

Takeovers, Takeover Defences, and Managerial Incentives

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I. Introduction

The debate surrounding the appropriate approach of directors of a target to a hostile takeover bid was sparked over 20 years ago and continues to this day. Easterbrook and Fischel argued that the central motivation for hostile takeovers is likely the replacement of managers. In order to create incentives for hostile bidders to engage in search for poorly run targets, and for managers to work hard to avoid hostile bids, Easterbrook and Fischel recommended a rule of passivity: managers should not be able to resist hostile bids, but rather must allow them to be put to shareholders. One counter-argument is that managerial resistance to an initial bid invites more bidding and an auction, which can move the firm's resources to the best manager thus saving transaction costs, while first bidders can benefit from their bids by buying toe-hold stakes. Another argument is that some (if not all – see Bebchuk) hostile bids can be coercive to target shareholders and thus some defences may be appropriate to protect shareholders from opportunistic bids. A front-end loaded two-tier bid, for example, leaves each shareholder in the target with a dominant strategy of tendering their shares into the bid even if there is collective harm to the shareholders from doing so; takeover defences allow the target to avoid this dilemma.¹

Recently, part of the takeover debate has shifted from considering the possible optimality of a rule of pure passivity to a focus on responses to defences by corporate actors. There are at least two reasons for this change in focus. First, there is little or no

¹ An example of a front-end loaded two-tiered bid would be an offer to pay \$50 cash for the first 50% of the firm (whose shares, let's suppose, were trading at \$47 before the bid) with a back-end acquisition of the remaining 50% at \$40. The second stage is contingent on the success of the first. In such circumstances, it is easy to show that all shareholders have a dominant strategy of tendering no matter what the true share value.

likelihood of a rule of pure passivity prevailing in practice any time soon. Understanding what corporations do in the shadow of takeover defences is therefore of greater practical importance than what legislatures or courts ought to do. Second, there is evidence that firms in the U.S. go public with protections against takeovers in place (Daines and Klausner), which, given the internalization of agency costs by entrepreneurs going public (Jensen and Meckling), challenges Easterbrook and Fischel's contention that such defences always hurt shareholders. Even institutional shareholders, who generally oppose takeover defences as midstream charter amendments, participate as sellers in IPOs that include takeover defences (Klausner). And elsewhere in the world, many corporations have controlling shareholders, which provides the most effective form of takeover defence (LLSV).

Kahan and Rock suggest that corporations in the U.S. have adapted to defences in a number of important ways that at least mitigate their possible harmful effects. They have increased debt in recent years, perhaps to reduce the agency costs of free cash flow (Jensen). They have appointed a greater number of independent directors. And they have increased incentive-based compensation. It is this last possibility that motivates this article. To what extent can incentive-based pay compensate for the elimination of the possibility of a hostile takeover? Put alternatively, what are the implications for incentive pay from the widespread adoption of takeover defences?

There are two ways in which the literature has recognized that executive compensation and takeover defences are related. The first is that managers who have a veto over a takeover bid can be compensated sufficiently to persuade them not to stand in the way of a value-enhancing takeover. Kahan and Rock, Kamar and Bebchuk identify

this Coasean role of executive compensation in overcoming resistance to takeovers. The second way in which pay and takeovers are related is that a firm that has managers who are able to resist a takeover can substitute for the incentives associated with hostile takeovers with pay based on the performance of the corporation (Kahan and Rock). The first relationship sees executive compensation and takeovers as complements: side payments to managers allow a takeover to succeed (where managers otherwise could resist it). The second relationship conceives of executive compensation and takeovers as substitutes: incentive pay can motivate managers, as can the threat of a takeover.

Without losing sight of the complementary role of side payments to managers to acquiesce in takeovers, we focus on the substitutability of hostile takeovers and performance pay. To develop a comparison between the two kinds of incentives, it is helpful to return to the origins of the debate over hostile takeovers. Easterbrook and Fischel argue that since hostile takeovers are premised on the replacement of management, they are likely to arise because of poor managerial performance. Monitoring by potential bidders provides incentives to managers to perform well because they do not want to be fired.

The point that managers do not want to be fired requires elaboration. Easterbrook and Fischel describe the salary and prestige associated with the job as providing managers with a desire to keep their jobs. Obviously any salary or pay that simply compensates the manager for the opportunity cost of her time does not in itself create a surplus for the manager to protect – if fired, she could simply collect the pay from a different source. Rather, it must be that there are some private advantages from remaining in control that exceed what the manager could collect in alternative jobs. Prestige could

be one source of such “private benefits of control”; so too could quasi-rents associated with firm-specific investment that the manager has made in the firm. Any benefits the manager personally realizes because of loose oversight from investors, like those from self-dealing, including excessive compensation, are also private benefits of control.

Alternatively, the manager may have won a tournament to manage the firm, thus realizing a surplus (the prize that motivates the tournament participants) not available in other jobs (Lazear and Rosen). Finally, there could be a Ricardian rent associated with a manager’s particular skill in fulfilling the role of manager in the firm in question. We define any benefit, either a rent or quasi-rent, that exceeds the opportunity cost of the manager’s time as a “private benefit of control” (Harris and Raviv).

The most significant desirable feature of the threat of hostile takeovers is that it provides incentives to managers both to perform well on the job and to hire people that they anticipate will perform well. This is because a hostile takeover results in the replacement of management and the loss of private benefits of control. Describing the merits of takeovers in this way reveals the obvious similarity between takeovers and explicit incentive pay. Managers that perform well enough to avoid a hostile takeover get a bonus in the form of continued enjoyment of the private benefits of control. If managers fail to perform well in the estimation of the market for corporate control, they fail to collect the private benefits of control. Similarly, a manager that earns stock-based compensation would be penalized through lower take-home pay by unsatisfactory managerial performance that had lowered stock values. This is like Klein, Crawford and Alchian’s description of rents as contractual incentive mechanisms: a contracting party will work at preserving a relationship where she expects to receive some surplus above

her opportunity cost from continuing the relationship. Similar arguments are made about “efficiency wages,” which pay workers more than their opportunity costs of time and thus provide them with incentives not to be fired and lose this surplus. (C. Shapiro and J. Stiglitz, “Equilibrium Unemployment as a Worker Discipline Device” (1984) 74 *Am. Econ. Rev.* 433-444; see also, Lazear.)

Thus, one might conclude that takeovers and incentive pay are close substitutes. There is a substantial difference, however, in the compensation profile associated with the different forms of motivation. Our task in this paper is to examine carefully the role of takeovers in providing incentives to managers. We consider factors that suggest that takeovers are efficient incentive devices, as conventional wisdom holds, but also review considerations that tend to imply that *preventing* takeovers can be an efficient component of a package of managerial incentives.

In what follows, it is useful to consider the nature of the relationship between private benefits of control and the market capitalization of the firm, or put another way, the public value of the firm. In our view, the correlation between private benefits and public value will vary depending on the perspective taken, static or dynamic. At any given point in time, it is reasonable to suppose that private benefits and public value are negatively correlated. This is because private benefits often arise at the expense of public investors. High salaries, perquisites, profits from self-dealing, etc. provide managers with private benefits while simultaneously lowering the value of the firm. There are some kinds of private benefits, such as prestige, that do not divert value from public investors, but many kinds do; hence a probable negative correlation from a static perspective.

From a dynamic perspective, on the other hand, the relationship between private and public value is hard to predict, though we suspect that there is good reason to suppose a positive correlation. Suppose that a firm has two possible future values. In a “good” state of the world, the firm has a high public value. In a “bad” state of the world, the firm has low public value. Ex ante, that is, before these values of the firm are realized, would a manager expect higher or lower private benefits in the good or bad state of the world? We suggest that often the answer will be higher private benefits in the good state of the world. When there is greater public value, we would predict that there is a greater opportunity for diversion of private benefits to managers. Unproductive corporate jets seem to us to be more likely to be owned by a \$100 million firm than a \$1 million firm. Moreover, simply the prestige and sense of accomplishment from remaining in control of a firm that one has successfully developed are private benefits that vary positively with public value. Ex post, that is, once the state of the world is realized, private benefits reduce public value, but ex ante private benefits and public value are properly viewed in these circumstances as positively correlated.

There could be reason to imagine that public and private values are not correlated from an ex ante perspective. For example, if law prevented diversion of any kind, greater public value would not necessarily lead to greater private benefits. Or, at the other end of the spectrum, if law allowed unfettered looting by management, then public value could remain low across states of the world because of diversion by management. Alternatively, some idiosyncratic, non-pecuniary private benefits, like family pride of ownership, may not be related to public value at all.

Finally, there could be negative correlation between private benefits and public value across future states of the world. For example, suppose political influence contributes to the amount that controllers can transfer to themselves from minority shareholders, and that political influence in turn depends on the size of such potential transfers, perhaps because political insiders expect directly or indirectly to benefit from the controller's wealth. As the *potential* gains from exploiting the minority grow, so do the greater the private benefits of control. This could imply a negative correlation between public value and private benefits of control from an ex ante perspective, at least over some range of values.

The relationship between private benefits and public value affects the analysis of takeovers and incentives. In particular, we will consider the cases where private benefits and public value positively correlate from an ex ante perspective and where there is no ex ante correlation between the two. Part II examines the incentive effects of the threat of takeovers where private benefits and public value are positively correlated. Part III considers the relationship between takeovers and incentives where private control benefits do not vary with public value. Part IV reviews some applications of the theory, which in turn allows review of some of the key assumptions of the analysis in Parts II and III and examines how conclusions may change if these assumptions are relaxed.

II. Implications of Assuming a Positive Correlation between Private Benefits of Control and Public Value from an Ex Ante Perspective: Protecting Private Benefits as an Incentive Mechanism

The problems for investors in motivating management arise because of incomplete contracts. It is impossible to specify at the time of contracting what it is that

managers must do going into the future. The contracting parties are unable to foresee what will be required in the future, and even if they were, many of the terms of the contract (e.g., enthusiasm) would not be verifiable in court even if observable to the parties themselves (Schwartz). Grossman and Hart emphasize the role of property rights in addressing the problem of incomplete contracts within firms. Assigning property rights in firm assets to one of the parties contracting within the firm's structure by its nature assigns residual decision-making power to that party. Assigning residual decision-making power to one party in turn protects that party from having its specific investments in the firm exploited by other parties. To take an example Grossman and Hart provide, assigning property rights in a customer list of an insurance agent to that agent promotes her incentives to invest in growing that list by working hard to attract customers. Of course, assigning property rights as a means of allocating residual control is likely to create tradeoffs – often both sides to a contract are expected to make specific investments in the relationship. For example, while assigning property rights in a customer list to the agent promotes the agent's incentives to invest in the list, it may dampen the insurance company's incentives to come up with new products, given that they will not be able to sell them to existing customers without the permission of the agent. Grossman and Hart suggest that economic actors will determine ownership of assets within a firm by balancing the incentives and disincentives to invest that each particular allocation of a property right creates. The parties have an incentive to assign property rights where investment distortions are minimized.

We contend that similar analysis can fruitfully be brought to bear on the question of assigning the right to resist a takeover. In particular, assume that the private benefits

of control and the public value of the corporation are positively correlated (Bebchuk, 2002) from an ex ante perspective. That is, even if private benefits come at the expense of public value ex post, from an ex ante viewpoint, the greater the public value, the greater the expected private benefits. Consider the following two-period model. The manager invests in growing the firm in the first period and the return on this investment is realized in the second. Between periods there is some probability of a bid for the firm's shares. Where the manager has been assigned the legal right to resist a bid, the "veto" case, any bid that materializes will not be extended to shareholders unless the manager approves. Where the right to resist a bid has been assigned to the shareholders collectively and not management, the "no-veto" case, such a bid is extended to shareholders. In such a model, it may be optimal for the firm to assign the right to resist a sale to the managers, as we explain. Our analysis describes the ability to resist takeover bids as being equivalent to a property right in the private benefits of control and shows that it may be optimal to assign that right to managers.

Takeover bids may emerge for a variety of reasons, ranging from a conclusion by the bidder that management has performed poorly and corporate value would improve if management were replaced (Marris; Manne; Easterbrook and Fischel), to possible synergies from a merger of two firms, to market power motivations of a bidder seeking to acquire a competitor. It is, however, often asserted that hostile bids (Easterbrook and Fischel) are most likely based on poor management, given that these bids *require* the ouster of existing management for gains to be realized, while the others do not. This may be so, but we doubt that in a world where management did not have any capacity to resist takeover bids without shareholder approval that there would be never be a bid unless

management underperformed. If managers could be bypassed easily, a bidder seeking synergies might prefer a hostile bid to being compelled to make side payments to managers to get them to agree to give up some private benefits of control in order to consummate a value-maximizing merger. This would depend on the incremental costs of a hostile relative to a friendly bid versus the size of any private benefits and thus side payments that would be necessary to get managerial acquiescence. For the explanation we set out in this section to hold, it is necessary to conclude that there are at least some occasions when a hostile bid would be made even where managers have performed optimally.

Indeed, in some circumstances, there may be reason to imagine that a hostile bid for control is *more* likely the better the performance of management. Suppose, as we do throughout this section, that private benefits of control and public value are correlated from an ex ante perspective. Suppose further that a manager in period 1 has invested optimally in public value, which in turn has resulted in significant private benefits of control. A potential acquiror of a controlling block of shares may be motivated to make a bid for the shares by the private benefits of control themselves. That is, any purchaser of a control block may need only to compensate existing shareholders for giving up in a sale the public value of shares, while the acquiror realizes for itself the private benefits of control (Bebchuk – Rent protection...). Thus, optimal investment in public and private value could invite an acquisition bid. Moreover, if this is the motivation for the bid, it would *necessarily* be hostile: compensating the existing managers for lost private control benefits such that they are willing to acquiesce in the sale would undermine the assumed source of gains to the acquiror from the acquisition. On the other hand, if the bid were

about replacing incompetent managers, it would not be necessary that the bid be hostile, since side payments for private benefits of control could buy the incumbents' acquiescence.

An alternative reason to suppose that hostile bids may be more likely where management has performed well arises if the bid is primarily motivated by potential synergy gains, the potential for which are greater the greater the public value of the target, and private benefits of control are significant. That is, this assumption is consistent with the supposition that synergy gains are less likely to arise with a grossly mismanaged corporation than with a well-managed corporation. A synergistic bid is more likely to emerge under this assumption the better has been performance; and a *hostile* bid is more likely given that significant compensation would be required to gain the consent of old managers who anticipate losing significant private benefits of control as a result of the acquisition.

While these refinements about the relationship between private benefits of control will be helpful below in establishing the possible optimality of takeover protection as an incentive device relative to alternatives like stock-based incentive pay, for the moment we set ourselves the task of showing the desirable incentive properties of a restriction on takeovers. For this purpose, it is sufficient to assume that there is a non-trivial subset of cases where a hostile bid would emerge even though managerial performance has been optimal. Even the possibility of a mistake by the acquiror is sufficient to justify this assumption.

The basic efficiency reason for restricting takeovers in the case where private benefits and public value are correlated from an *ex ante* perspective is straightforward.

Assigning the right to the manager to decide whether to allow a takeover or not essentially assigns her a property right in the private benefits of control; she cannot lose these without her consent. (Note that some of the most potent forms of takeover defences, like dual class shares or staggered boards, also insulate the manager from proxy contests.) Property right protection of private benefits maximizes her incentives to grow these private benefits, just as Grossman and Hart explain how property rights in a customer list maximize an agent's incentives to grow the list. Put negatively, if the manager did not have the property right in private benefits of control, she would anticipate less than her full enjoyment of these benefits because of the possibility of a hostile takeover in the future. On the assumption that growing the benefits is costly for the manager, failing to guarantee her full enjoyment of the fruits of her labour will diminish her incentives to provide that labour.

The key assumption that this section turns on is that the provision of incentives to grow private benefits results in the growth of the public value of the firm as well. That is, to realize significant private benefits of control the manager will work hard to grow the public value of the firm.

This theory gives rise to a possibility that been overlooked in the literature to date: insulating a manager from a takeover assigns property rights in a way that can provide incentives to maximize the value of the firm. This insight follows from taking an ex ante perspective on the relationship between private benefits and public value. Ex post, it may be true that managerial diversion of private benefits could be disciplined by the threat of a hostile takeover; this is a central thrust of Easterbrook and Fischel's writings on the subject. But while protecting managers from takeovers may create ex post inefficiencies,

it also may create ex ante efficiencies because of the incentives to grow public and private value generated by property rights in private benefits of control.

This analysis does not, however, prove or even suggest that takeover protection provides such incentives in an optimal way. For example, it could be argued that takeover defences should not be in place even under the assumption of a positive ex ante correlation between private benefits and public value. Rather, takeovers could be permitted without the consent of directors and stock-based compensation, not private benefits, could be used to motivate directors. There are, as we explain, a number of problems with this suggestion.

While in control, managers receive private benefits of control by definition. It would not be possible to set a contract that required the manager to forgo these benefits and instead receive stock-based compensation. Stock-based compensation cannot, therefore, substitute for the incentives provided by an interest in private benefits of control. As long as the probability of a takeover is less than one, there will be some incentives for the manager to work hard in period one to enjoy greater private benefits of control in period two; contract cannot change this.

Therefore, the only interesting context in which to consider the existence of substitutes for the incentives provided by the correlation of private benefits and public value is when there actually is a takeover bidder, for only then does the property right matter; at all other times, the manager will enjoy private benefits of control. It could be posited that rather than assigning the manager a veto over a takeover in order to protect ex ante incentives to invest in private benefits of control, there could be a rule simply requiring compensation to the manager for lost private benefits of control if a takeover

emerges ex post. If the investment in private benefits of control were protected by the promise of this compensation, hostile takeovers could be permitted without jeopardizing the managerial incentives provided by the prospect of private benefits of control. That is, golden parachutes could substitute for takeover protection.

One response to this argument is that they are consistent with our theory of takeover defences since golden parachutes are themselves a form of takeover protection, not substitutes for such protection. Managerial veto provides a property right over future takeovers to managers; golden parachutes provide a liability rule in favour of managers (Calabresi and Melamed). Rather than being a substitute for takeover protection, on this view they *are* takeover protection. This reconciles competing views of takeover protection found in the literature on golden parachutes. Some suggest that they efficiently protect the specific investment of managers in the firm (Williamson). The problem with this view, without more, is that mere promise of a payment on the happening of a takeover does not in itself provide incentives to make firm-specific investments. We address this shortcoming by noting that takeover defences encourage investments in private benefits of control, which under plausible assumptions also imply investments in value-maximization. But our view would also be consistent with those who have taken a view of golden parachutes as a deterrent to takeovers. We agree, but note that deterring takeovers in this manner may nevertheless provide efficient incentives.

Aside from (possibly definitional) questions of whether golden parachutes are or are not takeover defences, there are reasons to conclude that they are unlikely to be adequate substitutes for managerial property rights (vetos). First, it is clear that to protect investments in private benefits, the value of the parachute cannot be fixed in advance,

rather it must vary with the size of private benefits. A fixed payment would not vary with prior investments in private benefits and thus would very likely be very likely to either over- or undercompensate effort in growing private benefits.

The shortcomings of a fixed payment could possibly be overcome in the present context, given the assumption of a correlation between private benefits of control and public value: the parachute could be based on the public value of the firm at the time of the takeover bid. But a second problem with attempting ex ante to promise compensation to managers for lost private benefits of control in future takeovers is that difficult to know the precise relationship between private benefits and public value such that allocating a certain percentage of share value to the manager ex post would compensate her accurately for lost private benefits. It could be, for example, that the relationship between private benefits and public value is non-linear, such that an overly complex (that is, not feasibly contractible) formula would be necessary ex ante to compensate the manager appropriately. More importantly, the correlation between private and public value is very likely to be noisy, such that a certain percentage of share value would only approximate the actual private benefits of control.

There are several problems with relying on golden parachutes to compensate for prior investments in private benefits where the parachutes are predictably inaccurate measures of private benefits. Most importantly, if it appears ex post that the preordained payout to managers from the payment on a change of control will undercompensate managers for investments in private benefits, this harms incentives to invest in private benefits of control since there is a danger that this investment will be appropriated in a takeover. In addition, risk-averse managers suffer from exposure to uncertainty about the

value of their compensation in the event of takeover, since the payoff based on public value fluctuates imperfectly with private benefits.

The information problems about private benefits that hinder attempts to set ex ante compensation for lost private benefits ex post are considerably mitigated by assigning a property right in private benefits to managers in the form of takeover defences. First, if the manager has a property right to private benefits, she will only acquiesce to a takeover if she is adequately compensated for private benefits – the danger of undercompensation disappears. Moreover, the bargaining process can serve to reveal her valuation of private benefits. On the other hand, there is a risk of a breakdown in bargaining if she is given a veto over takeovers (Bebchuk). There is also a risk that she will attempt to bargain for more than her private benefits and will also seek access to any surplus that results from the acquisition. This has competing effects on the corporation's value: to the extent that the manager anticipates using her veto to extract surplus from an acquisition, part of her total compensation package comes from a third party, the acquiror, which is a source of a gain to the corporation (Choi); on the other hand, a smaller anticipated surplus for acquirors diminishes their incentives to search for targets (Easterbrook and Fischel). There is a tradeoff from giving the manager property rights over private benefits – there is better information about private benefits and such a right would essentially require acquirors to pay part of the manager's compensation package, but on the other hand the right could deter acquisitions.

However, there is further reason to assign the property right to the manager where private benefits and public value are positively but imperfectly correlated. Setting aside compensation for lost private benefits, no matter what the motivation for an acquisition,

an acquiror considering a hostile bid will find such a possibility more attractive the greater the ratio of private benefits of control to public value. This is because the price required to be paid to public shareholders in exchange for their shares will be low relative to the value of the private benefits of control. This consideration implies that the existence of a takeover bid itself adds to the stock of information about the private benefits of control relative to public value; in particular, the emergence of a bid indicates higher private benefits relative to public value. Suppose that a firm has relied on a preset allocation of a certain ratio of public value to the manager to compensate her for lost private control benefits in the event of a takeover. The analysis here suggests that conditional on a bid emerging, the ratio will systematically underestimate private benefits of control. This means that managers considering first period investment in private benefits of control will underinvest in anticipation of systematic undercompensation for lost private benefits in the event of a hostile takeover.

We have concluded that a takeover bid is more likely where the ratio of private benefits to public value is large. This indicates that assigning property rights to managers in order to protect them from takeovers that deprive them of predictably large private benefits could be optimal. The additional information that the emergence of a bid provides also suggests that allowing the bid would diminish ex ante incentives to invest in private benefits, and thus public value.

To summarize, where the private benefits of control and public value are positively correlated from an ex ante perspective, the threat of a hostile takeover, and the threat of the deprivation of private benefits that this implies, lowers incentives for managers to invest ex ante in private benefits. Where the private benefits of control and

public value are positively correlated ex ante, this means a lower investment in public value as well. As long as there is a positive probability of a takeover even where the manager has invested optimally in private benefits, there will be diminished incentives to invest optimally. Attempting to establish ex ante compensation for future lost private benefits based on the (inevitably imperfect) positive correlation between public and private value will face important difficulties, including, perhaps most importantly, the problem that takeovers are more likely where the ratio of private benefits to public value is relatively high. That is, the emergence of a hostile bid itself provides reason to conclude that the manager has invested significantly in private benefits. It could be efficient to allocate property rights over private benefits in the form of takeover defences to managers in order to protect such investment.

III. Implications of Assuming No Ex Ante Correlation Between Private Benefits and Public Value: Evaluating the Relative Merits of Takeover- and Stock-Based Incentives

(a) Incentives to Invest in Public Value

Even if there is no correlation between private benefits of control and the public value of the corporation from an ex ante perspective, that is, even if the “good” states of the world do not increase private benefits, concerns outlined in Part II about diminished incentives to invest in public value from permitting hostile takeovers can still arise, but will be limited to a narrower range of circumstances. In particular, suppose that the greater the public value of the firm, the greater the chance of an acquisition motivated by synergies. Even though a synergistic acquisition is not motivated by poor management, indeed, the opposite is true under current assumptions, incumbent managers risk losing their private benefits of control: the acquiror may do better by making a bid to target

shareholders and not compensating for lost control benefits than by making a bid and paying off incumbent managers either directly or with positions in the new entity. If such synergy-motivated acquisitions are more likely the greater the public value of the corporation, allowing hostile takeovers will hurt managerial incentives to invest in public value since this is more likely to lead to a takeover and the loss of private benefits of control. Such a conclusion could apply, for example, if entrepreneurial skills in developing the nascent value of assets are different from skills in managing more mature assets. An entrepreneur may worry that exercising her skill in developing the firm would make a synergistic acquisition of the firm more likely, thus depriving her of private benefits.

Golden parachutes may or may not remedy the incentive problems caused by the threat of synergistic takeovers. The presumed absence of a correlation between private and public value implies that relying on preset compensation, perhaps even a fixed sum, to set off private benefit losses from takeovers would not itself harm incentives to invest in public value, unlike the cases discussed in Part II. There will be problems of assessing private benefits, however, that may be exacerbated by the absence of a correlation: if private benefits vary over time but in unpredictable ways relative to public value, it would not be useful to base the golden parachute on the public value of the corporation. Attempting to fix an appropriate payment scheme for lost private benefits ex ante may be more difficult in the case where private and public value are not correlated from an ex ante perspective. Rather, relying on ex post bargaining by giving managers' property rights in private benefits may be the more effective approach to limit concerns about

incentives to invest in public value where such investments increase the probability of a hostile takeover.

(b) Variance Properties of Different Forms of Compensation

The absence of an ex ante correlation between private benefits and public value does not eliminate ex ante incentive problems from hostile takeovers, at least in circumstances where investing in public value increases the chances of an acquisition. But there may remain reasons to allow managers to resist hostile takeovers even if a takeover is more probable the lower is the public value of the firm and even if there is no correlation between private and public value from an ex ante perspective. While these circumstances would seem to support the conventional call for an allocation of the property rights in the private benefits of control to the public shareholders/acquirors in order to provide incentives for managers to maximize public value, there are reasons to challenge this conclusion. In particular, the incentives provided by the threat of a takeover create significant risk, and thus cost, for managers that may exceed costs associated with incentive-laden pay.

Consider first the no-veto scenario in which a manager is paid a wage, earns private benefits of control (which are not correlated with public value), and is vulnerable to a hostile takeover. That is, in the no-veto scenario the property rights in private benefits of control do not rest with the manager. Compare this with the veto scenario in which the manager earns stock as well as a wage, earns private benefits of control and can veto a takeover through the imposition of defences. In the veto scenario the manager has property rights in the private benefits of control and thus can expect to earn the

private benefits of control in perpetuity – either she remains in control, or she declines to veto a takeover in consideration for a side payment that compensates her for lost private benefits. In the no-veto scenario the manager will lose her private benefits of control in the event of a takeover. Assume that takeovers are more likely the worse the manager has performed in enhancing public value.

Both scenarios entail a risky compensation structure and thus impose costs on a risk-averse manager. (We assume that the investors in the firm are risk-neutral, thus any shifting of risk from them to the manager is collectively costly.) But they are risky in sufficiently different ways that it could not be said *a priori* that one form of compensation obviously dominates the other. To isolate this point, assume that the compensation package in the veto scenario creates the identical incentives to provide a certain level of effort as the threat of takeover does in the no-veto scenario. What are the relative costs of inducing this level of effort? That is, how much of a cost of risk must the manager bear such that she has incentives to produce a given level of effort in either scenario? Or put another way, the lower the exogenous risk associated with managerial motivation, the more powerful are the incentives in an optimal contract with managers.

In the veto scenario, the manager faces exogenous risk because there will not be a tight linkage between her performance and the performance of the stock. This is easy to understand; factors beyond the manager's control, like macroeconomic conditions, create a variance in pay that is costly to the manager. The risk associated with a takeover, on the other hand, is not costly to the manager in the veto scenario because she realizes private benefits of control whether or not the takeover takes place – she either enjoys them directly if she remains in control, or enjoys them indirectly through a side payment.

In the no-veto scenario, in contrast, there is a risk associated with the question of whether or not a takeover takes place: the manager only realizes the private benefits of control if there is no takeover. There are a number of considerations that affect the risk of a takeover in the no-veto case, some of which involve costly exogenous risk. The relevant question, however, is whether the exogenous risk associated with the takeover risk is greater or less than that associated with stock-based pay as in the veto-scenario. There are factors pushing in different directions on this question.

As noted, stock performance will depend in part on the manager's effort and in part on exogenous factors. A clear advantage of takeovers as a source of incentives relative to stock-based pay is that raiders in the market for corporate control have a strong incentive to distinguish the precise relationship between the manager's performance and the performance of the corporation. A raider that takes over a corporation on the premise of bad management and hence a low stock price will not make money if the low stock price were caused by factors beyond management's control. An exogenous negative shock to stock values lowers the manager's pay (and thus exposes her to costly risk) in the veto scenario, while such a shock does not affect the manager's compensation (including private benefits) as long as the shock is observable to the raider. Conversely, a positive shock affects pay and thus creates risk for the manager in the veto scenario, but does not affect the probability of a takeover and thus total compensation in the no-veto scenario as long as the shock is observable. That is, even firms enjoying good share performance are vulnerable to a takeover to the extent that they have enjoyed good performance *despite* management rather than because of it.

Of course, the signal that the raider gets about the source of performance, either management or exogenous factors, is unlikely in practice perfectly to distinguish the two. The noisier is the signal about blame for inferior performance, the greater is the exogenous risk facing managers vulnerable to takeovers. But in general, a raider will have more relevant information about managerial performance than that contained in the stock price, or even relative stock prices. For example, suppose a manager is responsible for a decision that turns out badly even though it was the correct decision at the time that it was made. The stock price, and even the stock price relative to industry peers, is indifferent to the fact that the decision was correct at the time that it was made, but the raider would not be indifferent to such a fact. Since the raider always has information about stock prices, including relative prices, the raider's conclusion about managerial performance must be at least as accurate, and generally more accurate, than that given by stock prices. This implies that the emergence of a takeover bid provides a signal about poor managerial performance that is not provided by stock price.

The additional signal about managerial performance provided by the emergence of a takeover bid is the central factor that favours the threat of a takeover and lost private benefits of control as an incentive mechanism in the scenario where takeovers are motivated by replacing poorly performing managers and where private benefits of control and public value are not correlated. This contrasts with the case described above in which private benefits of control and public value are correlated from an *ex ante* perspective. In that case, the additional signal that emerges from a takeover bid is that there are relatively high private benefits, which in turn implies relatively *good* managerial performance; in these circumstances, takeover defences make sense.

While the signal from a takeover bid about managerial performance is predictably better than that provided by stock prices, a factor that tends to suggest that the takeover incentive device will create *more* exogenous risk than the stock-based method of compensation is that takeovers depend on an all-or-nothing treatment of private benefits of control. That is, the payoff schedule jumps from high to low depending on the existence of a takeover. To the extent that the risk of a takeover occurring is perfectly related to managerial effort, the discontinuous drop in compensation (i.e., private benefits) associated with being terminated does not create costly exogenous risk. But in the more realistic instance (more on which shortly) in which there is exogenous risk associated with the probability of a takeover, these jumps in ex post compensation create costly risk. Stock based pay, on the other hand, can better smooth the earnings profile of the managers, reducing costs from exogenous risk. Stock based incentives result in a continuous schedule of pay unlike the discontinuous discrete jumps that a takeover implies.

To illustrate the problems caused by the discontinuity, and to isolate this factor from the previously discussed advantages of takeovers resulting from raiders' investigations into the source of responsibility for corporate performance, assume that raiders are incapable of identifying the source of a stock price decline. That is, an exogenous shock and managerial failure look the same to a raider. The raider may still be able on average to profit from its takeover activities given that all things equal, managerial failure is more likely to be associated with a stock price decline than an increase. The raider would make the decision on whether to acquire the firm based on observing the stock price – if it fell below a certain price, the raider would make the

acquisition. At the margin, a small movement in stock price, whether associated with a small managerial failing or with an exogenous shock, will result in a takeover and a discrete drop in the overall compensation available to the manager in the no-veto scenario. In the veto scenario, however, in which incentives are provided by stock movement (since private benefits will be realized whether or not there is a takeover), a small movement at the margin that invited a takeover would not create a discrete jump in the manager's compensation. As a consequence, along this dimension, the cost of risk is lower, and thus the optimal power of managerial incentives is greater, with stock-based pay than with takeovers.

There is strong reason to conclude that the takeover market will create exogenous risk for the manager: it cannot work perfectly, in the sense that it cannot be the case that a raider will inevitably purchase any firm that suffers from bad management. Grossman and Stiglitz show that as a general matter the stock market cannot be perfectly efficient because of the following paradox: if the stock market perfectly reflected all information, there would be no returns from investing in information, which means that the market predictably will not reflect all available information. The market must be sufficiently imperfect such that there is an incentive to invest in information. In the takeover context, if the takeover market worked perfectly there would be perfect competition to acquire any target with underperforming management. The inevitability of an acquisition would be reflected in the existing stock price, thus making a takeover unprofitable, which in turn means investing in research to find a takeover target would not be profitable. Hence, the takeover market must be sufficiently imperfect that there are returns to investing in potential takeovers. A likely manifestation of such imperfection is that a target with

management that is underperforming will not necessarily be taken over. That is, there is a random element to being taken over, which in turn implies that the risk of a takeover creates exogenous risk for the manager in the no-veto scenario.

Golden parachutes provide an intermediate scenario between the veto and no-veto case. To the extent that the risk of a large, discrete loss of private benefits creates undesirable levels of exogenous risk for the incumbent managers, golden parachutes can be designed to mitigate this problem by diminishing the impact of the manager's losing her job. But while such parachutes lower the cost of risk for the manager by limiting the variance of her pay package, they simultaneously diminish incentives to avoid takeovers. That is, for the takeover threat to have any meaningful impact on a manager's incentives, she must bear a sufficiently large drop in overall compensation (that is, compensation including private benefits) that she is willing to provide costly labour to avoid this drop. Once such a discrete jump exists, given that there are inevitably exogenous risks associated with takeovers, then the costs of takeovers to managers because of exogenous risk are unavoidable. Incentive pay, on the other hand, can better avoid such an all-or-nothing approach to compensation.

In summary, there is no a priori reason to prefer takeovers to stock-based compensation as a source of motivation for management. The cost and therefore effectiveness of takeover-based incentives could be greater or smaller than the cost of stock-based pay. The primary advantage of takeovers is that the raider has a strong incentive to distinguish managerial influences on corporate performance from exogenous factors. The raider focuses on management, while the market accounts for all factors. The estimate of managerial performance conditional on a takeover bid is lower than it

would be absent a bid. The primary disadvantages of takeovers, on the other hand, are first that the incentives depend on an all-or-nothing realization of private benefits of control, which exacerbates the cost of exogenous risk for the manager to the extent that probability of a takeover is not exclusively dependent on managerial performance.

Second, even setting aside considerations like mistaken takeovers and the Grossman and Hart free-rider problem, the takeover market cannot work perfectly, given the cost of finding a takeover target, which implies that the probability of a takeover will not depend exclusively on managerial performance – there will also be random factors at work, which create risk for the manager. The practical implications of the relative advantages and disadvantages obviously raise important empirical questions, but this is not to say that the inconclusiveness of the analysis has no practical implications. Most importantly, the analysis suggests that commentary that would inflexibly urge that managers be exposed to takeovers as a matter of mandatory corporate law is insufficiently appreciative of the costs of takeovers as incentive devices.

IV. Applications

There are two empirical phenomena that we relate in this section to the preceding theory. First, in the U.S., institutional investors support takeover defences in IPOs in which they participate, but oppose the adoption of takeover defences after IPOs (Klausner). Second, La Porta et al. (LLSV) suggest that where private benefits of control are relatively large around the world, controlling shareholder structures are common. Our theory may shed light on these empirical phenomena. Discussion of the empirical

evidence also provides an opportunity to discuss some practical and legal impediments to contracts over the sale of property rights that we have envisioned thus far.

(a) The Puzzle of Apparently Inconsistent Institutional Shareholder Attitudes

(i) Ex Ante Positive Correlation Between Public and Private Value

There are a couple of reasons to suppose that institutional resistance to takeover defences midstream yet support of defences on IPOs is consistent with the theory outlined above. Consider the incomplete contracts, property rights justification for giving managers the right to veto takeover bids, which relies on an assumption of a positive correlation between private benefits and public value. It may be that providing property rights in private benefits is optimal at early stages of a firm's development, but not at later stages. First, it may be that the correlation between growth in public value and private benefits is strongest for firms of relatively lower value, such that immediately following the IPO providing managers with property rights in future private benefits provides strong incentives, while providing such rights for a midstream corporation is not as effective in motivating managers. This pattern could be explained by legal and political constraints on private benefits and on side payments that compensate for lost private benefits. Suppose that private benefits are largely realized through compensation that exceeds the marginal contribution of the manager to the performance of the corporation. Courts tend to be very deferential about executive and directorial compensation (see, e.g., *Heller v. Boylan*), but at some level there is a risk that such payments will be characterized by the courts as "waste" (Disney). Commentators have also described political constraints on extremely high compensation packages (Jensen and Murphy; Bebchuk et al.). Bebchuk et al. refer to an "outrage constraint" on executive

pay. Suppose that in the absence of legal or political constraints, executives would expect to extract 5% of corporate value generated in each period; that is, there is a positive correlation between private and public value. But suppose further that at some point there is effectively an absolute cap on compensation generated either by waste doctrine or by political restrictions. In such a scenario, there would be a positive correlation between private benefits and performance at low levels of public value, but the correlation would cease to exist once the cap becomes binding on compensation. It would be consistent with our theory that while the corporation may be open to granting property rights to managers at low levels of public and private value because of a positive correlation between public and private value, it would be reluctant to make a similar grant at a point where the correlation does not exist or is likely to disappear in the near future.

Political or legal constraints on compensation could also impact the efficacy of property rights protection for private benefits in a different way. For a takeover to occur when managers have a veto, managers must be compensated for any forgone private benefits. Thus, as noted above, bargaining breakdown between bidders and managers could impede takeovers even if value-increasing. But where there are political and/or legal limits on compensation to managers, it could be that managers and bidders simply cannot come to an agreement over a sale of control. This would occur if adequate compensation for lost private benefits of control exceeded the limits on such payments. If it were anticipated that while property rights protection for private benefits would create good incentives, it nevertheless would unduly impede value-enhancing acquisitions, it may be optimal not to assign a veto to managers.

Such considerations could help explain why IPO firms adopt takeover defences with the support of institutions, while post-IPO firms do not get institutional support for such defences. If at early stages of a firm's growth, compensation for lost private benefits is below maximum permissible levels, then assigning a veto to managers provides incentives to grow private and public value without sacrificing the possibility of value-enhancing transactions. On the other hand, if compensation for lost private benefits would reach impermissible levels as the firm and private benefits grow, it may not be sensible to give managers a veto given the obstacle this would present even to value-enhancing takeovers.

(ii) Zero Ex Ante Correlation Between Public and Private Value

Our central justification of takeover defences where there is no correlation between public and private value is that takeovers and the threat of a loss of private benefits may create excessive exogenous risk for managers relative to the costs of other, equally powerful incentive schemes. As long as a takeover may arise even where the manager has put forth optimal effort, the takeover creates exogenous risk.

There is reason to suppose that the risk associated with takeovers even in the face of optimal effort is greater for a firm just going public than it is for a mature firm. The reason for this is that the signals of managerial performance may be noisier when a firm is immature and outsiders do not have a deep understanding of it. The less information about a firm, the more prone are raiders to examine share price and other signals and conclude that gains are available from replacing management even where management has done an optimal job. The stock of information about young, predictably smaller firms will be systematically less extensive than that for older firms. Hence, the

exogenous risk associated with takeovers of mature firms may be smaller than that associated with IPO firms. This could help explain why institutional shareholders oppose takeover defences for mature firms but not IPO firms.

(b) Controlling Shareholders

(i) Ex Ante Positive Correlation Between Public and Private Value

The surest way of retaining property rights in the private benefits of control is for the managers to have a control block of shares. Such ownership structures are common around the world, particularly in jurisdictions where there are significant private benefits of control (LLSV). Bebchuk has suggested that entrepreneurs are more likely to retain control where private benefits are high because to move to a dispersed ownership pattern would invite an acquisition of control by a purchaser motivated by access to private benefits. That is, a dispersed structure would be unstable. Our theory of property rights protection is complementary. Where private benefits are significant and correlated ex ante with public value, it is more likely that retaining property rights in private benefits will provide strong incentives to work to grow private, and thus public, value. If a jurisdiction had no or trivial private benefits of control, they are unlikely to become an important source of motivation.

Why rely on a control block of shares rather than takeover defences to protect managers' private benefits from expropriation in jurisdictions where there are large private benefits of control? This might be explained by legal and political limits on executive compensation. If private benefits are very large, it is more likely that the political or legal constraints on freedom of contract override payments to managers to waive takeover defences are binding. If so, efficient Coasean bargaining between

managers and acquirors over transferring control faces considerable impediments – the price managers require to waive private benefits may exceed what the acquiror legally or politically is able to pay.

These constraints are much less likely to matter for someone selling a control block than for a manager seeking greater executive compensation. Legal limits on the price at which a person can privately sell her control block often do not exist (though tax considerations may matter, just as they would for executive compensation). Moreover, political constraints on the sale of shares are very likely to be more permissive than political constraints on executive compensation. Rarely does one hear of outrage at the price paid for a block of shares as opposed to straight executive compensation. Our theory can thus help explain why control blocks are more likely to exist where there are high private benefits of control – acquirors are freer to compensate incumbents by paying for a control block than they are to give incumbents a bonus in executive compensation.

(ii) Zero Ex Ante Correlation Between Public and Private Value

Areas where there are high private benefits of control may be more likely to have antitakeover protection in the form of control blocks for several reasons. First, where private benefits of control are high, it is more likely that a takeover has little to do with inferior managerial performance and more to do with the acquiror's access to private benefits. Exposing a manager to a potential loss of private benefits would therefore expose her to risk from takeovers and a loss of benefits that has little to do with her performance. Second, where private benefits of control are very high, the threat from a loss of private benefits will be significant. To the extent that there is exogenous risk associated with the emergence of a takeover, the larger the discrete drop in private

benefits from such a takeover, the greater the cost of risk managers must bear. The discrete loss of private benefits could be mitigated by golden parachutes, but where private benefits are very high, the size of the golden parachutes necessary to mitigate losses and thus limit the cost of risk may exceed legal and political constraints on executive compensation. For these reasons, takeover protection may be appropriate where private benefits are very high and where there is no correlation between private and public value. Legal and political problems with contracting for compensation of lost benefits, identified previously, may help explain why takeover protection comes in such jurisdictions in the form of control blocks.