Journal of Law and Economics

Volume 65 | Number 4 Article 4

11-1-2022

The Development of the Takeover Auction Process: The Evolution of Property Rights in the Modern Wild West

William O. Brown, Jr
William.Brown@chicagounbound.edu

Tingting Liu
Tingting.Liu@chicagounbound.edu

J. Harold Mulherin
J.Mulherin@chicagounbound.edu

Follow this and additional works at: https://chicagounbound.uchicago.edu/jle

 Part of the Law Commons

Recommended Citation

Brown, Jr, William O.; Liu, Tingting; and Mulherin, J. Harold (2022) "The Development of the Takeover Auction Process: The Evolution of Property Rights in the Modern Wild West," *Journal of Law and Economics*: Vol. 65: No. 4, Article 4.
Available at: https://chicagounbound.uchicago.edu/jle/vol65/iss4/4

This Article is brought to you for free and open access by the Coase-Sandor Institute for Law and Economics at Chicago Unbound. It has been accepted for inclusion in Journal of Law and Economics by an authorized editor of Chicago Unbound. For more information, please contact unbound@law.uchicago.edu.

The Development of the Takeover Auction Process: The Evolution of Property Rights in the Modern Wild West

William O. Brown, Jr. *University of North Carolina at Greensboro*
Tingting Liu *Iowa State University*
J. Harold Mulherin *University of Georgia*

Abstract

Using a unique, hand-collected sample of US acquisitions, we study the interaction between the legal system and the takeover auction process from 1981 to 2020. We associate the strengthening of the property rights of targets' boards after the 1989 *Time Inc.* decision with fundamental changes in the takeover auction process. This strengthening of the boards' property rights has moved the auction process from a public one to a behind-the-scenes one in which targets' boards control both the number of bidders and the flow of information. Targets' boards are more likely to initiate the auction themselves, and the length of the private negotiation process has significantly lengthened. This fundamental change has benefited target shareholders.

1. Introduction

Coase (1959, 1960) insightfully notes that with well-defined property rights, resources flow to their highest-valued use. In the Coasean framework, property rights are an essential prelude to market transactions because they identify whom to contact to use a given resource. Given the delimitation of property rights, the transfer and use of rights to assets takes place via market transactions. Using a cave as an example, Coase (1959) states that the legal granting of the property right either to the owner of the land at the entrance to the cave or to the owner of

This paper is dedicated to the memory of Harold Mulherin, who died in December 2020. We thank Dennis W. Carlton, a referee, Julian Atanassov, Leonce Bargeron, Eric de Bodt, Zhaoran Gong, Robert Hansen, Jack He, Sara Holland, John Hund, Paul Irvine, Andrew Karolyi, Jonathan M. Karpoff, Ugur Lel, Kai Li, Gene Lu, Tao Shu, Shawn Thomas, Julie Wu, Celim Yildizhan, and seminar participants at the 2018 Midwest Finance Association annual meeting (San Antonio), the 2018 Financial Management Association (FMA) Asia/Pacific Conference (Hong Kong), the 2018 FMA annual meeting (San Diego), Creighton University, University of Georgia, and University of Nebraska–Lincoln for helpful comments.

[*Journal of Law and Economics,* vol. 65 (November 2022)]
© 2022 by The University of Chicago. All rights reserved. 0022-2186/2022/6504-0035$10.00

the land over the surface of the cave is irrelevant to the highest-valued use of the cave whether it be, say, to store bank records or to grow mushrooms.

In this paper, we apply the property rights paradigm to a more recent setting: the corporate takeover market in the United States. In this setting, a property right is the protection against the use of a target firm's resources by unsolicited bidders against the will of the target's board (Alchian 1965). Studies such as Jensen (1993) argue that the major corporate control activity beginning in the 1980s in the United States was tied to political, economic, and technological shocks to the existing structure of American industry. Indeed, innovations in junk-bond financing and the relaxation of antitrust laws made large firms the object of corporate takeovers for the first time. Hence, major corporations found "barbarians at the gate" (Burrough and Helyar 1990) in a modern Wild West setting.

This increased susceptibility of large firms to takeovers was followed by major alterations in the legal and governance environment for the corporate takeover market. Lobbied by the large firms in their states, legislators passed antitakeover laws. Major corporations instituted poison pills and other hurdles to takeover. These legal and governance changes induced lawsuits between bidders and targets to determine the degree to which the boards of target firms could "defend the corporate bastion" (Kahan 1993, p. 594) and repel the "barbarians" (Grundfest 1993, p. 857). Using the terminology of Alchian (1965), the courts in Delaware and other states were faced with determining the appropriate property rights to grant to targets' boards in the new takeover environment: when could a target's board just say no to a prospective bidder? While the legal process evolved iteratively and often did not please academic commentators such as Gilson (2001), the Delaware courts ultimately clarified the property rights of target firms' boards of directors.

A focal case amid this changing takeover environment was the decision in *Revlon v. MacAndrews & Forbes Holdings* (506 A.2d 173 [Del. 1986]) in which the court ruled that once a target firm is up for sale, the duty of its board changes from that of a defender of the corporate bastion to that of an auctioneer. However, the *Revlon* decision did not clearly define what an auction was. Through an evolutionary litigation process, as in the model of Rubin (1977), common-law cases clarified when and whether targets' boards must conduct an auction, the provision of information during an auction, and the allowability of takeover hurdles during the auction process. By 1989, in the *Time Inc.* decision, the courts had clarified the property rights during corporate control transactions by moving to broad deference via the business judgment rule, which implies relatively strong property rights for targets' boards but requires a process that is fair to shareholders. This clarification of property rights resulted in a reduction in hostile takeovers and legal battles. Our goals in this paper are to document fundamental changes in the auction process that are consistent with courts enhancing the property rights of targets' boards and to investigate whether these changes have benefited targets' shareholders.

Mitchell and Lehn (1990) initiated the use of Value Line data and document that their sample predominantly includes large companies. We begin with the

same sample because these large corporations capture the sea change in the takeover market beginning in the 1980s and were directly involved in the litigation tied to corporate takeovers (see Mitchell and Mulherin 1996). We start with 1,064 firms listed on the Value Line Investment Survey at the beginning of 1981 and add new coverage as of each 5-year period, which results in 3,485 firms. Among these firms, 1,719 were successfully acquired during 1981–2020. Using this sample of takeover activity, we compare and contrast the takeover auction process in the *Revlon* period of 1986–89 with later time periods following the *Time Inc.* decision.

Our results support the evolution of a property rights solution. First, after the *Time Inc.* decision, takeover auctions moved behind the scenes, where a significant portion of the bidding process occurs prior to public revelation of a takeover. Second, in conjunction with this movement to underground auctions, targets' boards are much more likely to initiate the takeover process rather than wait for an initial bid. Third, the movement toward target-initiated deals and away from hostile takeovers has led to a significant increase in the length of the negotiation process. These results suggest that after the *Time Inc.* decision, increased property rights for targets' boards moved takeover auctions out of the public realm to a structured auction controlled by the target's board behind the scenes.

Our paper has important implications for research on law and takeovers. A number of recent papers, such as Cain, McKeon, and Solomon (2017), tend to ask whether takeover laws and the legal setting impact the number of hostile takeovers. A related thread of research such as Bebchuk, Coates, and Subramanian (2002) is concerned that the decline in hostile takeovers has weakened the monitoring of targets with shirking management and call for a lessening of target boards' property rights. Indeed, the number of takeover defenses (Gompers, Ishii, and Metrick 2003; Bebchuk, Cohen, and Ferrell 2009) has become a standard measure of governance quality, with a higher number indicating worse governance. This view often associates the 1989 *Time Inc.* case with entrenchment of the target's management and presumes that the reduction in hostile takeovers and public competition leads to lower premiums (see, for example, Bebchuk, Coates, and Subramanian 2002).

Takeover competition via auctions has gone underground instead of declining after the 1980s (Liu and Mulherin 2018).[1] In contrast, this paper aims to provide an explanation for why such important changes happen and the associated wealth effect accounting for the changes. We investigate whether the increased property rights of targets' boards benefit shareholders or instead entrench poorly performing management by examining how targets' premiums change over time. We find that, accounting for this longer period between a deal's initiation and announcement, targets' premiums have significantly increased, rather than decreased, since the *Time Inc.* decision. The increasing premium over time reflects the greater bargaining power of targets' boards, which can identify a more valu-

[1] However, the causes of the changes in takeover competition and the implication of those changes on measuring premiums in different time periods are not investigated in Liu and Mulherin (2018).

able bidder match. These results are robust to a number of checks and sample selection tests.

The reality is that we are unable to determine if the courts' decisions in the 1980s resulted in a reduction in the number of deals after the *Time Inc.* decision in the absence of a clear control sample. But simply finding that the number of hostile deals declined is also not sufficient to suggest that targets' shareholders are worse off. DeAngelo and Rice (1983) and Stulz (1988) argue that defenses can increase managers' ability to extract higher premiums, which may benefit shareholders.[2] Schwert (2000) finds no systematic performance differences between targets of hostile and friendly bids and argues that a hostile bid is a tactical decision in the bargaining between targets and bidders. Moreover, Comment and Schwert (1995) and Heron and Lie (2006) conclude that antitakeover devices do not systematically deter takeover transactions. Karpoff and Wittry (2018) challenge the widely held assumption that business combination laws identify exogenous changes in takeover protection. They infer that the *Time Inc.* decision had a substantive effect on firms' takeover protections. Our interpretation is that, consistent with the property rights story, targets' boards are more in control of the takeover auction process, and this control benefits their shareholders.

Our work is also related to some seminal research on the effect of the legal setting on targets' premiums. Jarrell and Bradley (1980) find that the delay caused by the provisions of the Williams Act is associated with higher premiums. We find that the lengthening of time between a deal's initiation and announcement since the *Time Inc.* decision is also associated with higher premiums. Indeed, our results suggest that the now-standard event-study framework that follows Schwert (2000) and applies a common (−63, 126) window to all deals in all periods underestimates the targets' premiums for deals done after the *Time Inc.* decision.

2. What Is a Takeover Auction?

To provide a benchmark for our empirical analysis, we first sketch the key components of the takeover auction process. We then use this framework to describe how takeover auctions are modeled in the legal and financial economics literature and are treated in the courts, especially in conjunction with the 1986 *Revlon* decision. This background sets the stage for our empirical analysis.

2.1. Schematic of the Takeover Auction Process

Figure 1 provides a schematic of the takeover auction process. Information to describe takeover auctions is taken from the conceptual model of Hansen (2001) and the empirical work examining deals in the 1990s (Boone and Mulherin 2007,

[2] This beneficial view is supported by more recent empirical studies. For example, Chemmanur, Paeglis, and Simonyan (2011) show that adoption of antitakeover provisions by firms with initial public offerings is positively associated with long-term firm value. Johnson, Karpoff, and Yi (2015) and Cen, Dasgupta, and Sen (2016) find that firms can benefit from adopting takeover defenses to protect important business relationships.

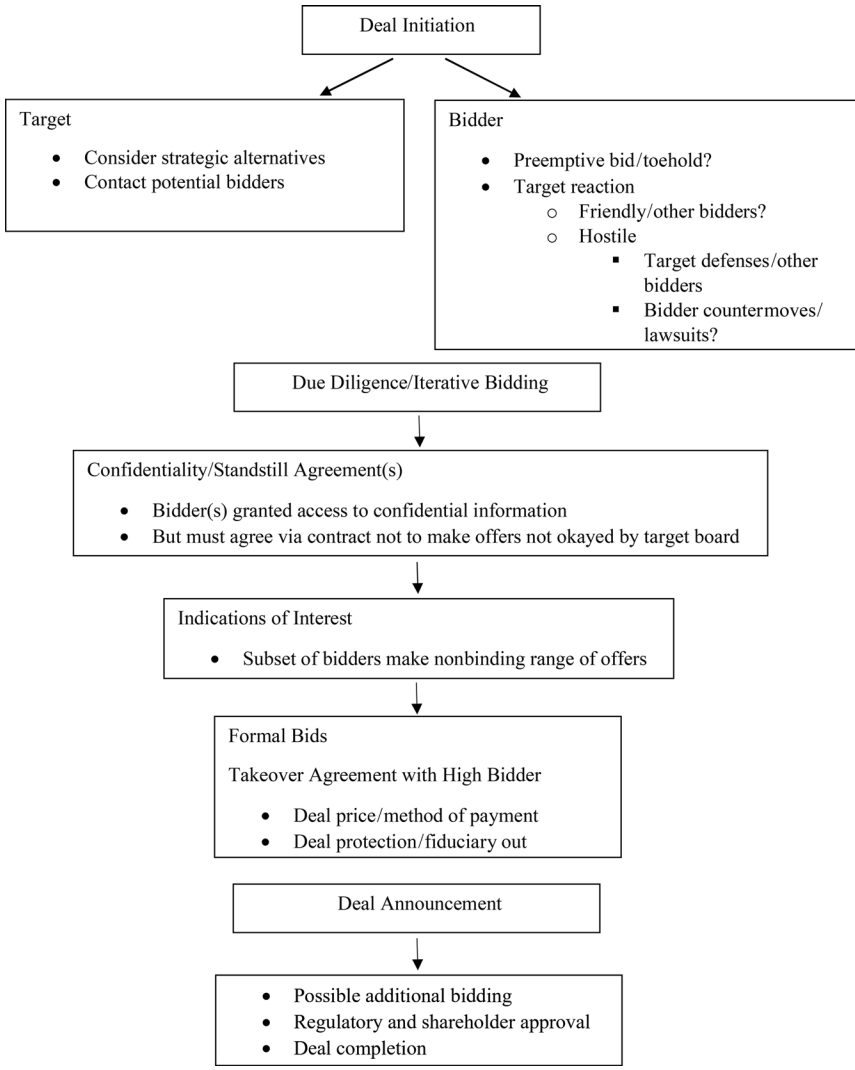

Figure 1. Schematic of the takeover auction process

2009). As we report in Section 6, the duration of the takeover auction process and the steps sketched in Figure 1 vary significantly over our sample period of 1981–2020.

A takeover auction can be initiated by either the target or a potential bidder. Initiation is usually done behind the scenes via private communication and interaction between the target and prospective bidders well before the news of a takeover becomes public. Targets often internally initiate an auction by considering

their strategic alternatives and, in consultation with their legal and financial advisors, deciding how many potential bidders to contact. Alternatively, a bidding firm may approach with a preliminary offer that may follow the acquisition of a toehold stake in the target. The target then reacts by either agreeing to negotiate with the bidder or resisting the offer, establishing takeover defenses, and considering other bidders. The bidder may make countermoves and engage in lawsuits to enjoin any takeover hurdles instigated by the target. The filing of lawsuits by the bidder can move the auction from a behind-the-scenes interaction to a battle in the public sphere.

Once a deal is initiated, crucial aspects of a takeover auction are the receipt of information by potential bidders and an iterative bidding process. As emphasized by Hansen (2001), target firms conducting an auction tend to restrict both the number of bidders and the flow of information to them. Selected bidders receive confidential information only after signing a standstill contract whereby bidders agree not to make an offer without approval from the target's board of directors.

A subset of the bidders who sign confidentiality and/or standstill agreements make nonbinding indications of interest. This information is used by the target firms and their legal and financial advisors to invite a subset of bidders for further due diligence. The next step is formal bids, with the ultimate outcome being a takeover agreement with the high bidder that includes terms such as the deal's price and method of payment and deal-protection devices such as termination fees in the event another bidder offers an even higher price before the deal is completed.

In the final stage of the auction process, the takeover agreement is publicly announced, subject to shareholder and regulatory approval. There is the potential for a higher bid in the period between the deal's announcement and completion. In a hostile bid with a white knight, there may be protracted bidding once an initial bid is announced. The deal is completed with the acquisition of the target by the winning bidder.

2.2. Conceptual and Theoretical Analysis of Takeover Auctions

With the schematic in Figure 1 as a framework, we now discuss the depiction of takeover auctions in the legal and financial economics literature. These models differ in the definition of an auction, the assumptions regarding the property rights of the target's board, and the information costs inherent in the takeover auction process. As summarized in Table A2, the questions addressed include whether and when to auction, the interaction of preemptive bids and access to information, and the effect of hurdles such as poison pills on takeover auctions.

2.2.1. Whether and When to Auction

As reported in Table A2, some of the earliest analysis of takeover auctions is a rather diametric debate in the legal literature between Easterbrook and Fischel (1981) and Bebchuk (1982). That analysis focuses on one step in Figure 1: how a

target's board should react to an unsolicited bid. Easterbrook and Fischel (1981) argue for a mandatory passivity rule under which targets' boards would refrain from auctioning a firm that was the subject of a takeover bid. Their proffered reason is that the use of an auction would compromise incentives for the initial bidder to incur search costs to identify undervalued targets. In effect, the proscription of Easterbrook and Fischel (1981) rules out hostile takeovers, as targets' boards would never reject a bid. Bebchuk (1982) counters this with a mandatory auction rule under which targets' boards would always attempt to auction a firm faced with an initial takeover bid. Bebchuk (1982) argues that an auction would find the highest bidder and thereby bring the greatest return to the targets' shareholders. Moreover, the initial bidder could be compensated for the initial search by obtaining a prebid toehold in the target firm.

Critiques of this early debate on takeover auctions include the implicit assumptions regarding the property rights of the target's board and the impact of search costs on the chosen bidding process. Haddock, Macey, and McChesney (1987) point out that the Easterbrook and Fischel (1981) rule implies extremely weak property rights that impose a first-possession rule and a race to capture the target firm. The Bebchuk (1982) mandatory auction rule places property rights in the hands of individual shareholders, which creates a communal property problem (DeAngelo and Rice 1983). Macey (1990) notes that Easterbrook and Fischel (1981) and Bebchuk (1982) offer rather rudimentary depictions of takeover auctions that fail to delve into the costs and benefits of the complex bidding process in Figure 1 and thereby ignore that the appropriate sales procedure in a given takeover can vary with the characteristics of the target and deal.

Much of the critique by Macey (1990) of the early auction analysis is based on the model of takeover bidding in French and McCormick (1984). That model adopts a setting envisioned by Easterbrook and Fischel (1981) and Bebchuk (1982) under which potential bidders bear costs to evaluate a potential target but delves much deeper into the implications of search costs. In a result reminiscent of Coase (1960), French and McCormick (1984) find that in equilibrium the target firms ultimately bear the cost of searches incurred by any bidders in the prices they receive. Hence, a deeper auction as measured by a more extensive canvassing of potential bidders brings both costs and benefits, and target firms have the incentive to economize on the number of bidders invited to a particular auction. French and McCormick (1984) suggest that target firms can impact the number of bidders by auction rules such as entry fees and can affect search costs by providing some information to selected bidders. Of course, the ability of the target firm to set the auction rules implicitly assumes strong property rights by the target's board.

2.2.2. Preemptive Bids and Access to Information

While French and McCormick (1984) conclude that target firms have the incentive to control the number of bidders to economize on search costs, some bid-

ders may choose to jump in line by making a preemptive bid, which is often accompanied by a toehold in the target firm. Bulow, Huang, and Klemperer (1999) and Goldman and Qian (2005) model this scenario and conclude that a toehold can give an initial bidder an advantage in a takeover auction. Hence, a toehold may not simply provide compensation for search costs but may also lead to a lower price paid for the target (Betton and Eckbo 2000). Hence, like French and McCormick (1984), Bulow, Huang, and Klemperer (1999) state that target firms may want to adapt the auction rules to mitigate such toehold advantages. Moreover, Berkovitch, Bradley, and Khanna (1989) point out that the winning bidder can be compensated for a search via deal-protection devices such as termination fees and lockup options that lessen the importance of acquiring a toehold.

Fishman (1988) and Dimopoulos and Sacchetto (2014) model the target's and bidder's tactics related to preemptive bids in a takeover auction. A central result in the Fishman (1988) model is that the elimination of preemptive bids raises the target's revenue. How might a target firm prevent such preemptive tactics by bidders? Fishman states that target firms could withhold confidential information until all bidders have signed standstill agreements. These results and insights are quite prescient and serve well to explain the relatively complex due-diligence stage in Figure 1.

2.2.3. Hurdles to Takeover

Much of the conceptual and theoretical research on takeover auctions addresses the role of the potential hurdles imposed by state and federal laws and firm-specific devices such as poison pills. Easterbrook and Fischel (1981) and Bebchuk (1982) both argue adamantly against takeover hurdles. Easterbrook and Fischel (1981) view takeover defenses by a target's management as prima facie evidence of entrenchment. Bebchuk (1982) opposes any device that seems to dampen a full-fledged auction. The formal model of takeover auctions in Bulow and Klemperer (1996) also concludes that impediments to auctions reflect agency costs of the target's management.

However, several commentators express less opposition to takeover hurdles. DeAngelo and Rice (1983) provide a model in which takeover hurdles such as shark repellents can bolster the property rights of the target's board and thereby act in target shareholders' interests. Here a property right is the protection against the use of the target firm's resources by unsolicited bidders against the will of the target's board (Alchian 1965). The benefit of greater property rights for the board is attained by centralizing the decision-making when faced with a takeover bid.

Related empirical research suggests some benefits that takeover hurdles can have for target shareholders. Jarrell and Bradley (1980) report that the delay enabled by the Williams Act was associated with higher premiums for targets. Jarrell (1985) finds that a target's resistance to an initial bid via lawsuits against a hostile bidder induces auctions by multiple bidders. Comment and Schwert (1995) conclude that poison pills improve the bargaining power of targets' boards. Bates and

Becher (2017) show that the main motive for a target's board to reject takeover bids is to improve the offer price. However, Bebchuk, Coates, and Subramanian (2002) argue that poison pills in conjunction with staggered boards of directors provide a lethal combination against a viable takeover auction.

2.3. Legal Cases Related to Takeover Auctions

We next discuss how takeover auctions have been treated in the courts. In particular, we report how the auction requirement of the 1986 *Revlon* decision induced subsequent legal cases to pinpoint what exactly a takeover auction was and what actions of the target's board were allowed during the bidding process (for analysis of *Revlon*, see Herzel and Shepro 1989; Gilson and Kraakman 1990; for a broader overview, see Bainbridge 2006). The cases we highlight are also presented in Table A3, and all involve target firms in our sample.

The seminal decision in *Unocal Corp v. Mesa Petroleum Co.* (493 A.2d [Del. 1985]) posed the duties of the target's board of directors as a question of process evaluated in the context of the business judgment rule. But the *Revlon* decision the next year famously stated that when the target firm is for sale, the target board's duties switch from defense of the corporate bastion to those of an auctioneer. However, like much of the conceptual and theoretical research discussed previously, the *Revlon* court did not clearly define an auction. This lack of clarity raised several questions, such as can a preemptive bidder force an auction of the target, to what extent do the *Revlon* duties require a level playing field across all bidders, and what role do takeover hurdles such as poison pills play in the course of an auction? Such questions induced additional lawsuits by hostile bidders.

Arguing for a level playing field, many hostile bidders sued targets to access confidential information. In the deal involving Koppers (*BNS Inc. v. Koppers Co.,* 683 F. Supp. 458 [D. Del. 1988]), the hostile bidder, BNS, argued that it should be given access to confidential information about the target. Similarly, in the J. P. Stevens deal (*West Point Pepperell Inc. v. J. P. Stevens & Co.,* 542 A.2d 770 [Del. Ch. 1988]), a hostile bidder sued to gain access to confidential information without having to contractually commit to cease its hostility by signing a standstill agreement. In such cases related to information access, the courts tend to defer to the target's board, not force revelation of information to hostile bidders, and attest to the validity of standstill agreements (see, for example, the discussion in Rhodes 1991; Kidd 2003). Hence, the courts empower the target's board with the property rights to information about the target firm and thereby enable the target's board to control access to bidding along the lines suggested by the model in Fishman (1988).

The role of poison pills in the takeover auction process was greeted with less clarity immediately following the 1986 *Revlon* decision. This created uncertainty in the property rights of targets' boards and resulted in numerous lawsuits by hostile bidders (see, for example, Gayle 1989; Yablon 1989). Following *Revlon,* hostile bidders often sued to enjoin a target's poison pill as interfering with the take-

over auction. In some cases, the courts consider poison pills part of the takeover auction process and reject the bidders' lawsuits. In *Facet Enterprises v. Prospect Group Inc.* (No. 9746, 1988 WL 36140 [Del. Ch. April 15, 1988]), the court states that a poison pill provides a gavel to run an auction. Similarly, in a deal involving Federated Department Stores (*CRTF Corp. v. Federated Department Stores,* 683 F. Supp. 422 [S.D.N.Y. 1988]), the court ruled that the target's board could leave the poison pill in place for the life of the takeover auction. However, in deals such as those for Moore McCormack Resources (*Southdown Inc. v. Moore McCormack Resources Inc.,* 686 F. Supp. 595 [S.D. Tex. 1988]) and Pillsbury (*Grand Metropolitan PLC v. Pillsbury Co.,* 558 A.2d 1049 [Del. Ch. 1988]), the courts concluded that the poison pills interfered with the auction process and forced the targets' boards to redeem the pills.

Much of the uncertainty created by the auction duties of the 1986 *Revlon* decision was resolved by the 1989 *Time Inc.* case. Time had proposed a merger with Warner but then became the object of a hostile bid by Paramount (*Paramount Communications v. Time Inc.,* 571 A.2d 1140 [Del. 1989]). The court ruled that Time could just say no to Paramount, concluding that the directors of the target firm were not obliged to abandon a deliberate corporate strategy. In effect, a hostile bidder could not force an auction on a target's board. As noted by Velasco (2002, p. 390), "Although there was a point at which it appeared that the Delaware courts would be willing to mandate the redemption of the poison pill in the face of a non-coercive tender offer, *Paramount Communications, Inc. v. Time Inc.* appears to have eliminated any such hopes." The *Time Inc.* decision clarified the relatively strong property rights held by the target's board of directors. Indeed, the just-say-no ruling corresponds directly to the concept of Alchian (1965) that a property right enables protection from actions by others that are against the will of the possessor of the property right.

A case involving Wallace Computer Services (*Moore v. Wallace Computer Services,* 907 F. Supp. 1545 [D. Del. 1995]) appears to have continued enforcement of the strong property rights of a target's board. Bebchuk, Coates, and Subramanian (2002) emphasize that legal decision as locking in the power of boards via a combination of poison pills and staggered boards. Lipton (2005), however, suggests that there might be some weakening of target boards' property rights wrought by the federal mandates of the Sarbanes-Oxley Act in 2002.

2.4. Summary and Motivation for Research

So far we have examined the variation in property rights. As shown in Figure 1, the takeover auction process is quite complex. The conceptual and theoretical analysis sketched in Table A2 captures this complexity and raises issues about the impact of takeover hurdles on the depth of takeover auctions. The legal cases in Table A3 indicate how undefined boards' duties became after the 1986 *Revlon* decision and the deference to the target's board in the 1989 *Time Inc.* decision.

This variation in property rights over time motivates our analysis. We aim to

study the impact of the changing legal setting on the depth and nature of takeover auctions. Our data cover 1981 to the present. The cases reviewed in Table A3 suggest five periods of analysis: the pre-*Revlon* period of 1981–85, the *Revlon* period of 1986–89, the post–*Time Inc.* period of 1990–95, the post–Wallace Computer Services period of 1996–2001, and the post–Sarbanes-Oxley period of 2002–20.

Our analysis also jointly compares the three post-1990 subperiods with the *Revlon* period (1986–89). Given the large number of court cases and the complicated nature of the legal decisions, one can argue about the extent to which any single case impacted property rights or whether and when all legal uncertainty was resolved. However, the lack of 100 percent definitive break points for the allocation of property rights serves only to bias the results of documenting measurable differences across the designated subperiods.

3. Formation and Description of the Sample

We start with 1,064 firms listed on the Value Line Investment Survey in the fourth quarter of 1981. This is the same set of firms that formed the base data set for Mitchell and Lehn (1990) and Mitchell and Mulherin (1996) in their analysis of takeover activity in the 1980s. As noted by both studies, this set of firms represents over 60 percent of the companies in the 1981 Standard & Poor's 500 index. We use the Value Line sample for several reasons. For one, it emphasizes large takeover targets and captures the sea change in the takeover market beginning in the 1980s. These large firms were often the prime lobbyists for changes in state antitakeover laws (Romano 1988). Relatedly, consistent with the legal model of Rubin (1977), the large corporations were directly involved in litigation tied to corporate takeovers.[3]

To avoid potential survivorship bias, we include new coverage of firms by Value Line in 1986, 1991, 1996, 2001, 2006, 2011, and 2016. These 2,421 firms combined with our original sample of 1,064 firms result in a sample of 3,485 firms. For each firm, we use Center for Research in Security Prices (CRSP) delist codes and information from the Securities Data Company (SDC) database to determine firms acquired in a completed deal announced between 1981 and 2020. We rely on both CRSP delist codes and the SDC database to ensure completeness of the sample and find that the SDC database is very accurate in identifying deals throughout the full sample period. We initially identify 1,719 completed deals and then obtain information about the takeover auction process from Securities and Exchange Commission (SEC) takeover documents as in Boone and Mulherin (2007). For the mid-1990s to the present, the SEC documents are available from the SEC's Electronic Data Gathering, Analysis, and Retrieval database. For earlier periods, we obtain SEC documents from Lexis-Nexis, Thomson One Financial, and microfiche. From these various sources, we are able to obtain SEC takeover documents for 1,585 of the completed deals.

[3] While this paper emphasizes the relatively large takeover targets derived from Value Line, our results are robust to using a random sample from the same overall time period (see Section 8).

For each firm in our base data set, we identify those reported by the SDC database as being in a withdrawn deal in the 1981–2020 period. We then drop any withdrawn deals in which the target firm was acquired by another bidder at the same time and therefore is in the completed-deal sample. We identify 484 withdrawn deals in which the target was not acquired at that time. Of these, 240 withdrawn deals have SEC documents pertaining to the takeover process, with the deals lacking documents tending to be those quickly ended by the target and/or bidder without substantive bidding. The final sample includes 1,825 takeovers announced between 1981 and 2020, with 1,585 completed deals and 240 withdrawn deals. In 2020 dollars, the total value of firms in the full sample is over $14 trillion.

Table 1 reports the time-series distribution of the sample by year. The rate per year is defined as the number of deals announced in each year divided by the number of firms covered by Value Line at the beginning of each 5-year period. Table 2 reports the distribution for each subperiod in our analysis. The *Revlon* period of 1986–89 has the highest rate of withdrawn deals per year.

Table 3 reports the results of a regression analysis in which the dependent variable is the rate of takeover activity per year and the independent variables are dummy variables for the periods. Note that to facilitate comparisons we make the *Revlon* period of 1986–89 the benchmark period (that is, the intercept). The regression analysis shows that the *Revlon* period has the highest rate of withdrawn takeover activity, as the dummy variables for the other subperiods tend to be negative and statistically different from 0. Moreover, the rate of completed deals in the 1986–89 subperiod is comparable to those in the 1996–2001 and 2002–20 subperiods. The 1990–95 subperiod has a lower rate of completed takeover transactions.

Tables 1–3 show an active takeover market in the post–*Time Inc.* subperiods, especially in the late 1990s and around the mid-2000s. These findings are consistent with prior literature investigating time-series takeover activities. Mitchell and Mulherin (1996) show that industry shocks such as deregulation, foreign competition, and financing innovations contributed to the takeover wave in the late 1980s. Harford (2005) finds little merger activity during the 1990–91 recession, followed by another merger wave in the late 1990s. Similar to Mitchell and Mulherin (1996), Harford (2005) concludes that economic, regulatory, or technological innovation plus capital liquidity causes industry merger waves. Kaplan and Strömberg (2009) show that the mid-2000s experienced a second leveraged buyout boom because of a record amount of capital committed to private equity in 2006 and 2007, which contributed to the merger wave in the mid-2000s.

Although we cannot unequivocally say that greater property rights in the post–*Time Inc.* period did not result in fewer deals, the literature suggests that economic shocks and capital availability (rather than property rights) are most likely to affect the rate of takeovers. This is also consistent with prior studies showing that antitakeover devices do not systematically deter takeover transactions (for example, Comment and Schwert 1995; Heron and Lie 2006).

Table 1
Distribution of the Sample

	All Deals			Completed Deals			Withdrawn Deals		
	N	%	Rate	*N*	%	Rate	*N*	%	Rate
1981	5	.27	.47	5	.32	.47	0	.00	.00
1982	42	2.30	3.95	37	2.33	3.48	5	2.08	.47
1983	35	1.92	3.29	33	2.08	3.10	2	.83	.19
1984	68	3.73	6.39	54	3.41	5.08	14	5.83	1.32
1985	66	3.62	6.20	57	3.60	5.36	9	3.75	.85
1986	97	5.32	5.57	75	4.73	4.30	22	9.17	1.26
1987	58	3.18	3.33	44	2.78	2.52	14	5.83	.80
1988	78	4.27	4.48	64	4.04	3.67	14	5.83	.80
1989	42	2.30	2.41	33	2.08	1.89	9	3.75	.52
1990	13	.71	.75	10	.63	.57	3	1.25	.17
1991	8	.44	.46	8	.50	.46	0	.00	.00
1992	4	.22	.23	3	.19	.17	1	.42	.06
1993	13	.71	.75	11	.69	.64	2	.83	.12
1994	28	1.53	1.63	25	1.58	1.45	3	1.25	.17
1995	41	2.25	2.38	37	2.33	2.15	4	1.67	.23
1996	50	2.74	2.85	41	2.59	2.34	9	3.75	.51
1997	77	4.22	4.39	67	4.23	3.82	10	4.17	.57
1998	77	4.22	4.39	69	4.35	3.93	8	3.33	.46
1999	83	4.55	4.73	73	4.61	4.16	10	4.17	.57
2000	72	3.95	4.10	63	3.97	3.59	9	3.75	.51
2001	42	2.30	2.31	40	2.52	2.20	2	.83	.11
2002	25	1.37	1.38	23	1.45	1.27	2	.83	.11
2003	19	1.04	1.05	17	1.07	.94	2	.83	.11
2004	32	1.75	1.76	26	1.64	1.43	6	2.50	.33
2005	46	2.52	2.53	43	2.71	2.37	3	1.25	.17
2006	67	3.67	3.85	62	3.91	3.57	5	2.08	.29
2007	81	4.44	4.66	72	4.54	4.14	9	3.75	.52
2008	42	2.30	2.42	31	1.96	1.78	11	4.58	.63
2009	31	1.70	1.78	29	1.83	1.67	2	.83	.12
2010	41	2.25	2.36	36	2.27	2.07	5	2.08	.29
2011	48	2.63	2.71	41	2.59	2.32	7	2.92	.40
2012	43	2.36	2.43	36	2.27	2.04	7	2.92	.40
2013	43	2.36	2.43	39	2.46	2.20	4	1.67	.23
2014	56	3.07	3.17	49	3.09	2.77	7	2.92	.40
2015	55	3.01	3.11	50	3.15	2.83	5	2.08	.28
2016	68	3.73	3.74	63	3.97	3.47	5	2.08	.28
2017	38	2.08	2.09	34	2.15	1.87	4	1.67	.22
2018	41	2.25	2.26	41	2.59	2.26	0	.00	.00
2019	36	1.97	1.98	31	1.96	1.71	5	2.08	.28
2020	14	.77	.77	13	.82	.72	1	.42	.06
Total	1,825	100.00		1,585	100.00		240	100.00	

Note. Percentages may not total 100 because of rounding.

Table 2
Distribution of the Sample by Subperiod

	All Deals			Completed Deals			Withdrawn Deals		
	N	%	Rate	*N*	%	Rate	*N*	%	Rate
1981–85	216	11.84	4.06	186	11.74	3.50	30	12.50	.56
1986–89	275	15.07	3.94	216	13.63	3.10	59	24.58	.85
1990–95	107	5.86	1.03	94	5.93	.91	13	5.42	.13
1996–2001	401	21.97	3.79	353	22.27	3.34	48	20.00	.46
2002–20	826	45.26	2.45	736	46.44	2.18	90	37.50	.27
Average per year	45.6	2.50	2.79	39.6	2.50	2.42	6.0	2.50	.37

Note. Rate is the rate per year defined as the number of deals announced each year divided by the number of firms covered by Value Line at the beginning of each 5-year period.

Table 3
Regression of Rate per Year on Subperiod Dummies

	All Deals	Completed Deals	Withdrawn Deals
Intercept	.039**	.031**	.008**
	(6.35)	(5.85)	(7.01)
P81_85	.001	.004	−.003+
	(.14)	(.56)	(−1.74)
P90_95	−.029**	−.022**	−.007**
	(−3.63)	(−3.20)	(−4.62)
P96_01	−.001	.002	−.004*
	(−.19)	(.35)	(−2.51)
P02_20	−.015*	−.009	−.006**
	(−2.19)	(−1.58)	(−4.36)
R^2	.427	.412	.454
Joint test	6.68	6.20	8.47

Note. Results are estimated regression coefficients, with robust *t*-statistics in parentheses. The intercept represents the period 1986–89. The joint test checks whether the coefficients of P90_95, P96_01, and P02_20 are equal to 0 ($\Pr > F = .001$). $N = 40$.

+ Statistical significance at the 10% level.
* Statistical significance at the 5% level.
** Statistical significance at the 1% level.

Table 4 reports summary statistics for the full sample of takeovers. Table A1 provides definitions of the variables. Table 5 reports the results of a regression analysis in which the dependent variables are the deal and governance characteristics and the independent variables are the dummies for the subperiods. Again, the intercept represents the *Revlon* period (1986–89). The results indicate that the *Revlon* period was a distinct time of hostile cash tender offers, which confirms the depiction of that era as having barbarians at the gate (Burrough and Helyar 1990). The regressions also indicate a growing presence of state antitakeover laws and poison pills, with near ubiquitous coverage by a state law and/or a poison pill

Table 4
Summary Statistics: Full Sample

	All Deals			Completed Deals			Withdrawn Deals		
	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD
Cash	.56	1.00	.50	.56	1.00	.50	.58	1.00	.50
Tender Offer	.33	.00	.47	.34	.00	.47	.28	.00	.45
Hostile	.20	.00	.40	.14	.00	.35	.63	1.00	.49
Delaware	.62	1.00	.49	.62	1.00	.49	.60	1.00	.49
Poison Pill	.37	.00	.48	.37	.00	.48	.42	.00	.49
State Law	.79	1.00	.41	.80	1.00	.40	.74	1.00	.44
Law or Pill	.83	1.00	.37	.84	1.00	.37	.82	1.00	.39

Note. Data are for 1981–2020. Law or Pill is a dummy variable for deals covered by a state antitakeover law and/or deals in which the target has a poison pill.

Table 5
Regression Analysis for Subperiods

	Cash	Tender Offer	Hostile	Delaware	Poison Pill	State Law	Law or Pill
Intercept	.724**	.644**	.538**	.524**	.491**	.589**	.742**
	(26.80)	(22.26)	(17.88)	(17.36)	(16.26)	(19.83)	(28.07)
P81_85	−.062	−.162**	−.154**	−.014	−.445**	−.473**	−.594**
	(−1.47)	(−3.63)	(−3.44)	(−.32)	(−13.31)	(−12.85)	(−16.57)
P90_95	−.275**	−.232**	−.295**	.028	.023	.345**	.221**
	(−4.98)	(−4.17)	(−5.76)	(.49)	(.41)	(9.06)	(6.86)
P96_01	−.392**	−.285**	−.416**	.072+	.118**	.346**	.233**
	(−10.94)	(−7.57)	(−12.14)	(1.86)	(3.03)	(10.76)	(8.47)
P02_20	−.115**	−.474**	−.462**	.174**	−.206**	.358**	.212**
	(−3.59)	(−14.94)	(−14.67)	(5.09)	(−6.06)	(11.64)	(7.74)
R^2	.075	.134	.184	.025	.135	.465	.492
Joint test	47.93	82.69	74.69	11.43	47.14	45.42	23.96

Note. Results are ordinary least squares regression coefficients, with robust *t*-statistics in parentheses. Law or Pill is a dummy variable for deals covered by a state antitakeover law and/or deals in which the target has a poison pill. The intercept represents 1986–89. The joint test checks whether the coefficients of P90_95, P96_01, and P02_20 are equal to 0 ($\Pr > F = .001$). $N = 1{,}825$.

+ Statistical significance at the 10% level.

** Statistical significance at the 1% level.

after 1990, consistent with analysis as in Comment and Schwert (1995). Consistent with Eldar and Wittry (2021), the use of poison pills significantly declined in the most recent period.

4. Lawsuits and the Evolution of Property Rights

The summary statistics in Table 5 indicate that the *Revlon* period was notable for its sharp increase in hostile takeovers and growing coverage for targets by state antitakeover laws and poison pills. In this section, we link these changes in the takeover auction setting to the changing property rights of targets' boards of

directors. Our analysis focuses on lawsuits by bidders in our sample of takeovers. We emphasize the effect that the 1986 *Revlon* case and subsequent decisions had on bidders' lawsuits to gauge the intertemporal variation in the delineation of property rights in takeover auctions.

Research on corporate lawsuits suggests that legal action is a negative-sum game. Cutler and Summers (1988) study the legal battle between Texaco and Pennzoil related to the acquisition of Getty Oil and find that any gains to the plaintiff, Pennzoil, were well offset by the losses to the defendant, Texaco. Bhagat, Brickley, and Coles (1994) offer similar findings in a more systematic analysis of corporate lawsuits, many of which entail disputes between targets and bidders in corporate takeovers. So why do corporations engage in lawsuits rather than simply settle their disputes? In their survey of research on legal disputes, Cooter and Rubinfeld (1989, p. 1092) attribute lawsuits to ambiguity: "vague laws cause litigation." They further argue that the legal process will iteratively clarify vague laws: "Laws whose inefficiency derives from their vagueness will tend to be litigated until the courts achieve a clear allocation of the underlying entitlement" (p. 1093). Rubin (1977) offers a similar evolutionary model to indicate why the common law is efficient.

For our sample of takeovers, we determine which deals had a lawsuit filed by at least one bidder in the transaction. Our sources of information for bidders' lawsuits include SEC takeover documents, media stories, and LexisNexis. As suggested by the examples in Table A3, many lawsuits are tied to access to confidential information and poison pills during the auction process. Other notable reasons for bidders' lawsuits include the validity of state antitakeover laws and the use of deal-protection devices such as termination fees and lockup options.

Applying the model of Cooter and Rubinfeld (1989) to our setting, our primary inquiry is how the 1986 *Revlon* decision requiring auctioneering impacted bidders' lawsuits. Our prediction is that the vagueness of the auction requirement induced an increase in lawsuits. (Examples are reported in Table A3.) Through subsequent lawsuits, the courts clarified when and whether a given target firm was subject to the *Revlon* auctioneering duties. As noted by Policastro (1991, p. 189), "The broad and ambiguous language of *Revlon* left subsequent courts with the task of articulating the circumstances under which a corporate board of directors would be charged with the *Revlon* duty."

Table 6 reports our findings on bidders' lawsuits in the sample of 1,585 completed deals, which occur in about 5 percent of the deals. The *Revlon* period (1986–89) has the greatest fraction of bidders' lawsuits, with nearly one-quarter of the sample. Table 7 confirms that the rate of lawsuits in the *Revlon* period is statistically greater than in the 1981–85 period and in each subsequent subperiod. Moreover, the rate of lawsuits in the *Revlon* period is also greater than the rate for the combined post-1990 subperiods, as indicated by the *F*-test. These results hold for our basic specification and a regression that controls for industry effects in the tendency for bidders to file lawsuits.

Table 6
Summary Statistics for Bidders' Lawsuits: Completed Deals

Period	Mean	Median	SD	*N*
1981–2020	.050	.000	.219	1,585
1981–85	.086	.000	.281	186
1986–89	.236	.000	.426	216
1990–95	.064	.000	.246	94
1996–2001	.017	.000	.129	353
2002–20	.001	.000	.037	736

Table 7
Regression Analysis for Bidders' Lawsuits

	(1)	(2)
Intercept	.236**	.189**
	(8.16)	(5.19)
P81_85	−.150**	−.150**
	(−4.23)	(−4.29)
P90_95	−.172**	−.166**
	(−4.49)	(−4.23)
P96_01	−.219**	−.215**
	(−7.36)	(−7.18)
P02_20	−.235**	−.228**
	(−8.10)	(−7.78)
Industry effects	No	Yes
R^2	.130	.151
Joint test	25.39	22.29

Note. Coefficients are from ordinary least squares regressions, with robust *t*-statistics in parentheses. The intercept represents 1986–89. Industry effects are controlled using the Fama-French 48-industry classification. The joint test checks whether the coefficients of P90_95, P96_01, and P02_20 are equal to 0 ($\Pr > F = .001$). $N = 1{,}825$.

** Statistical significance at the 1% level.

We interpret these results as consistent with the argument that the 1986 *Revlon* decision created vagueness in takeover law regarding auctions, especially as pertaining to the property rights of the target's board. This led to a significant increase in lawsuits by hostile bidders using preemptive bids and toehold strategies in an attempt to force takeover auctions and attain a target firm at a relatively lower premium. These lawsuits enabled the courts to clarify the duties of the target's board of directors. This iterative process in the courts culminated in the 1989 *Time Inc.* decision, which returned to targets' boards strong property rights tied to the deference of the courts via the business judgment rule.

Our interpretation of the evolution of takeover law is distinctly different from the conventional view that associates the 1989 *Time Inc.* case with entrenchment of targets' management (see, for example, Bebchuk, Coates, and Subramanian

2002). The entrenchment view presumes that hostile takeovers are a means of removing targets' poorly performing managers. Yet Schwert (2000) finds no systematic measurable differences in economic performance for hostile targets vis-à-vis targets acquired in friendly transactions. Our interpretation is consistent with the conclusion of Schwert (2000) that hostile takeovers are related to the bargaining choices of targets and bidders in response to the legal environment. Moreover, starting our sample period in 1981 enables us to discern the evolution of takeover law and legal cases. The facts show it is not simply that lawsuits declined after the 1989 *Time Inc.* case. They also increased dramatically after the 1986 *Revlon* decision. This is consistent with ambiguous property rights between 1986 and 1989.

5. Property Rights and the Takeover Auction Process

In this section, we report evidence for how the changing property rights of targets' boards wrought by legal decisions impacted the depth and nature of takeover auctions over time. We use two measures of auctions. The first is the auction process in the public sphere shown in Figure 1 and examined in research such as Schwert (1996, 2000). The second is the less visible bidding process in Figure 1 and research such as Boone and Mulherin (2007).[4] We find that the changing property rights of targets' boards had distinctly different effects on these two measures.

For our first measure of a takeover auction, we follow Schwert (1996, 2000) and define an auction as a takeover that has two or more bidders competing publicly for a target. Using this definition, Schwert (2000) and Andrade, Mitchell, and Stafford (2001) report that auctions declined between the 1980s and 1990s. Table 8 shows a similar decline. The fraction of the deals conducted as auctions averages 14 percent for the full sample, but the rate of auctions is greater than 30 percent until the 1990s and falls more than threefold to less than 10 percent in the last three subperiods. The regression analysis for public auctions in Table 9 confirms a significant decline in the rate of auctions in the last three subperiods. Hence, on the basis of publicly reported bidding, takeover competition appears to substantially decline following the legal decisions granting greater property rights to targets' boards.

However, for a sample of deals in the 1990s, the number of firms engaged in publicly reported bidding is only a small portion of competition for a target (Boone and Mulherin 2007). As shown in Figure 1 (and described in Boone and Mulherin 2007), a deep and active bidding process occurs behind the scenes prior to any public announcement of a deal. This behind-the-scenes bidding is referred to as the private-auction process, and a private auction is defined as a deal in which two or more potential bidders sign a confidentiality agreement with the target (Boone and Mulherin 2007). A study using a similar definition shows no

[4] The private-auction process has gained academic attention since it was first documented (Boone and Mulherin 2007). See, for example, Aktas, de Bodt, and Roll (2010), Gorbenko and Malenko (2014), Masulis and Simsir (2018), Liu (2020), and Liu and Officer (2021).

Table 8
Summary Statistics for Public and Underground Auctions: Completed Deals

	Mean	Median	SD	*N*
Public Auction:				
1981–2020	.139	.000	.347	1,585
1981–85	.328	.000	.471	186
1986–89	.347	.000	.477	216
1990–95	.096	.000	.296	94
1996–2001	.091	.000	.288	353
2002–20	.060	.000	.237	736
Underground Auction:				
1981–2020	.515	1.000	.500	1,585
1981–85	.446	.000	.498	186
1986–89	.560	1.000	.498	216
1990–95	.404	.000	.493	94
1996–2001	.422	.000	.495	353
2002–20	.577	1.000	.494	736

Table 9
Analysis of Public and Underground Auctions: Completed Deals

	Public Auction	Underground Auction
Intercept	.132+	.530*
	(1.85)	(2.37)
P81_85	−.012	−.097+
	(−.26)	(−1.87)
P90_95	−.233**	−.127*
	(−5.18)	(−2.04)
P96_01	−.237**	−.115**
	(−6.61)	(−2.60)
P02_20	−.252**	.037
	(−7.32)	(.90)
R^2	.155	.065
Joint test	18.01	8.51

Note. Coefficients are from ordinary least squares regressions, with robust *t*-statistics in parentheses. The intercept represents 1986–89. All regressions include industry effects, which are controlled using the Fama-French 48-industry classification. The joint test checks whether the coefficients of P90_95, P96_01, and P02_20 are equal to 0 ($\Pr > F = .001$). $N = 1{,}585$.

+ Statistical significance at the 10% level.
* Statistical significance at the 5% level.
** Statistical significance at the 1% level.

significant change in takeover competition between the 1980s and later periods (Liu and Mulherin 2018). We use the term "underground auction" to avoid con-

fusion about the type of bidder, namely, a publicly traded synergistic bidder or a private-equity bidder engaged in a financial transaction.

Table 8 reports our results for underground auctions. For the full sample, the rate of underground auctions is roughly 50 percent and remains relatively steady over time, ranging from 40 percent to 58 percent. As reported in Table 9, there is some evidence of a decline in the rate of underground auctions in 1990–95 and 1996–2001. However, the magnitude is much smaller compared with the decline in the rate of public auctions. Moreover, using a sample from 1994 to 2007, Aktas, de Bodt, and Roll (2010) show that even one-on-one privately negotiated deals face significant latent competition pressures. Hence, the increased property rights for targets' boards shifted the takeover auction process underground. These results cannot be underemphasized, as they indicate a fundamental change in the takeover auction process. The increased property rights for targets' boards moved takeover auctions out of the public realm, and now structured auctions are controlled by targets' boards behind the scenes along the lines suggested by Fishman (1988).

Our results shed further light on the finding in Schwert (2000) of a strong association between hostile deals and auctions in the public sphere. In addition to linking hostile deals with public bidding, Schwert (2000) finds that, instead of being related to targets' performance, hostile deals were distinguished by the use of publicity in the media by bidders and targets during the deal. Similarly, in our sample 55 percent of the deals conducted as auctions in the public sphere are hostile. Hence, consistent with the conclusion in Schwert (2000) that the use of hostile deals reflects bargaining choices made by bidders and targets, our findings for the movement to underground auctions and the associated decline in hostile deals jointly reflect the changes in the property rights of targets' boards.

6. Initiation of Deals and the Length of the Auction Process

In this section, we delve further into the bidding process shown in Figure 1. We analyze how the choice to initiate a deal by the target's board changed over time. We also study changes in the length of time between initiation and announcement of a deal (the underground auction in Figure 1) and the length of time between announcement and completion of a deal (the auction in the public sphere in Figure 1). We relate the changes in the initiation decision and the length of the bidding process to changes in the property rights of targets' boards from legal decisions spanning from *Revlon* (1986) to *Time Inc.* (1989).

The auctioneering rules in the *Revlon* decision would make a target board hesitant to initiate a deal, as that would force it to ultimately sell the firm. In effect, under the auctioneering rule the target's board cannot set an implied reserve price that is the minimum required to sell the firm. Following the *Time Inc.* decision, however, the courts returned to a business judgment rule that granted deference to targets' boards in terms of strategy. In reaction, boards often chose to consider strategic alternatives to improve shareholders' returns including the

Table 10
Summary Statistics for Targets' Initiation and the Length of the Takeover Process

	Mean	Median	SD	*N*
Target Initiation:				
1981–2020	.324	.000	.468	1,585
1981–85	.167	.000	.374	186
1986–89	.162	.000	.369	216
1990–95	.383	.000	.489	94
1996–2001	.382	.000	.487	353
2002–20	.376	.000	.485	736
Days (Initiation, Announcement):				
1981–2020	166.9	125.0	153.3	1,585
1981–85	79.8	60.5	81.0	186
1986–89	86.5	53.5	101.1	216
1990–95	198.9	145.0	186.4	94
1996–2001	178.2	146.0	141.8	353
2002–20	202.9	158.0	163.2	736
Days (Announcement, Completion):				
1981–2020	148.4	119.0	101.4	1,585
1981–85	158.0	119.0	110.0	186
1986–89	165.8	133.5	109.3	216
1990–95	145.8	135.0	88.2	94
1996–2001	134.3	111.0	95.6	353
2002–20	148.1	119.5	100.2	736
Days (Initiation, Completion):				
1981–2020	315.3	274.0	180.3	1,585
1981–85	237.8	207.5	143.4	186
1986–89	252.3	227.0	145.7	216
1990–95	344.7	281.5	210.6	94
1996–2001	312.4	286.0	168.7	353
2002–20	351.0	310.0	188.0	736

outright sale of the firm. The *Time Inc.* decision enabled the target's board to retract the consideration of alternatives if the board determined that a shareholder-enhancing policy was not available.

To determine the fraction of deals in which the target's board initiated the takeover auction, we consult the SEC takeover documents for each completed deal in our sample. The results are reported in Table 10. For the full sample, 32.4 percent of the deals were initiated by the target's board. But there are measurable changes in the rate of targets' initiation over time, with the 1980s having less than 20 percent and the subperiods following the 1990 *Time Inc.* decision having double that rate.

Table 11 confirms a significant increase in the rate of targets' initiation over time. The dependent variable is a dummy variable that equals one when the target's board initiates the deal. The independent variables are the subperiod dummy variables based on legal cases, and the regressions controls for industry fixed effects. Compared with the intercept, which represents the *Revlon* period of

Table 11
Regression of Targets' Initiation and the Length of the Takeover Process: Completed Deals

	Target Initiation	Days (Initiation, Announcement)	Days (Announcement, Completion)	Days (Initiation, Completion)
Intercept	−.119*	177.566	171.287**	348.854
	(−2.00)	(.93)	(5.11)	(1.62)
P81_85	.019	−5.242	−9.430	−14.672
	(.51)	(−.54)	(−.86)	(−1.00)
P90_95	.239**	115.679**	−21.541+	94.138**
	(4.16)	(5.87)	(−1.76)	(3.92)
P96_01	.245**	93.238**	−34.536**	58.702**
	(6.49)	(8.59)	(−3.94)	(4.28)
P02_20	.219**	121.109**	−14.145+	106.964**
	(6.52)	(11.97)	(−1.67)	(8.30)
R^2	.083	.138	.131	.122
Joint test	18.35	52.28	6.52	23.75

Note. Coefficients are from ordinary least squares regressions, with robust *t*-statistics in parentheses. The intercept represents 1986–89. Industry effects are controlled using the Fama-French 48-industry classification in the results for days from initiation to announcement. The joint test checks whether the coefficients of P90_95, P96_01, and P02_20 are equal to 0 ($\Pr > F = .001$). $N = 1{,}585$.

+ Statistical significance at the 10% level.

* Statistical significance at the 5% level.

** Statistical significance at the 1% level.

1986–89, the post–*Time Inc.* subperiods all have a significantly greater rate of targets initiating takeovers. This is consistent with our argument that the deference to strategy in the *Time Inc.* decision downplayed the mandated auctioneering rules of the *Revlon* decision and induced targets' boards to initiate more takeover auctions. This dramatic change in the rate of initiation is related to the measurable decline in hostile takeovers. In our sample, only a small fraction (3 percent) of the deals initiated by the target's board turn hostile. The significant movement toward target-initiated deals, which reflects greater property rights and control over the auction by targets' boards, thereby lessens hostile activity.

The movement toward target-initiated deals and away from hostile transactions also had a significant impact on the duration of the process's components shown in Figure 1. Using SEC documents, we determine the private initiation date for each deal and then estimate the days in calendar time between the initiation and announcement of the deal (the underground auction) and the days in calendar time between the announcement and completion of the deal (the auction in the public sphere).

The results for the lengths of these two components are reported in Table 10. For the full sample, the time between initiation and announcement (the underground auction) is a mean of 167 days and a median of 125 days. But the length of the underground auction varies noticeably. For 1981–85 and 1986–89, the mean length of the underground auction is less than 90 calendar days, or less than 3

calendar months. By contrast, the mean length of the underground auction from initiation to announcement of a deal is around 6 calendar months.

Table 11 confirms a significant increase in time between the initiation and announcement of deals following the *Time Inc.* decision. Hence, rather than the hostile deals of the 1980s that quickly became auctions in the public sphere, the legal setting following the *Time Inc.* decision enabled targets' boards to lengthen the bidding process before announcing a deal to the public. Table 11 also reports symmetric changes in the time between announcement and completion of deals: the length of the public-auction process fell following the *Time Inc.* decision. This reduction is directly related to the decline in publicly hostile deals. Finally, Table 11 shows that the total time of the takeover process increased after the *Time Inc.* decision.

7. Takeover Premiums over Time

In this section, we estimate targets' takeover premiums for our sample. The changes in the legal setting can be expected to have an impact on the size of premiums. Moreover, the changing length of time between initiation and announcement of deals suggests that care must also be taken in choosing the event window in which to measure takeover premiums.

Prior research found that changes in the legal setting had a measurable impact on targets' takeover premiums. Jarrell and Bradley (1980) find that the delay induced by the disclosure and minimum tender period requirements of the 1968 Williams Act was followed by a significant increase in targets' takeover premiums. Similarly, Jarrell (1985) finds that the delay enabled by targets' resistance tactics such as lawsuits is associated with more auctions and correspondingly higher premiums for targets. To address the possible impact of the legal setting on our sample, we measure whether there are any changes in targets' takeover premiums over time in conjunction with the lengthier time period between initiation and announcement of deals following the *Time Inc.* decision.

We also analyze whether the changing length of time between initiation and announcement of deals has implications for the appropriate event widow with which to gauge targets' takeover premiums. A commonly used estimate of premiums is a target's abnormal returns over the (−63, 126) event window, which includes a run-up period of roughly 3 calendar months (63 trading days) prior to announcement and 6 calendar months (126 trading days) following announcement of a deal. This framework by Schwert (2000) is widely used in research in financial economics such as Cain, McKeon, and Solomon (2017). However, the sample of takeovers in Schwert (2000) is from 1975–96. He chose his run-up period from a visual examination of the average trends of targets' returns prior to announcement of a deal.[5]

Our results in Tables 10 and 11 indicate that the run-up period prescribed by Schwert (1996, 2000), while appropriate for the deals from the 1980s that make

[5] Schwert (1996) examines deals from 1975 to 1991 and uses a shorter run-up period starting 2 calendar months (42 trading days) before announcement.

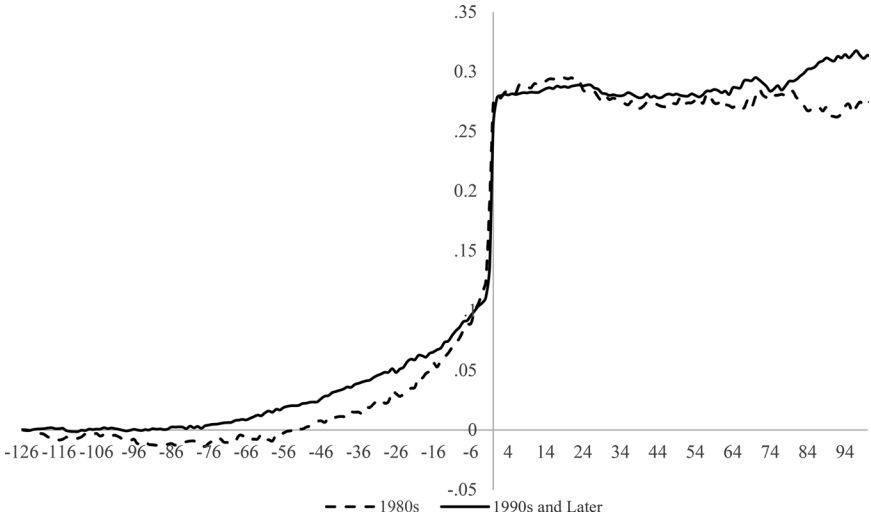

Figure 2. Targets' abnormal returns, 1980s versus the 1990s and later

up much of his sample, is less appropriate for deals in the 1990s and later. In prescribing his run-up window, Schwert's intention was to capture the time period in which a target firm and potential bidders engage in preannouncement bidding (Schwert 1996, pp. 155–56). A run-up period starting 3 calendar months prior to announcement appears to capture the period until initiation of a deal for 1981–85 and 1986–89, as the median time is less than 2 calendar months in Table 10. However, for the three later subperiods, much of which fall outside the years used in Schwert (1996, 2000), the run-up window of 3 calendar months fails to capture the period from initiation to announcement of a deal. Hence, the Schwert (2000) measure of targets' premiums based on the (−63, 126) event window may underestimate the gains to target firms.

To demonstrate the importance of the event window for the measurement of targets' premiums in the 1980s versus later periods, we plot in Figure 2 the cumulative average abnormal returns (CARs) from 126 trading days (that is, 6 calendar months) before the announcement of a public merger (day 0) for deals in the 1980s and deals in the 1990s and after.[6] Consistent with Schwert (1996), Figure 2 indicates that for deals announced in the 1980s, the target's price starts to move around day −42 (that is, 2 calendar months before the public announcement). However, for deals announced in the 1990s and after, the target's price starts to move around day −84, 2 calendar months earlier than deals from the 1980s. Figure 2 confirms our conjecture that the standard windows starting from day −42 or −63 may underestimate the gains to targets' shareholders in later periods.

[6] Following Schwert (1996), we use Center for Research in Security Prices value-weighted portfolio returns for days −379 to −127 to estimate market model parameters to define abnormal returns.

Table 12
Summary Statistics for Targets' Premiums: Completed Deals

	Mean	Median	SD	*N*
CAR (−63, 126):				
1981–2020	.322	.301	.289	1,585
1981–85	.325	.326	.254	186
1986–89	.361	.356	.313	216
1990–95	.358	.353	.290	94
1996–2001	.358	.334	.336	353
2002–20	.288	.270	.261	736
CAR (Private Initiation, 126):				
1981–2020	.326	.314	.315	1,585
1981–85	.318	.311	.262	186
1986–89	.339	.340	.297	216
1990–95	.372	.341	.358	94
1996–2001	.353	.356	.347	353
2002–20	.305	.290	.308	736

To further demonstrate how the choice of event window may affect the measure of wealth effects, we estimate two targets' premiums. The first is CAR (−63, 126), which follows Schwert (2000). The second is CAR (Private Initiation, 126), which starts the event window on the day the deal is privately initiated, as determined from SEC takeover documents. This latter estimate is more likely to capture the effects of the lengthening time between initiation and announcement of deals.

Table 12 provides means and medians for the full sample, and Table 13 reports regression analyses of targets' premiums, where the explanatory variables include time period dummy variables, characteristics of deals and targets, and industry fixed effects. The intercept represents the *Revlon* period of 1986–89. With the (−63, 126) window, targets' premiums are roughly the same except for during 1996–2001. By contrast, using the window (private initiation, 126), targets' premiums are greater in the last three periods. The coefficients on the dummy variables for 1990–95, 1996–2001, and 2002–20 are significantly different from 0, and the *F*-test also indicates a significant difference.

These results indicate why it is important to account for the changing takeover auction process, with targets' boards having greater property rights and more control of the auction process. Not only has there been a decline in hostile takeovers, but the auction process has gone underground. Moreover, the length of the underground process has increased. Our estimates of targets' premiums that capture these changes indicate that target firms received higher premiums after the *Time Inc.* decision.[7] These results resemble those of Jarrell and Bradley (1980) for the impact of the Williams Act on targets' premiums.

[7] Following our use of a longer event window between private initiation and announcement of a deal, Eaton, Liu, and Officer (2021) report that because target-initiated deals have a significantly longer process, the use of standard fixed windows significantly underestimates premiums for deals announced in the mid-1990s and afterward.

Table 13
Regression of Target Premiums: Completed Deals

	CAR (−63, 126)	CAR (Private Initiation, 126)
Intercept	.323**	.501**
	(5.60)	(3.31)
P81_85	−.009	.003
	(−.33)	(.11)
P90_95	.037	.071+
	(1.05)	(1.80)
P96_01	.074**	.100**
	(2.59)	(3.43)
P02_20	.037	.084**
	(1.34)	(2.91)
Tender Offer	.090**	.070**
	(5.42)	(3.85)
Target Size	−.023**	
	(−4.35)	
Target Size (Initiate)		−.030**
		(−4.91)
Hostile	.076**	.061*
	(3.22)	(2.49)
Market/Book	−.005+	−.007*
	(−1.85)	(−2.01)
Debt/Equity	.012+	.010
	(1.81)	(1.28)
ROE	−.002	.021
	(−.08)	(.63)
Price/Earnings	−.000	.000
	(−1.56)	(.66)
Sales Growth	.038	−.050
	(.85)	(−1.07)
R^2	.123	.101
Joint test	2.50	4.07
$\Pr > F$	.060	.007

Note. Coefficients are from ordinary least squares regressions, with robust *t*-statistics in parentheses. The intercept represents 1986–89. All regressions include industry fixed effects, which are controlled using the Fama-French 48-industry classification. The joint test checks whether the coefficients of P90_95, P96_01, and P02_20 are equal to 0. $N = 1{,}518$ (67 deals with incomplete information are excluded).

+ Statistical significance at the 10% level.

* Statistical significance at the 5% level.

** Statistical significance at the 1% level.

8. Robustness and Additional Analyses

In this section, we provide a robustness analysis. We also test the potential effects of shareholder activism since the Sarbanes-Oxley Act of 2002.

Our sample from Value Line is weighted toward relatively large takeover targets. As a robustness check, we replicate our analysis using data from a study of a

random sample of takeovers from 1981 to 2014 (Liu and Mulherin 2018). Online Appendix Table OA1 reports a summary of this robustness analysis, which replicates the regressions in Tables 7, 9, 11, and 13 for bidders' lawsuits, underground auctions, targets' initiation, length of the period from initiation to announcement of a deal, and targets' premiums. The results of the regressions using the random sample are similar to the results from our main sample. Hence, our main results are robust to a sample of relatively smaller takeover targets.

As reported in Table 1, our full sample includes both completed deals and withdrawn deals that were announced but not completed. For 55 hostile withdrawn deals that entailed a target firm in a friendly deal completed at a later date, we performed a matched-sample analysis of the changes in the takeover auction process over time. Consistent with our overall analysis, Online Appendix Table OA2 reports a sharp decline in lawsuits by bidders. Underground auctions increase significantly, as does the fraction of deals initiated by the target. Hence, for the same target in different time periods, there are time-series patterns similar to those for the full sample.

One might be concerned that firms in the post-2000 period are different from those in the 1980s. To address this possibility, we replicate the analysis using deals announced 1986–2000. This shorter period helps to alleviate concerns that our results could be driven by significant changes in corporate governance in the post-2000 period. The results (reported in Online Appendix Table OA3) remain very robust.

Karpoff and Wittry (2018) suggest that research in identifying the effects of laws and court decisions may best proceed using inductive reasoning, in which the most plausible inference is drawn from the data. We therefore test our time-series sample of targets' initiation for structural breaks at an unknown date in a time series. Online Appendix Figure OA1 presents a plot of Wald tests of a single structural break during each year in the sample period for targets' initiation. The test statistics are greater than the 1 percent critical value in Bai and Perron (2003). The correspondence of the structural break year with the *Time Inc.* decision suggests that strengthening target boards' property rights caused this structural change.

The literature shows that the adoption of shareholder proposals increased after passage of the Sarbanes-Oxley Act (for example, Ertimur, Ferri, and Stubben 2010). To investigate the potential impact of shareholder activism on the takeover process in this more recent period, we identify takeover announcements following activism via shareholder proposals aiming to remove the main antitakeover provisions (that is, poison pills and classified boards). Online Appendix Table OA4 shows that deals potentially related to shareholder activism are less likely to be initiated by targets and are less likely to be conducted via underground auctions compared with other deals. Our interpretation is that a shareholder proposal signals shareholders' willingness to sell the firm, which may encourage potential bidders to initiate the sale process. However, tests show no significant differences in takeover premiums between the two groups.

9. Summary and Conclusion

In this paper, we provide new evidence for the changing nature of corporate takeover auctions over time. Our main results document a fundamental alteration in the way takeovers are conducted during 1981–2020. Following the 1989 *Time Inc.* decision, takeover auctions moved from the public sphere to behind the scenes in what we label underground auctions. Moreover, the target's board is much more likely to initiate a takeover auction. The length of time between initiation and announcement of deals also increased. Finally, accounting for the lengthening of the initiation period of deals, we find that takeover premiums to targets' firms increased.

Our results have important implications for research on takeovers and governance. Targets' boards are more in control of the auction process since the *Time Inc.* decision. Furthermore, competition moved out of the public sphere of hostile deals and is instead conducted in a more sequential underground process. These fundamental alterations did not occur in response to a single type of state law or a particular court decision. Instead, the changing nature of takeover auctions iterated with a series of court decisions between the 1986 *Revlon* and the 1989 *Time Inc.* decisions. More important, those cases were a reaction to takeover hurdles imposed in a corporate takeover market wrought by shocks such as antitrust relaxation and junk-bond financing that made large firms vulnerable to the barbarians at the gate. As in the model of Rubin (1977), these changing conditions led to lawsuits that clarified the property rights of targets' boards when defending the corporate bastion.

In a Coasean vein, we interpret the decline of hostile takeovers following the *Time Inc.* decision as directly due to the clarification of property rights. Indeed, the burst of hostile takeovers following the *Revlon* decision can be seen as stemming from its ambiguity about auction duties. Our view contrasts with the standard argument that the *Time Inc.* decision entrenched incumbent management. The entrenchment view implies that hostile deals are associated with poorly performing targets, which is at odds with the results in Schwert (2000). Moreover, the view that targets' management could become entrenched and refuse to engage in value-enhancing deals is distinctly at odds with the main point of Coase (1959, 1960) that well-defined property rights facilitate exchange.

Indeed, the extant literature's (over)emphasis on hostile takeovers seems somewhat out of place when studying takeover auctions. In any setting with scarcity, markets and private-property rights direct conflicts over the use of resources (Alchian and Demsetz 1973). Hence, any contest for the control of a corporation could be deemed hostile in the sense that competing parties aim to attain control. But the incumbent party controlling the corporation need not be a shirking group of managers. The resilience and long-term survival of the modern corporation modeled in Alchian and Demsetz (1972) is simply that if the stock price under the incumbents is lower than that deemed appropriate by an outside competing group of possible mangers, then competition for control will ensue. Our

main result for takeover auctions over time is that this competition moved from outwardly visible contests to behind-the-scenes auctions.

Our results also have implications for measuring targets' premiums and run-up in takeovers. Most research relies on the measure of premiums developed by Schwert (2000) based on a (−63, 126) event window for a sample from the 1970s and 1980s. But our analysis indicates that the deal-initiation period lengthened in recent decades and that, accounting for the lengthening period, targets' premiums increased since 1990, when takeover hurdles also increased. In addition, we find some evidence that shareholder activism since 2002 affected the sale process but not takeover premiums. Future research could investigate how the reallocation of power between boards and shareholders can affect acquisition outcomes, particularly for different types of shareholders and various forms of shareholder activism.

Finally, our results suggest the importance of further modeling the takeover auction process, which is complex and often does not fit standard auction models (Hansen 2001). We show fundamental changes in both the initiation of auctions and the steps in the process over time. Hence, future work could pursue questions such as how deals are initiated (Gorbenko and Malenko 2020) and how the underground bidding process generates information (Quint and Hendricks 2018).

Appendix

Additional Tables

Table A1

Definitions of the Variables

	Definition	Data Source
Auction	Dummy variable equal to one if two or more potential buyers announce a bid publicly	Securities and Exchange Commission (SEC) documents; media reports
Bidder Lawsuit	Dummy variable equal to one if a lawsuit is filed by a bidder	SEC documents; media reports
CAR (−63, 126)	Cumulative abnormal returns around the event window (−63, 126), where abnormal returns are net of market returns, proxied by the Center for Research in Security Prices (CRSP) value-weighted index, and day 0 is the date of the public announcement of the merger	CRSP
CAR (Private Initiation, 126)	Cumulative abnormal returns from the private initiation date until 126 trading days after the public announcement, where abnormal returns are net of market returns, proxied by the CRSP value-weighted index	CRSP
Cash	Dummy variable equal to one if the bidder uses cash as the method of payment	SEC documents
Confidential	Number of potential buyers who signed a confidentiality or standstill agreement with the selling firm	SEC documents
Contact	Number of potential buyers contacted by the selling firm and its financial advisor	SEC documents
Days (Announcement, Completion)	Number of days between the public announcement date and the date the deal is completed	SEC documents
Days (Initiation, Announcement)	Number of days between the date of private initiation and the date of the public announcement	SEC documents
Days (Initiation, Completion)	Number of days between the date of private initiation and the date the deal is completed	SEC documents
Deal Size	Transaction value adjusted by inflation in 1980 dollars	Securities Data Company (SDC) database; SEC documents
Debt/Equity	Book value of debt divided by book value of equity	Compustat
Delaware	Dummy variable equal to one if the target firm is incorporated in Delaware	SEC documents
Hostile	Dummy variable equal to one if the deal involves a hostile bidder (not necessarily the winning bidder), defined when the target's board rejects the bid	SEC documents; media reports

Indication of Interest	Number of potential buyers who submit an indication of interest to the selling firm	SEC documents
Law/Pill Dummy	Dummy variable equal to one if a firm has a poison pill or is covered by a state antitakeover law	SEC documents; proxy statements; media reports; Bebchuk and Ferrell (2002); Bertrand and Mullainathan (2003); Bryan (1991)
Market/Book	Ratio of the year-end market value of common stock to the book value of equity for the fiscal year before the merger announcement	Compustat
Poison Pill	Dummy variable equal to one if the target has a shareholder rights plan (poison pill)	SEC documents
Price/Earnings	Ratio of the year-end stock price to earnings per share for the fiscal year before the merger announcement	Compustat
Private Bidders	Number of potential buyers who submit a private written offer	SEC documents
Public Bidders	Number of potential buyers who announce a formal bid publicly	SEC documents
ROE	Return on equity, measured as the ratio of earnings to average equity for the fiscal year before the merger announcement	Compustat
Sales Growth	Proportional change in sales over the fiscal year before the merger announcement	Compustat
State Law	Dummy variable equal to one if the target's state of incorporation has antitakeover laws when the deal is announced	Bebchuk and Ferrell (2002); Bertrand and Mullainathan (2003)
Target Initiation	Dummy variable equal to one if the target initiates the deal	SEC documents
Target Size	Log value of the target's stock price times shares outstanding 3 months before the merger announcement	CRSP
Target Size (Initiate)	Log value of the target's stock price times shares outstanding 1 day before the private initiation	CRSP
Tender Offer	Dummy variable equal to one if the deal is a tender offer	SEC documents
Underground Auction	Dummy variable equal to one if two or more potential buyers sign a confidentiality or standstill agreement	SEC documents
Withdrawn	Dummy variable equal to one if the target firm is not taken over by any other firm within a year of the merger announcement	SDC database; SEC documents
P81_85	Dummy variable equal to one if the deal is announced from 1981 to 1985	
P90_95	Dummy variable equal to one if the deal is announced from 1990 to 1995	
P96_01	Dummy variable equal to one if the deal is announced from 1996 to 2001	
P02_20	Dummy variable equal to one if the deal is announced from 2002 to 2020	

Table A2
Studies of Takeover Auctions

	Analysis
Whether and when to auction:	
Easterbrook and Fischel (1981)	Set mandatory passivity rule to ensure that the initial bidder incurs search costs
Bebchuk (1982)	Set mandatory auction rule and give initial bidder toehold to compensate for search costs
French and McCormick (1984)	Target bears costs and is incentivized to economize on bidders
Preemptive bids and access to information:	
Bulow, Huang, and Klemperer (1999)	Toehold helps initial bidder; target can alter rules to mitigate advantages
Fishman (1988)	Target's revenue is higher by eliminating preemptive auctions; target can withhold confidential information until after standstill
Berkovitch, Bradley, and Khanna (1989)	Deal protection can compensate for bidders' search costs
Takeover hurdles:	
Easterbrook and Fischel (1981)	Hurdles should not be allowed; they signal management entrenchment
Bebchuk (1982)	Hurdles should not be allowed; they interfere with full-fledged auctions
Bulow and Klemperer (1996)	Impediments to auctions reflect agency costs
DeAngelo and Rice (1983)	Hurdles can bolster the property rights of the target's board
Jarrell and Bradley (1980)	Williams Act is associated with higher premiums for targets
Jarrell (1985)	Target's resistance delays and induces auctions
Comment and Schwert (1995)	Poison pills can increase bargaining power
Bebchuk, Coates, and Subramanian (2002)	Staggered boards and pills are a lethal combination

Table A3
Legal Cases Involving Takeover Auctions

Target Firm	Year	Topic	Ruling
Unocal	1985	Board duties	Assess offer's threat in context of business judgment rule
Revlon	1986	Board duties	Switch from bastion defender to auctioneer
Koppers	1988	Information access	Target's board can impact the playing field
J. P. Stevens	1988	Information access	Use confidentiality or standstill agreement
Facet Enterprises	1988	Poison pill	Use as gavel to run an auction
Federated Stores	1988	Poison pill	Can keep in place for life of auction
Moore McCormack	1988	Poison pill	Must redeem pill
Pillsbury	1989	Poison pill	Must redeem pill
Time Inc.	1989	Board duties	Not obligated to abandon deliberate strategy
Wallace Computer	1995	Poison pill	Embellishes just-say-no defense

References

Aktas, Nihat, Eric de Bodt, and Richard Roll. 2010. Negotiations under the Threat of an Auction. *Journal of Financial Economics* 98:241–55.

Alchian, Armen A. 1965. Some Economics of Property Rights. *Il Politico* 30:816–29.

Alchian, Armen A., and Harold Demsetz. 1972. Production, Information Costs, and Economic Organization. *American Economic Review* 62:777–95.

———. 1973. The Property Rights Paradigm. *Journal of Economic History* 33:16–27.

Andrade, Gregor, Mark Mitchell, and Erik Stafford. 2001. New Evidence and Perspectives on Mergers. *Journal of Economic Perspectives* 15(2):103–20.

———. 2003. Computation and Analysis of Multiple Structural Change Models. *Journal of Applied Econometrics* 18:1–22.

Bainbridge, Stephen M. 2006. *Unocal* at 20: Director Primacy in Corporate Takeovers. *Delaware Journal of Corporate Law* 31:769–863.

Bates, Thomas W., and David A. Becher. 2017. Bid Resistance by Takeover Targets: Managerial Bargaining or Bad Faith? *Journal of Financial and Quantitative Analysis* 52:837–66.

Bebchuk, Lucian A. 1982. The Case for Facilitating Competing Tender Offers. *Harvard Law Review* 95:1028–56.

Bebchuk, Lucian Ayre, John C. Coates IV, and Guhan Subramanian. 2002. The Powerful Antitakeover Force of Staggered Boards: Theory, Evidence, and Policy. *Stanford Law Review* 54:887–951.

Bebchuk, Lucian, Alma Cohen, and Allen Ferrell. 2009. What Matters in Corporate Governance? *Review of Financial Studies* 22:783–827.

Bebchuk, Lucian, and Allen Ferrell. 2002. On Takeover Law and Regulatory Competition. *Business Lawyer* 57:1047–68.

Berkovitch, Elazar, Michael Bradley, and Naveen Khanna. 1989. Tender Offer Auctions, Resistance Strategies, and Social Welfare. *Journal of Law, Economics, and Organization* 5:395–412.

Bertrand, Marianne, and Sendhil Mullainathan. 2003. Enjoying the Quiet Life? Corporate Governance and Managerial Preferences. *Journal of Political Economy* 111:1043–75.

Betton, Sandra, and B. Espen Eckbo. 2000. Toeholds, Bid Jumps, and Expected Payoffs in Takeovers. *Review of Financial Studies* 13:841–82.

Bhagat, Sanjai, James A. Brickley, and Jeffrey L. Coles. 1994. The Costs of Inefficient Bargaining and Financial Distress: Evidence from Corporate Lawsuits. *Journal of Financial Economics* 35:221–47.

Boone, Audra L., and J. Harold Mulherin. 2007. How Are Firms Sold? *Journal of Finance* 62:847–75.

———. 2009. Is There One Best Way to Sell a Company? Auctions versus Negotiations and Controlled Sales. *Journal of Applied Corporate Finance* 21:28–37.

Bryan, Joy Marlene. 1991. *Corporate Anti-takeover Defenses: The Poison Pill Device.* New York: Clark Boardman.

Bulow, Jeremy, Ming Huang, and Paul Klemperer. 1999. Toeholds and Takeovers. *Journal of Political Economy* 107:427–54.

Bulow, Jeremy, and Paul Klemperer. 1996. Auctions versus Negotiations. *American Economic Review* 86:180–94.

Burrough, Bryan, and John Helyar. 1990. *Barbarians at the Gate: The Fall of RJR Nabisco.* New York: Harper & Row.

Cain, Matthew D., Stephen B. McKeon, and Steven Davidoff Solomon. 2017. Do Takeover Laws Matter? Evidence from Five Decades of Hostile Takeovers. *Journal of Financial Economics* 124:464–85.

Cen, Ling, Sudipto Dasgupta, and Rik Sen. 2016. Discipline or Disruption? Stakeholder Relationships and the Effect of Takeover Threat. *Management Science* 62:2820–41.

Chemmanur, Thomas J., Imants Paeglis, and Karen Simonyan. 2011. Management Quality and Antitakeover Provisions. *Journal of Law and Economics* 54:651–92.

Coase, R. H. 1959. The Federal Communications Commission. *Journal of Law and Economics* 2:1–40.

———. 1960. The Problem of Social Cost. *Journal of Law and Economics* 3:1–44.

Comment, Robert, and G. William Schwert. 1995. Poison or Placebo? Evidence on the Deterrence and Wealth Effects of Modern Antitakeover Measures. *Journal of Financial Economics* 39:3–43.

Cooter, Robert D., and Daniel C. Rubinfeld. 1989. Economic Analysis of Legal Disputes and Their Resolution. *Journal of Economic Literature* 27:1067–97.

Cutler, David M., and Lawrence H. Summers. 1988. The Costs of Conflict Resolution and Financial Distress: Evidence from the Texaco-Pennzoil Litigation. *RAND Journal of Economics* 19:157–72.

DeAngelo, Harry, and Edward M. Rice. 1983. Antitakeover Charter Amendments and Stockholder Wealth. *Journal of Financial Economics* 11:329–59.

Dimopoulos, Theodosios, and Stefano Sacchetto. 2014. Preemptive Bidding, Target Resistance, and Takeover Premiums. *Journal of Financial Economics* 114:444–70.

Easterbrook, Frank H., and Daniel R. Fischel. 1981. The Proper Role of a Target's Management in Responding to a Tender Offer. *Harvard Law Review* 94:1161–1204.

Eaton, Gregory W., Tingting Liu, and Micah S. Officer. 2021. Rethinking Measures of Mergers and Acquisitions Deal Premiums. *Journal of Financial and Quantitative Analysis* 56:1097–1126.

Eldar, Ofer, and Michael D. Wittry. 2021. Crisis Poison Pills. *Review of Corporate Finance Studies* 10:204–51.

Ertimur, Yonca, Fabrizio Ferri, and Stephen R. Stubben. 2010. Board of Directors' Responsiveness to Shareholders: Evidence from Shareholder Proposals. *Journal of Corporate Finance* 16:53–72.

Fishman, Michael J. 1988. A Theory of Preemptive Takeover Bidding. *RAND Journal of Economics* 19:88–101.

French, Kenneth R., and Robert E. McCormick. 1984. Sealed Bids, Sunk Costs, and the Process of Competition. *Journal of Business* 57:417–41.

Gayle, Wendy B. 1989. The Defensive and Offensive Use of "Poison Pills" within the Business Judgment Rule. *University of Richmond Law Review* 24:127–50.

Gilson, Ronald J. 2001. *Unocal* Fifteen Years Later (and What We Can Do about It). *Delaware Journal of Corporate Law* 26:491–513.

Gilson, Ronald J., and Reinier Kraakman. 1990. What Triggers *Revlon*? *Wake Forest Law Review* 25:37–59.

Goldman, Eitan, and Jun Qian. 2005. Optimal Toeholds in Takeover Contests. *Journal of Financial Economics* 77:321–46.

Gompers, Paul, Joy Ishii, and Andrew Metrick. 2003. Corporate Governance and Equity Prices. *Quarterly Journal of Economics* 118:107–55.

Gorbenko, Alexander S., and Andrey Malenko. 2014. Strategic and Financial Bidders in Takeover Auctions. *Journal of Finance* 69:2513–55.

———. 2020. Auctions with Endogenous Initiation. Working paper. University College London, Department of Economics, London.
Grundfest, Joseph A. 1993. Just Vote No: A Minimalist Strategy for Dealing with Barbarians inside the Gates. *Stanford Law Review* 45:857–937.
Haddock, David D., Jonathan R. Macey, and Fred S. McChesney. 1987. Property Rights in Assets and Resistance to Tender Offers. *Virginia Law Review* 73:701–42.
Hansen, Robert G. 2001. Auctions of Companies. *Economic Inquiry* 39:30–43.
Harford, Jarrad. 2005. What Drives Merger Waves? *Journal of Financial Economics* 77:529–60.
Heron, Randall A., and Erik Lie. 2006. On the Use of Poison Pills and Defensive Payouts by Takeover Targets. *Journal of Business* 79:1783–1807.
Herzel, Leo, and Richard W. Shepro. 1989. Negotiated Acquisitions: The Impact of Competition in the United States. *Business Lawyer* 44:301–22.
Jarrell, Gregg A. 1985. The Wealth Effects of Litigation by Targets: Do Interests Diverge in a Merge? *Journal of Law and Economics* 28:151–77.
Jarrell, Gregg A., and Michael Bradley. 1980. The Economic Effects of Federal and State Regulations of Cash Tender Offers. *Journal of Law and Economics* 23:371–407.
Jensen, Michael C. 1993. The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems. *Journal of Finance* 48:831–80.
Johnson, William C., Jonathan M. Karpoff, and Sangho Yi. 2015. The Bonding Hypothesis of Takeover Defenses: Evidence from IPO Firms. *Journal of Financial Economics* 117:307–32.
Kahan, Marcel. 1994. Paramount or Paradox: The Delaware Supreme Court's Takeover Jurisprudence. *Journal of Corporation Law* 19:583–606.
Kaplan, Steven N., and Per Strömberg. 2009. Leveraged Buyouts and Private Equity. *Journal of Economic Perspectives* 23(1):121–46.
Karpoff, Jonathan M., and Michael D. Wittry. 2018. Institutional and Legal Context in Natural Experiments: The Case of State Antitakeover Laws. *Journal of Finance* 73:657–714.
Kidd, Brian K. 2003. The Need for Stricter Scrutiny: Application of the *Revlon* Standard to the Use of Standstill Agreements. *Cardozo Law Review* 24:2517–73.
Lipton, Martin. 2005. Twenty Years after *Takeover Bids in the Target's Boardroom:* Old Battles, New Attacks, and the Continuing War. *Business Lawyer* 60:1369–82.
Liu, Tingting. 2020. The Information Provision in the Corporate Acquisition Process: Why Target Firms Obtain Multiple Fairness Opinions. *Accounting Review* 95:287–310.
Liu, Tingting, and J. Harold Mulherin. 2018. How Has Takeover Competition Changed over Time? *Journal of Corporate Finance* 49:104–19.
Liu, Tingting, and Micah S. Officer. 2021. Public News, Stock-Market Reactions, and Bidding Behavior in Private Merger Negotiations. Working paper. Iowa State University, Ivy College of Business, Ames.
Macey, Jonathan R. 1990. Auction Theory, MBOs, and Property Rights in Corporate Assets. *Wake Forest Law Review* 25:85–119.
Masulis, Ronald W., and Serif Aziz Simsir. 2018. Deal Initiation in Mergers and Acquisitions. *Journal of Financial and Quantitative Analysis* 53:2389–2430.
Mitchell, Mark L., and Kenneth Lehn. 1990. Do Bad Bidders Become Good Targets? *Journal of Political Economy* 98:372–98.
Mitchell, Mark L., and J. Harold Mulherin. 1996. The Impact of Industry Shocks on Takeover and Restructuring Activity. *Journal of Financial Economics* 41:193–229.

Policastro, Portia. 1991. When Delaware Corporate Managers Turn Auctioneers: Triggering the *Revlon* Duty after the *Paramount* Decision. *Delaware Journal of Corporate Law* 16:187–240.

Quint, Daniel, and Kenneth Hendricks. 2018. A Theory of Indicative Bidding. *American Economic Journal: Microeconomics* 10:118–51.

Rhodes, Melissa J. 1991. The White Knight Privilege in Litigated Takeovers: Leveling the Playing Field in Discovery. *Stanford Law Review* 43:445–75.

Romano, Roberta. 1988. The Future of Hostile Takeovers: Legislation and Public Opinion. *University of Cincinnati Law Review* 57:457–505.

Rubin, Paul H. 1977. Why Is the Common Law Efficient? *Journal of Legal Studies* 6:51–63.

Schwert, G. William. 1996. Markup Pricing in Mergers and Acquisitions. *Journal of Financial Economics* 41:153–92.

———. 2000. Hostility in Takeovers: In the Eyes of the Beholder? *Journal of Finance* 55:2599–2640.

Stulz, René M. 1988. Managerial Control of Voting Rights: Financing Policies and the Market for Corporate Control. *Journal of Financial Economics* 20:25–54.

Velasco, Julian. 2002. The Enduring Illegitimacy of the Poison Pill. *Journal of Corporation Law* 27:381–423.

Yablon, Charles M. 1989. Poison Pills and Litigation Uncertainty. *Duke Law Journal,* pp. 54–91.