteristics to takeover defenses, and long-term studies linking takeover defenses to stock returns and firm value.

defenses to lowered firm value and lower stock returns.[5]   This line of studies most strongly supports the argument against takeover defenses due to its generality and level of corroboration.[6]

This section makes two arguments that cut against the use of current empirical work to condemn takeover defenses. First, I show that the key results of Gompers and its progeny may have benign explanations. Second, I argue that even if the empirical verdict is against takeover defenses on average, there may still be a substantial subset of firms for which takeover defenses are net beneficial.

II.A. Takeover Defenses, Stock Returns, and Firm Value

Several studies have linked takeover defenses to lowered firm value and lesser stock returns. Gompers et al. (2003) was the first study to create a governance index, "G", based on 24 corporate governance provisions.[7] The study found that firms with low Gs (good governance) outperformed firms with high Gs (bad governance) throughout the 1990s by more than 9% per year on a risk-adjusted basis.[8] A further result was a significant negative correlation between G and firm value, measured by Tobin's Q.[9] Bebchuk et al. (2009) focused

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[5] Paul Gompers, Joy L. Ishii, and Andrew Metrick, Corporate Governance and Equity Prices, 118 The Quarterly Journal of Economics (No. 1) 107 (2003) was the first study to link "good" corporate governance, which includes lesser takeover defenses, with increased firm value and stock returns. The study has been followed by a numerous others including, significantly, Lucian A. Bebchuk and Alma Cohen, The Costs of Entrenched Boards, 78 Journal of Financial Economics (No. 2) 409 (2005) (finding a significant negative correlation between staggered boards and firm value) and Lucian A. Bebchuk et al., What Matters in Corporate Governance?, 22 Review of Financial Studies (No. 2) 783 (2009) (formulating an entrenchment index and finding significant negative correlations between that index and firm value and stock returns).
For shareholder reliance on these studies, see e.g., Kellogg Company, Definitive Proxy Statement, Proposal 4 – Shareholder Proposal to Repeal Classified Board (filed March 3, 2012) (accessed at http://1.usa.gov/XxmVkz) (relying first on Bebchuk and Cohen, 2005, Faleye (2007) and Frakes (2007) for the proposition that classified boards are associated with lower firm valuation).

[6] Other genres of studies are either conflicting, flawed, or lack sufficient generality. For example, a number of short-term event studies examine the relation between the adoption of a takeover defense and price movements. Not only are the results of these studies "largely inconclusive," but they are also vulnerable to criticism on a number of grounds. Straska and Waller. See also John C. Coates IV, Empirical Evidence on Structural Takeover Defenses: Where Do We Stand?, 54 U. Miami L. Rev. 783 (2000) (outlining flaws in poison pill event studies). Another set of studies looks at the effects of takeover defenses on takeovers. One study, for example, finds that takeover defenses significantly lower value for target shareholders when a takeover bid is made. Lucian Arye Bebchuk et. al., The Powerful Antitakeover Force of Staggered Boards: Theory, Evidence, and Policy, 54 Stan. L. Rev. 887 (2002) (estimating that staggered boards reduced value for shareholders of targeted firms by 8-10%). Within the framework of this paper, this result is prone to criticism in that it only considers an extreme veto-like takeover defense and cannot overcome the averages criticism of part III.C. Outside the framework of this paper, the result is prone to criticism because of its specificity: it does not consider costs and benefits when a takeover bid not made (e.g., ex ante efficiencies and incentives, and bargaining power).

[7] Gompers et al., supra note 5.

[8] Id. at 121.

[9] The magnitude of this negative correlation increased throughout the 1990s. Gompers at 127.

the governance index on six key provisions, creating the entrenchment index, "E".[10] It was found that the six entrenchment provisions in E were the primary drivers of the Gompers et al. (2003) results.[11] Other studies have had an even narrower focus, looking only at the staggered board provision, arguably the most powerful anti-takeover measure when used in combination with the poison pill.[12]

Of the two findings—lower firm value and lesser stock returns—the latter is not as convincing when it comes to denouncing takeover measures.[13] If investors understood the significance of anti-takeover measures, stock prices would reflect that understanding in an efficient market, and stock returns would not reflect the difference.[14] Thus, one would need to assume an inefficient market to argue against anti-takeover measures using this result.[15] As such, several other studies have suggested alternative, more benign, explanations. Core, Guay, and Rusticus (2006) found that the market was not surprised by the performance of high G indexed firms,[16] and Cremers, Nair, and John (2009) showed that takeover exposure may be linked to systematic risk, which would imply higher expected returns for firms without takeover defenses.[17] In sum, it is difficult to conclude from the association between takeover provisions and lowered stock returns that takeover provisions are bad.

The more compelling empirical result—the negative correlation between takeover defenses and firm value—may also have more benign explanations. One common criticism looks at causality: it is not clear whether the presence of takeover defenses leads to managerial entrenchment and lower firm value, or whether low firm values results from self-interested managers who also erect takeover defenses.[18] Of course, this alternative

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[10] Lucian A. Bebchuk, Alma Cohen, and Allen Ferrell, What Matters in Corporate Governance?, 22 Review of Financial Studies 783 (2009).

[11] Bebchuk et al. (2009) at 786.

[12] Lucian Bebchuk and Alma Cohen, The Costs of Entrenched Boards, 78 Journal of Financial Economics No. 2, 409-433 (2005) was the original study linking classified boards to lower firm value. Olumbuni Faleye, Classified boards, firm value, and managerial entrenchment, 83 Journal of Financial Economics No. 2, 501-529 (2007) and Michael D. Frakes, Classified Boards and Firm Value, 32 Del. J. Corp. L. 113 (2007) confirmed the result. On the power of classified boards as an anti-takeover device, see Lucian Arye Bebchuk et. al., The Powerful Antitakeover Force of Staggered Boards: Theory, Evidence, and Policy, 54 Stan. L. Rev. 887 (2002).

[13] Miroslava Straska and Gregory Waller, Antitakeover Provisions and Shareholder Wealth: A Survey of the Literature (Journal of Financial and Quantitative Analysis Forthcoming) ("many researchers propose that the relationship between antitakeover provisions and firm value is more informative than the relationship between antitakeover provisions and stock returns")

[14] Cf. Lucian A. Bebchuk, Alma Cohen, and Charles C. Y. Wang, Learning and the Disappearing Association Between Governance and Returns, Journal of Financial Economics, Forthcoming (the association with stock price returns disappeared in the 2000s because market participants "gradually" learned to adjust prices based on corporate governance).

[15] But see subsection IV.B (arguing that the market is inefficient to some degree).

[16] John E. Core, Wayne R. Guay, and Tjomme O. Rusticus, Does Weak Governance Cause Weak Stock Returns? An Examination of Firm Operating Performance and Investors' Expectations, 61 The Journal of Finance (No. 2) 655 (2006)

[17] Martijn K. J. Cremers, Vinay B. Nair, and Kose John, Takeovers and the Cross-Section of Returns, 22 Rev. Fin. Stud. No. 4, 1409-1445, 1412 (2009).

[18] See Bebchuk and Cohen (2005), supra note 5, at 426.

explanation isn't exactly favorable for takeover defenses. Another, far more benign, explanation is based on a selection bias in the sample of firms. As the possibility of this selection bias has received virtually no attention in the literature,[19] the next subsection is dedicated to exploring it in more detail.

II.B. Selection bias in empirical studies that linking takeover defenses to firm value

If low value firms are, on average, more attractive takeover targets than high value firms, then those low value firms with fewer takeover defenses will be removed from the sample by takeovers at a disproportionately greater rate than those high value firms with fewer takeover defenses. This effect will result, at least temporarily, in a negative correlation between takeover defenses and firm value.

Two empirical premises are required for the conclusion to follow. First, low value firms need to be taken over at a greater rate than high value firms. Second, the presence of takeover defenses needs to significantly reduce the probability that a firm will be taken over. Both premises find substantial support in the literature. The former has been studied and confirmed extensively.[20] The latter has not received as much empirical attention, perhaps because it is obvious. However, the strong antitakeover effect of certain provisions was convincingly demonstrated by Bebchuk et al. (2002).[21] As the required premises receive strong empirical support, this bias is bound to be present and should not be ignored. If the bias happens to be strong enough, takeover defenses may even be on average value creating in spite of the evidence linking them to lower firm value.

A simple model and numerical example demonstrates the bias. Consider a universe of 400 firms that is divided into four categories based on their value (either low or high) and their takeover defenses (either none or some). Suppose that initially, this universe has 100 of each type of firm. Suppose further (for simplicity) that the size of the empirical premises discussed above is a factor of two; that is, in any given period, firms with no takeover defenses are twice as likely to be taken over than firms with takeover defenses, and low value firms are twice as likely to be taken over than high value firms. If four high-value firms with takeover defenses are expected to be taken over for every one hundred such firms, then in the first period, it is expected that thirty-six firms be taken over. This situation is shown in **table 1**. If the thirty-six firms taken over are replaced with an equal number of new firms that are, as

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[19] The only mention of the possibility of such a selection bias was made in passing by Michael D. Frakes, Classified Boards and Firm Value, 32 Del. J. Corp. L. 113, 146 (2007) ("[That low value firms may be more likely takeover targets] combined with the [takeover defense of classified boards] may support the general finding of a negative relationship between classified boards and firm value.")

[20] See Joel Hasbrouck, The Characteristics of Takeover Targets: Q and Other Measures, 9 J. Banking & Fin. 351, 351 (1985) ("unregulated non-financial target firms are characterized by low [firm value]"); Gerald F. Davis and Suzanne K. Stout, Organization Theory and the Market for Corporate Control: A Dynamic Analysis of the Characteristics of Large Takeover Targets, 37 Admin. Sci. Q. 605, 624 (1992) ("We found support for the hypothesis that [higher value firms] were less subject to takeover attempts.").

[21] Lucian Arye Bebchuk et. al., The Powerful Antitakeover Force of Staggered Boards: Theory, Evidence, and Policy, 54 Stan. L. Rev. 887, 933 (2002) (finding that takeover targets with effective staggered boards were more than twice as likely to remain independent thirty months after an initial hostile bid).

with the initial universe, evenly split between the four categories, a negative association between the presence of takeover defenses and firm value becomes apparent after the first period. This is demonstrated by the lower ratio of firms with no takeover defenses to firms with takeover defenses for the set of low-value firms relative to the set of high-value firms.

| Table 1: Simple takeover model						
Value	Takeover Defenses?	Firms at time 0	Firms taken over	New firms	Firms at time 1	Ratio
High	Yes	100	4	9	105	
High	No	100	8	9	101	0.96
Low	Yes	100	8	9	101	
Low	No	100	16	9	93	0.92
		400	36	36	400	

It is important to note that while this bias is present in this simple example, and would get stronger after a second such takeover round, the bias disappears once the universe reaches a stable equilibrium. **Table 2** is the same as **table 1**, but depicts the equilibrium, where the ratio of firms with no takeover defenses to firms with takeover defenses is the same for both low-value and high-value firms. That ratio, 50%, is equal to the strength of the takeover defenses (in this case, it was assumed to be a factor of 2). Within this simplified model, it is the general case that the ratios will be equal to the strength of the takeover defense once the universe settles into equilibrium.[22]

Table 2: Simple takeover model in equilibrium						
Value	Takeover Defenses?	Firms at time x	Firms taken over	New firms	Firms at time x+1	Ratio
High	Yes	178	7	7	178	
High	No	89	7	7	89	0.50
Low	Yes	89	7	7	89	
Low	No	44	7	7	44	0.49
		400	28	28	400	

How long does it take for the universe of firms to settle into an equilibrium state? **Figure 1** expands upon this particular example to show that it will take about 100 periods for the effect to disappear, and that the effect is most pronounced at around period 10.

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[22] Proof: consider the sub-universe of x firms (either low or high value), with x_1 firms that have TO defenses and x_0 firms that don't. Each period proportion p ($0 < p < 1$) of the firms without takeover defenses get taken over, and proportion qp of the firms with takeover defenses get taken over, where q is represents the strength of the takeover defenses ($0 < q < 1$, with a lower q representing stronger defenses). If there are n new firms each period, half of which have takeover defenses, then in equilibrium, $1/2n = px_0 = qpx_1 \rightarrow x_0 = qx_1$. Therefore, in equilibrium, $x_0/x_1 = q$, which is independent of p (the frequency of takeovers).

Figure 1: Comparison of takeover defenses in low value and high value firms
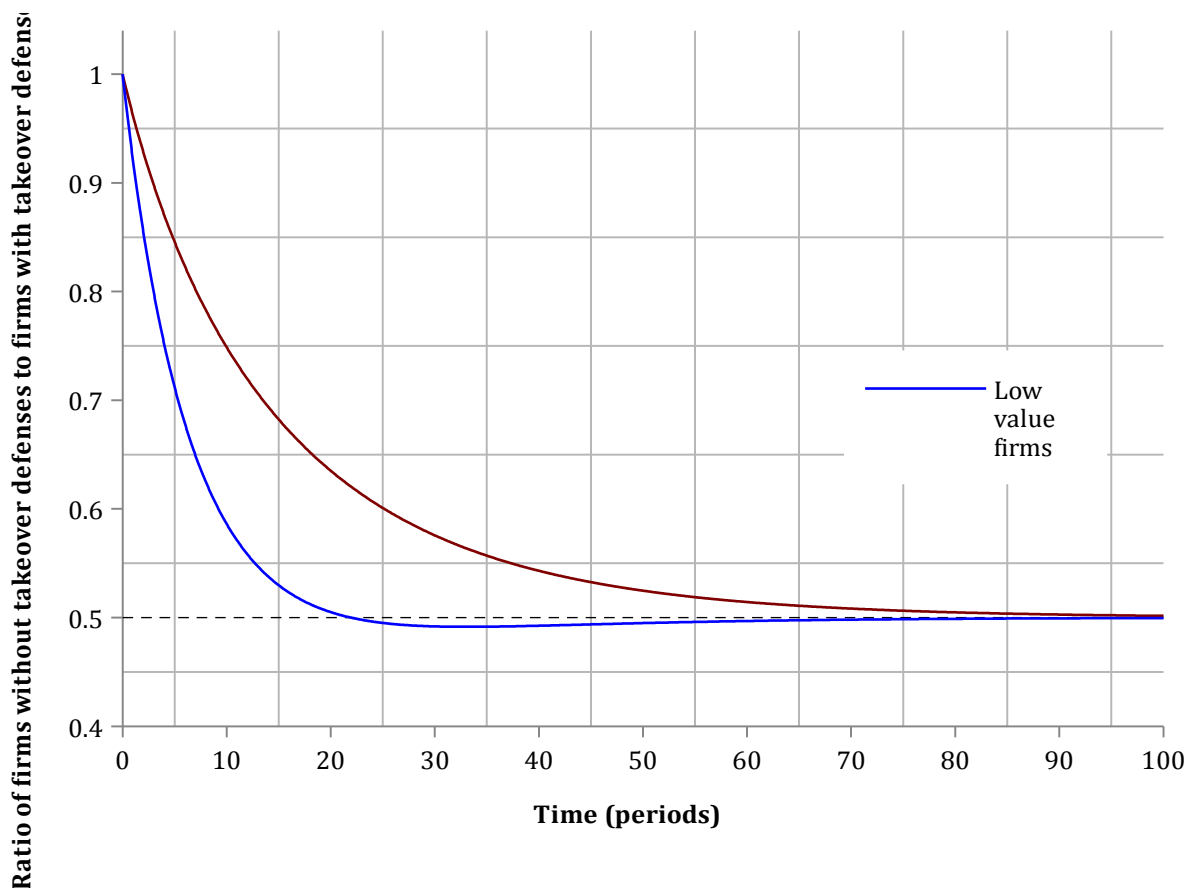
Reality is more complex in several respects. The number of new firms is likely quite different than the number of firms taken over, firms leave the universe for a variety of other reasons (e.g., friendly takeovers, going private, liquidation, etc.), firm value is continuous, and firms will shift between categories. These complexities make it very hard to account for the effect in reality, especially with the size of the effect changing over time. As such, the most that can be said right now is that the observed negative correlation between firm value and takeover defenses is affected by this potentially significant selection effect, and that the observation should be discounted accordingly.

II.C. What Averages Don't Tell Us

Setting aside weaknesses in the empirical evidence, there is an even more compelling argument that should give pause to those who seek to eliminate takeover defenses: even if takeover defenses are empirically bad, on average, that does not imply that takeover defenses are bad for all firms, or even that all takeover defenses are on average bad. As an analogy, consider that around 80% of the firms traded on the NYSE, AMEX, and NASDAQ exchanges did not pay dividends in 1999, and that these non-dividend paying firms had significantly higher

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firm values than dividend-paying firms.[23] It would be absurd to use this empirical result to argue that firms should never pay dividends. Just as these dividend payout statistics tell us nothing about the desirability of paying dividends for the individual firm, empirical results about takeover defenses on average also fail to inform takeover defense design for the individual firm.[24]

Several recent empirical studies support the idea that takeover defenses can be beneficial for certain subsets of firms. For example, Frakes (2007), one of the studies linking classified boards to lowered firm value that is commonly relied upon in shareholder proposals to declassify boards, finds that the association disappears (or even reverses) when one considers only lowered value firms.[25] The results of Faleye (2007), another study commonly relied upon in declassification proposals, also suggest that the negative association exists only for a subset of a firms.[26] Faleye found that the impact a classified board had on median firm value was much smaller than the impact it had on mean firm value,[27] which suggests that the association is much more pronounced for some subset of firms.[28] Rose (2009) also finds that the negative association between classified boards and firm value disappears for an identifiable subset of firms—specifically, those that have low outside ownership concentration.[29]

This suggests that the question we should be asking is not, "are takeover defenses bad," but rather, "how can we value takeover defenses?" And then, supposing that we could identify negative value takeover defenses, what should courts do to interfere?[30] The answer to the latter question likely depends on our ability to answer the first: the better our ability to

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[23] Eugene F. Fama and Kenneth R. French, <u>Disappearing dividends: changing firm characteristics or lower propensity to pay?</u>, 60 Journal of Financial Economics 3-43, 4 (2001)

[24] Interestingly, circa 1960 the academic situation with respect to dividends was not too different from that which we see today for takeover defenses: a lot of debate over empirical findings, little consensus, and a dearth of theoretical analysis. See e.g., Merton H. Miller and Franco Modigliani, <u>Dividend Policy, Growth, and the Valuation of Shares</u>, 34 J. Bus. 411, 411 (1961) ("Although these questions [on dividend policy] have been the subject of many empirical studies in recent years no consensus has yet been achieved."). Today, while there is still no single accepted view on dividend policy, the area is no longer such a mystery.

[25] Michael D. Frakes, <u>Classified Boards and Firm Value</u>, 32 Del. J. Corp. L. 113, 149 (2007) ("At low levels of Tobin's Q, the association between classified boards and firm value is either negligible or positive in sign, supporting the possibility that classified boards, in certain circumstances, actually generate countervailing benefits to shareholder wealth").

[26] Olumbuni Faleye, <u>Classified boards, firm value, and managerial entrenchment</u>, 83 J. Fin. Econ. (No. 2) 501 (2007)

[27] *Id.* at 506-507.

[28] For more detail on this argument, see Michael E. Murphy, Attacking the Classified Board of Directors: Shaky Foundations for Shareholder Zeal, 65 Bus. L. 441, 449 (2010).

[29] Morgan J. Rose, <u>Heterogeneous impacts of staggered boards by ownership concentration</u>, 15 J. Corp. Fin. 113, 115 (2009) ("at low levels of outside ownership concentration, a staggered board has no statistically significant impact on firm Tobin's Q")

[30] Consider that courts have given business judgment deference to even the most obviously poor dividend decision. See <u>Kamin v. Am. Exp. Co.</u>, 86 Misc. 2d 809 (N.Y. Sup. Ct. 1976) <u>aff'd sub nom.</u> <u>Kamin v. Am. Express Co.</u>, 54 A.D.2d 654 (N.Y. Sup. Ct. App. Div. 1976).

evaluate takeover defenses, the better we can decide their legal treatment. And the answer to the first is as much a theoretical matter as it is an empirical one.

Advocates of takeover defenses have identified two key benefits that support their position. The first is the bargaining power benefit of takeover defenses.[31] The second benefit commonly appealed to is the protection of value that is hidden to a firm's shareholders, but can be observed by its insiders.[32] As it has been argued that the Delaware law is based on the second benefit of takeover defenses, the rest of this paper will examine it specifically.[33] I begin first by developing a simple economic model of the hidden value in Part III, and then discussing the practical considerations in Part IV.

III. An Economic Model of Takeover Defenses

III.A. The Value of a Takeover

Consider a scenario in which we have two firms: the Target and the Bidder. Assuming away transaction costs, the Bidder will make a bid for the Target whenever the value it places on the Target's assets, V_{BID}, is greater than the minimum purchase price. The minimum purchase price is the sum of two components. First, is the pre-bid market value of the Target, V_{MKT}. This value, in an assumed semi-strong efficient world, is the value of the Target based on public information. Second, is the premium required to get the Target shareholders to sell, D_{SH}, which is non-negative and functions as a shareholder-driven takeover defense. For simplicity, this paper assumes that the bidder always bids V_{BID}.[34]

It is possible to stop the analysis here and calculate the value of the takeover to the Target's shareholders as being equal to $V_{BID} - V_{MKT}$. Since the takeover will only happen when $V_{BID} > V_{MKT}$ (since $V_{BID} > V_{MKT} + D_{SH} > V_{MKT}$), the takeover will always create value. It appears that this is where some academic analysis has stopped.[35] While this is a reasonable valuation of the takeover to an outsider, from the perspective of the Target's management, acting as an agent for the Target's shareholders, the value of the takeover might differ significantly from this, and may even take on a negative value. This is because management is privy to non-public information, which is not factored into V_{MKT}.

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[31] See Robert Daines and Michael Klausner, Do IPO Charters Maximize Firm Value? Antitakeover Protections in IPOs, 17 JLEO 83, 88-89 (2001).

[32] Id. at 89.

[33] See Bernard Black and Reinier Kraakman, Delaware's Takeover Law: The Uncertain Search For Hidden Value, 96 Nw. U. L. Rev. 521- (2002).

[34] This removes the bargaining power theory of takeover defenses from the analysis. Bargaining power is removed for simplicity and exposition, although the costs (failed value-creating takeover transactions) and benefits (firm-specific gain for the Target's shareholders) are non-negligible. One not obvious cost here is that once bargaining comes into play, the managerial entrenchment interest could be come costly, since management may inefficiently bargain due to the leverage created by their entrenchment interest.

[35] See Frank H. Easterbrook and Daniel R. Fischel, The Proper Role of a Target's Management in Responding to a Tender Offer, 94 Harv. L. Rev. 1161 (1981)

As insider information is superior to public information, it is better to value the Target's assets at according to insider information. Using V_{INS}, the value of the Target according to management's information, instead of V_{MKT}, the value of the takeover becomes $V_{BID} - V_{INS}$. When $V_{INS} > V_{BID}$, the value of takeover will be negative. Since this will sometimes be the case, it follows that some takeovers will destroy value even if the bidding firm values the takeover correctly according to its information. Consider the situation in **table 3**, where a successful bid of 1200 is made for a firm the market values at 1000, and V_{INS} of either 1500, 1000, or 500, with probabilities of 30%, 40%, and 30% respectively. Although the average value of the takeover is equal to $V_{BID} - V_{MKT}$, the takeover is only value-creating 70% of the time. Thus, there is room for management to ameliorate the situation by employing a takeover defense.

Table 3: The value of a takeover from the perspective of management

p	VINS	VBID	VBID-VINS	p(VINS-VBID)
0.3	1500	1200	-300	-90
0.4	1000	1200	200	80
0.3	500	1200	700	210
Value of Takeover				**200**

III.B. The Value of a Takeover Defense with Aligned Incentives

For the purposes of this model a takeover defense will be defined as an optional and costless measure that the Target's management can use to increase the minimum purchase price of the Target. When used, the defense adds the strength of the takeover defense, D_M, to the purchase price, which becomes $V_{MKT} + D_{SH} + D_M$. Since it was assumed that there are no transaction costs, a bid will be initiated whenever $V_{BID} > V_{MKT} + D_{SH}$, and so the presence of an optional takeover defense does not deter bids. If management incentives are aligned with shareholder interests, then management will use the takeover defense whenever it creates value for shareholders ($V_{INS} > V_{BID}$) and the takeover defense is effective ($V_{MKT} + D_{SH} + D_{MGMT} > V_{BID}$).

Thus, when management incentives are aligned, shareholders desire as powerful an optional takeover defense as possible.[36] Consider how the scenario in **table 3** plays out if management has a defense of strength $D_M = 250$, shown in **table 4**.

Table 4: Value of a takeover when a defense is available and incentives are aligned

p	VINS	VBID	VBID-VINS	Def Used?	Value	p(Value)
0.3	1500	1200	-300	Yes	0	0
0.4	1000	1200	200	No	200	80
0.3	500	1200	700	No	700	210
Value of Takeover						**290**
Value of Takeover Defense						**90**

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[36] An important caveat here is that we are still under the assumption that bargaining power is irrelevant and that greater optional takeover defenses will not block takeover bids.

It worth briefly discussing what the optimal D_{SH} is. If management has available to it a takeover defense with a very high D_M, then it is fairly straightforward that D_{SH} should be minimal (zero, or as close to zero as possible): if management does not exercise the takeover defense to block a takeover, under the assumptions thus far, $V_{BID} > V_{INS}$ and the shareholders want the takeover to happen. But even if management does not have a takeover defense available to it, if we set aside risk and bargaining considerations, it would seem that D_{SH} should still be minimal. This is because in a semi-strong efficient market the mean of the distribution of V_{INS} will be V_{MKT}. However, it might be the case that even in the absence of a takeover defense, which we defined as costless, management might be able to implement a costly measure that functions as a takeover defense, such as increasing V_{MKT} at the cost of decreasing V_{INS}.[37] Building on the example in **table 4**, if the pre-bid state of the world was V_{INS} = 1500, and the chance of a bid was 10%, management might be able to decrease V_{INS} by 20 to temporarily increase V_{MKT} by 250 and stop the bid. This would still be net beneficial for shareholders, as demonstrated in **table 5**.

Table 5: Value of a takeover when a costly defensive measure is implemented						
p	VINS	VBID	VBID-VINS	Def Used?	Value	p(Value)
0.3	1500	1200	-300	Yes (costs 20/0.1)	-200	-60
0.4	1000	1200	200	No	200	80
0.3	500	1200	700	No	700	210
Value of Takeover						**230**
Value of Costly Defensive Measure						**30**

III.C. The Value of a Takeover Defense when there are Private Incentives

Unfortunately for the Target's shareholders, management incentives are not perfectly aligned with their own. To model the management's private interest, suppose that the Target management has some equity interest in the Target, and also an independent private interest in their management position, denoted E for entrenchment interest. E is not necessarily positive: it can take on negative values if management has a private interest in the takeover occurring. For simplicity, management's interests will be scaled up to the company level; that is, if V_{INS} is 1000, management is said to also have an interest of V_{INS} = 1000, even though their stake in the company is actually much smaller. E is also scaled up accordingly.

When management has private incentives, then management will use the takeover defense whenever it creates value for management ($V_{INS} + E > V_{BID}$) and when the takeover defense is effective ($V_{MKT} + D_{SH} + D_M > V_{BID} > V_{MKT} + D_{SH}$). This is summarized in **table 6**.

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[37] Cite Moran and Wachter, supra.

Table 6	Management wants TO $V_{INS} + E < V_{BID}$	Management doesn't want TO $V_{INS} + E > V_{BID}$
$V_{BID} > V_{MKT} + D_{SH} + D_M$	*Bid, TO Happens*	*Bid, TO Happens*
$D_M > V_{BID} - V_{MKT} - D_{SH}$	*Bid, TO Def not used, TO Happens*	*Bid, TO Def used, TO fails*
$V_{MKT} + D_{SH} > V_{BID}$	*No Bid*	*No Bid*

From **table 6**, we see immediately that only the middle row matters. **Table 7** shows the conditions under which shareholders bear an agency cost.

Table 7	Size of potential agency cost	Management wants TO $E < V_{BID} - V_{INS}$	Management doesn't want TO $E > V_{BID} - V_{INS}$
$V_{INS} < V_{BID}$	$V_{BID} - V_{INS}$	*Management correctly allows the TO go through*	*Management should allow the TO but doesn't: agency cost incurred*
$V_{INS} > V_{BID}$	$V_{INS} - V_{BID}$	*Management should block TO but doesn't: agency cost incurred*	*Management correctly blocks the TO*

Tables 6 and **7** reveal some interesting information. First, agency costs are incurred whenever the absolute value of the private interest is greater than the agency cost. This is obvious but important, because it tells us that firms with better aligned incentives benefit more from takeover defenses. We will see later that the combination of a costly incentive package with a takeover defense may be superior to no takeover defense at all. It also tells that agency costs resulting from improper use of takeover defenses are capped at the private interest.

Second, the alternative to having a takeover defense is to always let the takeover succeed. But this is costly when $V_{INS} > V_{BID}$, and so even in the presence of an entrenchment interest (positive E), management's action will often be correct. To see this, consider the situation in **table 4** when E is 300.

Table 8: Value of a takeover when defense available and incentives are misaligned; E = 300							
p	VINS	VBID	VBID-VINS	MGMT Interest	Def Used?	Value	p(Value)
0.3	1500	1200	-300	-600	Yes	0	0
0.4	1000	1200	200	-100	Yes	0	0
0.3	500	1200	700	400	No	700	210
Value of Takeover							**210**
Value of Takeover Defense							**10**

We see from **table 8** that even if management has a relatively large entrenchment interest and incorrectly turns down a value-creating bid when $V_{INS} = 1000$, their ability to correctly turn down the value-destroying bid when $V_{INS} = 1500$ makes up for that mistake and the net value to SH actually increases by 10. Note that the entrenchment interest in this simple example could have been as high as 700 (management's interest without E in the most value-creating situation) and the takeover defense would have been value creating rather than neutral. This suggests that the following point:

Depending how large the set of potential takeovers with $V_{INS} > V_{BID}$ is, there exists some critical value of E, E*, such that having a takeover defense is value-creating for shareholders if E < E*. The size of the aforementioned set is dependent on the probability distributions of V_{INS}, V_{BID}, and V_{MKT}. All else equal, the correct use of the takeover defense will increase as the variance of V_{INS} grows relative to V_{BID} and V_{MKT}. That is, the more inefficient a market is, the more valuable takeover defenses become.[38]

Importantly, this discussion reveals the two key factors for determining when takeover defenses are desirable: market efficiency and private incentives. If either the entrenchment interest is too high or the market is more efficient, takeover defenses can quickly become value destroying. Of equal importance is that because the probability distributions of V_{BID} and V_{INS} affect the desirability of the takeover defense, and because the relevant range of these distributions is determined by the middle row of Table 6, the desirability of the takeover defense depends on both the strength of that takeover defense, D_M, and the natural barrier provided by shareholders, D_{SH}.

III.D. The Power of an Incentive Package

The previous sub-section showed that the value of takeover defenses decreases as the value of E grows. This suggests that if we can align management's private interest with shareholders, thereby reducing E, we can capture the full value of the takeover defense. Aligning interests is costly, but the following example shows that it can be better than eliminating the takeover defense altogether.

Consider again the example in Table 8. Assume that management has a 5% equity stake in company, so that to offset the entrenchment interest (E) of 300 and align managerial

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[38] [note: FERREIRA, M. A. and LAUX, P. A. (2007), Corporate Governance, Idiosyncratic Risk, and Information Flow. The Journal of Finance, 62: 951–989. Speaks to the reverse of this point: that higher takeover defenses result in less information flow; their naked result support the point made in the text, but they reject the notion that reverse causality driving their results (which doesn't necessarily reject reverse causality)]

incentives, we could make a payment of 300 * 5% = 15 to management when they sell the target. This situation is shown in Table 9.

Table 9: Value of a takeover with a defense and incentive package when incentives misaligned							
MGMT equity:	0.05		E:	-300		Payment:	15
p	VINS	VBID	VBID-VINS	MGMT Interest	Def Used?	Value	p(Value)
0.3	1500	1200	-300	-300	Yes	0	0
0.4	1000	1200	200	200	No	185	74
0.3	500	1200	700	700	No	685	205.5
Value of Takeover							**279.5**
Value of Takeover Defense + Incentive Package							**79.5**

The payment of 15 avoided management's mistake by aligning their interests with shareholders. Although the payment has a cost of 10.5 when compared to the situation in Table 4, where management was acting as a perfect fiduciary, we see that this option is superior to leaving entrenched management with a takeover defense (Table 8), where the cost of entrenchment was 80.

This analysis is incomplete for at least two reasons. The first is that it may be difficult to constrain alignment costs to only those situations where there is a hostile takeover: making a payment to management only when there is a hostile takeover, but not when there is a friendly takeover may create costly perverse incentives. As such, it may be that incentive packages are more expensive than they appear to be at first glance. The second reason the analysis is incomplete is that management's entrenchment interest is uncertain in reality, which is discussed further in the next subsection.

III.E. Uncertain Incentives

The entrenchment interest is not only difficult to accurately estimate but it is *per se* uncertain. That is, entrenchment will often depend not just on the Target company, but also on characteristics of the bid that cannot be known *ex ante*: is it hostile or friendly, and what is the bidder offering management. Thus, even if one had perfect information *ex ante*, entrenchment interest would not be a constant, but a probability-weighted distribution. This drastically reduces the effectiveness of the constant payment strategy outlined above. Consider, for example, the scenario in Table 10, which is the same as Table 8 except that instead of a constant E of 300, there is a 30% chance that E will be 900 and a 70% chance that E will be 0 (for an expected E of 270).

Table 10: Value of a takeover with a takeover defense when private incentives are uncertain								
p	VINS	VBID	E	VBID-VINS	MGMT Interest	Def Used?	Value	p(Value)
0.09	1500	1200	900	-300	-1200	Yes	0	0
0.21	1500	1200	0	-300	-300	Yes	0	0
0.12	1000	1200	900	200	-700	Yes	0	0
0.28	1000	1200	0	200	200	No	200	56.0
0.09	500	1200	900	700	-200	Yes	0	0.0
0.21	500	1200	0	700	700	No	700	147.0
Value of Takeover								**203.0**
Value of Takeover Defense								**3.0**

Uncertainty in E decreased the value of the takeover defense, even though the expected entrenchment interest went down. Just as a payment to management was able to remedy a value destroying takeover defense in the previous subsection, so too can it here. However, if we can adjust only adjust E by a constant, it should be clear that the payment cannot be as effective as it was in Table 9, since it will under-align incentives in some cases and over-shoot the target in others. Consider providing a payment of 10 (i.e., countering an E of 200 when management has 5% equity) to avoid the big mistake that management makes in fifth row of Table 9 (V_{INS} = 500, V_{BID} = 1200, E=700), which is shown in Table 11.

Table 10: Value of a takeover with a defense, uncertain incentives, and alignment payment								
Payment: 10								
p	VINS	VBID	E	VBID-VINS	MGMT Interest	Def Used?	Value	p(Value)
0.09	1500	1200	900	-300	-1000	Yes	0	0
0.21	1500	1200	0	-300	-100	Yes	0	0
0.12	1000	1200	900	200	-500	Yes	0	0
0.28	1000	1200	0	200	400	No	190	53
0.09	500	1200	900	700	0	No	690	62
0.21	500	1200	0	700	900	No	690	145
Value of Takeover								**260**
Value of Takeover Defense								**60**

Although a constant payment was able to remedy the situation in this particular example, management's incentives are not aligned in all situations, and management is making one more mistake that they did in the situation outlined in Table 9. The net cost of the uncertain entrenchment interest here is 30, as opposed to only 10.5 in Table 9. The greater the uncertainty surrounding E, the greater the problem becomes. While a constant payment will help save some mistaken uses of the takeover defense, it may also induce some inefficient sales. This suggests that solutions involving non-constant payments should be explored. Two ways to do this are by increasing managerial interest in $V_{BID} - V_{INS}$ so that E falls in relation to that interest, and by modifying the payment (i.e., making it a variable payment)

based on a set of objective criteria that correlate with E. A combination may be most effective.

The discussion in this subsection and the previous subsection demonstrates that takeover defenses and incentive packages are not independent: the existence of an incentive package can make the difference between a value-creating and a value-destroying takeover defense.   Furthermore, the discussion in this subsection shows that designing the proper incentive package can be a complex inquiry that depends heavily on the entrenchment interest. Consider also that the strength of the contemplated takeover defense will factor into the inquiry, as it affects the relevant range of probability distributions (i.e., the size of the middle row in Table 6).

III.F. Takeaways

This section has provided a simple model of takeovers and takeover defenses. The model demonstrated some basic known facts about takeover defenses that can be summarized as follows:

- Takeover defenses can be used by management to preserve hidden value for shareholders, thereby preventing value-destroying takeovers,
- The more inefficient a market is, the more valuable are takeover defenses,
- The greater entrenchment interest there is, the less valuable are takeover defenses,
- Well-designed incentive packages can make takeover defenses more valuable, and
- The effectiveness of takeover defenses and incentive packages are interdependent; designing efficient pairings involves a complex inquiry into expected entrenchment interest.

IV. Practical Considerations

This rest of the paper examines the current state of takeover law and takeover defenses, and uses the insights of Part III to analyze a few select takeover defenses.

IV.A. The Current Legal Standard

One of the reasons why takeover defenses are a topic of lively debate is that the Delaware General Corporation Law (DGCL) is silent on the issue.[39] Although the statute requires both shareholder and board approval for certain fundamental transactions,[40] it does not say that both shareholders and the board must approval a tender offer.[41]

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[39] William T. Allen, Jack B. Jacobs, and Leo E. Strine, The Great Takeover Debate: A Meditation on Bridging the Conceptual Divide, 69 U. Chi. L. Rev. 1067-1100, 1068 (2002).

[40] But note that even this requirement can be circumvented through the use of dual-class share structures, discussed in more detail infra. Thus, the statute might be seen as only providing a default framework, rather than a strong policy stance.

[41] Id. at 1078.

Against the backdrop of statutory silence, Delaware courts were forced to make a policy decision in response to a wave of hostile takeovers in the 1980s. The poison pill, which was invented by practitioners to force hostile bidders to hold a proxy fight and win the target board some time, was upheld by the court in *Moran*, subject to the standard set out in *Unocal*.[42] *Unocal*, in recognition of the tension between managerial expertise and managerial entrenchment, devised a reasonableness standard for determining the validity of defenses measures.[43] However, as the Court was (and still is) reluctant to make business decisions on the part of management, the reasonability require remains extremely deferential to the target's board, coming close to allowing a board-veto of hostile takeovers.[44] For example, in *Air Products & Chemicals*, the Chancery Court upheld the staggered board and poison pill combination – a near-preclusive defensive measure that requires hostile bidders to win two elections.[45]

Delaware takeover cases have received a great deal of criticism from academics.[46] Professors Black and Kraakman, in their critique of the case law, have argued that Delaware takeover cases can be justified only on grounds of "hidden" value, or, in the language of Part III, by a V_{INS} that differs from V_{MKT}.[47] Although they admit that hidden value is present, they discount it as a viable foundation for the corporate law, basing their argument on the empirical evidence against takeover defenses, discussed *supra* in Part II, and the inability and reluctance of courts to scrutinize the difference between V_{INS} and V_{MKT}.[48]

Much of the academic criticism is based on the case law's approval of near-preclusive measures able to stop bids with very high premiums. As Professors Black and Kraakman write, it is certainly true that it is rare and usually implausible for a bid premium of 50-100% over the market price to undervalue the target.[49] However, it is also true that such a high bid would be accepted even with private interests unless V_{INS} was also significantly higher than V_{MKT} (recall from subsection III.C that the agency cost from an improperly used takeover defense is limited to the private interest). Consider for example an unsolicited bid made by GlaxoSmithKline for Human Genome Sciences, or an 81% premium to the market price.[50] The bid was refused by Human Genome Sciences' board, and after the refusal, the company's stock traded at an even

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[42] <u>Moran v. Household Int'l, Inc.</u>, 500 A.2d 1346 (Del. 1985).

[43] <u>Unocal Corp. v. Mesa Petroleum Co.</u>, 493 A.2d 946, 955 (Del. 1985). The Court laid out a two-step test. First, the board must have reasonable grounds to believe that another person's stock ownership poses a threat to the corporate enterprise. <u>Id.</u> Second, the board must demonstrate that its "defensive response was reasonable in relation to the threat posed. <u>Id.</u>

[44] See e.g., <u>Unitrin</u>, which expanded upon the second <u>Unocal</u> prong and held that a defensive response is unreasonable if it is either coercive or preclusive. <u>Unitrin, Inc. v. Am. Gen. Corp.</u>, 651 A.2d 1361, 1387 (Del. 1995).

[45] <u>Air Products & Chemicals, Inc. v. Airgas, Inc.</u>, 16 A.3d 48 (Del. Ch. 2011)

[46] See e.g., Ronald J. Gilson, <u>Unocal Fifteen Years Later (and What We Can Do About It)</u>, 26 Del. J. Corp. L. 491, 492 (2001) ("<u>Unocal </u>ultimately has developed into an unexplained and, I think, inexplicable preference that control contests be resolved through elections rather than market transactions")

[47] Bernard Black & Reinier Kraakman, <u>Delaware's Takeover Law: The Uncertain Search for Hidden Value</u>, 96 Nw. U. L. Rev. 521 (2002) (arguing that superior insider information is the only theory upon which Delaware takeover cases can be rationalized)

[48] *Id.* at 550-555.

[49] *Id.* at 553.

higher 95% premium to the original market price.[51] While it's likely that stock price increased due to the possibility of another takeover at a higher premium, this example shows that hidden value can exceed 80% premiums.[52]

But approval of near-preclusive measures is merely approval, not prescription. It is important to remember that the corporate law is enabling in nature: it provides default rules, enabling shareholders and management to contract as they see fit. The ability to block bids with such high premiums comes primarily from the use of the poison pill, which forces bidders to go through the proxy system. But if management and shareholders so agreed, they could implement a policy to prevent the use of poison pills. In fact, several companies have implemented policies restricting the use of pills.[53] Notably, in *Unisuper Ltd. v. News Corp.*, the Chancery Court upheld the validity of a pill policy that required a shareholder vote to extend an existing pill; that is, the Court held that directors need not be able to implement a poison pill of their own accord to meet their fiduciary duties, because shareholders would still be able to vote on the implementation.[54] Thus, it seems to be the case that shareholders and management could choose to opt-into a no-pill world *ex ante*.

Ever since *Moran* and *Unocal* it has been known, and it is certainly known today, that management has powerful takeover defenses at its disposal. While I do not wish to understate the importance of default rules, the parties to the corporate contract are able and sophisticated enough to draft provisions that appropriately balance the power between shareholders and management.

Part III showed that certain takeover defenses under certain conditions create value. As long as this is true, Delaware courts should approve defenses used in good faith. And this is exactly what they do. If defenses being used in practice, such as the staggered board and poison pill combo, seem too strong or seem to be used too liberally, it follows either that this view is false, that the contracting parties have made an inefficient contract, or that while these measures are efficient under the current law, the law does not accommodate more efficient ones.

While the former two options are plausible, that milder defenses are not available under the current law seems unlikely to be the case.[55] As Part IV.C will show, supermajority provisions and dual class share structures can be used to create a price premium defense a la the defense described in Part III, which can be designed to be much milder than the

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[50] Maureen Farrell, Hostile Takeovers are Back, CNNMoney (April 19, 2012), available at: http://money.cnn.com/2012/04/19/markets/mergers-hostile/index.htm

[51] *Id.*

[52] Admittedly, this is an example in which hidden value was successfully communicated to the market (and if this is the case, we don't need management-driven takeover defenses); however, it is problematic to find a convincing example of a case in which information could not be successfully communicated without bringing in noise from elapsed time. One in which a premium could not be communicated but we might reasonably believe there was one due to increases in the target's market-price can be found in Air Products, *supra* note 45.

[53] See Subodh Mishra, 2008 Background Report: Poison Pills, RiskMetrics Group, 50-56 (2008), available at: http://va.issproxy.com/resourcecenter/publications/Background_Reports/2008/PP_2008.pdf, for examples

[54] Unisuper Ltd. v. News Corp., 1699-N, 2005 WL 3529317 at *7-8 (Del. Ch. Dec. 20, 2005)

[55] Initially, it seems that the second option is also unlikely, because the contracting parties are sophisticated. However, it is possible that there is some market failure in the bargaining process that results in this outcome.

staggered board and poison pill combo that is so often criticized. Before taking a look at those defenses however, it is useful to discuss why the "defense of communication" is not satisfactory.

IV.B. The Defense of Communication

One possible argument against allowing the board to exercise takeover defenses is articulated by Professor Bebchuk as follows: the board already has a natural and optional takeover defense available to them in that they can tell the Target shareholders not to accept the Bidder's bid.[56] Thus, Bebchuk writes, "to prefer a [regime in which the board has final say over the use of a defense,] one would have to believe that shareholders' decision-making on whether to defer would be so flawed that tying shareholders' hands and mandating general deference to boards would make shareholders better off."[57] As Bebchuk recognizes, the defense of communication is functionally equivalent to a management takeover defense[58]; the only two differences are that the strength of the defense is decided *ex post* rather than *ex ante*, and that the *ex post* decision is left entirely to shareholders. It's true that the information *ex post* is newer, and so holding out finds its only real advantage in the fresher information available to the shareholders *ex post*. However, the shareholder decision-making process on this issue is in fact quite flawed; it is not only expensive and prone to collective action problems, but the fact that the median shareholder is the one making the decision makes it difficult to believe that this is the "efficient" standard.

Having shareholders make an *ex post* decision is costly; in order to achieve the efficient outcome, the takeover defense design inquiry must be conducted both *ex ante* and *ex post*. Recall that one of the key takeaways from Part III was that incentive packages are critical to efficient takeover defense design, and that both inquiries must be conducted at the same time. Suppose that the compensation structure had not already been properly devised prior to a hostile bid. Then, it hardly makes sense for shareholders to implement it *ex post* by offering to pay management if management changes its recommendation and they then decide to sell.[59] Thus, in order for *ex post* decision making to obtain the same benefits as *ex ante* decision-making, the compensation structure must be devised *ex ante*. Since we saw in Part II that properly designing the compensation structure depended on the distributions of V_{INS}, V_{BID}, and E, and further on D_{SH} and D_M, the analysis for the optimal strength of D_M would have already been completed *ex ante*. Why should we duplicate that same analysis *ex post*?

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[56] Lucian A. Bebchuk, The Case Against Board Veto in Corporate Takeovers, 69 U. Chi. L. Rev. 999 (2002). Bebchuk articulates his case against a "board veto," which might be interpreted as an absolute takeover defense, $D_M =$ infinity. An absolute defense is unrealistic, and so we must think that Bebchuk is arguing instead against some very high D_M (it is clear that if V_{BID} is at a 300% premium to V_{MKT}, no "board veto" is going to stop the takeover).

[57] *Id*. at 1002-1003

[58] *Id*. at 1002 ("A board veto regime and a shareholder voting regime would produce different outcomes only in those cases in which shareholders would elect not to defer if the decision were left with them.")

[59] Management would be incentivized to recommend against the takeover even when they thought it was a good idea, in order to capture a payment when the offer is made.

Moreover, the analysis is not trivial; regardless of how sophisticated investors are, the analysis itself is expensive; it could not only be time-consuming, but also could benefit tremendously from insider information not available to shareholders *ex post*. It seems strangely inefficient to ask each of the many shareholders to conduct such an expensive analysis of their own accord when they could have pooled their resources and used better information to conduct it *ex ante*. Faced with a decision to accept an attractive bid or conduct a costly analysis, it is quite possible shareholders will rationally choose the former and therefore lose the benefit of an optimally chosen D_M.

Finally, an unsettling characteristic of the defense of communication is that is leaves the final decision in the hands of a rather arbitrary shareholder: the median shareholder. The same can be said about most anything that shareholders vote on, such as director elections, but that choice seems to be based more on principal than anything else; within the takeover context, where both sides of the debate are making efficiency arguments, it seems a little strange to think that this is the efficient answer. It's certainly true that if the market were perfectly efficient, each and every shareholder would value the stock at exactly the stock price, and it wouldn't matter if a transaction required 1% of the shareholder vote or 99% of the shareholder vote to go through. Indeed, if the market were perfectly efficient in this way, a takeover should happen when it is offered at even the slightest premium to the market price; all shareholders should be forced to sell for anything over the market price. Such an approach would not sit well with current understandings of capital markets. A positive D_{SH} implies that there are some shareholders that price that firm's shares at more than the prevailing market price. That supermajority vote provisions are considered defensive measures supports this view. Indeed, the mere fact that the defense of communication might work is evidence of this: as the defense presupposes that the market price remains unaffected by the communication, the only way it could work is by raising the median shareholder's valuation of the target. It would be defense with strength D_M as determined by the analysis of the median shareholder. But what efficiency rationale can one possibly dream up to think that the median shareholder is the efficient decision maker?

IV.C. Price Premium Defenses

The D_M defense described in part III was a modifier to the price premium required for a takeover to occur and so it may be termed a price premium defense. If the staggered board and poison pill combo are too powerful a defense when framed in price premium terms and managerial passivity (simply D_{SH}) is too weak, we need a defense that is somewhere in the middle. Supermajority clauses and dual class share structures can achieve this by providing management with the ability to modify the voting requirements or simply hold more votes in certain situations.

A supermajority clause can be used to modify shareholder voting. For example, a supermajority vote requirement for any business combination with an interested party (a la DGCL §203) that does not have board approval would function to increase the amount of stock a hostile offeror would need to purchase in a tender offer to ensure a successful merger. This would allow management to shift the critical shareholder higher up the distribution from

the median. If the clause and accompanying incentive package were correctly designed, the shift would be more efficient on average.

Dual class share structures could provide shares owned by management with special voting rights in certain situations, such as mergers with interested parties, which would function very similarly to the supermajority vote requirement just discussed. For example, if management has a 5% equity stake, but gets 25% of the vote, this essentially creates a 67% supermajority requirement for the non-management shareholders, shifting the critical shareholder higher up the distribution. Importantly, special voting rights might also be used to encourage certain friendly takeovers, by moving the critical shareholder down the distribution rather than up. If management had 25% of the voting power, for example, a friendly merger would only need 33% of the remaining stockholder vote. While Part III discussed takeover "defenses," the analysis is very much the same for when $V_{INS} < V_{BID}$ and management wants instead to encourage a takeover.

Thus, providing management with special voting rights via dual class share structures, or allowing them to modify shareholder voting via supermajority provisions provides a way of imitating the price premium defense discussed in Part III. Both of these methods can be used to create takeover defenses that are not only milder than the veto-like staggered board and poison pill combo, but also have the potential to be much more efficient than a managerial passivity or a defense of communication approach.