

TAKEOVER BIDS VS. PROXY FIGHTS  
IN CONTESTS FOR CORPORATE CONTROL

Lucian Bebchuk  
Oliver Hart

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Harvard Law School  
Cambridge, MA 02138

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## Takeover Bids vs. Proxy Fights in Contests for Corporate Control

Lucian Bebchuk and Oliver Hart\*

### Abstract

This paper evaluates the primary mechanisms for changing management or obtaining control in publicly traded corporations with dispersed ownership. Specifically, we analyze and compare three mechanisms: (1) proxy fights (voting only); (2) takeover bids (buying shares only); and (3) a combination of proxy fights and takeover bids in which shareholders vote on acquisition offers. We first show how proxy fights unaccompanied by an acquisition offer suffer from substantial shortcomings that limit the use of such contests in practice. We then argue that combining voting with acquisition offers is superior not only to proxy fights alone but also to takeover bids alone. Finally, we show that, when acquisition offers are in the form of cash or the acquirer's existing securities, voting shareholders can infer from the pre-vote market trading which outcome would be best in light of all the available public information. Our analysis has implications for the ongoing debates in the US over poison pills and in Europe over the new EEC directive on takeovers.

Key words: corporate governance; corporate control; takeovers; proxy contests; mergers and acquisitions.

JEL classification: G30, G34, K22.

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## I. INTRODUCTION

An important issue for any firm but the very smallest is how the firm's owners select the managers who have authority over the firm's operations. This issue is particularly relevant in the case of a public company with dispersed ownership, where owners are commonly passive and managers consequently have substantial discretion to pursue their own goals.

In this paper we examine and assess alternative methods for choosing or replacing the management team (board) in companies with dispersed ownership. We focus on three principal mechanisms: (1) a proxy contest, i.e., a straight vote on replacement of the board; (2) a takeover bid; and (3) a combination of (1) and (2), specifically, an acquisition offer accompanied by a vote. We identify and compare the problems involved in each of these mechanisms. We show how combining an acquisition offer with voting can be superior both to straight proxy fights and to straight takeover bids, and we put forward a simple and clean arrangement for such a combined mechanism. We also show that a mechanism in which shareholders vote on acquisition offers can exploit the ability of shareholders to draw inferences from market prices. Our conclusions have implications for a range of arrangements, used in both the U.S. and Europe, that introduce voting requirements in conjunction with takeover bids.

We start by analyzing proxy fights. At first sight, it seems that proxy contests would be a good way for superior managers to replace an incumbent, given that they do not require the costly acquisition of shares. However, straight proxy contests suffer from serious problems that limit their use to replace managers in practice. In our view, the most serious disadvantage arises not from the familiar public good problem that challengers will have to bear the costs of a campaign whose benefits will be largely captured by shareholders. This problem by itself could be solved by reimbursing successful challengers for their expenses. Rather, the fundamental

difficulty with a proxy contest, we argue, is that of persuading shareholders that a rival's victory would be beneficial for them.

Because control provides private benefits, the fact that a rival is interested in replacing the incumbent does not imply that the rival would manage the company better. Consequently, if shareholders do not observe the quality of rivals, but know that the average quality of potential rivals is worse than the incumbent's, the rational strategy of shareholders will be to vote for the incumbent. Indeed, we show that, even if the quality of a certain rival is known by the most informed shareholders, voting shareholders may well be unable to infer this quality from the market price and thus may vote generally for the incumbent. As a result, even a rival who in fact would be better might have difficulty in persuading the shareholders to vote for it.<sup>1</sup> This problem of proxy fights can be overcome by a rival's putting an acquisition offer on the table. A rival that would in fact be better can offer a high bid that would make it clear to the shareholders that they would benefit from the rival's gaining control without having to convince them of the rival's superior abilities.

There are two other potential problems with pure proxy contests that tender offers can overcome. First, it might be the case that a rival could create a higher value, but some of this value would flow directly to the rival (in the form of private benefits or synergies) and a victory by the rival in a proxy contest would thus be against the interests of shareholders. In this case, the rival can still gain control by making an acquisition offer to buy shareholders out at an attractive price. Second, in some cases, achieving the benefits from a change in control would require a move to concentrated ownership, which a tender offer can accomplish but a proxy fight

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<sup>1</sup>The idea that a rival of uncertain quality may have difficulty in getting shareholders to vote for it in a proxy contest has been noted previously by Pound (1988) and Bebchuk and Kahan (1990).

cannot.<sup>2</sup>

While takeovers do not suffer from the problems associated with pure proxy contests, they exhibit significant difficulties of their own. These difficulties, which have been already recognized in the literature, arise from the fact that a shareholder deciding whether to tender will, among other things, compare the price offered by the bidder to the value of being a minority shareholder in the post-acquisition company. As a result, a shareholder might choose not to tender even though he wants the bid to succeed (the free-rider problem analyzed in Grossman-Hart (1980)) or he might choose to tender even though he wants the bid to fail (the pressure-to-tender problem analyzed in Bebchuk (1985a)). We show that combining tender offers with voting on the offer can eliminate both of these distortions.

To be more precise, we argue that a mechanism that works better than either a straight proxy contest or a straight takeover bid is one under which approval by a vote of shareholders is both a necessary and a sufficient condition for an acquisition offer to be accepted. One simple way of implementing such a mechanism would be to change the rules governing mergers to allow not only the managers but also rival bidders to submit merger proposals to a shareholder vote (subject to some threshold conditions seeking to eliminate frivolous offers). Under this

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<sup>2</sup> Models examining proxy fights and their problems have largely focused on issues other than the ones we analyze. Gilson and Schwartz (2001) view proxy fights as inferior because shareholders affiliated with the incumbent might have more intense preferences and be more likely to vote and thus might carry the day even when they constitute a minority of the shareholders. This concern also leads them to take the opposite view to ours on the desirability of requiring takeover bidders to win a shareholder vote. Bhattacharya (1997), Maug (1999), and Yilmaz (1999) focus on information aggregation in proxy contests, but they do not compare the problems of proxy contests with those of takeovers. Two early models of the choice between proxy fights and tender offers, which also differ from our approach, are Harris-Raviv (1988) and Shleifer-Vishny (1986). Shleifer-Vishny (whose work we discuss further in Section III) follow Manne (1965) in attributing the rarity of proxy fights as compared with takeovers to high transaction costs. Harris-Raviv (1988) focus on the ability of an incumbent facing a rival to exchange equity for debt to increase the fraction of votes held by the incumbent, and how such exchanges affect differently the feasibility of a takeover and a proxy contest.

arrangement, anyone seeking to acquire a controlling interest in a company would submit a proposal directly to the shareholders, and if the proposal is approved by a majority vote it will be binding on all shareholders, who would then receive equal treatment.

Our analysis supports various arrangements in the U.S. and Europe that introduce voting in connection with rivals seeking control. While these arrangements do not all implement the combined voting-on-acquisition-offers mechanism in the simplest way, they do operate to condition the success of acquisition offers on approval in a shareholder referendum. In the U.S., for example, the development of poison pills has had the effect of requiring hostile bidders that seek a control block to oust the incumbent in a proxy fight in order to have the pill redeemed. This proxy fight would be effectively a referendum on the acquisition offer. The poison pill thus forces hostile bids to go through a vote, and there is an ongoing debate as to whether this critical consequence of the pill is desirable.<sup>3</sup> Our analysis suggests that this consequence is desirable.

Our view of poison pills by themselves is thus more favorable than the one financial economists usually take. Poison pills can become problematic in our opinion only when combined with arrangements that make it difficult or even impossible for a rival to get an effective shareholder vote on its acquisition offer, e.g., in the presence of a classified (or “staggered”) board. Similarly, our analysis provides support for those arrangements in the U.K. and in the proposed Directive for the EEC that effectively require hostile bidders to be able to win a shareholder vote.

One novel element of our model is that, in contrast to the existing literature, we analyze explicitly how inferences drawn from pre-voting market prices can influence shareholders who

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<sup>3</sup> Compare Gilson (2001), who opposes the use of “elections” over acquisition offers with Lipton and Rowe (2001), who defend the poison pill and the elections it forces on hostile bidders.

make tender decisions, or who vote in proxy contests or directly on acquisition offers.<sup>4</sup> Such inferences are important because not all shareholders will incur the expenses needed to acquire and process all the publicly available information. Economists have obtained sufficient conditions for market prices to reflect, and for agents to be able to infer from them, the information known to the most informed traders.<sup>5</sup> But these conditions apply to the case where the distribution of security returns is exogenous. In contrast, in our context, security returns depend on a decision, a vote by shareholders, which in turn is influenced by the information embedded in market price, i.e., security returns are endogenous.

We show that, in the case of a proxy contest, even if a rival's quality is known to the informed shareholders studying all public information, other shareholders might well be unable to draw from market prices any information useful for voting purposes. In contrast, we show that, in a vote on acquisition offers in cash or publicly traded securities, uninformed shareholders will be able to infer from the market price which way to vote, and they will vote as if they had all the publicly available information about the target's independent value. That is, voting works better when the choice is between the incumbent's uncertain value and the certain value of an offer in cash or publicly traded securities, and less well when the choice is between the incumbent's uncertain value and the rival's uncertain value.

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<sup>4</sup> Although the literature on modeling takeovers and proxy fights is quite large, very little attention has been paid to this question. The only two exceptions that we know of are Hietala, Kaplan, and Robinson (1999) and Maug (1999). The first paper is a case study of what information shareholders could have inferred from market prices about how two bids compared in the Viacom-QVC bidding contest. The second paper considers inferences that shareholders can draw in proxy voting from market prices in a case in which uninformed shareholders vote strategically: specifically, they vote in such a way as to make better informed shareholders pivotal. In contrast, in our model it is optimal for all rational shareholders to vote on the basis of whatever estimate of the various outcomes they are able to form (see the discussion in Section II).

<sup>5</sup>See, e.g., Grossman (1989).

The scope of our project is limited in two important ways. First, we restrict ourselves to analyzing and comparing the three mechanisms noted above. We thus do not explore the full set of possible mechanisms to see whether any other mechanism could perform even better.<sup>6</sup> Second, we analyze situations in which a rival is permitted to seek control, and we focus on the performance of alternative mechanisms for determining whether control will be transferred in such a case. In the U.S., many companies have charter provisions that limit substantially the points in time when rivals can launch a control contest. We leave for another day the question of when (or how often) rivals should be allowed to trigger the mechanism governing control transfers.

The paper is organized as follows. Section II presents our framework of analysis. Section III analyzes the problems of pure proxy contests. Section IV analyzes how voting can be beneficial when combined with an acquisition offer, puts forward our proposal for making this combination, and examines existing arrangements that introduce voting in connection with offers. Finally, Section V concludes.

## II. FRAMEWORK OF ANALYSIS

### T=1: Initial Situation

We consider the following five-stage model: At T=1 a target with dispersed ownership is managed by an incumbent. At T=2 a rival emerges and decides whether to enter a control contest and, if so, which form to use. At T=3 market trading in the target's securities takes place. At T=4 the outcome of a control contest, if such a contest is launched, will be determined by the tender decisions or voting decisions of shareholders. At T=5, values will be realized.

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<sup>6</sup>For example, Neeman and Orosel (1999) argue that it might be best to create, for each election of the board, a market for corporate votes that is separate from the market for corporate shares. However, as they recognize, such a separation can also create new distortions.



Below we discuss in more detail our assumptions about each of the stages.

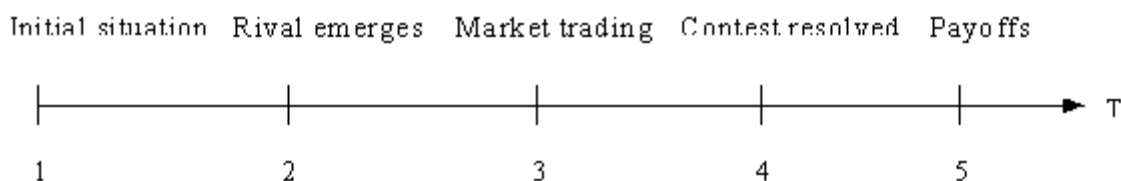


Fig. 1: Sequence of Events

There is a widely held company. There is a large number of small shareholders, each owning a (quite small) fraction  $\sigma$  of the shares of the company.<sup>7</sup> The company has an incumbent manager I with a negligible fraction of the company's shares. (The analysis could be modified to apply to the case in which I has a non-negligible block of shares as long as this block is small enough not to provide I with a lock on control or a decisive influence on the outcome of corporate voting.) Our analysis thus excludes companies in which I has a controlling or large block to begin with; such companies are important, but control transfers in them present different problems (see Bebchuk (1994)).

#### T=2: Possible attempt to obtain control by a rival

At T=2 a rival R arrives and decides whether to seek control--either launch a proxy contest or a tender offer--to replace I. We shall assume at this stage that both the proxy contest route and the tender offer route are feasible. That is, we assume that (i) elections to the board are either due or can be requested by R, and (ii) R may launch a tender offer without having to win a

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<sup>7</sup> Grossman-Hart (1980) used a model with a continuum of shareholders. Bebchuk (1985b, 1988) and Holmstrom and Nalebuff (1992) considered the possibility of shareholders being pivotal, assuming a finite (even if large) number of shareholders. The possibility of being pivotal is clearly important to understanding voting decisions, and we shall therefore use a setup with a large but finite number of shareholders.

vote beforehand. (The case in which a poison pill or some other arrangement introduces the need to win a vote before proceeding with the offer will be considered in section IV.)

The transaction cost of a proxy challenge is  $c_p$  and that of making a tender offer is  $c_t$ . We assume that the proxy fight is successful if the rival receives more than 50% of the votes and that the tender offer is successful if the rival receives more than 50% of all the outstanding shares. If a tender offer is made, we will assume that it will be for all shares and conditional on gaining control. This assumption is made for simplicity and our main results do not depend on it.<sup>8</sup>

### T=3: Market trading

Since we will want to study the inferences that shareholders can draw from market trading, we will allow for a market in the firm's shares before the outcome of the bid or proxy contest is determined. Thus, at T=3, we suppose that there is market trading (due to some liquidity-selling) and a market price P is set. We assume that market makers take the effort to obtain and assess all the public information known to the most informed investors. This includes information revealed at T=2 as a result of actions and disclosures made by I and R. Because such information may be quite important, the estimates of the company's future value under either I or R that are formed on the basis of all information publicly available at T=3 might well differ from the market price at T=1.

We assume that selling involves some small transaction costs borne by the sellers so that in equilibrium only liquidity sellers will sell. We also assume that all market participants, including shareholders, are risk-neutral and that the rate of interest is zero.

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<sup>8</sup>We also assume that, if the rival makes a tender offer, its offer will be the only one on the table. The incumbent is assumed to be liquidity constrained (or risk-averse) and so cannot make a competing bid.

#### T=4: Shareholder decisions determine who will control the firm

If a proxy contest or a takeover bid is initiated by R at T=2, its outcome will be resolved at stage 4. In the case of a proxy fight, shareholders will decide whether to vote for I or R. In the case of a takeover bid, shareholders will decide whether to tender. In analyzing shareholder decisions, we will suppose that shareholders can be divided into three categories:

(1) Rational Informed shareholders (including market makers): These shareholders, who own a fraction  $\alpha_I$  of the shares, incur the costs of studying the relevant public information concerning the characteristics of R and I. We suppose that  $\alpha_I$  is negligible, but that informed shareholders have enough wealth to determine the market price (by placing orders that would prevent any deviations from the price that reflects the relevant public information).

(2) Rational uninformed shareholders: These shareholders (which might in part be institutions) do not spend the time and expense to learn the characteristics of R and I. They are able, however, to draw rational inferences and can be expected to act “rationally.” They make voting and tendering decisions based on the general information they have about the probability distributions from which R and I’s characteristics are drawn and on the inferences they can draw from the market price.

(3) “Noise” investors: These “noise” investors own a fraction  $\alpha_N$  of the shares. They do not vote or tender rationally. Rather, a fraction  $\lambda$  of the shares of these shareholders will support the rival R, and a fraction  $1-\lambda$  of the shares of these shareholders will support the incumbent I, where  $\lambda$  is a random variable that is uniformly distributed on  $[0,1]$ .

We assume that  $\alpha_N$  takes on two values:  $\alpha_H > 1/2$  with probability  $\epsilon$ , and  $\alpha_L < 1/2$  with probability  $1-\epsilon$ , where  $\epsilon$  is very small. Shareholders do not know the realization of

$\alpha_N$  before they vote or tender.<sup>9</sup>

Our assumptions imply that, with high probability (when  $\alpha_N = \alpha_L < 1/2$ ), the rational uninformed shareholders will have the power to decide the contest, in the sense that if they all vote for or tender to a particular candidate (as they will do in equilibrium), that candidate will win. However, there is always a small chance (when  $\alpha_N = \alpha_H$ ) that the noise investors will be important. When they are important, there is some probability that they will give the needed 50% of the shares to I, there is some probability that they will give the needed 50% to R, and there is some probability that they will split their support in such a way that the decisions of the rational uninformed shareholders will determine the outcome. In the last scenario, each rational uninformed shareholder has some chance of being pivotal.<sup>10</sup>

We will also assume that the cost of voting is negligible for all rational shareholders so that each of them will vote as long as there is some chance, as is the case under our assumptions, that the shareholder will be pivotal for the outcome. There is in fact a large incidence of shareholder participation in corporate voting. This can be explained by noting that for many shareholders the cost of voting is small and many shareholders are institutions holding a significant number of shares (which increases the chance, however small, of being pivotal).<sup>11</sup>

Our assumptions can be shown to rule out the phenomenon analyzed by Feddersen and

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<sup>9</sup> Some results can be stated more simply if one assumes that  $\epsilon$  is very small, and we will make the assumption throughout that  $\epsilon$  is sufficiently small for these purposes. See footnotes 12, 13, 15, and 26.

<sup>10</sup> In particular, in the event that noise investors are important, which has probability  $\epsilon$ , the likelihood that a shareholder with a fraction  $\sigma$  of the shares will be pivotal will be  $\sigma/\alpha_H$ . Thus the likelihood that any given rational shareholder will be pivotal is  $\epsilon\sigma / \alpha_H$ .

<sup>11</sup> Our analysis could be easily modified, with little change in results, to apply to the case in which some fraction of the rational shareholders will not vote because their costs are relatively high. Similarly, our analysis would carry over to a case in which the small stakes of some shareholders (say, institutions) are larger than the small stakes of others (say, retail investors) and where the cost of participation will prevent the latter but not the former from voting.

Pesendorfer (1997), whereby uninformed voters vote “strategically” (e.g., some of them abstain) in order to make informed shareholders decisive. This possibility does not occur here since, if a rational uninformed shareholder finds that he is pivotal, the correct inference will not be that informed shareholders have certain information, but rather that the noise voters are numerous ( $\alpha_N = \alpha_H$ ) and have voted in a certain way. In other words, because the noise votes are randomly distributed and the rational informed votes are negligible, the fact that a rational uninformed voter has turned out to be pivotal conveys no information about whether the rival or incumbent is better at operating the firm. Thus, in the event that a rational uninformed shareholder turns out to be pivotal, the shareholder would prefer to cast its vote “sincerely,” i.e., in favor of the outcome that, based on the information that the shareholder has, the shareholder estimates to have a higher expected value.

Finally, we shall assume that, in making their tender decisions or voting decisions, rational shareholders will use only pure strategies. As we shall see, an equilibrium in pure strategies always exists in our model.

#### T=5: Realization of cash flows and private benefits

If R fails to gain control at date 4, then, at date 5, cash flows will be  $Y_1$  and private benefits will be  $B_1$ . We will denote by  $V_1 = Y_1 + B_1$  the total value under I. We will focus on the case in which  $B_1 \ll Y_1$ . This is the most relevant case since we have assumed that the company is widely held. Bebchuk (1999) shows that, when private benefits are large, it will be optimal for the initial capital structure of the company to include a control block rather than to leave control up for grabs. In other words, given our assumption that the company has widely dispersed ownership, it is reasonable to suppose that initial private benefits are small, i.e.,  $V_1$  is approximately equal to  $Y_1$ .

If R gains control, then cash flows will be  $Y_R$  and private benefits will be  $B_R$ . We allow for the possibility that  $B_R$  will be small or large. We denote the total value under R by  $V_R = Y_R + B_R$ .

To formalize the idea that some shareholders are imperfectly informed about  $Y_I$  and  $Y_R$ , we suppose that  $(Y_I, Y_R)$  is drawn from a probability distribution function, with mean  $(Y_I^*, Y_R^*)$ , and with support  $(0, \bar{Y}) \times (0, \bar{Y})$ . We suppose that rational uninformed shareholders know just this distribution function (plus anything they infer from the market price). Rational informed shareholders, however, are assumed to know both  $Y_I$  and  $Y_R$  (though we will comment on the case in which  $Y_I$  and  $Y_R$  are private information and thus are not known even to informed shareholders).

Our interest will be in whether the outcome is efficient—that is, in whether a control transfer takes place if and only if it increases total value (net of transaction costs). To be sure, there are other issues that might be significant from a social or at least private point of view, such as the division of surplus in the event of a control transfer, various ex ante effects, and so forth. But while the question of an efficient ex post outcome is not everything, the issue is certainly sufficiently important from the perspective of either social or private optimality that it deserves careful study.

### III. PROXY CONTESTS

#### A. Conditions Under Which Proxy Contests Work Well

Before we analyze the problems and imperfections that prevent pure proxy fights from

working well, it is useful to begin with a hypothetical benchmark case in which they do work well. The next proposition provides sufficient conditions for a proxy contest to yield an efficient outcome, i.e., for control to be transferred if and only if  $V_R - c_p > V_I$ . We denote  $Y_R - Y_I$  by  $\Delta Y_R$ .

Proposition 1: Assume that R must resort to a proxy contest if it wants to replace management. Then the following (approximate) conditions are sufficient to ensure that R will launch a contest, and all rational shareholders will vote for R, if and only if a control transfer via a proxy fight is efficient:

A1:  $B_R > c_p$ ;

A2:  $V_R - c_p > V_I$  if and only if  $Y_R > Y_I$ ; and

A3: Whether  $\Delta Y_R$  is positive or negative is common knowledge to all shareholders.

Proof: Suppose first that a replacement of I via a proxy contest is efficient, which implies that  $V_R - c_p > V_I$ . Given A2, this implies that  $Y_R > Y_I$ . Given A3, the shareholders will know this. Thus, if R launches a contest, all rational shareholders will vote for R.

Hence, if R launches a bid, R will win with a very high probability. Given condition A1, this in turn implies that launching a contest will be profitable for R.<sup>12</sup>

Now suppose that replacement of I via a proxy contest would be inefficient. This means that  $V_R - c_p < V_I$ . Given A2, this implies that  $Y_R < Y_I$ . Given A3, the shareholders will know this, and all rational shareholders will vote against R. R will consequently lose with a very high

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<sup>12</sup>This assumes that  $\epsilon$  is sufficiently small (see footnote 9). R will win with probability  $1 - [\epsilon (\alpha_H - 1/2) / \alpha_H]$ . Thus, R will profit from launching the contest only if  $B_R (1 - \epsilon [(\alpha_H - 1/2) / \alpha_H]) > c_p$ . And if A1 holds and  $\epsilon$  is sufficiently small this condition will hold.

probability, and R will therefore elect not to launch a contest in the first place.<sup>13</sup> Q.E.D

Thus, if conditions A1-A3 hold, then the proxy contest mechanism ensures that a pure proxy contest will work well. However, as explained below, some or all of assumptions A1-A3 are unlikely to hold in practice. Relaxing these assumptions will enable us to identify the problems that prevent pure proxy fights from working well.

## B. Difficulty of Convincing Shareholders That R Is Superior

### 1. Shareholders' Imperfect Information

Let us start by relaxing A3, the assumption that all shareholders know whether  $\Delta Y_R$  is positive or negative. This introduces the problem that we view as the most important impediment to pure proxy contests--the difficulty that a superior rival has in convincing shareholders of this superiority. Rational uninformed shareholders cannot infer from the fact that a challenger is running that it would be a superior manager. Such inference cannot be made because a rival could benefit from winning and capturing private benefits of control even if it would not be a superior manager.

Because rational uninformed shareholders do not know the actual value of  $\Delta Y_R$ , they will have to vote on the basis of their estimate of  $\Delta Y_R$ . If shareholders cannot make inferences from the market price, they will have to base their voting decisions on  $\Delta Y_R^*$ .

Now even though some rivals might be superior it is plausible to assume that, in the common case, the average quality of potential rivals is lower than the quality of the incumbent. Presumably there are many bad managers in the world who would be more than happy to run a

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<sup>13</sup>This again assumes that  $\epsilon$  is sufficiently small. There is a small likelihood of  $\epsilon (\alpha_H - 1/2) / \alpha_H$  that R will win, and it is assumed that  $\epsilon$  is sufficiently small so that  $[\epsilon (\alpha_H - 1/2) / \alpha_H] B_R < c_p$ .



public company and capture some private benefits of control. Not being able to distinguish between the majority of inferior rivals and the minority of superior rivals, rational uninformed shareholders will generally vote for the incumbent. Thus, we can make the following observation:

If rational uninformed shareholders cannot infer information about  $\Delta Y_R$  from the market price, and if  $Y_R^* < Y_I^*$ , then all rational uninformed shareholders will vote against R even if  $Y_R > Y_I$ . Hence, under these conditions R will never launch a proxy fight.

It is worthwhile contrasting this observation with the conclusions of Shleifer-Vishny (1986). Imperfect information about the rival's quality is a central element of their model. However, they assume that, while shareholders are imperfectly informed about  $\Delta Y_R$ ,  $\Delta Y_R$  is always positive--challengers can always improve performance and the only question is by how much. Given this assumption, Shleifer-Vishny reach the conclusion that superior rivals can always gain control via a proxy fight but not a takeover bid, a conclusion that makes the rare use of proxy fights puzzling. Shleifer and Vishny resolve this puzzle by hypothesizing that proxy contests are costly (see also Manne (1965)). But there are reason to doubt that the transaction costs of proxy fights are generally higher than those of takeover bids.<sup>14</sup> Indeed, in many cases, the reverse is likely to be true. In addition to the costs of contacting shareholders, tender offers also involve the transaction costs associated with getting the required financing and with acquiring a large number of shares. Because a proxy fight involves a "pure" change in the board, without a rearrangement of ownership, it is plausible to assume that in many cases a proxy fight involves smaller transaction costs than a takeover.

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<sup>14</sup>See Schrage (1986).

In contrast, in our model, imperfectly informed shareholders are unable to know for sure that  $Y_R$  is higher than  $Y_I$  and that R is not just after private benefits. Under these assumptions, imperfect information does not make the rare use of proxy fights puzzling but instead can explain it. In our model, imperfect information can make it more difficult for the rivals who are superior to stand out among all potential rivals and to convince shareholders to vote for them.

## 2. Inferences From Market Prices

We have shown that, if rational uninformed shareholders cannot infer information about  $\Delta Y_R$  from the market price and must act on the basis of  $\Delta Y_R^*$  (which we assume to be negative), then all rational uninformed shareholders will vote against R even if  $Y_R > Y_I$ . The question thus remains whether such inference from the market price will be possible. There are two reasons why it might not be. First, there may be situations in which the rival's quality is private information to the rival and consequently even the most informed shareholders do not know  $Y_R$  but only  $Y_R^*$ . In our analysis--by assuming that the most informed shareholders do know  $Y_R$ --we put aside this first reason. Instead, we focus on the analytically more interesting reason--which is that, even assuming that the most informed shareholders do know  $Y_R$  and  $\Delta Y_R$ , rational uninformed shareholders may be unable to infer from the market price any information about  $\Delta Y_R$ .

In what follows an equilibrium is defined by two strategies:

- (i) The strategy of each market maker at  $T=3$  which will specify, for any values of  $Y_I$  and  $Y_R$ , what price to set; and
- (ii) the strategy of rational uninformed investors at  $T=4$  which will specify, for any market price that they observe, how they will vote.

Proposition 2: Assume that market makers know the actual realizations for  $Y_I$  and  $Y_R$  and that  $E[\Delta Y_R | Y_I = x]$  is negative for any  $0 < x < \bar{Y}$ . Then the unique equilibrium is a “non-revealing” equilibrium in which (i) all rational uninformed shareholders vote for the incumbent regardless of the actual value of  $\Delta Y_R$ , and (ii) the market price is set at a level of (approximately)  $Y_I$ .

Proof: Let us first show that the outcome in the proposition is an equilibrium. Note first that, given the shareholders’ voting strategy, the rational action for the market maker is to set  $P$  at (approximately)  $Y_I$ .<sup>15</sup> Moreover, given the market maker’s strategy in setting  $P$ , shareholders cannot infer any information about  $\Delta Y_R$  from the market price. Thus, it is rational for them to act on the basis of the mean of the distribution and to vote against  $R$ .

Let us next show that there cannot be any equilibrium other than the one in the proposition. Note first that there cannot be an equilibrium in which rational shareholders always vote for  $R$  regardless of the market price and the market price is set at (approximately)  $Y_R$ . For in such a case, for any price  $P$  for which  $E[\Delta Y_R | Y_R = P] < 0$ , the rational shareholders will be better off voting for  $I$ , which implies a contradiction. And our assumption that  $Y_I^* > Y_R^*$  implies that there must be a price  $P$  for which  $E[\Delta Y_R | Y_R = P]$  is negative; for if no such case existed, this would imply that  $Y_R^*$  is not lower than  $Y_I^*$ .

So it remains to consider whether there can be an equilibrium in which rational shareholders vote for  $R$  for some levels of the market price and for  $I$  for some other levels of the market price. Suppose that shareholders will vote for  $R$  if the market price is  $P_1$  and for  $I$  if the market price is  $P_2$ . In this case, the following contradiction would arise: if  $Y_I = P_1$  and  $Y_R = P_2$ ,

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<sup>15</sup>More precisely, the market makers will set the price at  $(1-\gamma)Y_I + \gamma Y_R$ , where  $\gamma = [\epsilon(\alpha_H - 1/2)/\alpha_H]$  is the probability that, despite the voting by all rational shareholders for  $Y_I$ , voting by noise investors will give the victory to  $R$ .

then no price set by the market at  $T=3$  will be self-fulfilling. If the market sets the price at level  $P_1$ , shareholders will vote for R and the ultimate value will thus be  $P_2$ . And if the market were to set the price at level  $P_2$ , shareholders will vote for I and the ultimate value will be  $P_1$ . Finally, if the price is set at some level  $P_3$ , different from both  $P_1$  and  $P_2$ , then, whichever contender is supported by shareholders at  $P_3$ , the ultimate value will be either  $P_1$  or  $P_2$ , which again produces a contradiction. Q.E.D.

### 3. Overcoming the Problem

(i) Verifiable plan of action: Although the problem that we have identified arises in a wide range of circumstances, note that it does not always arise and a straight proxy fight is not always doomed. A proxy fight may succeed in a case in which the limited information that rational uninformed shareholders have still enables them to conclude that the expected value of  $Y_R$  exceeds the expected value of  $Y_I$ . This could happen if I is a terrible failure. Alternatively, this could happen if R's promise for improvement is based not on a claim for some superior managerial abilities that are hard to observe but rather on having some attractive and verifiable plan. For example, Kerkorian's 1995 proxy fight against Chrysler's management had some chance of success because it was based on a commitment to distribute Chrysler's accumulated cash to shareholders. (And because the proxy fight had a chance of success, the management in this case was pressured into adopting some of the elements of Kerkorian's proposed plan.)

(ii) Signaling by block ownership: Another way to overcome the information problem is for the rival to hold or to buy some block of the company's shares. This might serve as a signal that R would improve value. It might rule out the possibility that R would be an especially bad manager. If R holds a non-controlling block of  $\theta$ , R will be interested in winning only if  $\theta\Delta Y_R + B_R > c_p$ . Thus, if R has a block  $\theta$ , shareholders' estimate for  $\Delta Y_R$  (without any inferences from

market prices) will be  $E[\Delta Y_R | \theta \Delta Y_R + B_R > c_p]$  and not  $\Delta Y_R^*$ . In the Chrysler case, Kerkorian's significant stock ownership might have also been helpful in making Kerkorian's success possible. Indeed, Mulherin and Poulsen (1998) found that the median stock holding of rivals in proxy contests is 9%, and Pound (1988) found that the likelihood of a challenger's victory increases with the size of the challenger's initial holdings.

The ownership of a significant but not controlling block, however, may not be sufficient to convince the shareholders that R's victory will make them better off. If R has a block  $\theta$  and R is a worse manager than I but not by much,  $\theta \Delta Y_R + B_R$  might still be positive. As a result, if the probability of such an event is substantial,  $E[\Delta Y_R | \theta \Delta Y_R + B_R > c_p]$  might be negative even for a significant level of  $\theta$ . That is, the signal might not work unless R acquires a block by itself that would be so large as to already provide R with partial or full control.<sup>16</sup>

(iii) Acquisition offer: With a takeover bid, in contrast, there is a way for R to communicate credibly to shareholders that R's gaining control will make them better off without demonstrating to shareholders what  $Y_R$  is. To show shareholders that replacement will make them better off, R does not have to convince them that  $Y_R$  exceeds their estimate of  $Y_I$ . Rather, it is enough for R to put on the table an offer with a (cash or cash equivalent) value of  $\Pi$  exceeding their estimate of  $Y_I$ . As will be discussed shortly, the free-rider problem may still prevent R from winning control through a takeover bid even if the shareholders recognize that the bid's success will make them better off. But the main point at this stage is that, whereas the shareholders' imperfect information about  $Y_R$  might lead them to doubt whether R will increase the firm's value, a tender offer is a way for R to remove such doubt: essentially R puts money on the line to back up his claim that R's gaining control will benefit shareholders. Note, finally, that

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<sup>16</sup> Furthermore, note that in many U.S. companies, the presence of a poison pill would prevent R from acquiring more than 15% of the company's shares.

according to the Mulherin-Poulsen (1998) study, a large fraction of proxy contests that take place are indeed accompanied by a takeover bid.

### C. Other Problems of Pure Proxy Contests

#### 1. Incentives to Engage in a Proxy Contest

Let us relax condition (A1) and consider the possibility that  $B_R < c_p$ . In such a case, even if R can manage the company better, R has an insufficient incentive to engage in a proxy contest, since R will make a net loss from the contest even if he wins it. There is a public good problem: R bears the transaction costs of replacing the incumbent but does not capture the total gains from increasing the company's value.

Although this problem is often noted in the literature,<sup>17</sup> it is not in our view a fundamental problem of proxy contests. There are possible arrangements that would provide winners in contests with a payment that would give them sufficient incentives.<sup>18</sup> Indeed, U.S. law allows a contestant to reimburse itself out of the company's coffers for the cost of running its campaign if it wins the proxy fight. Thus, if the imperfect information problem identified above did not exist, and if a superior R could win if it were to run, then this reimbursement arrangement would be sufficient to solve the problem. For in such a case a superior rival would win for sure, get its costs reimbursed, and make a net gain equal to its private benefits of control.

#### 2. The Existence of Large Private Benefits for R

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<sup>17</sup>See, e.g., Clark (1986).

<sup>18</sup>For an analysis of optimal reimbursement rules for contenders in proxy contests, see Bebchuk and Kahan (1990).

Suppose  $B_R$  is high, e.g., R is a high-tech company, I is a high-tech start up, and, if R gets control of I, then R will capture directly substantial synergy gains. In such circumstances, condition (A2) may be violated, i.e., we may have  $V_R - c_p > V_I$ , but  $Y_R < Y_I$ . In a case like this, it is efficient for management to be replaced. However, even putting aside the informational problem and assuming that shareholders know the characteristics of both contenders, rational shareholders will prefer R not to win and will vote against it in a proxy contest.

Making a tender offer enables R to overcome the problem and make R's gaining control beneficial for the shareholders. Let R offer a price  $\Pi$  for shares that satisfies  $Y_I < \Pi < V_R - c_t$ . Note that such an offer will not face the free-rider problem that we will discuss later, because  $\Pi$  exceeds  $Y_R$  ( $\Pi$  exceeds  $Y_I$  which in the case under consideration exceeds  $Y_R$ ). Thus R will gain control with such an offer: in effect R pays shareholders up front for the privilege of extracting high private benefits, a transfer that is not present in a proxy fight.<sup>19</sup>

### 3. Efficiency Benefits Arising from Concentrating Ownership Rights

In some circumstances, obtaining the potential efficiency benefits from R's gaining control would require R to have a substantial fraction of the income or control rights associated with the company. For example, R's incentive to run I well may be enhanced if R owns a substantial share of the company's cash flow rights.<sup>20</sup> It might be also worthwhile to have R undertake investments that increase the value of  $V_R$ ; and, given the concern that the benefit from

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<sup>19</sup> In principle, R could win a proxy fight by promising to pay the company (or its shareholders) a sufficiently large amount to make a victory by R worthwhile to shareholders. Note that such a strategy by R would move the contest away from being a pure proxy fight and in the direction of the combination of vote and acquisition offer which we will discuss below. Furthermore, R would have to continue to make such payments in each subsequent election. A tender offer would eliminate the need to make such periodic payments and will replace them with one large up-front payment.

<sup>20</sup>See Jensen and Meckling (1976).

these investments will be expropriated by others who will oust R later on, R may be willing to carry out these investments only if it possesses at least 50% of the company's votes, thereby becoming replacement-proof.<sup>21</sup>

Clearly, winning a proxy fight does not enable R to acquire a substantial fraction of either I's income rights or I's voting rights. Such an acquisition, however, can be achieved with a tender offer. After buying the shares in a successful bid, R can retain a fraction  $\delta$  of the cash flow rights and a fraction  $\gamma$  of the voting rights and sell the rest to the market.

#### IV. TAKEOVERS WITH AND WITHOUT VOTING

In this section we analyze how a combination of voting and acquisition offers can do better than either voting alone or acquisition offers alone. We argue that an efficient outcome can be facilitated by an arrangement under which all acquisition offers are put to a shareholder vote and approval is both a necessary and a sufficient condition for R to gain control. We start by noting how pure takeover bids, even though they do not involve the problems of proxy contests, suffer from significant shortcomings of their own.

##### A. Pure Takeover Bids

As has been recognized in the literature, the problem with pure takeover bids is that the individual tender decisions of shareholders may differ from those that would be in their collective interest. Let  $M^*$  denote the expected post-takeover value of minority shares in the event that the bid succeeds (conditional on the information possessed by rational uninformed

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<sup>21</sup>See, e.g., Hart (1995).



shareholders). The fundamental difficulty is that, in the face of a bid  $\Pi$ , shareholders will base their tender decisions not only on a comparison of  $\Pi$  and their estimate of  $Y_1$  but also on a comparison of  $\Pi$  and  $M^*$ . Specifically, there are two problems:

The free-rider problem: The problem is that, if  $M^* > \Pi$  rational shareholders might hold out even if  $\Pi$  exceeds their estimate of  $Y_1$ .<sup>22</sup> (See Grossman and Hart (1980, 1981); for a recent formalization see Segal (1999).) The free-rider problem arises when, in the event that the bid is going to win, shareholders prefer to hold out and receive the post-acquisition value of the company rather than tender. Because of this, an attractive bid fails.

The pressure-to-tender problem: The problem is that, if  $M^* < \Pi$ , rational shareholders will tender even if  $\Pi$  is below their estimate of  $Y_1$  (see Bebchuk (1985a, 1985b)).<sup>23</sup> The pressure-to-tender problem arises when, in the event that the bid is going to win, shareholders prefer to tender rather than remain as minority shareholders in the company.

## B. Combining Voting With an Acquisition Offer

Suppose that at  $T=4$ , prior to shareholders' tender decisions, R is required to submit its bid to a vote of shareholders, as suggested by Bebchuk (1985). In particular, consider the following voting-on-acquisition-offers mechanism:

Voting-on-acquisition-offers (VAO) mechanism: If R wishes to make a cash (or cash-equivalent)

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<sup>22</sup>In our setup, the unique equilibrium in this case is for all rational shareholders to hold out.

<sup>23</sup>Note that, given the existence of noise investors, there is always a chance that the rival will win, and so rational shareholders strictly prefer to tender even though the bid is conditional. Thus the unique equilibrium in this case is for rational shareholders to tender.

bid II, R's bid is put to a shareholder vote. Approval of the bid by a majority of the shareholders will be both a necessary and sufficient condition for the bid's success. In particular:

- (i) If the bid fails to gain majority approval in the vote, the bidder will not be allowed to proceed with its bid.
- (ii) If the bid obtains majority approval in the vote, then all shareholders will be required to tender their shares (or, equivalently, they can be induced to tender their shares).

As will be discussed later on, various existing arrangements overlap with this mechanism. At this stage, we wish to point out that, within the structure of existing corporate law, the mechanism can be implemented in two "clean" ways. One way would involve having potential acquirers proceed through a tender offer, and would (i) require that such a tender offer be approved in advance by a majority vote; and (ii) in the event that the offer succeeds, allow the bidder upon gaining control to effect a freezeout at a specified discount below the bid price.

Alternatively, the mechanism can be implemented by amending the rules governing mergers to allow potential acquirers to bring a merger proposal directly to a shareholder vote without the approval of the board of directors. That is, the mechanism can be implemented by eliminating the board's monopoly over the merger agenda.<sup>24</sup>

While the above two versions would effectively implement the voting-on-acquisition-

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<sup>24</sup> Under existing rules, merger proposals, like all other proposals for fundamental corporate changes, can be brought to a vote of shareholder approval only by the incumbent board. We believe, however, that in some cases it might be desirable to have proposals submitted directly to a shareholder vote. See Aghion, Hart and Moore (1992), who advocate that shareholders of reorganized firms vote on all cash and noncash bids submitted to them, and Bebchuk and Ferrell (2001), who advocate allowing shareholders to initiate and approve by vote the opting-in and opting-out of different takeover regimes. See Bebchuk (2001) for a discussion of the pros and cons of letting shareholders initiate and approve major corporate decisions.

offers mechanism, this mechanism could be implemented in other ways as well. In particular, as will be discussed in subsection E, various existing arrangements implement elements of this mechanism.

Given the mechanism, if the bid succeeds, each shareholder will get its pro-rata fraction of  $\Pi$ . If the bid fails, each shareholder will get its pro-rata fraction of  $Y_1$ . Thus, the optimal strategy for each shareholder will be to vote for the offer if and only if  $\Pi$  exceeds the shareholder's estimate of  $Y_1$ . Thus, we can state the following:

Proposition 3: Under the voting-on-acquisition-offers mechanism, each rational shareholder will vote in favor of the bid if and only if  $\Pi$  is higher than the shareholder's estimate of  $Y_1$  (conditional on the shareholder's information).

Remarks: It is worth pointing out how the two elements of the mechanism eliminate the problems of pressure-to-tender and free-riding. Essentially, the mechanism eliminates the incentives arising from the prospect of becoming a minority shareholder.

(i) Making shareholder approval necessary for the bid's success eliminates the pressure-to-tender problem. Suppose that  $M^* < \Pi$  but that  $\Pi$  is lower than the shareholders' estimate of  $Y_1$ . In the absence of voting, each shareholder would rationally choose to tender even though defeating the offer is in the shareholders' collective interest. With the VAO mechanism, however, a shareholder can vote against the offer without fear of suffering a penalty if the offer succeeds. Thus, in such a case, shareholders will vote against the offer and the offer will be defeated.

(ii) Making shareholder approval sufficient for the bid's success eliminates the free-rider problem. Suppose that  $M^* > \Pi$  and that  $\Pi$  is higher than the shareholders' estimate of  $Y_1$ . In this

case, without the VAO mechanism, each shareholder would rationally choose to hold out even though accepting the offer is in the shareholders' collective interest. The way in which the VAO mechanism solves this problem is by ensuring that, if the shareholders vote for the offer, the shareholders will indeed tender.

It is also worth noting that it is possible to separate the two elements of the mechanism and take only the first element; that is, one could make the winning of a vote a necessary condition for a rival to take control, but not a sufficient condition. Doing this would eliminate the pressure-to-tender problem but not the free-rider problem. This option might be desirable if, say, free-riding were regarded as a good way for target shareholders to extract surplus from the rival (see also the comments in Section V).

We see that the considered mechanism will lead (with a very high probability) to a takeover if  $\Pi$  exceeds the shareholders' estimate of  $Y_1$  and will lead (with a very high probability) to the company's remaining independent if the reverse is the case. The above suggests that, assuming all shareholders know  $Y_1$ , the VAO mechanism will produce efficient outcomes. However, as noted earlier, it may be the case that  $Y_1$  is uncertain and that most voting shareholders do not take the time to assess all the new information about  $Y_1$ . We show next that the mechanism can work well even under these conditions.

### C. Voting When Shareholders Are Differentially Informed

Managers facing a cash tender offer often argue that shareholders are imperfectly informed about the independent target's value  $Y_1$ . To be sure, shareholders know the pre-bid market price--which reflects the public information about  $Y_1$  available prior to the making of the

bid. As noted, however, a considerable amount of new information about  $Y_1$  might be revealed in the aftermath of a bid. Thus, it might be argued that voting shareholders will be imperfectly informed at  $T=3$ . We now show that this problem is not as severe as one might think. In particular, for the vote to work well, it is not necessary for all or even most shareholders to possess the new information about  $Y_1$ . As demonstrated below, as long as the informed market makers possess the new information about  $Y_1$ , rational uninformed shareholders will be able to learn the relevant information from the market price and will vote accordingly. An efficient outcome will thereby be attained.<sup>25</sup>

Assume initially that R's bid is in the form of cash – in the amount of  $\Pi$ . An equilibrium in this simple model will consist of the following:

- (i) The strategy of each market maker at  $T = 3$  specifying, for any value of  $Y_1$  and bid price  $\Pi$ , what market price he will set; and
- (ii) The strategy of rational uninformed shareholders at  $T = 4$  specifying, for any market price  $P$  that they observe, how they will vote.

Remark: To illustrate, consider the following numerical example. Suppose that a bidder offers \$100 a share for the company. In such a case, the equilibrium will be one in which:

- (i) market makers will set the market price above \$100 (at slightly below  $Y_1$ ) if  $Y_1 > \$100$  and at (slightly below) \$100 if  $Y_1 < \$100$ ; and
- (ii) rational uninformed shareholders will vote against the offer if and only if they observe a

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<sup>25</sup> Thus, the only informational objection that can be put forward is one based on a claim that  $Y_1$  is private information of the target's managers and is not known even to the most informed shareholders. Such a situation might arise, for example, when the target has investments in long-term projects (see, e.g., Stein (1988)). One who is concerned about this problem, and its *ex ante* effects, might wish to allow rivals access to the control contest mechanism only at distinct points in time, with substantial intervals in between (see Lipton and Rosenblum (1991)).

market price exceeding \$100.

To see that this is an equilibrium, note that, given (i), it is optimal for rational uninformed shareholders to vote as specified in (ii). And given (ii), market makers know that (1) if  $Y_1 < \$100$  and they set the price at (just slightly below) \$100 then the bid will win with high probability, which will make the set price rational; and that (2) if  $Y_1 > \$100$  and they set the price above \$100 (just slightly below  $Y_1$ ), the bid will fail with high probability, which again will make the set price rational.

Proposition 4: Assuming that market makers know  $Y_1$ , the unique equilibrium is the “fully revealing” equilibrium defined as follows:

- (i) At  $T = 3$ , the market makers set the market price at (slightly below)  $\max(\Pi, Y_1)$ ;<sup>26</sup> and
- (ii) At  $T = 4$ , rational uninformed shareholders vote against the offer if the market price  $P$  exceeds  $\Pi$  and vote for the offer otherwise.

Proof: To see why this is an equilibrium, note first that, given how the pre-vote market price is set, if  $P > \Pi$ , then it must be the case that  $Y_1 > \Pi$  and thus it is optimal for the rational uninformed shareholders to vote for the incumbent; and if  $P < \Pi$ , then it must be the case that  $Y_1 < \Pi$  and thus it is optimal to vote for the offer.

Furthermore, given the expectation that the rational uninformed shareholders will vote in the above way, the outcome of the vote will produce a value of (slightly below)  $\max(\Pi, Y_1)$ .

Thus, the market price set at  $T = 3$  is indeed equal to the company’s expected value in this

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<sup>26</sup>More precisely, the market makers will set the price at  $(1-\gamma) \max(\Pi, Y_1) + \gamma \min(\Pi, Y_1)$ , where  $\gamma = [\epsilon(\alpha_H - 1/2)/\alpha_H]$  is the (very small) probability that, despite the voting by all rational shareholders in favor of a certain outcome, voting by noise investors will produce the opposite outcome.

equilibrium.

To establish uniqueness, consider an event  $Y_1 > \Pi$ . Given the existence of noise investors, there is a positive probability that the bid will fail. Hence the market makers will set a price  $P$  exceeding  $\Pi$ . Seeing this, rational uninformed investors will deduce that it is optimal to vote against the bid, and so the bid fails almost surely. Hence  $P \approx Y_1 = \text{Max}(\Pi, Y_1)$  when  $Y_1 > \Pi$ .

On the other hand, suppose  $Y_1 < \Pi$ . Since there is a positive probability that the bid will fail, the market makers will set a price  $P$  below  $\Pi$  (how much below will depend on what the rational uninformed shareholders are expected to do). Seeing this, rational uninformed investors will vote for the bid and so the bid succeeds almost surely. Thus, when  $Y_1 < \Pi$ , we must have  $P \approx \Pi = \text{Max}(\Pi, Y_1)$ . Hence, we can conclude that in equilibrium the market price must be set at (approximately)  $\text{Max}(\Pi, Y_1)$ . Q.E.D.

#### D. Offers with Some Uncertainty about Value

Thus far we have assumed that the value of the offer is precisely known, which is presumably the case for a cash offer. Our conclusions about the ability of shareholders to infer from the market price the information possessed by the most informed shareholders, however, generalize to the case in which there is a small amount of uncertainty in the value of the offer.

One case with some small uncertainty about the value of the offer is that of a bid that is at least partly in new debt securities whose value cannot be precisely ascertained by rational uninformed shareholders. Suppose that the value of the offer,  $\Pi$ , has support in a small interval  $[\Pi_1, \Pi_2]$ . The offer might be no longer purely in the form of immediate cash but might include, say, an element of notes, i.e., a promise to pay some cash in the future. We assume that informed

shareholders, but not uninformed shareholders, know the value of  $\Pi$ . Given the smallness of the interval, it is reasonable to assume that  $E[Y_1 | Y_1 < \Pi_2] < \Pi_1$ .

In this case, we can show, using reasoning similar to the one employed earlier, that the unique equilibrium is one in which (i) the market makers set  $P$  at (approximately)  $Y_1$  if  $Y_1 > \Pi_2$  and at (approximately)  $\Pi$  otherwise, and (ii) shareholders vote against the offer if  $P > \Pi_2$  and vote for the offer otherwise. To see that this is an equilibrium, note that if  $P > \Pi_2$ , rational uninformed shareholders can deduce that  $P = Y_1 > \Pi_2 > \Pi$ , and so it is rational for them to vote against the offer; and that, if  $\Pi_1 < P < \Pi_2$ , then rational uninformed shareholders can deduce that  $Y_1 < \Pi_2$ , in which case, given that  $E[Y_1 | Y_1 < \Pi_2] < \Pi_1$  due to the smallness of  $[\Pi_1, \Pi_2]$ , it is rational to vote for the offer.<sup>27</sup>

Another case in which there might be uncertainty about the value of the bid is one in which the bidder offers existing securities of the bidder (e.g., shares of the bidder). To be sure, the target's shareholders could look at the market price of these securities to see what their value is according to the publicly available information. In contrast to a cash offer, however, the value of the offered securities might depend on whether the bid is expected to be successful or not. If the offer is in securities of the bidder, success of the offer might raise their value because of synergy.

Suppose that the value of offered securities will be  $\Pi_s$  if the bid succeeds and  $\Pi_f$  if the bid fails; that informed shareholders including the market makers know the values of  $\Pi_s$  and  $\Pi_f$  (and, as before, the value of  $Y_1$ ); and that rational uninformed shareholders (in addition to knowing not  $Y_1$  but only  $Y_1^*$ ) do not know the values of  $\Pi_s$  and  $\Pi_f$  but only know the distributions from which  $\Pi_s$  and  $\Pi_f$  are drawn, which have means of  $\Pi_s^*$  and  $\Pi_f^*$ . And let us assume that the impact of the

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<sup>27</sup> Note that in this case the outcome will not be always the one that would be best in light of all the publicly available information but rather may depart from it to a small extent. Specifically, when  $Y_1$  falls in the small interval between  $\Pi$  and  $\Pi_2$ , the bid will succeed.



offer's success on the bidder is small (say, because the bidder is much larger than the target) and that  $\Pi_s$  and  $\Pi_f$  are therefore sufficiently close in value so that they are both on the same side of  $Y_1$  (that is, either they are both higher than  $Y_1$  or they are both lower than  $Y_1$ )

In this case, there are two market prices from which inferences can be drawn--the market price of the target, denoted as before by  $P$ , and the market price of the package of the (currently trading) offered securities, which will be denoted by  $P_b$ . Using the same reasoning as before, one can show that the unique equilibrium is one in which:

- (i) the market makers will set the market price of the target  $P$  at a level of (slightly below)  $\max(Y_1, \Pi_s)$  and the market price of the package of offered securities  $P_b$  at a level of (approximately)  $\Pi_s$  if  $\Pi_s > Y_1$  and a level of (approximately)  $\Pi_f$  if  $\Pi_s < Y_1$ .
- (ii) The uninformed shareholders will vote against the offer if  $P > P_b$ ; and will vote for the offer otherwise.<sup>28</sup>

Finally, it should be stressed that the ability of the shareholders to infer from market prices which outcome of the vote would be value-maximizing does not extend to cases in which there is substantial uncertainty about the value of the bid. Rivals are able (and should be allowed) to make offers on any terms and using whatever currency they wish, and bids might be therefore structured in a way that would make their value quite uncertain. For example, consider the extreme case in which  $R$  offers shareholders a noncash bid made fully of shares in a new "shell"

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<sup>28</sup> To see why this state of affairs is an equilibrium, note that, in this considered equilibrium, if  $\Pi_s < Y_1$ , market makers will set  $P$  just slightly below  $Y_1$  and will set  $P_b$  at about  $\Pi_f$  which is less than  $Y_1$ . In this case, voting against the offer upon observing  $P > P_b$  will be rational. And given that the offer will fail with high probability, the price set by the market makers to begin with will be rational. Also, in this equilibrium, if  $\Pi_s > Y_1$ , then  $P_b$  and  $P$  will be set slightly below  $\Pi_s$  with  $P_b$  slightly above  $P$ . In this case, voting for the offer upon observing that  $P$  does not exceed  $P_b$  will be rational. And given that the offer will succeed with high probability, the price set by the market makers to begin with will be rational. Uniqueness can be proved using reasoning similar to the one used in the proof of proposition 4.

company which will have no assets if the offer is rejected and which will own the assets of the target (but under R's management) if the offer is successful. In this case the vote on the "acquisition offer" is equivalent to a proxy contest, and as such the vote faces all the problems discussed earlier regarding proxy contests--including the difficulty for R of convincing the shareholders that a victory by R would benefit them. For this reason, we do not expect that rivals will make acquisition offers of this form, and indeed we are not aware of any such offers.

#### E. Implications for Existing Voting Requirements

In the United States, there are some arrangements that make approval by vote a necessary condition for a control transfer. To start with, some states have control share acquisition statutes. Such statutes essentially require a bidder to gain majority approval before proceeding with its bid. (If the bidder does not gain such approval, the shares it acquires will not have voting power, and this lack of voting power will eliminate the point of purchasing the shares.)

Furthermore, all states now allow incumbents to install poison pills. When poison pills are in place, a bidder will be able to proceed with its bid only if it first wins a proxy contest and replaces the board with directors that will redeem the pill. In the face of pills, the route that rivals must pursue is that of putting an offer on the table and then running a proxy contest that is essentially a referendum about the offer. According to our analysis, by making approval by vote a necessary condition, such arrangements provide one element of the proposed approach.

Note that none of these arrangements would make winning such a shareholder referendum a sufficient condition for the acquisition offer to succeed. Thus, they do not by themselves provide both elements of the voting-on-acquisitions-offers mechanism. However, the legal rules governing freeze-outs (and the pressure-to-tender that they create) are sufficient

usually to ensure that, if the bidder is allowed to proceed with its offer, tendering would be worthwhile.

Note also that the arrangements above would involve a more cumbersome procedure than the proposed mechanism in that they require shareholders to act twice--once to vote and once (at least for successful bids) to tender. In contrast, the proposed mechanism would involve shareholders' acting only once.

Finally, the above discussion has implicitly assumed that there are no charter provisions that make it difficult or costly for a rival to oust the incumbent in a proxy contest. In some companies, where the board is not classified and where shareholders can call a special meeting or act by written consent, a rival that emerges can quickly get to a vote on replacing the board, which would serve as a referendum on its offer. In many other companies, however, there are "antitakeover" charter provisions that delay or make difficult the access of a bidder to a shareholder vote on its offer (Coates (2000), Daines and Klausner (2001), Field and Karpoff (2000)).

These antitakeover charter provisions fall into two categories. The first category includes arrangements that have the effect of allowing rivals to gain access to a vote only in the next annual election. Such companies can be viewed as having an arrangement under which rivals can gain access to the mechanism only once a year. Recall that our analysis took as given that rivals are at a point in time in which they have access to a control contest, and it did not examine what the optimal spacing of such points in time would be.

The second category of antitakeover charter provisions, however, prevents bidders from ever having easy access to a shareholder referendum on their offer. Many companies have classified boards, with one third of the board seats coming up for election each year. Classified boards require a rival that seeks to gain control over the board to win two annual elections in a

row. And our analysis indicates that such an arrangement makes it difficult for hostile bidders to gain control no matter when they emerge. We have shown that shareholders would be reluctant to vote for a rival in a proxy contest unless the rival puts on the table an offer that guarantees how they would fare if the rival were to win. However, when a rival facing a classified board runs the first proxy contest of the two needed to gain control, it would be difficult for the rival (given that values of assets change over time) to commit to the price that it would be willing to offer for the company in the event that it wins both the first election and the second election a year down the road. In the absence of such a commitment, however, the rival's chances of winning the first election would be reduced.<sup>29</sup>

Turning to Europe, the British City Code on Takeovers also has an arrangement that in effect makes the success of a takeover bid conditional on the ability of a bidder to win a shareholder vote against the incumbent. Under this arrangement, incumbents are required to be passive but they may erect whatever defenses are approved by a shareholder vote. A proposal for a new EEC Directive on Takeovers, which the EEC Commission put forward but which the European Parliament narrowly failed to approve, would have led to the adoption of this arrangement in all EEC countries. In anticipation of the passage of the Directive, various member states have already enacted takeover laws including this arrangement. This arrangement again goes in the direction of conditioning the success of a hostile bidder on the support of shareholders in a vote, thereby eliminating the pressure-to-tender problem.

It should be noted, however, that, unlike the US, some European countries currently do not allow a successful bidder a large latitude in proceeding to a freezeout. In such countries, the free-rider problem might be present, and a rival's ability to win a vote of approval by the target's

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<sup>29</sup> For a full analysis and empirical confirmation of the antitakeover power of classified boards, see Bebchuk, Coates, and Subramanian (2001).

shareholders might be insufficient for a takeover. The EEC Commission has ordered a study of the arrangements governing freeze-outs, and such a study should carefully consider the effect of the rules governing freeze-outs in EEC countries on the efficiency of takeover bids.

## V. CONCLUSION

This paper has analyzed and contrasted two primary ways for a rival manager to gain control over a corporation--buying shares and persuading shareholders to vote for the rival. Both straight proxy contest and straight takeovers bids suffer from substantial shortcomings. We have shown that a combined voting and acquisition offer mechanism works better than either straight proxy fights or straight takeovers. It works better than straight proxy fights because having an acquisition offer on the table may be needed to convey credibly to shareholders that they will be made better off by a transfer of control. It also works better than a straight takeover bid since it addresses distortions that would otherwise affect shareholders' tender decisions. Furthermore, we have shown that, given the inferences that shareholders can draw from market prices, such a vote might reflect aggregate information better than has been previously recognized. And we have put forward smooth and clean methods for accomplishing the proposed mechanism. Our results support the increasing use of voting in connection with acquisition offers in both the US and Europe.

Our analysis leaves unresolved certain issues concerning the optimal arrangements for contests for corporate control. For example, our analysis assumed that rivals are at a point in time in which they are able to contest control, and simply examined what would be the best mechanism for resolving the issue. Thus, there remains the question of when rivals should have access to the control transfer mechanism. Furthermore, while our analysis suggests the

superiority of combining voting with acquisition offers over straight proxy fights and straight takeovers, it has not sought to identify the best mechanism for control contests. Indeed, our setup is not sufficiently comprehensive to allow definitive conclusions in this regard; whereas our analysis has focused on ensuring an efficient *ex post* outcome of control contests, there are other considerations that are relevant for an analysis of the optimal mechanism, such as the effects of the mechanism on *ex ante* actions.<sup>30</sup> Extending the analysis in these directions would be a worthwhile project for subsequent work.

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<sup>30</sup> Such *ex ante* effects include the effects of the *ex post* mechanism on the incumbent's *ex ante* non-verifiable investment in human capital (see generally Hart (1995)), the incumbent's choice between short-term and long-term investments (Stein (1988, 1989), Bebchuk and Stole (1993)), the incumbent's *ex ante* level of effort, and the *ex ante* investments by shareholders in potential bidders and targets.

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