

Shareholder Rights and the Bargaining Structure in Control Transactions

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We provide a general framework for analyzing shareholder rights in control transactions. Our focus is on the case of dispersed shareholders, and specifically their inability, as a collective, to make counter-offers. When managers have the right to initiate any sale and shareholders have only their statutory rights, namely the right to vote on the transaction and the right to a judicial appraisal, shareholders confront effectively take-it-or-leave-it offers and get no share of deal surplus. While this results in ex-post efficient operation of the market for corporate control, it distorts investment incentives, and we show that shifting deal surplus to the Shareholder would be less ex-post efficient but nonetheless increase ex-ante efficiency. We thus analyze how the design of fiduciary duties might strengthen target shareholders' bargaining position. Competition between acquirers, in combination with a norm of non-interference of offers by target managers, increases shareholders' bargaining power but results in socially inefficient transactions. An anti-self-dealing norm can also deliver greater deal surplus to shareholders but results in managerial entrenchment. Furthermore, given target shareholders' precarious bargaining position, institutional features can have counterintuitive consequences: restricting managers' or controlling shareholders' ability to pursue a transaction without shareholder approval *à la MFW* ends up *hurting* shareholders, whereas allowing a plaintiff attorney with misaligned incentives to file suit may help them.

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State corporate law accords shareholders two main types of rights in mergers and acquisitions (M&A). First, statutes grant to shareholders a set of special rights with respect to “fundamental transactions,” including many M&A transactions (Carney, 1980). These include principally the right to vote on the transaction and appraisal rights for dissenting shareholders. Second, shareholders have a right to loyal conduct by corporate fiduciaries, the contours of which have been developed largely by judges. Concern about excessive merger litigation, however, has led more recently to jurisprudential developments cutting back on the right of shareholders to sue to enforce fiduciary duties. Courts and commentators increasingly put great faith in corporate fiduciaries negotiating on behalf of shareholders to give them their due. But what exactly is shareholders’ due, and what mechanisms can secure it, is almost entirely unclear. In principle, faithful corporate fiduciaries empowered to act as centralized bargaining agents can protect shareholders against certain collective action problems posed by M&A transactions. But what protects the shareholders against unfaithful fiduciaries?

We attack these questions from first principles. The basic perspective we develop is that the functioning of shareholder rights in control transactions must be understood in terms of how they shape the bargaining structure. A key theme of our analysis is that the inability of dispersed shareholders to make counter-offers has profound consequences for the bargaining structure induced by alternative bundles of shareholder rights.

We begin by developing a baseline model of the bargaining structure in control transactions when managers have the exclusive right to initiate any sale and shareholders have only their statutory rights, namely the right to vote on the transaction and the right to a judicial appraisal. The baseline model yields a number of insights and motivates our analysis of fiduciary duty regimes. In particular, we show that, protected by only their statutory rights, shareholders’ inability to make counter-offers results in them facing what are effectively take-it-or-leave-it offers (TIOLIOs) from target managers, depriving them of any share in deal surplus, a result that is robust both to indefinitely repeating offers and to bidder competition. On the one hand, this outcome results in an ex-post efficient allocation of corporate assets and fully satisfies Bebchuk (1984, 1988)’s “undistorted choice” or “sole owner” normative standard for takeover policy. But we show that it also is ex-ante inefficient: an alternative bargaining structure in control transactions that shifts deal surplus to target shareholders would be less ex-post efficient but nonetheless increase ex-ante efficiency. Our simple model thus shows that the existing literature’s excessive focus on ex-post efficiency has resulted in an inadequate normative framework for evaluating takeover rules. Given the social desirability of target shareholders’ sharing in deal surplus, and the precarious bargaining position of shareholders with only their statutory rights, a key goal of the design of target management’s fiduciary duties should be to ensure a greater share of deal surplus goes to target shareholders.

We then analyze three alternative conceptions of target managers’ fiduciary duties, beginning with the norm of non-interference in buyout offers made directly to shareholders. In the absence of effective bidder competition, such a norm does the target shareholders little good, as they ultimately end up facing TIOLIOs from bidders instead of target managers, resulting in the same lack of deal surplus going to shareholders. This points up the potential value to the target shareholders of having a faithful bargaining agent empowered to act on their behalf, a role corporate law assigns to corporate fiduciaries,

We thus consider two other aspects of target manager’s fiduciary duties that are intended to ensure their fidelity in bargaining on behalf of shareholders in control transactions. First, we analyze the anti-self-dealing norm, which we model as requiring that

target shareholders receive a share of deal consideration pro rata with their ownership of stock. In practice such a norm is not perfectly enforceable, given the difficulties with detecting side-payments made to the management. But we show that, to the extent it can be effectively enforced, the anti-self-dealing norm can deliver to shareholders a greater share of deal surplus, albeit a cost to ex-post efficiency due to managerial entrenchment. Shareholders' basic predicament can re-emerge, however, if the anti-self-dealing rules include the standard "cleansing act" doctrine by which a shareholder vote approving the deal eliminates their ability to sue to enforce the anti-self-dealing norm. Such a cleansing act rule results in the target shareholders confronting a TIOLIO of a deal violating the anti-self-dealing norm or no deal, which results in the same no-surplus-to-shareholders outcome as the statutory regime. Perhaps somewhat surprisingly, however, if management can force through a deal unilaterally after a failed shareholder ratification vote, we show that this can make *more* effective the protection of shareholders' entitlement to a share in deal surplus if what the manager must give the shareholders in the unilateral process is more than shareholders' stand-alone value. The reason is that management's unilateral option changes shareholders' choice from one between the proposed deal or no deal (that is, the status quo) to a choice between the proposed deal and the unilateral deal. One implication is that the seemingly shareholder-friendly feature of cleansing act doctrine of requiring controlling shareholders to condition certain transactions on a majority of the minority vote *ab initio* in order to receive more deference from judges ex post can in fact serve to undercut shareholder protections.

We then consider a final aspect of managers' fiduciary duties, their *Revlon* duty to sell the firm to the highest bidder. We show how *Revlon* duties can indeed ensure that the firm is sold to the highest valuing acquirer, even when bidders can offer target managers side payments, and can at least mitigate the problem of inefficient sales. But on the other hand, *Revlon* exacerbates the problem of managerial entrenchment.

The paper proceeds as follows. Section 1 analyzes the case when managers have the right to initiate any sale and shareholders have only their statutory rights. Section 2 then considers three alternative conceptions of target managers' fiduciary duties. Section 3 concludes.

1 The Statutory Regime

We begin by analyzing the bargaining structure in control transactions when managers have the right to initiate any sale and shareholders have only their statutory rights, namely the right to vote on the transaction and the right to a judicial appraisal. Our analysis in this section introduces a basic economic problem that motivates the rest of our analysis: dispersed shareholders' inability to make counter-offers can result in target shareholders being deprived of deal surplus, potentially at a cost to ex-ante efficiency. We turn to how fiduciary duties can address this problem in Section 2.

As a general matter, under state corporate law the shareholders of a target company in a merger must approve the transaction by majority vote of the outstanding shares of common stock.¹ This can be thought of as "property rule" protection of shareholders' entitlement to their shares in the status quo, in which consent of shareholders is required in order for anyone to take their entitlement (Calabresi and Melamed, 1972). But this entitlement is located at the level of the shareholder collective, rather than at the level of

¹See, e.g., DGCL § 251.

the individual shareholder, so that shareholder consent is manifested by majority vote. We will focus on the case in which approval by the public shareholders is essential for the transaction, either because they own a majority of the stock or because their approval is otherwise required by the rules (e.g., a majority-of-the-minority vote requirement).

The appraisal remedy in U.S. corporate law, in contrast, provides dissenting shareholders in certain control transactions the right to a summary legal procedure in which a judge determines the status quo value of the shares, which the corporation must pay the shareholder in lieu of the merger consideration specified in the transaction.² In the framework of Calabresi and Melamed (1972), this can be thought of as “liability rule” protection of shareholders’ entitlement to their shares in the status quo lodged at the individual shareholder level.³

In this section we take as given that the firm’s managers must initiate any transaction. In principle, bidders could make tender offers directly to shareholders to purchase their shares. Nonetheless, in practice target managers can generally block such offers using devices such as the poison pill. We will consider the case in which target managers cannot block offers made directly to shareholders in our analysis of fiduciary duty regimes in Section 2.

1.1 The baseline model of statutory shareholder rights

Consider a firm that is run by a Manager who owns a fraction $s \in (0, 1)$ of the firm’s shares, with the remaining $1 - s$ of the shares held by a Shareholder. We are interested in the case in which the public shareholders are dispersed, but to simplify we model this with a representative Shareholder and capture collective action problems in reduced form by assuming restrictions on what the Shareholder can do, as we discuss below. The net present value of the firm’s observable cash flows if it remains under the control of the Manager is normalized to 1. In addition, the Manager enjoys private benefits of $b > 0$ from running the firm. The total social value of the firm in the status quo—i.e., absent an acquisition—is thus $1 + b$. We assume all parties are risk-neutral and all parameters (including bidders’ valuations) are common knowledge.

Remark 1. Nature of private benefits. The Manager’s private benefits potentially include both pecuniary benefits—often referred to as “tunneling”—and non-pecuniary benefits such as the feeling of power. Whatever the nature of the Manager’s private benefits of control, we assume that they are in addition to the observable cash flows of 1 split between the Manager and Shareholder according to shares s and $1 - s$. The critical distinction between the private benefits of b and the observable cash flows of 1 is that only rights to the observable cash flows, and not to the private benefits, can be sold to the Shareholder.

Suppose an Acquirer that values the firm at $v > 0$ wishes to buy the firm. We assume that the Manager and Acquirer first bargain over the terms of the acquisition. The Manager then takes the proposed deal to the Shareholder for her approval. If the Shareholder approves the deal, then it is implemented, subject to the appraisal rights of the

²See, e.g., DGCL § 262(h), providing that in an appraisal proceeding with respect to a merger of a Delaware corporation, “the Court shall determine the fair value of the shares exclusive of any element of value arising from the accomplishment or expectation of the merger or consolidation.”

³By default, Delaware provides both a shareholder vote and appraisal rights (DGCL 251(c), 262(a),(b)), but for certain transactions it provides only one, for example only appraisal in short-form mergers (DGCL 253) and only a vote in certain stock deals (DGCL 262(b)).

Shareholder.

Crucially, we assume that the Shareholder cannot make a counter-offer and gets only an up-or-down vote on the Manager’s proposal. The Shareholder’s inability to make counter-offers captures the fact that dispersed shareholders would be unable to coordinate on an offer. Individual shareholders lack the incentive to incur the requisite expenditure to investigate and formulate an offer and, even if they did, could not speak on behalf of other shareholders. At the same time, the assumption of a single Shareholder avoids the even more serious collective action problems that occupied much of the 1980s literature on takeovers. On the one hand, efficient deals might be derailed by hold-out shareholders free-riding on the acquirer’s improvements to firm value (Grossman and Hart 1980). On the other hand, inefficient deals could be forced through by bidders employing coercive devices such as conditional two-tiered front-loaded tender offers, resulting in “distorted shareholder choice” (Bebchuk, 1984). Coercive devices work by playing multiple shareholders against each other. But the problem of coercive offers has been largely solved by regulation of tender offers, including prohibitions on cascading offers, and other legal rules. In order to focus on the remaining problems, we assume away the problem of distorted shareholder choice by assuming a single representative shareholder.

More specifically, the timing of the model is:

1. The Manager and Acquirer Nash bargain over a sale of the company, with the Manager’s bargaining power relative to the Acquirer’s equal to $\phi \in [0, 1]$, i.e., the Manager obtains fraction ϕ of any deal surplus. (If $v < 1 + b$ then there is no surplus and the game ends with no transaction.) Denote the agreed-to deal price by p .
2. The Manager makes a proposal to the Shareholder to give the Shareholder a of the deal price, with the Manager retaining the remaining $p - a$.
3. The Shareholder decides whether to accept the Manager’s offer of a . If so, the game proceeds to the next step. If not, the players receive their status quo payoffs.
4. The Shareholder decides whether to seek judicial appraisal.⁴ If so, then the Shareholder and Manager receive payoffs $\min(p, 1 - s)$ and $p - \min(p, 1 - s)$, respectively.⁵ Otherwise the Manager’s proposal is implemented, and the Shareholder and Manager receive payoffs a and $p - a$, respectively.

This bargaining structure between the Manager and the Shareholder might be termed “take-it-or-leave-it-or-seek-appraisal,” but with appraisal delivering to the Shareholder only the value of the Shareholder’s claims in the status quo, the end result parallels the classic “take-it-or-leave-it” Ultimatum Game (Güth and Tietz, 1990). As a result, in any subgame perfect Nash equilibrium (SPNE), the Manager gets all of the surplus from any deal, as we now state more formally.

⁴Appraisal rights are generally available only for dissenting stockholders in a merger. But with a single Shareholder, providing appraisal rights only if the Shareholder dissents from the transaction would be vacuous, since the transaction would not go forward if the (single) Shareholder dissented. Accordingly, we capture this statutory bundle of rights in a reduced form way by supposing that the Shareholder can seek appraisal even after approving the transaction.

⁵As a legal matter, appraisal claims are obligations of the target corporation. We model them as reducing the deal consideration available for the Manager because a rational bidder would account for these claims, which reduce the value of the target, in the terms of its offer.

Proposition 1. *Under the statutory regime, in any SPNE:*

1. **Sharing of surplus:** *All of the surplus from any sale goes to the Manager and the Acquirer, who split it according to their bargaining power ϕ and $1 - \phi$, respectively. The Shareholder receives only her status quo payoff $1 - s$.*
2. **Ex-post efficiency:** *The firm is sold to the Acquirer if and only if it is ex-post efficient, i.e., $v \geq 1 + b$.*

This outcome reflects the fact that each of the components of the statutory package of merger rights protects the Shareholder’s entitlement to the value of her claims in the status quo but no more. If at time 4 the Manager’s offer would give the Shareholder less than the value of her claims in the status quo, $a < 1 - s$, then the Shareholder would seek appraisal. The existence of this appraisal right in turn makes the Shareholder approval requirement of no practical value. The Shareholder is willing to accept *any* offer a since her right to appraisal ensures she will receive at least her status quo payoff in any deal. Similarly, the existence of a Shareholder approval right makes the appraisal right superfluous. If the Shareholder had only the right to vote on the deal and not the right to seek an appraisal, then the Manager would have to offer at least $a = 1 - s$ in order to induce the Shareholder to approve the deal, inducing the exact same payoffs.

In all of these cases, the reason the Manager would never offer the Shareholder more than the value of her claims in the status quo is because the proposal power of the Manager gives her all of the bargaining power. When the Manager offers the Shareholder only her status quo payoff, $a = 1 - s$, it is effectively take-it-or-leave-it. Seeking appraisal won’t give the Shareholder any more.

The lack of surplus going to the Shareholder in turn results in an ex-post efficient allocation of corporate assets in the market for corporate control. Ex-post efficiency in this sense requires the firm to be sold whenever the Acquirer values it more than its value in the status quo. Since the Shareholder only gets her status quo value in any deal in equilibrium, the deal surplus that the Manager and the Acquirer are Nash bargaining over is also the full *social* surplus at stake.

Remark 2. Errors in judicial valuations. To be sure, the redundancy of voting rights and appraisal rights depends on our assumption that the judge would value the Shareholder’s claims in the status quo the same as the Shareholder does. If the judge’s valuation is expected to systematically err in one direction or the other then having both a shareholder vote and an appraisal right can result in higher expected payoffs to the Shareholder than having just one of those protections. But it is *not* necessary for our redundancy result or any of our other results that courts correctly assess Shareholder’s status quo entitlement, $1 - s$, in individual cases. Courts only need to assess $1 - s$ correctly *in expectation*, i.e., to be correct *on average*. The reason is that the Manager takes the deal decision in anticipation of the court ruling, not in reaction to it. This logic is familiar from the economics of deterrence. Similarly, the Shareholder’s investment decision, which we discuss below, only depends on the expected payoff, not their realization. Of course, systematic court errors—getting the mean wrong—do change the analysis.

Remark 3. Repeating offers. The outcome is unchanged if one considers the realistic possibility of repeating offers, rather than artificially restricting the offers to one round as we did above. Intuitively, the reason is that “procedures in which all the offers are made by only one of the two bargainers ... assign all the bargaining power to the party

who makes the offers” (Binmore et al. (1992), 184).⁶ To see this, distinguish bargaining protocols with finite and (potentially) infinite rounds. If rounds are finite, the result follows simply by backward induction. If rounds are potentially infinite, note first that as before there cannot be a deal where the Shareholder gets less than $1 - s$ because then the Shareholder would be better off not agreeing to it; concomitantly, there cannot be a deal if $v < 1 + b$. Focus thus on the case $v \geq 1 + b$ and the split of the positive bargaining surplus $v - (1 + b) \geq 0$ (if indeed there is a bargain). Let M_t be the supremum of the Shareholder’s equilibrium payoff (net of the Shareholder’s status quo payoff) of any SPNE of the subgame starting in round t . As is standard in bargaining models (e.g., Rubinstein (1982); Binmore et al. (1992)), assume that payoff received in a subsequent round is discounted by a factor $\delta \in (0, 1)$, be it due to time discounting or because of a probability of deal failure (e.g., the bidder goes bankrupt or finds a better target between rounds).⁷ Then in round $t - 1$, subgame perfection requires the Shareholder to accept any offer of at least δM_t and in turn the Manager not to make offers greater than this, which in turn implies $M_{t-1} = \delta M_t$. Now notice, however, that the game is stationary: the game at period t is the same as that at period $t - 1$. Thus we must have $M_t = M_{t-1} = M$, where M is the Shareholder’s supremum payoff in any round, and thus $M = \delta M$, which only holds for $M = 0$.⁸ To complete the proof, note that there must nonetheless be a deal (except if $v = 1 + b$) in SPNE for otherwise the Manager would obtain zero surplus too and could make herself better off by offering the Shareholder some strictly positive share of the deal surplus, which the Shareholder would accept.

Bidder competition. One might hope that competition among multiple potential acquirers on its own might help mitigate dispersed shareholders’ predicament, but this is not so. To see this, suppose that $N > 1$ bidders that value the firm at greater than its value in the status quo compete to acquire the firm, with bidders’ valuations from highest to lowest denoted v_1, \dots, v_N . To capture bidder competition, assume that at stage 1, the Manager and the highest-valuing bidder (the “Acquirer”) Nash bargain over a transaction where the Manager’s threat value is now not the status quo outcome but rather to sell the firm to the second-highest valuing bidder at a price of v_2 . The agreed-to deal price thus gives the Manager all the deal surplus for which other bidders would have competed plus a fraction $\phi \in [0, 1]$ of the additional deal surplus specific to the bidder with the highest valuation. That is, the firm is sold to the bidder with the highest valuation for a price of $v_2 + \phi(v_1 - v_2)$. For $\phi = 0$, this is the outcome that would result if the Manager ran an

⁶Binmore et al. also write that “[m]uch has been written on” such procedures. We have not been able to locate such writing on bargaining with complete information. For the case of asymmetric information, Cramton (1984) shows that the party receiving offers will capture some surplus, but only surplus representing an information rent: all known surplus—i.e., surplus that is fixed no matter the receiver’s information—is captured by the party making the offers even after that party’s information is fully revealed. Since dispersed shareholders do not have any information about the firm that bidders do not have, however, they will not receive any information rent. Consequently, Schwartz (1988, 173) may be correct in the abstract that “[i]t is disadvantageous to be the only offeror when information is incomplete because offers then may be revealing,” but wrong in drawing the conclusion that “[a]ccordingly, passive shareholders could do better when facing prospective buyers than single owners of the same assets would do.”

⁷Alternatively, assume that the Shareholder incurs a fixed cost κ in every round of bargaining. Then analogous reasoning leads to $M_{t-1} = \max\{0, M_t - \kappa\}$ and thus $M = \max\{0, M - \kappa\}$, which again holds only for $M = 0$.

⁸We have drawn inspiration from the proof technique of Shaked and Sutton (1984) for alternating offers models of bargaining.

English auction with reserve price $1 + b$, which would be a natural deal process.⁹ Since running an English auction is generally possible for the Manager, the Manager will hardly do worse regardless of how the process actually unfolds. The Manager certainly will not accept any deal for total consideration less than $1 + b$. The case $\phi > 0$ allows for the possibility that the Manager designs a process to capture additional surplus. Otherwise the game proceeds as before. Note that the Shareholder’s basic predicament stemming from the initiation rights of the Manager combined with the inability of the Shareholder to make counter-offers remains unchanged. Bidder competition only changes the allocation of deal surplus as between the Manager and the Acquirer; the Shareholder still receives only her status quo value, $1 - s$.

1.2 The ex-ante efficiency of the statutory regime

We view the ultimate normative criterion for evaluating merger rules as ex-ante efficiency, i.e., maximizing the total expected social value of corporate assets viewed from prior to the financing of the firm in the first place. From an ex-ante perspective, social efficiency requires more than that corporate assets ultimately end up under the control of the efficient owner. It also requires that a firm is financed if and only if its expected gross social value is greater than the firm’s investment costs. The basic financing issue is whether enough of the social value of the firm can be pledged to the Shareholder so that the Shareholder is willing to invest (Tirole, 2006). From this perspective the failure of the the statutory regime to deliver deal surplus to the Shareholder is potentially problematic because it can distort the Shareholder’s ex-ante investment in the firm.

To see this, consider a prior stage, “time 0,” in which the Manager and the Shareholder bargain over the financing of the firm. Suppose the Manager has a project that requires a fixed investment of $n > 0$, which is drawn from a distribution with cdf $F(\cdot)$. To establish a firm to pursue the project, the wealth-constrained Manager must raise the needed funds for the investment from the Shareholder. Suppose further that at time 1, the Acquirer’s valuation v is realized from a distribution with cdf $G(\cdot)$. The rest of the model proceeds as above.

There are three basic components to the social value of the firm in this model. First, there are the observable cash flows of the project under the Manager’s control, which are normalized to 1. These cash flows are fully pledgable to the Shareholder at stage 0 by allocating the shares of the company between the Manager (s) and Shareholder ($1 - s$). Second, the firm produces private benefits of control to the Manager of $b > 0$. We assume that these private benefits are not pledgable to the Shareholder, which can lead to socially valuable projects with $1 + b > n > 1$ not being financed. Third, there is

⁹The equilibrium is not unique with symmetric information but it would be with asymmetric information.

Some real-world bidding contests may not be well represented by an orderly English auction where every potential buyer bids up to their reservation price. One particularly relevant alternative is that potential buyers with (expected) lower valuations refrain from entering the auction in the first place because they expect to lose against a known or anticipated competitor with an (expected) higher valuation. At the extreme, this may effectively convert the multiple-bidder to the single-bidder case without managerial blocking power. We do not model such complications explicitly because (a) all our regime comparisons below will be weighted averages of the single- and multiple-bidder cases, where putting a large weight on the single-bidder case is equivalent to allowing explicitly for the possibility of “bid deterrence,” and (b) by assuming competitive bidding we bias our results against our finding that empowering a Manager can help shareholders: if the Manager can help even with (occasional) full competition, then the Manager would be even more helpful if only the Manager’s intervention can entice competing bids (e.g., by offering a toehold to a potential buyer with a presumed lower valuation).

the prospect of an Acquirer who values the firm at $v > 1 + b$ materializing and purchasing the firm, which occurs with probability $1 - G(1 + b)$ if all and only ex post efficient deals are consummated. The expected increment in value in such a transaction is also part of the overall social value of the firm ex ante. Whether this source of value is pledgable to the Shareholder, however, depends on the bargaining structure in control transactions. In this model, socially valuable firms with $n > 1$ can be financed only if the Shareholder can expect to receive some share of deal surplus in a sale. As a concrete example of this sort of firm, consider an early stage drug development company that would have to be acquired in order to ultimately commercialize its drug candidate. But as we showed in the baseline model above, none of this third component of the social value of the firm is pledgable under the statutory regime, which gives the Shareholder only the value of her status quo claim in any sale and none of the deal surplus.

While this analysis suggests the social value of additional legal rules or other institutions that would deliver deal surplus to shareholders, such a change would pose potential social costs in terms of ex-post efficiency. In particular, consider an alternative institutional regime under which the Shareholder would receive in any sale a payoff equal to $a^* > 1 - s$. Now for an Acquirer with $v \in [1 + b, a^* + s + b)$, to whom it would be efficient to sell the firm, no deal would be possible between the Manager and the Acquirer at time 1, since the most the Acquirer would be willing to pay less the amount that would go to the Shareholder ($v - a^*$) would be less than the Manager's status quo value ($s + b$).

The bargaining structure in control transactions can thus pose a tradeoff between the ex-post efficiency of control over corporate assets and the efficiency of which projects get financed ex ante. Giving the Manager enough deal consideration to compensate for her loss of private benefits is essential for ex-post efficiency, but on the other hand, ex-ante efficiency requires the Shareholder to receive the full social value created by her investment, including the full value of the firm in an acquisition. While it is difficult to say much about the optimal way to strike this tradeoff in general, the model delivers an important insight stated in the following Proposition.

Proposition 2. *Relative to the statutory regime, an alternative bargaining structure in control transactions that gives a larger amount of deal surplus to the Shareholder would be less ex-post efficient but nonetheless increase ex-ante efficiency.*

This result points up the critical importance of shareholder's ex-ante investment incentives for the efficient design of takeover rules. To see the intuition for this result, consider again the bargaining structure under the statutory regime and consider a change that begins to shift deal surplus to the Shareholder. Because the statutory regime is ex-post efficient, the marginal deal deterred by such a change has $v = 1 + b$ and thus has no social value, so that there is no first-order social cost to the loss in ex-post efficiency. In contrast, note that the statutory regime results in firms with strictly positive social value not being financed, since none of the portion of expected firm value attributable to a future acquisition is pledgable to the Shareholder. As a result, the marginal firm that is now financed ex ante by shifting deal surplus to the Shareholder has a strictly positive social value, resulting in a first-order efficiency gain.

To be sure, our model omits several other incentive margins that complicate the analysis of the efficient bargaining structure in control transactions, including: (1) the Manager's incentive to exert effort to maximize the value of the firm in the status quo; (2) the Manager's incentive to exert effort to find an acquirer; (3) incentives to invest ex-ante in the Acquirer; and (4) the Acquirer's incentive to search for targets. Changing the

bargaining structure from the statutory regime baseline so as to shift surplus to the Shareholder would also potentially have effects on these margins.

But note that, as to the first two of these additional margins, the outcome under the statutory regime of the Manager getting all deal surplus creates an additional distortion by incentivizing the Manager to focus excessively on increasing the value of the firm in a sale at the expense of the value of the firm in the status quo, which reinforces the social desirability of shifting deal surplus from the Manager to the Shareholder. As to the second two margins, note that the allocation of deal surplus as between the Manager and the Shareholder is analytically distinct from the allocation of surplus as between the target firm and the Acquirer. In other words, it is not obvious that shifting the former will necessarily have any effect on incentives to invest ex-ante in the Acquirer or on the Acquirer's search incentives. More generally, our model's basic normative message, that institutions that deliver perfect ex-post efficiency in the market for corporate control are generally ex-ante inefficient, is quite general. This point derives from the insight that the marginal transaction in a perfectly ex-post efficient market for corporate control has no social value.

Moreover, the perspective we develop here is in stark contrast to the normative approach taken in much of the existing literature on the rules governing control transactions, which focuses excessively on ex-post efficiency. For example, Easterbrook and Fischel (1981) argues for appraisal as the exclusive remedy for shareholders in control transactions because giving shareholders (only) their status quo value ensures that all (and only) ex-post efficient transactions take place, while providing optimal incentives for managers to search for such transactions. But the optimal ex-post incentives point is also true for managerial incentives outside of the sale context. Yet there Easterbrook & Fischel surely would not hand the entire upside to the manager, which would entail in effect handing the manager complete ownership of the firm. The reason not to do so is, obviously, to maintain incentives for ex-ante shareholder investment.

As a less extreme example, Bebchuk (1984, 1988) articulates a highly influential normative framework for evaluating takeover policy he terms the "undistorted choice" standard (and also refers to as the "sole owner standard"). According to this standard, "a corporation should be acquired if and only if its shareholders judge the offered acquisition price to be higher than the target's independent value" (Bebchuk, 1988, p. 198). He justifies this standard largely on ex-post efficiency grounds, arguing that enabling dispersed shareholders to decide (in an undistorted way) whether to sell corporate assets is the best feasible mechanism for generating ex-post efficiency (Bebchuk, 1984, p. 1765). But the undistorted choice standard requires that a majority of shareholders judging an acquisition price to be worth more than the standalone value of the target to be *sufficient* for the bid to be successful, which implies that this normative standard is completely insensitive to the division of surplus between the target shareholders, on the one hand, and target management and the acquirer, on the other. Note that in our model, under the statutory baseline the undistorted choice standard is met. But such an outcome is socially inefficient—Proposition 2 shows that ex-ante efficiency can be improved by an alternative bargaining structure that shifts some surplus to target shareholders.

To summarize, dispersed shareholders' rights under the statutory regime, combined with their weak bargaining position due to their inability to make counter-offers, results in a bargaining structure that yields them little or no surplus in a sale, a problem that neither competition nor repeating offers on its own offers a solution. We turn now to an alternative set of legal rules stemming from target managers' fiduciary duties and analyze

the extent to which they can change the bargaining structure to induce greater surplus sharing with shareholders.

2 Fiduciary Duties

Consider now an alternative legal regime in which the Manager is subject to fiduciary duties. In the real world, fiduciary duties overlay statutory law—i.e., the two apply simultaneously. Nonetheless, we initially consider fiduciary duties on their own in order to isolate their effect and to show that, in principle—if perfectly enforced!—fiduciary duties could replace shareholders’ statutory protections entirely while additionally generating some deal surplus for the Shareholder.

We analyze fiduciary duties as having three principal components relevant for control transactions. First, we consider the case in which target managers’ fiduciary duties prohibit them from blocking a tender offer made directly to shareholders. Such a view of their fiduciary duties has long attracted the support of U.S. legal scholars (e.g., Gilson, 1981) and such an approach has been adopted in the U.K. if not the U.S. Analyzing this case is also of conceptual interest because it helps reveal the extent to which target shareholders’ predicament is due to the target manager’s blocking power. Second, we consider a prohibition on self-dealing, i.e., transactions in which the fiduciary receives more than their pro-rata share (relative to their share ownership).¹⁰ Finally, in the context of control transactions, fiduciary duties under *Revlon* require the board to sell the company to the highest bidder.¹¹ Since nobody would choose to accept an offer that is worse *for them*, and under proportional sharing what’s good for the Manager is good for the Shareholder, *Revlon*’s *raison d’être* has to be a concern that some deal consideration to the Manager is unobserved by the court. We therefore consider the possibility that bidders make private, unobserved side payments to the Manager.

Remark 4. Without fiduciary duties, it is irrelevant whether side payments to the Manager are observed or not. The reason is that the statutory rules do not prohibit such payments. For this reason, we did not distinguish observed and unobserved payments in the model thus far.

Subsection 2.1 analyzes the non-interference norm. Subsection 2.2 analyzes the generic effects of the anti-self-dealing norm. Subsection 2.3 fills in the blanks, showing the effect of bidder competition with and without *Revlon* as compared to a base case of a single bidder. In these latter two subsections, we assume that the anti-self-dealing and *Revlon* norms are actually enforced. As subsection 2.4 shows, however, this is not guaranteed for two reasons harkening back to our general theme of the importance of the bargaining structure. When the Shareholder confronts a TIOLIO of a deal violating the norms or no deal, the Shareholder will choose the deal as long as the deal offers (epsilon more than) the status quo value. This is, in essence, the choice that the Shareholder has when the Shareholder—not an independent plaintiff attorney—must choose whether to ask a court to enjoin the deal, or when a statutorily or contractually required shareholder vote cleanses any fiduciary duty violations.

¹⁰ See *Sinclair v. Levien*, 280 A.2d 717 (Del. 1971).

¹¹ *Revlon, Inc. v. MacAndrews & Forbes Holdings, Inc.*, 506 A.2d 173 (Del. 1986).

2.1 The non-interference norm

Consider the case in which the Manager’s fiduciary duties are understood to prohibit the Manager from blocking a tender offer from the Acquirer made directly to shareholders. Such a norm might be understood as flowing from the Manager’s fiduciary duty of loyalty, since the Manager has a personal interest (captured in the model by her private benefits of control b) in blocking the bid.

In such a setting, the Shareholder continues to have a “vote” in the form of her tender decision. But we will assume on both simplicity and realism grounds that the Shareholder does not have appraisal rights, although all of our conclusions are robust to allowing for them. We will also assume, again on both simplicity and realism grounds, that in any successful offer the Manager also tenders her shares (or is squeezed-out ex post) and receives the same per-share price as the Shareholder.

The sequence of moves in the model is now simply:

1. The Acquirer makes an offer to buy the firm for total price p .
2. The Shareholder decides whether to accept the offer. If so, the game ends, the Shareholder receives $(1 - s)p$ and the Manager receives sp . If not, the players receive their status quo payoffs.

This game structure is a straightforward Ultimatum game that has an obvious unique equilibrium: if $v \geq 1$, then the Acquirer proposes $p = 1$ and the Shareholder accepts, receiving her status quo payoff $1 - s$ (and otherwise the firm is not acquired). That is, the non-interference norm has simply moved the Shareholder out of the frying pan and into the fire: she remains on the receiving end of a TIOLIO and gets no share of deal surplus. Note that this outcome implies a social loss of $1 + b - v$ for $v \in (1, 1 + b)$ stemming from the Manager’s loss of her private benefits of control (assuming that there is no Coasean bargaining involving the Manager to prevent such deals, perhaps because the Manager is liquidity constrained). In other words, the “entrenchment” that the non-interference norm is avoiding is actually *socially efficient* entrenchment.

Remark 5. Bidder competition. When the Manager has no blocking power, it is natural to think of bidder competition as an English auction of competing tender offers. Since the Shareholder must ultimately accept the winning offer for the deal to close, the Shareholder’s status quo valuation acts as a reserve price. It is well known that in such an auction, the bidder with the highest valuation wins the auction at a price equal to the greater of the second-highest valuation and the reserve price, unless the highest valuation is below the reserve price (in which case the auction fails).¹² Thus, we get a deal if and only if $v_1 \geq 1$ at a price of $\max\{v_2, 1\}$. Analogous to the single bidder case, this outcome implies a social loss of $1 + b - v_1 > 0$ for $v_1 \in [1, 1 + b)$; otherwise, all and only efficient deals happen. But if there is a deal, the Shareholder now obtains positive deal surplus $(1 - s) \max\{v_2 - 1, 0\}$.

To summarize, the main benefit for the Shareholder of the non-interference norm is that it makes bidder competition effective at delivering to the Shareholder at least some share of the surplus created by the sale, albeit at a cost to ex-post efficiency given that the value of the Manager’s private benefits are ignored. But in the absence of bidder competition the Shareholder is no better off than she was under the statutory regime, and even with

¹²With symmetric information, as we have assumed, the equilibrium is not unique, but it is still an equilibrium.

bidder competition, the Shareholder only gets the portion of surplus given by $v_2 - 1$. This points up the potential value to the Shareholder of having a *faithful* bargaining agent empowered to act on her behalf, a role corporate law assigns to corporate fiduciaries, i.e., the Manager in the model. We thus now turn to fiduciary duty regimes that try to ensure fidelity of the Manager in bargaining on behalf of the Shareholder over control transactions.

2.2 Anti-self-dealing

Consider in particular the anti-self-dealing norm, which we take to require that the Manager share the judicially observed deal consideration in proportion to share ownership. Let the aggregate consideration paid by the bidder be p , but let fraction $\beta \in [0, 1]$ of this be a private benefit to the Manager unobservable to courts.¹³ Our interpretation of anti-self-dealing is thus that the Shareholder receive at least $(1 - s)(1 - \beta)p$. In this section, we assume the norm is enforced; we defer enforcement issues until section 2.4.

The Manager and the bidder negotiate under the shadow of this legal regime. They might strike a deviant deal only to have it adjusted by a court later; we assume they strike a permissible deal right away. We will again assume that they strike all and only bargains that make the two better off, and split their marginal deal surplus—i.e., deal surplus relative to the best alternative transaction—in proportions $\phi, 1 - \phi$. Let the Manager’s and bidder’s joint marginal deal surplus and the Manager’s best alternative transaction—which might be no transaction—be Δ and O , respectively. As we will discuss later, O depends on the number of bidders and whether *Revlon* applies.

We have from the economic fundamentals and the fiduciary duty constraint $\Delta = v - O - (1 - s)(1 - \beta)p$ and from the bargaining assumption $\phi\Delta = s(1 - \beta)p + \beta p - O$, implying $p = \frac{\phi v + (1 - \phi)O}{\beta + (1 - \beta)[\phi + (1 - \phi)s]}$. The numerator of p is simply what the Manager would get if Manager and bidder negotiated unimpeded by shareholder rights and the Manager captures fraction ϕ of their joint marginal surplus: Manager’s outside option O plus fraction ϕ of joint surplus $v - O$. When the bidder can pay the Manager’s entire consideration in private benefits, then that is all there is: when $\beta = 1$, the denominator equals one. However, as β or—for $\beta, \phi < 1$ — s decrease, p gets inflated by a decreasing denominator. Intuitively, the more the Manager must share with the Shareholder, the more the Manager insists vis-a-vis the buyer on increasing the aggregate consideration to compensate for that loss. That strengthening fiduciary duties essentially stiffens the Manager’s back in dealing with the third-party bidder resembles the effect modelled by Choi and Talley (2018).

Remark 6. For the most part, we would get the same qualitative results if we assumed that Manager and bidder split not *their* deal surplus but the *aggregate* deal surplus—including the Shareholder’s—in proportions $\phi, 1 - \phi$. However, this alternative assumption strikes us as less realistic. It would also stack the deck in favor of finding entrenchment, i.e., the foregoing of ex post efficient deals: clearly, if the Manager is assumed to negotiate terms for one constituency (Shareholder and Manager jointly) but to accept or reject based on the interests of another constituency (Manager only), there will be deal failure. The alternative assumption would not generate the Choi and Talley (2018) effect.

As we will discuss later, β depends on the number of bidders and whether *Revlon* applies. Depending on β , the Manager may initiate too few or too many deals, i.e., there

¹³There may of course be observed side payments—observed at least once the case is dragged into court and subject to discovery. Those can be policed by courts and are thus *not* included in β .

may be ex post inefficiency from foregoing efficient transactions or entering into inefficient ones:

1. If the Manager must share too much, the Manager may simply forgo the transaction: fiduciary duties induce entrenchment, especially for s small. Specifically, the Manager and bidder will agree to the transaction only if they do better than doing nothing, i.e., $s(1 - \beta)p + \beta p \geq s + b$ and $v \geq p$, respectively, implying $v \geq \frac{s+b}{s(1-\beta)+\beta}$. This is not the same as the condition for social optimality, $v \geq 1 + b$, for the simple reason that the bidder's and the Manager's decisions to do the deal do not take into account the Shareholder's deal surplus. When $\beta = 0$ —all consideration paid by the bidder, and thus all surplus, must be shared with the Shareholder—the Manager's deal condition becomes $v \geq 1 + \frac{b}{s}$. This private threshold will be very considerably higher than the social optimality threshold for small s . Intuitively, the Manager needs to be compensated for the loss of status quo private benefits b with a greater cut of the observable deal consideration, which requires however a potentially much greater increase in the overall observable deal consideration because the Manager only obtains a fraction $s < 1$ of it.
2. Inversely, if $\beta = 1$ —the Manager can be paid entirely on the side—the Manager's deal condition is $v \geq s + b$, which is lower than the social optimality threshold. Intuitively, if the Manager can sell the firm for a bribe, the Manager may do so much below value. To prevent this, fiduciary duties must require that the Shareholder get at least $1 - s$, or the Shareholder must additionally have a vote or appraisal rights.
3. At least in theory, there is a sweet spot: a β that achieves ex post efficiency. While this may be fanciful when β refers to unobserved payments (how could they be controlled?), the logic would be the same for open side payments, which are widespread in practice (golden parachutes). Specifically, the Manager's deal condition $v \geq \frac{s+b}{s+\beta(1-s)}$ coincides with the social ex post optimality condition $v \geq 1 + b$ if and only if $\frac{s+b}{s+\beta(1-s)} = 1 + b$, or equivalently—given $s < 1$ — $\beta = \frac{b}{1+b}$: the Manager gets the same fraction in private benefits in the deal as in the stand-alone firm.

In summary, protection by anti-self-dealing can provide the Shareholder with a fraction $(1 - s)(1 - \beta)$ of the deal value, which will often include positive deal surplus. However, by itself, the anti-self-dealing norm may leave the Shareholder with even less than the status quo—i.e., negative deal surplus—if and because the Manager can conceal enough bidder payments from the court (β is high); in this case, the Manager may even pursue ex post socially inefficient transactions. On the other hand, when fiduciary duties are well enforced— β is low—they will lead to entrenchment as the Manager rejects deals from bidders that value the firm higher than its status quo value but not high enough to compensate the Manager for loss of private benefits, as that compensation is “taxed” by having to share with the Shareholder. Specifically, there will be ex post inefficiency for $v \in \left(1 + b, \frac{s+b}{s+\beta(1-s)}\right)$ —entrenchment when the second term is larger than the first, and sales below value when the first is larger.

2.3 The effects of bidder competition and *Revlon*

If there is only a single bidder, then v is set, and Manager and buyer maximize their own payoffs by setting β as high as possible. Call this maximum $\bar{\beta}$. At the limit without

statutory shareholder rights, we might have $\bar{\beta} = 1$ such that the anti-self-dealing norm is completely powerless, Manager and bidder strike a deal any time $v \geq s + b$, and the Shareholder gets nothing, fiduciary duties notwithstanding.

2.3.1 Bidder competition without *Revlon* duties

Bidder competition *per se*—without *Revlon*—does not necessarily improve the Shareholder’s plight, or even ex post efficiency. The reason is that bidders i compete not over their aggregate bid a_i per se but over the package (a_i, β_i) . After all, the Manager picks the winning bid. Clearly, every bidder will offer the maximum $\bar{\beta}_i$ that they can given that, by assumption, increasing $\bar{\beta}_i$ costs them nothing but enhances their chances of winning the bidding contest.¹⁴ Crucially, different bidders i may be able to offer different side payments β_i . For example, a private buyer may find it easier to make undisclosed side payments than a public buyer who must publicly disclose payments to the Manager under securities law.¹⁵ This means that a bidder may win because they have higher ability to dissimulate side payments—i.e., higher $\bar{\beta}_i$ —even while having a lower valuation for the firm—i.e., v_i . In a Coasean world, a winning bidder with lower valuation than a losing bidder would immediately sell the firm to the loser, but we assume—realistically, we think—that this is not possible.

Specifically, order bidders j from highest to lowest by the maximum payoff $\left[s + (1 - s) \bar{\beta}_{(j)} \right] v_{(j)}$ that they can offer to the Manager. With this notation, we have $v = v_{(1)}$, $\beta = \bar{\beta}_{(1)}$, and $O_{NoRevlon} = \max \left\{ s + b, \left[s + (1 - s) \bar{\beta}_{(2)} \right] v_{(2)} \right\}$, which we can plug into the results from section 2.2 to obtain deal thresholds and parties’ payoffs.

There will still be deal failure if too much value must be shared with the Shareholder, and inefficient deals if too much value can be siphoned off as side payments. Bidder competition makes the former less likely, but may make the latter more likely because bids can be selected on high $\bar{\beta}_i$. An additional source of inefficiency is that, as we mentioned, the winning bid is not that with the highest v_i but the highest package $\left[s + (1 - s) \bar{\beta}_i \right] v_i$, so that a lower valuation bidder may acquire the firm.

2.3.2 Bidder competition with *Revlon* duties

Revlon duties require that *if* the Manager agrees to a deal, the Manager must accept the deal offering the highest payoff to shareholders at large, i.e, the observed pro-rata payoff to the Shareholder and the Manager.

Revlon has several important, immediate logical implications that are qualitatively independent of details of (how we model) the bidding process between Manager and suitors and the ensuing surplus split, at least if we continue to assume complete information and that Manager and the most suitable suitor strike any mutually beneficial deals, as we do. The first two increase ex post welfare, while the third decreases it.

1. *Revlon* ensures that **any sale is to the suitor with the highest valuation.**

This is because, by definition, the suitor with the highest valuation could always

¹⁴In reality, bidders may incur expenses to dissimulate payments, i.e., they may be able to raise $\bar{\beta}$ at a cost. Our assumption corresponds to stipulating marginal cost zero up to some $\bar{\beta}_i$ and infinite marginal cost beyond. A more general specification would yield wasteful expenditures on dissimulation but not otherwise enhance the insight of the model.

¹⁵As another example, bidder decisionmakers might face different cost-benefit trade-offs depending on how vulnerable they are to sanctions if found out (e.g., differential sensitivity to reputational sanctions) versus how much benefit they get if not found out (e.g., bidder CEO with low or high ownership in the bidder).

profitably top the highest rational bid any other suitor could make, while *Revlon* would prohibit the Manager getting in the way. Any side deals between the Manager and lower-value suitors only reduce the required topping bid and thus increase the surplus available to the highest-value suitor. Technically, subscribing the winner and any loser by w and l , respectively, we must have $v_w \geq p_w \geq (1 - \beta_w) p_w \geq v_l \forall l \Leftrightarrow w = 1$, where the inequalities follow from winning bidder's rationality, $\beta_w \geq 0$, and *Revlon*, respectively.

2. *Revlon* **reduces the problem of inefficient sales**, i.e., sales to buyers that value the firm less than its stand-alone value. Unlike the shareholder vote or appraisal, *Revlon* does not put an absolute floor on the deal price that would prevent all inefficient sales. But the previous point that any sale would have to be to the highest value suitor at least excludes sales to lower value suitors who just happen to be good at "bribing" the Manager (i.e., are able to offer high β). This will prevent some low value sales, and convert some others to efficient sales.
3. The flipside is that *Revlon* **exacerbates entrenchment** created by the anti-self-dealing norm (*supra* 2.2). This is because as between the Manager and the (winning) bidder, *Revlon* only restricts the deals that can be struck: any deal possible under *Revlon* is one that they could have struck without *Revlon* as well. Thus, if the Manager was unwilling to agree to any deal without *Revlon*, the Manager will continue to reject it with *Revlon*. In addition, however, *Revlon* will make the Manager reject deals that *Revlon* alters to the Manager's detriment by giving more surplus to the Shareholder.

It remains to fill in the details of how Manager and bidder bargain under *Revlon* and thus how they will split value between themselves and the Shareholder, which will in turn determine precisely which deals will be struck.

It is possible that *Revlon* has no consequence whatsoever beyond ensuring that the suitor with the highest valuation wins. The economic/game-theoretic reason would be that suitors with lower valuation understand that they will ultimately lose any bidding war and thus do not even start it, leaving Manager and winner to strike whatever deal they want subject to the anti-self-dealing constraint. This would yield payoffs and deal surplus as derived in 2.2 with $\beta = \bar{\beta}_1$, $v = v_1$, and $O = s + b$. This seems unduly extreme. In reality, we do see bidding wars, and firms are not generally sold for a pittance. From a game-theoretic perspective, competitors might put in bids merely to raise the winning bidder's cost. Moreover, in a more realistic game of incomplete information, it would be unclear who will ultimately win the war.

At the other extreme, courts might read *Revlon* to require an open auction in which all potential bidders participate, with no opportunity for the Manager to engage in any true negotiations. In that case, the well-known auction-theoretic result is that the winning bidder 1 would pay v_2 ,¹⁶ which under the anti-self-dealing norm Manager and Shareholder would share in proportions $s, 1 - s$. Knowing this, the Manager would only initiate such an auction if $sv_2 \geq s + b$. This implies $v_1 \geq v_2 \geq 1 + \frac{b}{s} > 1 + b$: no inefficient deals would be consummated ($v_1 > 1 + b$), but there could be efficient deals lost even if both the highest and second-highest valuations among suitors are above the firm's stand-alone value $1 + b$

¹⁶We implicitly used this result also in multi-bidder situations above, albeit there with a reserve price.

if and because $v_2 < 1 + \frac{b}{s}$.¹⁷ This extreme result is the consequence of assuming that the Manager loses control of the situation once the Manager initiates any bid: otherwise, the Manager could set a reserve price or negotiate a higher, acceptable price with the winning bidder. We think this assumption is unrealistic. In reality, deal auctions are rarely if ever pure price auctions, i.e., Manager's still negotiate deal terms, which might include β , and in any event *Revlon* tends to be triggered by the announcement of a firm deal, which the Manager can use to set a reserve price they would be happy with.

We favor an intermediate assumption between these two extremes. We continue to assume that Manager and buyer negotiate a transaction if and only if their joint surplus is positive, and split any marginal surplus—i.e., that only available with the high bidder—in proportions $\phi, 1 - \phi$. However, we now assume that they bargain subject to a constraint, which is that the publicly observable part of the deal must at least equal what the suitor with the second highest valuation would be able to bid in an open auction: $(1 - \beta_1)p_1 \geq v_2$. Clearly, it is privately optimal for Manager and bidder to channel as much compensation as possible directly to the Manager instead of sharing with the Shareholder, so incorporating the constraint, they will set $\beta_1 = \min\{\bar{\beta}_1, 1 - \frac{v_2}{p_1}\}$. Since the Manager will only agree to a deal if her deal payoff $p_1 [s + (1 - s)\beta_1]$ exceeds her status quo payoff $s + b$, the Manager's deal payoff increases in p_1 and β_1 —which in turn weakly increases in p_1 —and the highest p_i the buyer can rationally pay is v_1 , a deal will happen if and only if $v_1 \geq \frac{s+b}{s+(1-s)\min\{\bar{\beta}_1, 1 - \frac{v_2}{v_1}\}}$.¹⁸ Notice that the second-highest valuation of any

suitor, v_2 , weakly shrinks the space of possible deals: the inequality's right-hand-side is weakly increasing in v_2 . The underlying reason is that the higher v_2 , the more deals between Manager and high bidder could be disrupted by an intervening bid. We think it is reasonable also to assume another consequence of the potential for such bids, which is that they raise the Manager's outside option, i.e., decrease the marginal surplus differed by the high bidder in the negotiation. In terms of 2.2, this implies $O = \max\{s + b, sv_2\}$. We emphasize that O only matters for the division of surplus in deals that do happen; it has no bearing on which deals happen.

2.4 Enforcement

Up to now, we have assumed that fiduciary duties would actually be enforced (except that fraction β of the deal consideration could be paid to the Manager on the side). This assumption was unproblematic to the extent fiduciary duties are enforceable through damages ex post: if all that can happen is that the Shareholder gets more money, then it is clearly in the interest of the Shareholder to bring the lawsuit.

The assumption of enforcement is unjustified, however, if the Shareholder only has the choice of this deal or no deal. This is the case if the Shareholder would have to

¹⁷Note that the results of 2.2 are inapposite here because there is no negotiation between Manager and bidder.

¹⁸If the *Revlon* constraint on β does not bind— $\bar{\beta}_1 \leq 1 - \frac{v_2}{v_1}$ —this is simply the standard deal condition for negotiated deals under the anti-self-dealing norm as derived in 2.2. If the *Revlon* constraint does bind— $\bar{\beta}_1 > 1 - \frac{v_2}{v_1}$ —the Manager's deal condition becomes $v_1 - (1 - s)v_2 \geq s + b$. At the limit $v_2 = v_1$, the only way to outbid the second bidder is to pay no private benefits at all, i.e., $\beta = 0$, which is captured by the deal condition becoming $sv_1 \geq s + b \Leftrightarrow v_1 \geq 1 + \frac{b}{s}$, the usual inflated deal threshold when side deals are impossible. At the other limit, if $v_2 = 0$, i.e., in the single bidder scenario, the condition becomes $v_1 \geq s + b$, the usual deal condition when Manager and bidder can perfectly collude, i.e., give shareholders nothing.

enforce fiduciary duties through an injunction that would stop not only the fiduciary duty violation but the deal in its entirety, or if the law or the Manager makes completion of the deal dependent on a shareholder vote that, if it passes, also erases the fiduciary duty claims. In either case, the Shareholder does not have the choice of a deal that complies with fiduciary duties. If the Shareholder could actively bargain, the Shareholder might actively counter-propose such a compliant deal. But we have assumed that the Shareholder cannot do so, just as dispersed shareholders in the real world cannot. The only choice the Shareholder has is to reject or to accept the deal as proposed. This choice is exactly the choice we analyzed in the statutory vote regime, and we derived the unique equilibrium in 1.1: the Shareholder will accept all and only deals offering the status quo value $1 - s$ or more, and the Manager will propose only deals offering $1 - s$ to the Shareholder, splitting the rest with the acquirer. (If the injunction only lies if the Shareholder gets even less than $1 - s$ —i.e., fiduciary duties allow giving the Shareholder less— then the Manager will only give that lower amount.¹⁹)

2.4.1 Injunction: The Role of Plaintiff Attorneys

The injunction can enforce payments greater than $1 - s$ as required by fiduciary duties only if it is enforced by a plaintiff lawyer acting for their own account in order to earn a success fee—precisely *because* the lawyer’s incentives are misaligned with the Shareholder. Assume that the plaintiff lawyer will get some strictly positive success fee if and only if the court enjoins the deal. Then the plaintiff lawyer will sue to enjoin any deal that is below the court’s threshold for an injunction (below, that is, in terms of payoffs to the Shareholder). Of course, in equilibrium, we would not expect to see (much) litigation because the Manager anticipates the lawsuit and, assuming even some small personal cost of putting together the transaction, will only put forward transactions that pass judicial muster. In this sense, the attorney-enforced injunction is equivalent to, and will have the same effects as, enforcement via monetary relief that adjusts the deal terms.

Remark 7. The one sense in which even the attorney-enforced injunction is different from monetary relief is court error. The reason is not the form of relief per se but the timing of when it is determined, or rather its effect on whether the deal proceeds. We assume—realistically, we think—that monetary relief changes the deal terms but does not derail the deal. As we explained in the context of appraisal, this means that only the expectation of the monetary award—its mean—matters for its effect on deal selection (and investment). By contrast, the injunction stops the deal by definition. This means that the Manager can “roll the dice” lowballing the Shareholder in the hope of a downward court error; if not, the Manager can increase the Shareholder’s take then. In the real world, random court error may also create the opposite problem of plaintiffs threatening the deal delay caused by an upward error to extort a nuisance settlement. Expectations or rather hopes of such court errors will generate litigation in equilibrium. This litigation is costly but since the vast majority of cases is resolved very quickly, a price likely worth paying for the protection that fiduciary duties provide.

¹⁹One way to think about this is that the right to demand an injunction against certain deals is strictly less powerful than the right to vote against any deal.

2.4.2 “Cleansing Votes”

The reason why enforcement of fiduciary duties is tied to—and thus ultimately frustrated by—a shareholder vote on the deal is jurisprudential creations of the last ten years. In two lines of cases, Delaware courts have cut off fiduciary duty suits after shareholder approval of a deal, even though shareholders did not have an isolated vote on the fiduciary duty violation and instead voted on the package of (deal and waiving fiduciary duties) or (no deal). First, under *Corwin*, a statutorily required shareholder vote on a deal other than with a controlling shareholder waives shareholders’ fiduciary duty claims. Second, under *MFW*, controlling shareholders can elect to submit a squeeze-out—i.e., a forced “purchase” of all minority shares—to a procedure containing a binding vote of the other shareholders: if shareholders vote against the squeeze-out, it cannot proceed, whereas if they vote in favor, fiduciary duty claims are waived.²⁰ In each case, the courts require that the shareholders be “fully informed.” Even with full information, however, both lines of cases put shareholders on the uncomfortable receiving end of the ultimatum game that we have discussed repeatedly, and in which they only get $1 - s$ (or whatever lower amount they are promised by fiduciary duties). If the Manager initially has the option whether to seek binding shareholder approval—i.e., the Manager *could* proceed without shareholder approval if the Manager so prefers, as in squeeze-outs where the Manager owns more than 50% of the votes—the Shareholder’s situation is worse than with the statutory vote because the Manager can then pick the regime that yields a higher payoff to the Manager – and thus a lower payoff to the Shareholder.

As a final wrinkle, we note an ironical twist in the *MFW* requirement that the Manager *commit* not to do the squeeze-out without shareholder approval. The Delaware courts intend this requirement to help the shareholders, as it restricts the Manager’s power (or rather, the Manager self-restricts) and seems to empower the shareholders. In negotiations, however, commitment is often helpful, not harmful, to the committed party. So here. In particular, the *MFW* commitment can get the Manager a *better* deal—and the Shareholder a worse deal—than if the Manager had simply pushed the squeeze-out through without shareholder approval. Let L be the equilibrium payoff the Shareholder would get if the Manager unilaterally pushed through the squeeze-out, which will be the lowest compensation the Manager must pay in such a situation given fiduciary duties. The interesting case is $1 - s < L < v - s - b$, where the unilateral squeeze-out is incentive-compatible for the Manager ($v - L > s + b$) and the Shareholder would prefer it to both the status quo and to a deal subject to a vote (in both of which the Shareholder gets $1 - s < L$). If the Manager retains the option of a unilateral squeeze-out after the Shareholder vote, then the only SPNEs give the Shareholder L , be it through a “consensual” or a unilateral squeeze-out. The reason is that if the Shareholder rejects a deal, the only rational action for the Manager is to implement the unilateral deal giving the Shareholder L ; knowing this, the Shareholder will not accept anything less (this is for a one-shot game and extends straightforwardly to any finite game through backward induction; see the Appendix for the infinite game). By contrast, if the Manager is able to commit not to do a unilateral squeeze-out (a power provided by *MFW*!), the only SPNE is a “consensual” squeeze-out paying the Shareholder $1 - s$. The reason is that eliminating the option of a unilateral squeeze-out transforms the “game” into the standard situation

²⁰ *MFW* also requires the constitution of a special committee of independent directors to negotiate the transaction. To the extent the special committee is effective, *MFW* achieves its purpose even without the shareholder vote. Our discussion only concerns the (in)effectiveness of the additional requirement of a shareholder vote.

of a deal subject to shareholder vote, for which we have already shown in 1.1 that the Shareholder only gets $1 - s$ due to their inability to make counteroffers.

2.5 Comparing legal regimes

We summarize the outcomes of the various regimes in the following table. For fiduciary duties, we also distinguish by manner of enforcement. “Inefficiency region” can refer to deals that should be done but are not, or deals that should not be done but are—in either case, the welfare loss is the difference between the status quo value and the bidder that has the highest valuation or buys the firm, as the case may be. (Note that the right limit of the inefficiency region is not necessarily the lower one.) References to a second highest bidder 2 or a second highest “briber” (2) refer to situations with multiple bidders; if there is only one, $v_2 = v_{(2)} = 0$ and those terms drop out. For brevity, the table does not include additional complications from Manager choice of whether to seek a cleansing vote, or shareholder-enforced injunctions when the injunction threshold is below $1 - s$. Shareholder surplus is conditional on there being a deal, and $f(O, \beta, v) \equiv (1 - s) \frac{(1-\beta)[\phi(v-1)+(1-\phi)(O-s)]-\beta}{\beta+(1-\beta)[\phi+(1-\phi)s]}$ (the Shareholder’s payoff derived in 2.2 net of the Shareholder’s status quo value $1 - s$).

Regime		Inefficiency region	Shareholder deal surplus	add'l inefficiency
Statutory	w/ M blocking	N/A	0	
	w/o M blocking	$v_1 \in [1, 1 + b)$	$(1 - s) \max \{v_2 - 1, 0\}$	
Anti-self-dealing	PA or \$	$v_{(1)} \in \left(1 + b, \frac{s+b}{s+(1-s)\beta_{(1)}}\right)$	$f \left(\max \{s + b, [s + (1 - s) \bar{\beta}_{(2)}] v_{(2)}\}, \bar{\beta}_{(1)}, v_{(1)} \right)$	$v_1 - v_{(1)}$
	Inj. or cleansing	N/A	0	
<i>Revlon</i>	PA or \$	$v_1 \in \left(1 + b, \frac{s+b}{s+(1-s) \min \left\{ \bar{\beta}_1, 1 - \frac{v_2}{v_1} \right\}}\right)$	$f \left(\max \{s + b, sv_2\}, \bar{\beta}_1, v_1 \right)$	
	Inj. or cleansing	N/A	0	

3 Conclusion

[WRITE ME.]

References

- BEBCHUK, L. A. (1984): “Toward Undistorted Choice and Equal Treatment in Corporate Takeovers,” *Harvard Law Review*, 98, 1693–1808.
- (1988): “The Sole Owner Standard for Takeover Policy,” *The Journal of Legal Studies*, 17, 197–229.
- BINMORE, K., M. J. OSBORNE, AND A. RUBINSTEIN (1992): “Chapter 7 Noncooperative models of bargaining,” Volume 1 of *Handbook of Game Theory with Economic Applications*: Elsevier, 179–225.
- CALABRESI, G., AND A. D. MELAMED (1972): “Property Rules, Liability Rules, and Inalienability: One View of the Cathedral,” *Harvard Law Review*, 85, 1089–1128.
- CARNEY, W. J. (1980): “Fundamental Corporate Changes, Minority Shareholders, and Business Purposes,” *American Bar Foundation Research Journal*, 5, 69–132.
- CHOI, A. H., AND E. TALLEY (2018): “Appraising the “Merger Price” Appraisal Rule,” *The Journal of Law, Economics, and Organization*, 34, 543–578.
- CRAMTON, P. C. (1984): “Bargaining with Incomplete Information: An Infinite-Horizon Model with Two-Sided Uncertainty,” *The Review of Economic Studies*, 51, 579–593.
- EASTERBROOK, F. H., AND D. R. FISCHER (1981): “Corporate Control Transactions,” *Yale Law Journal*, 91, 698–738.
- GILSON, R. J. (1981): “A Structural Approach to Corporations: The Case against Defensive Tactics in Tender Offers,” *Stanford Law Review*, 33, 819–891.
- GÜTH, W., AND R. TIETZ (1990): “Ultimatum bargaining behavior: A survey and comparison of experimental results,” *Journal of Economic Psychology*, 11, 417–449.
- RUBINSTEIN, A. (1982): “Perfect Equilibrium in a Bargaining Model,” *Econometrica*, 50, 97–109.
- SCHWARTZ, A. (1988): “The Fairness of Tender Offer Prices in Utilitarian Theory,” *The Journal of Legal Studies*, 17, 165–196.
- SHAKED, A., AND J. SUTTON (1984): “Involuntary Unemployment as a Perfect Equilibrium in a Bargaining Model,” *Econometrica*, 52, 1351–1364.
- TIROLE, J. (2006): *The Theory of Corporate Finance*: Princeton University Press.

Appendix: Equilibria in the Infinite Game Where the Manager has the Option of Unilateral squeeze-out

In 2.4.2, we showed that in the one-shot game where the Manager has the option of a unilateral squeeze-out after a negative shareholder vote, the only SPNE are ones where the Manager pays the Shareholder L , the amount the Shareholder would get in the unilateral squeeze-out. We now show that this remains true in one variant of the infinite game where the Manager can indefinitely keep re-submitting a deal to a shareholder vote until shareholders approve it or the Manager implements the unilateral squeeze-out (or returns to the status quo). Recall that we are considering the interesting case $1 - s < L < v - s - b$. As in our previous contemplation of infinite games (1.1), we adopt the standard assumption in bargaining models (e.g., Rubinstein (1982); Binmore et al. (1992)) that the payoff received in a subsequent round is discounted by a factor $\delta (0, 1)$, be it due to time discounting or because of a probability of deal failure (e.g., the bidder goes bankrupt or finds a better target between rounds).

Clearly, no SPNE can yield less than $v - L$ for the Manager, or else the Manager could do better by immediate unilateral squeeze-out, which yields the Manager $v - L > s + b$. In particular, it cannot be (part of) an SPNE for the status quo to be preserved (Manager payoff $s + b$), for the Manager to go it alone later (where the Manager obtains the same payoff but discounted), or for the Manager to offer more than L . The only question is if it is possibly part of an SPNE that the Manager propose, and the Shareholder accept, a deal that gives the Shareholder less than L . It turns out that the answer depends on when exactly the discounting (possible deal breakdown etc.) occurs: between the Shareholder vote and the Manager's next move, or between the Manager's proposal and the Shareholder vote.

If discounting occurs between the Shareholder's decision and the Manager's next move, the only SPNE is for the Manager to offer $1 - s$ in any subgame and for the Shareholder to accept only this and higher offers. Proof: Let the maximum payoff for the Shareholder in any subgame of any SPNE be M . We already established that any SPNE must end with a deal. Such deal must give the Shareholder at least $1 - s$ because the Shareholder will not rationally agree to anything less than $1 - s$ given that the shareholder's payoff in a unilateral deal is $L > 1 - s$. Now the problem is isomorphic to the case considered in 1.1, where we established $M = 1 - s$.

By contrast, if discounting occurs between the Manager's move and the Shareholder's decision, it is always an SPNE for the Manager to go it alone in any subgame and for the Shareholder to reject any deals yielding less than L .²¹ It is obviously a Nash equilibrium. It is subgame perfect because if the Manager did not go it alone, the Shareholder would do strictly worse by accepting anything less than L rather than waiting for the Manager to go it alone next round. There may be other SPNE but not for low δ : at the limit $\delta \rightarrow 1$ (akin to the Manager's situation in the last round of the one-shot game), the Manager's only rational choice is immediate unilateral squeeze-out.

The reason for the different outcome when discounting occurs at different times is that it changes the Shareholder's calculation. If discounting occurs not after the Shareholder's

²¹As far as payoffs are concerned, it does not matter if the first possibility of deal breakdown is only after the Shareholder has first been able to vote (and after the Manager's subsequent opportunity to go it alone). The Shareholder at the first vote understands the unique SPNE going forward and will not vote for a deal that gives the Shareholder less. Alternatively, the Shareholder could even vote against a deal offering the SPNE payoff because the Manager will deliver that at the next move anyway.

vote but after the Manager's proposal of a vote, the highest possible Shareholder payoff after voting no is not discounted: it is always L . Conversely, making an offer is no longer automatically incentive compatible for the Manager because it is costly: it triggers one more round of discounting. Intuitively, the difference is in who has the last opportunity to avoid the discounting: whoever is last will be tempted to give in.