

Who Initiates Takeovers?

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Keywords: Takeover, Merger, Deal Initiation, Target Board, CEO Age, CEO Incentives, Offer Premium, Geographic Proximity, Production Similarity

JEL Classifications: G34

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Abstract

Who *initiates* a takeover process determines whether observed firm- and chief executive officer (CEO) characteristics reflect participation in a transaction or the endogenous decision to start one. We hand-classify initiation for 4,636 U.S. takeover bids over 1996–2016, the largest such sample to date, and compare targets and public acquirers with characteristics of matched non-merging firms. Targets initiate as much as 55% of classified deal processes, either alone (43%) or jointly (12%). Conditioning on initiation changes the interpretation of prominent CEO-age effects reported in the literature: Retirement-age target CEOs are no more likely to initiate a sale; instead, bidders disproportionately approach firms led by CEOs nearing retirement. Moreover, young acquirer CEOs are overrepresented in both bidder- and target-initiated deals, indicating that CEO youth predicts acquisition participation rather than active deal initiation. Target initiation is positively associated with vested CEO equity but strongly negatively associated with unvested equity, as if incentivizing the CEO to continue the firm as a stand-alone company. These and other findings show that standard takeover correlations conflate selection into deals with the choice to initiate them.

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1 Introduction

For decades, research on the market for corporate control has taken the deal *initiation* decision as exogenously given—as if the asset were already up for sale when the analysis begins (Jensen and Ruback, 1983; Betton et al., 2008). There is, however, a growing interest in also understanding who moves first in the takeover game and how it affects deal outcomes. Many familiar motives for bidder initiation have seller-side analogues. A target board may search for a partner to realize the value of prior R&D investments (Phillips and Zhdanov, 2013), pursue a sale when external financing is costly, or initiate one when managerial change-of-control incentives favor a transaction (Yermack, 2006; Jenter and Lewellen, 2015). Also, by moving first, the target may in principle be able to capture the bulk of the rents from the control change (Liu and Bernhardt, 2021), unless the move also signals that the target is under financial pressure (Masulis and Simsir, 2018).

For a buyer contemplating approaching a target firm, one concern is that the initiation may signal a valuable investment opportunity to free-riding rival bidders (Gorbenko and Malenko, 2024). For a potential seller, the concern is that a successful deal will typically result in the termination of executives and directors (Hartzell et al., 2004). Reflecting this agency friction, some seller initiations are forced: an independent board, large shareholders, or activist investor may push for the sale of a poorly performing firm (Greenwood and Schor, 2009; Boyson et al., 2017; Brav et al., 2022). The emergence of costly structural takeover defenses such as the poison pill, which were deemed legal by the early 1990s and substantially raised the cost of unsolicited and unwanted bids, may also have required targets that want to be acquired to start the process.¹

In this paper, we provide new large-sample evidence, at both the intensive and extensive margins, on how CEO age and compensation structure are associated with voluntary target initiations. It is instructive to illustrate how conditioning on initiation may affect conventional interpretations of deal outcomes. Consider the important finding of Jenter and Lewellen (2015) that target firms tend to have a CEO close to retirement age. Without knowing the initiating party, this evidence has been interpreted to mean that retirement-age CEOs are more likely

¹See, e.g., Gompers et al. (2003) and Bebchuk et al. (2009). Brown et al. (2022) argue based on empirical evidence that the strengthening of target-board control after the 1989 *Time Inc.* landmark court decision may have shifted takeover auctions behind the scenes and increased target initiation. See also Internet Appendix A.

to cash out by putting their firms up for sale. However, the same evidence is consistent with bidders disproportionately seeking out targets led by passive, retirement-age CEOs—precisely because these may be amenable to accepting a deal. In another setting, Yim (2013) reports that acquisition propensity declines with CEO age. This may suggest that young CEOs actively originate acquisitions or, alternatively, that young CEOs are overrepresented among buyers in *target*-initiated transactions. Yim (2013)’s own suggestion that young acquisitive CEOs appear to act as “empire builders” is less likely to hold under the latter.²

To sort out these and other interesting issues, we manually classify the initiating party for 4,636 takeover bids involving public U.S. targets over the twenty-year period 1996–2016. We start by showing that targets initiate 43% of the bids we can classify, while another 12% are jointly initiated with the bidder. Thus, targets initiate, alone or jointly, as much as 55% of classified takeover processes. Target initiation is economically important throughout the sample period, accounting for at least 28% of the bids in every year. Hence, the conventional view that the bidder initiates the deal process describes less than half of the processes that lead to announced takeover bids.³

For our analysis of initiation at the extensive margin, we implement the methodology of Bena and Li (2014) and match each target and public acquirer to five non-merging firms with similar industry and size characteristics. We also construct counterfactual target–acquirer pairs, allowing us to identify distinguishing characteristics that drive the actual pairing. We use these matches to estimate selection into target and acquirer roles, separately by initiation type. This empirical design is necessary to distinguish characteristics associated with becoming a target or an acquirer from those associated with initiating the deal process. As developed in Section 4.1, we sort the potential drivers of initiation into three broad areas: CEO incentives, firm performance and financing capacity, and information and search frictions.

²As a third example, we argue in separate work that a stock-financed bid need not reflect opportunistic timing if the bidder does not self-select when to start the deal process (Eckbo et al., 2026). There, we also show that, once the test of opportunism conditions on deal initiation, the evidence does not support the opportunism interpretation of the data.

³The fraction of target-initiated deals in our sample is higher than reported in the extant literature, where the sample sizes are smaller—ranging from N=388 bids in Liu and Mulherin (2018) to N=1,821 in Brown et al. (2022). Other studies that condition on deal initiation include Aktas et al. (2010) (N=1,774), Masulis and Simsir (2018) (N=1,268), and Fidrmuc and Xia (2019) (N=1,098). We comment on this literature below, all of which address deal initiation at the intensive margin.

Starting with target CEO age, we show that retirement-age CEOs are no more likely to initiate a sale than matched control-firm CEOs, whereas young CEOs are significantly less likely to do so. A related age effect instead appears on the other side: bidders disproportionately initiate offers for targets led by CEOs nearing retirement (ages 59–63). In other words, while retirement-age target CEOs are more likely to participate in deals, they do not typically *initiate* those deals. Also, while we confirm that firms led by young CEOs are more likely to become the successful acquirer in bidder-initiated deal processes, young CEOs are similarly overrepresented among buyers in target-initiated transactions. CEO youth therefore predicts acquisitive *participation*—not acquisitive *initiative*.

Next, we show that the likelihood of target initiation increases with the CEO’s exercisable option holdings relative to matched control firms. Moreover, within sample (intensive margin), we find that target initiation is positively associated with vested equity but strongly *negatively* associated with unvested equity. This finding is interesting since takeovers typically accelerate vesting, which benefits the CEO.⁴ Nevertheless, unvested equity appears to incentivize the CEO to continue the firm as a stand-alone entity rather than initiate a sale. Since we control for CEO age, this marginal incentive effect may be driven by CEOs for whom a sale of the firm would terminate a series of valuable future equity awards specific to the target firm.⁵

Third, expanding prior evidence on merger matching, we show that geographic proximity and product-market relatedness strongly predict the observed match across initiation types.⁶ High-tech firms are also more likely to become both targets and acquirers in target- and bidder-initiated deals, which extends the evidence in Phillips and Zhdanov (2013) that research-intensive firms often combine through M&A. We also examine whether deal initiations differ on and off industry merger waves among public firms, and find that the target is more likely to operate in an industry on the wave than off the wave when the bidder initiates the deal. At the same time,

⁴For public companies, the vesting rules contained in the CEO’s employment contract typically mean that unvested awards vest immediately provided (i) a change in control occurs and (ii) the executive is subsequently terminated without cause or resigns for “good reason” (so-called double-trigger vesting).

⁵In related research, Fidrmuc and Xia (2019) examine how the initiation decision depends on target-CEO ownership and compensation. They find that the likelihood of target rather than bidder initiation is positively related to the target CEO’s ownership and compensation (including pretakeover stock and option grants). They do not, however, include data on the CEO ownership and compensation of their bidder firms.

⁶We use the product market relatedness scores developed by Hoberg and Phillips (2010, 2016). For firm location and geographic clusters, see also Kedia et al. (2008), Almazan et al. (2010) and Eckbo et al. (2018).

industry waves do not affect the likelihood of target initiation.⁷

Finally, we extend the within-deal evidence in Masulis and Simsir (2018) that target-initiating firms are financially weaker and receive lower offer premiums. We show that target-initiating firms are also financially weaker at the extensive margin—relative to matched non-merging firms: they have poorer past stock returns, higher leverage, lower cash balances, and lower investment. By contrast, successful acquirers in bidder-initiated deals are large and financially strong, with high prior stock returns and low leverage. We also confirm the lower-premium result for target-initiated deals in our substantially larger sample.

Overall, our paper contributes substantially to the growing literature that reconstructs the private takeover process from SEC filings. Boone and Mulherin (2007) first showed that takeover negotiations begin well before the public announcement recorded by SDC and often unfold through competitive private contacts. We add the missing first step: which side set that process in motion. Our empirical design is unique in that we treat initiation as an extensive-margin selection decision and benchmark observed targets and public acquirers against matched non-merging firms, and not only against other takeover participants. We show that this design, which is necessary to separate characteristics that predict participation from those that predict deal initiation, alters the role of prominent deal characteristics, such as CEO age and compensation, while confirming others.

2 Data and initiation classification

2.1 Sample selection

We begin with takeover bids recorded in Thomson SDC Platinum’s Mergers and Acquisitions database with announcement dates between May 6, 1996—when electronic filing with the SEC became mandatory—and December 31, 2016. We require the target to be a publicly traded U.S. firm, the transaction to be classified by SDC as a “merger” (M) or an “acquisition of majority interest” (AM), and the reported deal status to be either completed or withdrawn. For each bid, we search SEC EDGAR for merger-related filings submitted by the target or bidder dur-

⁷This difference between bidder and target initiation frequencies is consistent with bidder preemptive acquisition motives (Harford, 2005; Fridolfsson and Stennek, 2005; Toxvaerd, 2008).

ing the twelve months following the announcement. The principal sources are DEFM14A and PREM14A proxy statements, Schedule TO-T tender-offer filings, Schedule 14D-9 recommendation statements, and S-4 registration statements, supplemented by other transaction filings when these documents are unavailable. Requiring CRSP and Compustat coverage and an EDGAR filing that describes the merger process yields 7,478 bids, which form the universe for our initiation coding and appear in column 1 of Table 1.

Public-company takeovers generate detailed SEC disclosures about the process leading to the transaction. In a merger, the target typically files a proxy statement under Regulation 14A soliciting shareholder approval, and the “Background of the Merger” section provides a chronology of the negotiations, including who contacted whom, when, and for what purpose. In a tender offer, the target board’s Schedule 14D-9 recommendation statement contains an analogous “Background of the Offer” section. The credibility of these disclosures reflects the fact that they are prepared with securities counsel, approved through the board process, subject to the federal securities laws, and often scrutinized by the SEC and in litigation.

These background sections describe the private phase of the takeover process. Boone and Mulherin (2007) show that this phase often begins months before the first public announcement, although they do not classify the initiating party. While the public (post-announcement) phase may involve bid revisions, competing offers, and withdrawals before the final shareholder vote, it is the private phase that reveals who first set the process in motion. The background sections documenting this phase have therefore become the common source for initiation classifications in the literature.⁸

As shown in column 2 of Table 1, we identify the initiating party for 4,636 bids, or 62% of the 7,478-bid coding universe. In the remaining cases, the background narrative is too vague to attribute the first move, or the retrieved filing does not describe the transaction. As a reliability check, roughly ten percent of the coded bids were independently initiation-coded by a second reader, with disagreements resolved through the authors’ review of the underlying background section.

The initiation-coded sample includes both completed and withdrawn transactions, reducing

⁸See, e.g., Aktas et al. (2010), Masulis and Simsir (2018), Liu and Mulherin (2018), Fidrmuc and Xia (2019), Brown et al. (2022), and Eckbo et al. (2026).

selection on eventual deal completion. This protection is incomplete, however. Because coding requires a merger filing, we observe bids withdrawn after the filing stage but not sale processes or private approaches abandoned before any filing. More broadly, we observe only initiation processes that culminate in an announced bid. A target that begins a sale process but attracts no buyer does not generate a merger filing, just as a bidder whose private approach is rebuffed before producing an announced bid remains unobserved. Our initiation frequencies therefore describe *announced takeover bids*, not all initiation attempts, and the extensive-margin estimates below characterize firms whose initiation efforts lead to an announced bid.

2.2 Classifying initiations

We manually read the background section for each deal and classify the initiator based on the earliest documented action that sets the sale process in motion. Importantly, we code initiation of the entire sale process, not initiation of the specific transaction that is eventually announced.⁹ We define six mutually exclusive categories:

Target board. We classify a deal as target-board initiated when the target board or management first sets the sale process in motion. For example, the board may begin a review of strategic alternatives in response to poor performance and ultimately retain an investment bank to seek buyers. A subsequent approach by an acquirer does not change the classification if the target had already begun the sale process.

Target shareholder. We classify a deal as target-shareholder initiated when a large shareholder or activist investor takes the earliest documented action, typically by pressing the target board or management to pursue strategic alternatives or a sale. The process may begin with a strategic review and culminate in an investment bank seeking buyers. This is the initiation channel studied in the literature on activism-driven acquisitions (Greenwood and Schor, 2009; Boyson et al., 2017).

⁹This distinction matters when comparing initiation rates across studies. A process set in motion by the target board may later culminate in an approach by the eventual buyer, which a deal-level classification would label bidder-initiated. Our process-level coding assigns such cases to the target. Section 2.4 returns to this distinction when comparing our frequencies with the literature.

Winning bidder. We classify a deal as winning-bidder initiated when the eventual acquirer’s approach to the target is the earliest documented action in the sale process, with no prior target-side effort to begin a sale.

Rival bidder. We classify a deal as rival-bidder initiated when a buyer other than the eventual acquirer makes the first approach to the target. The eventual acquirer enters the process later, either independently or after being contacted by the target or its investment bank.

Joint effort. We classify a deal as a joint effort when the transaction emerges from discussions between the bidder and the target and the filings provide no basis for identifying either party as the first mover. Such discussions may follow a prior business relationship, joint venture, or other strategic interaction.

Merger of equals. We classify a deal as a merger of equals if the background of the merger explicitly uses this terminology. This category lacks a clear initiating party.

In the analysis below, we combine target-board and target-shareholder initiations as *target-initiated*; winning-bidder and rival-bidder initiations as *bidder-initiated*; and joint effort and merger of equals as *jointly initiated*.¹⁰

The acquisition of Pan Pacific Retail Properties by Kimco Realty Corporation illustrates a target-board initiation. Pan Pacific’s board first reviewed strategic alternatives and then instructed its investment bank to solicit interest from three selected buyers, including Kimco. Kimco ultimately prevailed. Although the announced transaction appears simply as a friendly negotiated merger, the background section shows that the target had already set the sale process in motion. Appendix B describes two recent takeovers—one bidder-initiated, one target-initiated—in more detail.

A target board that begins such a process does not trigger Revlon duties immediately—the obligation to seek the highest value reasonably available in a sale of control. As Internet Appendix (IA) A explains, Delaware law generally permits a board to explore strategic alter-

¹⁰In rival-bidder-initiated deals, the eventual acquirer—whose characteristics enter the buyer-side analysis—did not itself initiate the process. Section 4.2 discusses where this distinction matters.

natives, including a possible sale and even a limited auction, before those duties attach. This legal flexibility gives boards substantial scope to test buyer interest privately, consistent with the target-led processes documented in the background sections.

2.3 Who initiates, and when

Table 1 reports the initiation-coded sample by announcement year and detailed initiator type, while Figures 1–2 plot the corresponding time series; the frequencies are shown in Figure 3. Over the full sample period, the target board initiates 1,919 bids (41.4%) and target shareholders initiate another 85 (1.8%), for a combined target-initiation frequency of 43.2%.¹¹ The winning bidder initiates 1,364 bids (29.4%) and a rival bidder initiates 717 (15.5%), for a combined bidder-initiation frequency of 44.9%. The remaining 551 bids (11.9%) are jointly initiated, comprising 499 joint efforts and 52 mergers of equals. Thus, targets initiate, alone or jointly, 55% of classified takeover processes, and bidder-initiated transactions account for less than half of the sample.

The time series reveals two broad shifts. First, the target-initiation share declines from roughly 46% of coded bids in 1996–2009 to about 34% in 2010–2016. Second, rival-bidder initiation rises sharply over the same period, from about 11% of coded bids before 2010 to roughly one-third thereafter: the decline in target initiation is accompanied not simply by more winning-bidder initiation, but by more processes in which the bidder that moves first does not ultimately acquire the target. Jointly initiated deals, including mergers of equals, also become rare after the financial crisis. Because the coding rate varies over time, we interpret these changes as broad compositional patterns rather than precise year-to-year movements.

2.4 Comparison with prior classifications

The frequencies and trends documented above are broadly consistent with the two other initiation classifications that span recent decades. Brown et al. (2022) document a long-run rise in target initiation over 1981–2020 as the formal takeover auction process developed. Our sample

¹¹Although small in number, shareholder-initiated bids rise from about 1.5% of coded bids in 1996–2009 to about 3% in 2010–2016, consistent with the growing role of activist investors in sale processes (Greenwood and Schor, 2009; Boyson et al., 2017).

begins in 1996, after much of that increase had already occurred, and the post-2010 shift toward rival-bidder initiation is consistent with the continued spread of the structured, auction-like sale processes they describe.

Eckbo et al. (2026), in an independent data-collection effort covering completed takeovers over 2000–2020, apply the same process-level convention: a deal remains target-initiated if the target had already begun a sale process before the eventual buyer approached. They report a 34% target-initiation rate. The difference from our full-sample rate of 43% appears to be driven primarily by the later sample window, since our own target-initiation rate is also 34% over 2010–2016. Differences in completion restrictions and the treatment of ambiguous disclosures may account for the remainder. The close agreement across two independent readings of the same SEC disclosures supports the replicability of process-level initiation coding and complements the internal double-coding check in Section 2.1.

3 Takeover-sample characteristics by initiation type

We next compare the characteristics of firms and deal pairs across initiation types. Table 2 reports target characteristics in Panel A, acquirer characteristics in Panel B, and pair characteristics in Panel C for target-, bidder-, and jointly initiated deals. The final two columns report the difference in means between bidder- and target-initiated deals and the corresponding *t*-statistic.

Targets that initiate their own sale have a distinctly weaker financial profile than targets that are approached. They are roughly half the market capitalization of targets in bidder-initiated deals, carry more leverage, hold less cash, and are less profitable—a pattern first documented by Masulis and Simsir (2018)—and they are younger public firms, consistent with younger companies seeking a larger partner to develop or commercialize organizational capital (Phillips and Zhdanov, 2013). The clearest difference is in recent market performance: initiating targets underperform the market by 22.5% over the year before the bid, compared with 12.9% for targets in bidder-initiated deals, and they exhibit higher return volatility. Yet the median initiating target remains operationally sound, with a positive operating margin and return on

assets (ROA). The typical firm that initiates its own sale is financially weak, not distressed.

Acquirers in target-initiated deals are also smaller, more levered, and exhibit weaker prior stock performance than acquirers in bidder-initiated deals (Panel B). They are slightly less likely to be publicly listed and more likely to be financial buyers, consistent with target-run sale processes attracting private-equity participation (Fidrmuc et al., 2012) and with bidders preferring that the target open the process when bidder valuations share a large common component (Gorbenko and Malenko, 2024). Panel C shows that target- and bidder-initiated pairs differ little in product-market relatedness and geography, apart from a somewhat higher same-industry frequency among bidder-initiated deals—an initial indication, developed formally in Section 4.5, that initiation matters less for *who matches with whom* than for *which firms transact at all*.

We turn from firm fundamentals to governance and executive pay. Table 3 reports target ownership structure, board characteristics, and CEO compensation, hand-collected from each target’s last annual proxy statement (DEF 14A) before the bid, so coverage extends beyond the ExecuComp and BoardEx universe of larger firms. Target-initiated deals feature significantly higher inside ownership—CEO ownership averages 6.4%, compared with 5.3% in bidder-initiated deals ($t = 3.51$), while directors excluding the CEO hold 21.0%, compared with 17.5% ($t = 5.95$)—consistent with the positive relation between ownership and initiation documented by Fidrmuc and Xia (2019). Outside ownership also appears more concentrated: the largest block is larger ($t = 3.75$) while the number of blockholders is modestly but significantly lower. Fewer, larger owners—both inside and outside the firm—may strengthen incentives to pursue a sale when it creates value and reduce the coordination costs of initiating one (Shleifer and Vishny, 1986). Board size and the incidence of staggered boards are similar across initiation types.

Panel B shows that target CEOs in the two groups are nearly identical in age (54.2 versus 54.4 years), gender, and tenure. This similarity provides an important benchmark for the analysis in Section 5.1, where the CEO-age effects emerge in comparisons with matched control firms rather than between target- and bidder-initiated deals. Compensation differs substantially, however. CEOs of initiating targets receive lower total pay (a mean of \$2.5 million versus \$3.2 million; $t = 3.24$) and, most notably, hold far less *unvested* equity: mean unvested holdings are \$1.4 million, compared with \$2.9 million in bidder-initiated deals ($t = 5.90$), while their *vested* equity

holdings are virtually identical (\$39.7 million versus \$39.5 million). This asymmetry motivates the possibility, developed in Sections 4.1 and 5.2, that unvested grants bind the CEO to the stand-alone company rather than induce a sale.

Jointly initiated deals, finally, stand apart on both sides of the transaction. They combine the largest targets with buyers that are overwhelmingly publicly listed and rarely financial, the parties are disproportionately high-tech and drawn from the same industry, and their CEOs own the least equity, are the youngest, and receive the highest total pay (Tables 2 and 3). These characteristics point to strategic combinations between large, related, professionally managed firms—resembling mergers of equals and consistent with the heavy use of stock consideration documented in Section 6. We next ask which of the univariate differences in this section survive comparison with matched firms that did not become takeover participants.

4 Extensive-margin selection into takeover processes

The comparisons in Section 3 condition on a takeover occurring: they show how initiating targets differ from other takeover targets, but not whether a given characteristic makes a firm more likely to enter an announced takeover process. This section changes the benchmark by comparing observed targets and acquirers with matched non-merging firms. The resulting estimates establish the extensive-margin selection patterns by initiation type and provide the empirical foundation for the paper’s main applications in Section 5, where we revisit the CEO-age evidence and examine the role of CEO equity composition. We begin with the hypotheses and matched-control design, then examine target-, bidder-, and jointly initiated transactions, and conclude with matching at the target–acquirer pair level (Section 4.5).

4.1 Hypotheses

We organize the potential drivers of initiation into three groups. The first, and the one motivating our central tests, is *CEO incentives*. Initiation allows us to distinguish managerial characteristics associated with participation in the takeover market from those that predict the decision to start a sale or acquisition process. On the target side, career concerns imply

that younger CEOs, who have more future private benefits of control to lose, should be reluctant to initiate a sale, whereas retirement preferences (Jenter and Lewellen, 2015) predict that retirement-age CEOs should be disproportionately represented among target initiators relative to otherwise similar firms that do not become targets. On the bidder side, an empire-building interpretation of young acquirer CEOs (Yim, 2013) predicts that their overrepresentation should be concentrated in bidder-initiated transactions. If young CEOs are equally prevalent when the target starts the process, age may instead identify selection into acquisitive firms rather than a greater propensity to initiate acquisitions.

Equity incentives generate additional target-side predictions. Greater managerial and director ownership should align insiders with shareholders and increase their willingness to initiate a value-increasing sale (Shleifer and Vishny, 1986; Fidrmuc and Xia, 2019). The composition of the CEO’s equity generates a sharper prediction. The effect of unvested equity is less clear. Unvested awards may accelerate or be cashed out in a change of control, making them an inducement to sell, but they are generally at risk of forfeiture if the CEO leaves before vesting. When acceleration is incomplete, double-triggered, or renegotiated in the transaction, unvested equity may instead tie the CEO’s wealth to the stand-alone firm and be associated with a lower propensity to initiate. Which force dominates is an empirical question.

The second group comprises *firm performance and financing capacity*. A board’s incentive to initiate a sale should rise as the firm’s stand-alone prospects deteriorate or external financing becomes costly. Poor stock returns, high leverage, low cash holdings, and curtailed investment should therefore predict target initiation, with a sale serving as an alternative to issuing securities (Eckbo et al., 2007), short of the extreme cases of distress and bankruptcy sales (Shleifer and Vishny, 1992; Hotchkiss and Mooradian, 1998). Conversely, bidder initiation should be associated with financial strength, including strong past performance, low leverage, and spare debt capacity.

The third group is *information and search frictions*. In Gorbenko and Malenko (2024), a bidder’s indication of interest reveals information on which rivals can free-ride. This discourages bidders from moving first when valuations have a large common-value component and creates a role for the target in opening the process. A target’s decision to shop itself may also convey

adverse private information and thereby depress offers (Masulis and Simsir, 2018). At the pair level, initiation and matching should be easier when firms are geographically close or product-market related, because potential synergies and suitable counterparties are easier to identify. Section 4.5 tests whether these forms of proximity predict who matches with whom and whether their importance varies with initiation type.

4.2 Matched-control design

To characterize the extensive margin of initiation, we benchmark each target and each acquirer against observationally similar firms that do not enter the corresponding takeover role. Following Bena and Li (2014), we select industry- and size-matched control firms in the year before the bid and construct samples using either the closest match or the five closest matches.¹² Acquirer controls are additionally required to have made no acquisition in the three years preceding the match. Section C of the Internet Appendix details the matching procedure, including the industry-fallback rule when a four-digit SIC industry contains too few candidate controls, and the full set of specifications underlying the firm-level, pair-level, and within-deal tests.

We estimate conditional logit models in which the dependent variable equals one for the observed takeover firm and zero for its matched controls. Deal-match-group fixed effects ensure that identification comes from within each matched set, and standard errors are clustered by matched set. We estimate the models separately for target-, bidder-, and jointly initiated deals and separately for the seller and buyer sides of each transaction.

The buyer-side models are restricted to publicly listed acquirers with Compustat data. Their interpretation depends on the identity of the initiator. In winning-bidder-initiated deals, they compare the initiating acquirer with matched non-acquirers. In rival-bidder-initiated deals, they compare the eventual acquirer with matched firms even though that acquirer did not make the first move. Estimates for the combined bidder-initiated category therefore characterize firms that become the eventual buyer in a bidder-opened process, not uniformly firms that initiate the process themselves (Section 2.2). In practice, the distinction is bounded: the eventual

¹²Following the full menu in Bena and Li (2014), we also construct control samples matched on industry, size, and book-to-market using propensity scores; all results below are qualitatively similar. The reported tables use the industry- and size-matched controls.

acquirer itself initiated 1,364 of the 2,081 bidder-initiated deals (66%; Table 1).

Explanatory variables are measured at the end of the fiscal year preceding the bid year and include firm fundamentals, institutional ownership from 13F filings, and—in the ExecuComp/BoardEx subsample—CEO compensation, equity incentives, and age-bracket indicators.¹³ Following Jenter and Lewellen (2015), we define CEOs as young (ages 18–53), pre-retirement (59–63), retirement age (64–66), or post-retirement (67 and above), with ages 54–58 forming the omitted category. The estimates characterize participation in announced takeover processes by initiation type. Where the focal firm itself initiates, they capture initiation that reaches public announcement rather than all attempted initiations.

Tables 5 and 6 first report univariate differences between takeover firms and their matched controls. By construction, controls are matched on industry and size. For targets, Table 5 confirms the quality of the match: four-digit SIC codes are identical, and differences in total assets and market capitalization are statistically insignificant (Panel A). Acquirer controls match exactly on industry, but acquirers remain larger than their controls (Panel B), reflecting the additional requirement that acquirer controls made no acquisition in the three years preceding the match, which excludes many of the largest firms from the control pool. Because $\ln$ total assets enters all the conditional logit models below, the estimates are not driven by this residual size difference.

Differences also emerge along dimensions not used in matching. Targets underperform their controls by eight percentage points over the prior year ($t = 6.84$), carry more leverage, hold less cash, and exhibit greater return volatility. Acquirers have higher sales growth, stronger prior stock performance, and lower leverage than their controls.

Takeover targets also have higher institutional ownership, more poison pills, lower CEO fractional ownership, more restricted stock, and older CEOs with shorter tenure than matched control firms (Table 6). These comparisons motivate the inclusion of ownership, takeover defenses, and CEO characteristics in the multivariate models. Most importantly, the age difference

¹³The matched-control design requires identically constructed variables for takeover firms and their control firms, which are often small and outside the ExecuComp universe. The commercial databases provide consistently constructed coverage for this comparison. The within-deal analyses in Sections 3 and 5.2, which involve deal firms alone, instead use CEO ownership, compensation, and age data hand-collected from annual proxy statements, extending coverage well beyond the ExecuComp universe.

reproduces in our sample the unconditional pattern documented by Jenter and Lewellen (2015): acquired firms have older CEOs than comparable firms that are not acquired. The initiation-conditioned estimates below decompose that pattern according to who moves first.

4.3 Which firms initiate a sale—and which buyers they attract

Which firms put themselves up for sale—and who buys them? Table 7 examines target-initiated deals. Columns 1–2 compare initiating targets with their matched controls in a multivariate framework, estimating the probability that a firm initiates its own sale; columns 3–4 compare the buyers in those deals with their matched controls, characterizing the acquirers that initiating sellers attract.

The central result in column 1 is that firms initiate a sale when internal funding is tight and market performance has disappointed: the probability of initiation decreases sharply with the prior-year market-adjusted stock return (coefficient -0.38 ; $t = 6.51$) and with cash holdings and capital expenditures, and increases with market leverage. Initiating targets are also disproportionately high-tech firms and face greater takeover activity among private firms in their industry. These estimates corroborate, against a counterfactual benchmark, the within-merger evidence in Masulis and Simsir (2018): the same financial weaknesses that distinguish initiating targets from other takeover targets also distinguish them from non-merging peers.

Notably, the target’s public-industry merger-wave indicator is insignificant, even though initiation rises with takeover activity among private firms in the industry. Firms therefore do not appear to put themselves up for sale simply because their listed peers are merging; private-firm activity may instead capture a broader market for assets, or information about acquisition opportunities, that encourages boards to consider a sale outside a public merger wave.

Columns 3–4 show that the buyers of target-initiated firms are large, low-leverage companies that hold little cash and invest relatively little internally, consistent with acquisitions substituting for internal investment. They also operate in industries with elevated private-firm takeover activity and have fewer institutional owners than their matched controls.

4.4 Which firms initiate acquisitions—and which targets they select

Table 8 repeats the analysis for bidder-initiated deals. Read together with Table 7, the estimates suggest a division of roles in the market for corporate control: firms with poor performance, high leverage, and limited liquidity are more likely to initiate their own sale, while bidder-opened processes pair large, better-performing, low-leverage buyers with targets in consolidating industries whose CEOs have relatively low ownership stakes and shorter horizons.

The seller-side estimates (columns 1–2) characterize the targets that initiating bidders *select*. Chosen targets have poor prior stock returns—though the point estimate is less than half that in the target-initiation model—are younger, and have higher institutional ownership. Unlike targets that initiate their own sale, they are concentrated in industries experiencing a *merger wave* (coefficient 1.27; $t = 4.81$), consistent with the shock-driven industry clustering of merger activity (Harford, 2005; Ahern and Harford, 2014). Bidders also select targets whose CEOs have lower fractional ownership and more restricted stock (column 2); Section 5.1 develops their age profile. The buyer-side estimates (columns 3–4) show that firms becoming buyers in bidder-opened processes have high recent stock returns, are large, and maintain low leverage.

The merger-wave contrast is the noteworthy asymmetry: the wave indicator that strongly predicts which targets bidders select is insignificant in the target-initiation model (Table 7). Public merger waves thus appear to operate through acquirers directing their search toward consolidating industries, not through firms in those industries putting themselves up for sale. Preemption motives explain both sides of the pattern: a bidder that waits risks being left without a suitable partner, or as an outsider to its rivals' combinations (Fridolfsson and Stennek, 2005; Toxvaerd, 2008), while targets in consolidating industries have little need to open a process that bidders are racing to start. Consistent with this reading, target initiation decreases with merger activity in the seller's industry but increases with merger activity in the buyer's industry in the within-deal estimates (Section 5.2). Takeover activity among private firms differs: it predicts initiation on both sides, consistent with private-market transactions revealing opportunities to boards and bidders alike.

Jointly initiated deals, finally, look different from both target- and bidder-initiated transactions. In the matched-control estimates for jointly initiated deals—joint efforts and mergers

of equals—reported in Table IA.1, both the target and the acquirer are large relative to their controls, while the targets are disproportionately high-tech and their CEOs hold relatively small fractional ownership stakes. These are combinations of substantial, professionally managed firms, consistent with the merger-of-equals label and echoing the univariate profile in Section 3.

4.5 Who buys whom: pair-level evidence

The firm-level models ask which firms transact, but not why a particular target matches with a particular buyer. In Table 9, we therefore conduct the analysis at the target–acquirer *pair* level for target-initiated deals; Tables IA.2 and IA.3 report the corresponding estimates for bidder- and jointly initiated deals. For each observed pair, we construct counterfactual pairs in both directions: the actual acquirer is paired with each of the target’s matched control firms, and the actual target is paired with each of the acquirer’s matched control firms. We then estimate conditional logit models with deal-level matched-set fixed effects, so identification comes from comparing the observed pair with its counterfactual alternatives within each deal. The pair-level specifications add two measures of proximity: the log geographic distance between the firms’ headquarters (Kedia et al., 2008) and an indicator that they are product-market rivals under the text-based network industry classification of Hoberg and Phillips (2016). These variables capture dimensions along which potential partners may be easier to identify, evaluate, and combine.

The pair-level results are strikingly consistent across initiation types. The probability that a particular pair transacts falls sharply with geographic distance and rises sharply with product-market similarity, with *t*-statistics exceeding 12 and 10 in the target-initiated specification; the bidder- and jointly initiated specifications in the Internet Appendix display the same pattern with comparable magnitudes. The importance of geographic and product-market proximity in merger pairing is well established (Hoberg and Phillips, 2010; Kedia et al., 2008; Almazan et al., 2010; Cai et al., 2016). The initiation decomposition shows that these forces remain strong regardless of which side moves first. Thus, initiation helps explain which firms enter the takeover process, while proximity helps explain which of those firms ultimately match.

Several firm-level patterns also remain visible in the pair specifications: seller underperformance and the young-buyer-CEO effect in target-initiated pairs (Table 9; $t = 2.84$, with

the coefficient of 0.88 implying more than twice the odds), and the buyers’ strong prior stock returns in bidder-initiated pairs (Table IA.2). These results reinforce the extensive-margin evidence while indicating that pair-specific proximity is a strong predictor of the eventual match.

Taken together, the firm- and pair-level estimates distinguish two margins. Firm characteristics predict which companies enter target- and acquirer roles under different initiation processes, while geographic and product-market proximity predict which firms ultimately match. Section 5 uses the first of these margins to revisit the interpretation of CEO age and to examine how the composition of CEO equity is associated with target initiation.

5 Reinterpreting CEO age and equity incentives

Initiation data matter most where inference hinges on who moves first. The matched-control estimates in Section 4 allow us to separate characteristics that predict participation in the takeover market from those that predict the decision to initiate the process. We use that distinction to revisit two prominent interpretations of CEO age in takeovers and then examine how the composition of target-CEO equity is associated with the decision to sell.

5.1 The CEO-age evidence

The ExecuComp/BoardEx specifications in Tables 7 and 8 allow us to revisit two prominent interpretations of CEO age in takeovers. Jenter and Lewellen (2015) show that acquisition likelihood rises when the target CEO reaches retirement age and interpret the pattern as evidence that retirement preferences encourage CEOs to sell. Yim (2013) shows that acquisitions are disproportionately made by firms with young CEOs and interprets the pattern as empire building by executives with long post-acquisition horizons. Both interpretations, as commonly drawn, depend on an unobserved selection margin: the CEO characteristic must predict the decision to open the takeover process, rather than merely participation in a process opened by the other side. Our initiation classification makes that distinction observable.

Target CEO age: cashing in, or being cashed out? A useful benchmark is that mean target-CEO age is virtually identical in target- and bidder-initiated deals—54.2 versus 54.4 years

(Table 3). The relevant differences therefore lie in particular age bands. Following Jenter and Lewellen (2015), we distinguish young CEOs, CEOs approaching retirement, CEOs of retirement age, and older CEOs.

If retirement preferences lead target CEOs to seek a sale, CEOs aged 64–66—the bracket that drives the incidence result in Jenter and Lewellen (2015)—should be disproportionately represented among target initiators relative to matched firms that do not become targets. We find no evidence that they are. In Table 7, Column 2, neither the pre-retirement indicator for ages 59–63 (coefficient 0.11, $t = 0.74$) nor the retirement-age indicator for ages 64–66 (coefficient -0.40 , $t = -1.52$) predicts target initiation. The retirement-age estimate is informative as well as insignificant: the point estimate implies 33% *lower* odds of initiating than the omitted 54–58 group, and the upper bound of the 95% confidence interval rules out an odds increase of more than about 12%. The data are thus inconsistent with retirement-age CEOs disproportionately putting their firms up for sale, not merely uninformative about it.

Young target CEOs, by contrast, are significantly less likely to initiate a sale: the coefficient of -0.31 ($t = -2.12$) corresponds to approximately 27% lower odds than the omitted group. This is what career concerns predict. A CEO in her forties or early fifties gives up more by selling than an older peer: the position anchors a managerial career with decades left to run, and with it future compensation, advancement in the managerial labor market, and the private benefits of running an independent firm (Jenter and Lewellen, 2015). Selling the company eliminates that platform, so any change-of-control payoff must compete with the discounted value of a long stream of expected future rents. For a CEO close to retirement the same trade-off should tilt toward selling—yet no corresponding excess propensity to initiate appears, suggesting that when firms led by retirement-age CEOs are sold, the impetus typically comes from the other side of the market.

A related age pattern instead appears on the bidder side. In Table 8, Column 2, the coefficient for target-CEO ages 59–63 is 0.30 ($t = 2.13$), corresponding to approximately 35% higher odds of becoming the target of a bidder-initiated offer. The retirement-age indicator (ages 64–66) is also positive but insignificant (0.26, $t = 1.18$). Taken in isolation, a single age-bracket coefficient significant at the 5% level warrants caution. The more compelling evidence is the joint pattern

across the two sides of the market: bidders disproportionately initiate offers for firms whose CEOs are approaching retirement, retirement-age CEOs are no more likely than control-firm CEOs to initiate a sale, and young CEOs are significantly *less* likely to do so.

Thus, the broader association between CEO age and takeover incidence documented by Jenter and Lewellen (2015) is present in our sample (Table 6), but the initiation-conditioned estimates point to a different mechanism and timing. Their incidence effect is concentrated in the retirement-age bracket (64–66); on the initiation margin, that bracket shows no significant effect on either side of the market, while the bidder-side selection concentrates just before retirement, at ages 59–63. The evidence is consistent with bidders approaching firms whose CEOs are nearing retirement and may therefore offer less resistance,¹⁴ rather than with retirement-age CEOs putting their firms up for sale. Their premium evidence points the same way: they find that offer premiums are similar for retirement-age and younger target CEOs, whereas if retirement-age CEOs disproportionately initiated sales, the lower premiums that accompany target initiation (Section 6) should produce a visible discount for their firms.

Why would bidders disproportionately approach firms led by CEOs who are approaching, but have not yet reached, retirement age? A bidder anticipating negotiations with target management cares about the CEO’s incentive to resist. A CEO with a short expected remaining horizon has less to lose from ceding control—fewer years of compensation, private benefits, and firm-specific investment remain—and a package of change-of-control payments can more easily compensate for what is left (Hartzell et al., 2004; Yermack, 2006). Approaching such a firm shortly *before* the CEO reaches retirement age may be particularly attractive: expected resistance is already low, but the board has not yet organized a succession or sale process that could attract competing buyers. On this reading, the concentration of bidder approaches among CEOs aged 59–63 reflects bidder timing with respect to the target CEO’s horizon—selection by the buyer, not initiative by the seller.

¹⁴Because we observe only initiation attempts that culminate in an announced bid (Section 2.1), we cannot rule out unobserved sale attempts by retirement-age CEOs that fail to attract a buyer. For such attempts to explain the results, however, failed target initiations would have to be unusually concentrated among retirement-age CEOs. That interpretation would also leave unexplained the bidder-side concentration among targets led by CEOs aged 59–63.

Acquirer CEO age and empire building. Initiation also refines the interpretation of young acquirer CEOs. Yim (2013) documents that acquisition propensity declines with CEO age and argues that young CEOs have stronger incentives to acquire because they can enjoy any post-acquisition increase in compensation over a longer horizon. Barger and Denis (2026) qualify the compensation premise; our tests address a different question—whether the young CEO is the source of the acquisition initiative.

Young acquirer CEOs are indeed overrepresented among buyers in bidder-initiated deals: the coefficient for age 53 or below is 0.37 ($t = 3.05$) in Table 8, Column 4, corresponding to approximately 45% higher odds of becoming the buyer. Viewed alone, that result is consistent with an empire-building interpretation. But young CEOs are also overrepresented among buyers in target-initiated deals, with a coefficient of 0.33 ($t = 2.57$)—approximately 39% higher odds—in Table 7, Column 4.

If CEO youth identified a greater propensity to initiate empire-building acquisitions, its effect should be concentrated in bidder-initiated deals. Instead, the implied odds increments are similar across the two initiation types—45% versus 39%. CEO youth therefore predicts which firms become acquirers, but does not by itself identify who takes the initiative. One interpretation is selection in the managerial labor market: firms whose strategies rely on acquisitive growth may appoint younger CEOs, and those firms are positioned both to search for targets and to respond when targets approach them. Alternatively, the compensation incentives above may operate at the decision to acquire rather than the decision to search: a young CEO with stronger incentives to grow the firm will also respond eagerly when a target approaches.¹⁵ Our design does not distinguish these interpretations; what it rules out is that CEO youth proxies for acquisitive initiative specifically.

Taken together, the two results illustrate why initiation is an economically important selection margin. CEO age continues to predict participation in the takeover market, but conditioning on who moves first changes the behavioral interpretations that can be drawn from those associations: it relocates the retirement-age effect to the bidder side of the market, and it narrows the youth effect from acquisitive initiative to acquisitive participation.

¹⁵Yim (2013) reports within-firm evidence against pure selection of young CEOs by acquisitive firms, consistent with incentives operating alongside any matching.

5.2 CEO equity composition and the decision to sell

Table 10 complements the matched-control estimates by asking, conditional on an announced takeover, which transactions are initiated by the target. Using the proxy-collected governance and CEO variables described in Section 3, we estimate probit models in which the dependent variable equals one for target initiation and zero for all other initiation types. The within-deal results largely reinforce the extensive-margin profile: target initiation is more likely in smaller deals and when the seller has poorer prior stock performance, higher leverage, and less cash. Conditional on the other covariates, target initiation is also associated with lower seller stock volatility, reversing the positive univariate difference in Table 2.

The merger-wave asymmetry of Section 4.4 also reappears within deals: target initiation decreases with merger activity in the seller’s industry ($t = 2.92$) but increases with merger activity in the buyer’s industry ($t = 2.89$).

The principal new evidence concerns governance and the composition of CEO equity. The governance variables in columns 3–4 are consistent with the incentive interpretation. In the governance specification (column 3), target initiation increases with non-CEO directors’ ownership ($t = 3.11$), CEO tenure ($t = 2.47$), and the CEO’s outside directorships ($t = 1.95$); of these, the outside-directorship effect remains significant in the full specification ($t = 2.31$), while the ownership and tenure effects weaken ($t = 1.80$ and 1.07). The sharpest and most robust patterns concern the composition of the CEO’s equity: in the full specification, target initiation increases with *total vested equity* ($t = 3.59$) and decreases sharply with *total unvested equity* ($t = 6.61$ and 4.71 in columns 3 and 4).

Taken together, the three empirical designs distinguish equity that is already vested or exercisable from equity whose realization remains contingent. In the univariate takeover sample, target-initiated deals feature substantially less total unvested equity, unvested stock, and unexercisable options than bidder-initiated deals, while total vested equity is nearly identical across the two groups (Table 3). In the matched-control models, exercisable options positively predict target initiation, while unexercisable options enter negatively but not significantly. In the within-deal specifications, as just shown, the pattern is sharpest: vested equity enters positively and unvested equity strongly negatively. The vested-versus-contingent distinction also appears

across two data sources: Table 7 uses ExecuComp option measures, whereas Tables 3 and 10 use the more granular proxy-collected equity measures.

The strong negative coefficient on total unvested equity shows that, in the within-deal design, contingent equity is associated with a lower likelihood of target initiation despite the possibility that such awards accelerate in a takeover. This pattern is consistent with a forfeiture-and-renegotiation channel that ties part of the CEO’s wealth to the stand-alone firm and outweighs any inducement from acceleration. A complementary horizon channel may also operate: large contingent positions often accompany substantial ongoing grant flows, and a sale truncates that future stream. CEOs with more unvested or unexercisable equity may therefore have more prospective compensation to lose from initiating a sale, even when existing awards accelerate fully. The pattern is also consistent, however, with boards that favor continued independence using contingent equity as a retention device. The estimates do not distinguish whether unvested equity directly affects initiation or instead reflects a preexisting stand-alone orientation.

These results also refine the ownership evidence in Fidrmuc and Xia (2019), who find that target initiation increases with target-CEO ownership and equity-based pay. Our univariate comparisons show the same positive relation (Table 3), but the matched-control and within-deal estimates indicate that the composition of the CEO’s equity—and, to a lesser extent, non-CEO directors’ ownership—are more robust predictors than CEO fractional ownership itself. Fractional ownership captures managerial alignment broadly; vesting and exercisability more directly determine how the CEO participates in the takeover consideration and what future compensation may be lost if the firm is sold. The evidence therefore shows that CEO equity composition contains information about whether the firm reaches the bargaining table—a margin that premium regressions, which condition on an observed deal, cannot identify.

6 Initiation and transaction outcomes

The preceding section examined which firms enter takeover processes and which side moves first. We now ask how initiation relates to the structure and pricing of the resulting transaction. Table 11 compares payment method, completion, offer premiums, and announcement returns

across initiation types.

Panel A shows that target- and bidder-initiated deals are similar in relative size, toehold frequency (5–6%, consistent with the rarity documented by Betton et al. 2009), and, importantly, completion rates (89% versus 88%). Any disadvantage associated with target initiation therefore does not appear in deal completion. Target-initiated deals are slightly less likely to be all-cash (42% versus 45%; $t = 2.06$), consistent with the greater use of stock documented by Eckbo et al. (2026), and somewhat more likely to be LBOs (13% versus 11%), in line with the higher financial-buyer share in Table 2. Jointly initiated deals are much more stock intensive: half are all-stock, only 18% are all-cash, and just 3% are LBOs.

Panel B shows the main intensive-margin pattern: offer premiums are consistently lower when the target initiates. Measured relative to the price 42 trading days before announcement, the mean premium is 39.6% in target-initiated deals and 45.9% in bidder-initiated deals, a difference of about 6.2 percentage points ($t = 3.28$). The gap widens to 9.4 percentage points at the 105-day horizon and remains under the dividend-adjusted premium measures of Eaton et al. (2021). Target announcement CARs are correspondingly lower (16% versus 20%; $t = 5.57$). Pre-bid runups are similar across the two groups, indicating that the premium difference is not driven by differential anticipation. Acquirer announcement CARs are small and statistically indistinguishable across initiation types, at approximately -2% .¹⁶

A target-initiation premium discount is not new: Masulis and Simsir (2018) report a gap of roughly ten percentage points in their 1,268-deal sample. Our estimates—about six percentage points at the 42-day horizon, widening to nine at 105 days—replicate the discount in a sample more than three-and-a-half times as large. The pattern is consistent with initiation revealing the seller’s greater willingness or need to transact. A similar discount arises in the equilibrium of Gorbenko and Malenko (2024), where sellers initiate when their private information or pressure to sell is unfavorable, so that initiation itself conveys adverse information about value. The discount can also be viewed as the mild end of a forced-sale gradient. Meier and Servaes (2019)

¹⁶In regressions using the 1996–2009 portion of our classification, the four-week premium discount for target-initiated deals is 6.9 percentage points ($t = 2.02$) after controlling for target size, leverage, R&D intensity, pre-bid price rundown, payment method, industry relatedness, and industry and year fixed effects. The corresponding coefficient for the three-day target announcement CAR is also negative ($t = 1.95$). Masulis and Simsir (2018) report similar conditional evidence in their sample; see also Liu and Mulherin (2018).

show that outright distressed sellers concede substantially larger discounts, whereas the initiating sellers in our sample are financially weak but typically not distressed (Section 3). The observed discount is therefore meaningful but well below fire-sale magnitudes.

Two caveats temper a purely bargaining-power interpretation. First, even bilateral negotiations occur under the latent threat that the target may solicit competing bids, which can discipline the negotiated price (Aktas et al., 2010). The similar completion rates and absence of higher acquirer announcement returns are also inconsistent with a simple transfer of rents from initiating targets to buyers. Second, Liu and Bernhardt (2021) show that sellers accepting stock or mixed cash-and-stock consideration may extract value through the terms of the securities received, which a conventional cash-premium measure does not fully capture. This consideration is especially relevant for the stock-heavy jointly initiated deals. Their mean 42-day premium is the lowest of the three groups, at 37.2%, but these transactions often resemble mergers of equals, in which gains are divided through the exchange ratio rather than reflected solely in a control premium.

7 Conclusion

Who initiates a takeover is an economically important feature of the market for corporate control. Using hand-collected initiation data for 4,636 U.S. takeover bids over 1996–2016, we show that targets initiate 43% of classified bids and participate jointly in initiating another 12%. The familiar image of a passive target waiting for a bidder therefore describes less than half of the takeover processes that lead to announced bids.

Observing initiation changes the interpretation of prominent CEO effects reported in the literature. Retirement-age target CEOs are no more likely than matched control-firm CEOs to initiate a sale; instead, bidders disproportionately initiate offers for firms led by CEOs approaching retirement. Young acquirer CEOs are overrepresented in both bidder- and target-initiated transactions, indicating that CEO youth predicts acquisition participation rather than bidder initiative.

The composition of target-CEO equity also predicts initiation: vested equity is positively

associated with target initiation, whereas unvested equity is strongly negatively associated with it. This pattern is consistent with contingent compensation tying the CEO more closely to the stand-alone firm, although it may also reflect endogenous compensation choices by firms already oriented toward remaining independent.

More broadly, the results show that takeover data can conflate selection into a transaction with the decision to start one. Matching takeover participants to non-merging firms allows us to distinguish characteristics that predict entry into target and acquirer roles from those that predict initiative. The same distinction clarifies the role of merger waves, firm financial condition, and target–acquirer matching. Initiation is therefore not merely a procedural feature of the sale process; it identifies whose decision brought the observed transaction into the takeover sample. Future work on takeover motives, bargaining, and managerial incentives should account for that first move explicitly.

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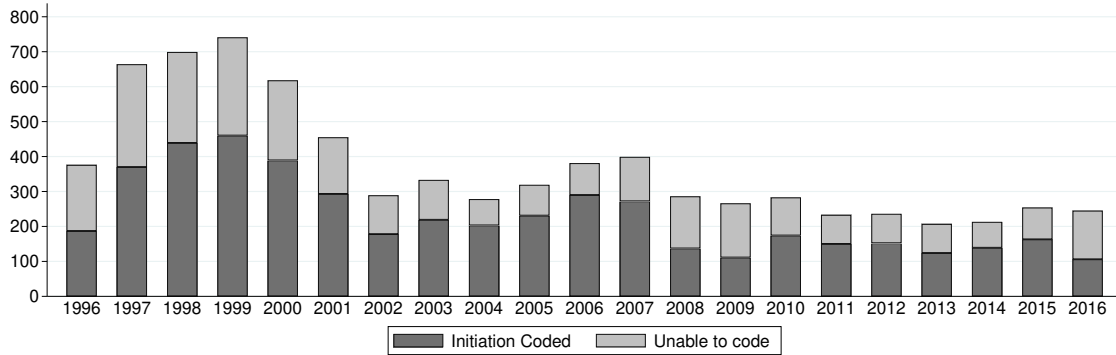
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Figure 1
Takeover bids and initiation coding by year

The sample is 7,478 takeover bids for U.S. publicly traded targets, 1996–2016, from Thomson SDC Platinum, with a CRSP and Compustat match and a merger filing on SEC EDGAR (Section 2.1). Takeover initiation is classified from the “Background of the Merger” sections of the SEC merger filings. Panel A shows the annual number of bids, split into bids for which the initiating party could be identified (Initiation Coded, $N=4,636$) and bids for which the background narrative is too vague to attribute the first move (Unable to Code). Panel B shows the annual number of initiation-coded bids by initiator group: the target (target board or shareholders), a bidder (the eventual acquirer or a rival bidder), and jointly initiated transactions (joint effort or merger of equals).

A. Number of takeover bids: initiation coded versus unable to code



B. Number of initiation-coded bids by initiator

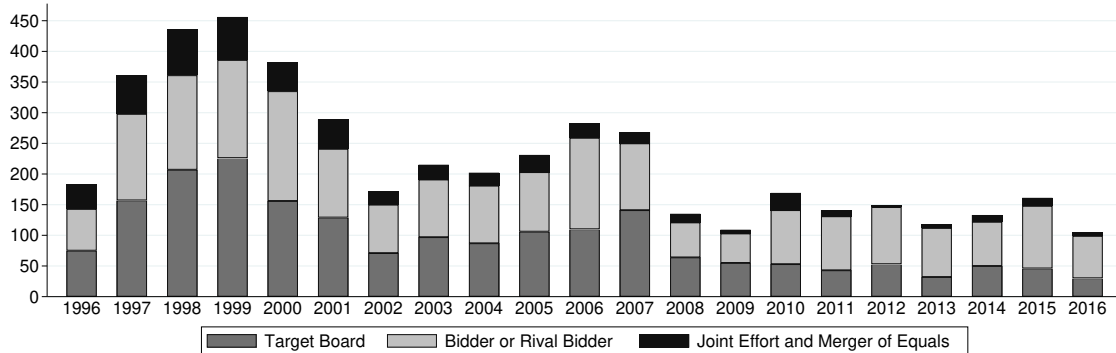
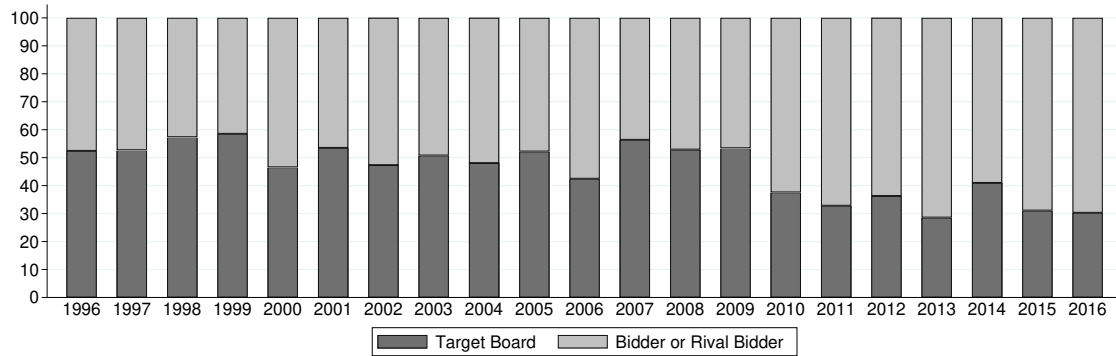


Figure 2

The share of target-initiated takeover bids by year

The sample is the 4,636 initiation-coded takeover bids for U.S. publicly traded targets, 1996–2016, described in Section 2.1. Takeover initiation is classified from the “Background of the Merger” sections of the SEC merger filings. Panel A shows, for each year, the percent of bids initiated by the target versus bids initiated by a bidder (the eventual acquirer or a rival bidder), excluding jointly initiated transactions. Panel B shows the percent of bids initiated by the target versus bidder- and jointly-initiated takeovers. The target-initiated share declines from roughly one-half in the late 1990s to below one-third after 2010.

A. Percent target- versus bidder-initiated takeovers



B. Percent target-initiated versus bidder- and jointly-initiated takeovers

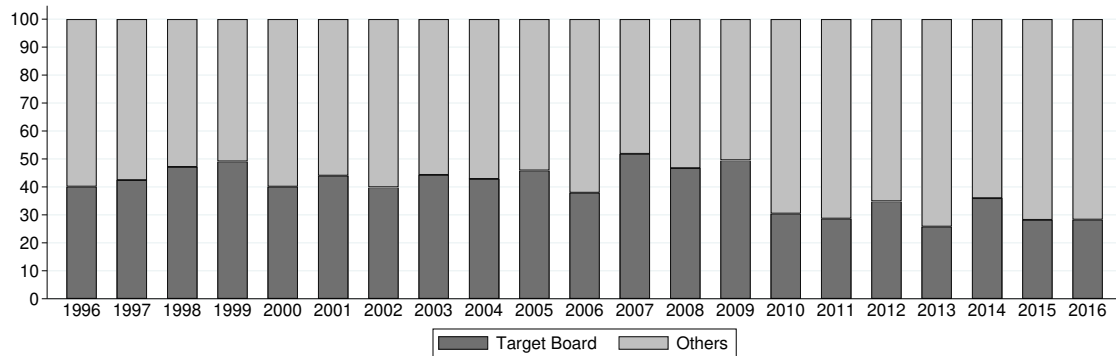


Figure 3

The initiating party in U.S. public target takeover processes

We classify takeover initiations based on the “Background of the Merger” section in SEC merger filings. In the category “Rival bidder”, a bidder other than the successful bidder initiated the deal. In “Joint effort”, the deal process is described as a joint effort. In “Merger of equals”, the transaction is described as a merger of equals *verbatim*. The sample includes 4,636 completed and withdrawn bids for U.S. public targets from 1996–2016. Percentages rounded to sum to 100.

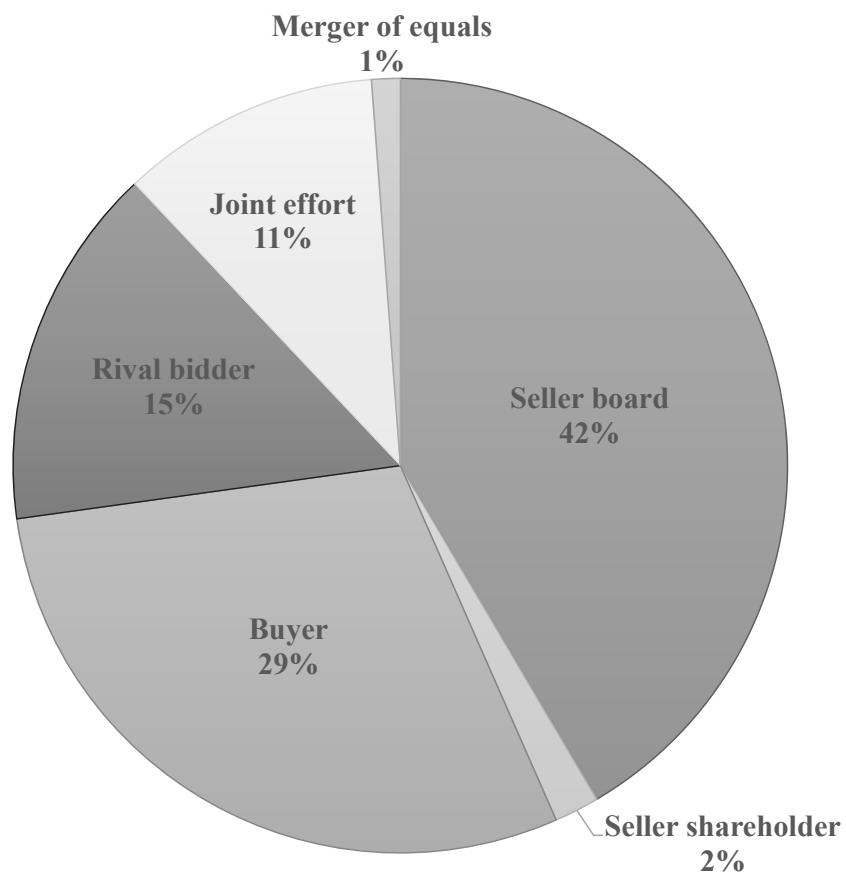


Table 1
Sample of takeover initiations by year

The table shows the number of observations by takeover initiation and year. Takeover initiation is determined based on the background section in the SEC merger filing. Transactions are coded as initiated by the target (target board or shareholders), a bidder (the acquirer or a rival bidder that loses the competition for the target), or jointly by the target and acquirer (joint effort or merger of equals). The sample is takeover bids for U.S. publicly traded firms, 1996–2016, from Thomson SDC Platinum. We select mergers (M) and acquisitions of majority interest (AM), and require the deal to be completed or withdrawn. Column 1 lists the number of target firms matched with CRSP and Compustat, and with a merger filing on EDGAR. Column (2) lists the number of bids for which the initiation of the takeover could be identified.

Year	All mergers (1)	All initiations (2)	Target initiated		Bidder initiated		Jointly initiated	
			Target board (3)	Share- holders (4)	Acquirer (5)	Rival bidder (6)	Joint effort (7)	Merger of equals (8)
1996	363	181	72	3	49	17	33	7
1997	628	354	151	8	119	17	53	6
1998	668	418	195	2	124	24	70	3
1999	697	426	206	3	130	21	61	5
2000	577	360	148	7	131	36	31	7
2001	440	287	125	4	87	24	39	8
2002	278	174	70	6	51	27	20	0
2003	327	215	94	4	73	21	19	4
2004	273	202	87	1	69	24	21	0
2005	309	228	106	0	65	29	27	1
2006	369	283	107	8	80	66	20	2
2007	391	270	139	4	62	47	16	2
2008	268	134	61	2	36	21	11	3
2009	250	106	53	2	28	18	5	0
2010	279	173	53	5	37	50	26	2
2011	228	149	43	9	41	46	10	0
2012	231	148	52	3	40	50	3	0
2013	201	122	32	5	36	43	5	1
2014	209	139	50	6	33	39	11	0
2015	251	162	46	2	44	57	12	1
2016	241	105	29	1	29	40	6	0
All	7,478	4,636	1,919	85	1,364	717	499	52

Table 2
Target, acquirer, and deal-pair characteristics by type of initiation

The table shows mean and median target and acquirer characteristics by takeover initiation (target, bidder, or jointly initiated). Column 7 shows the difference in mean between bidder- and target-initiated takeovers, while Column 8 lists the t-value of the difference using a t-test. All variables are defined in Table 4 and are from the last financial statement prior to the takeover bid. *Market cap* is the market value of equity in \$ millions. *Sales growth* is the growth in sales over the last year. *M/B* is the ratio of market value to book value of equity. *Market leverage* is total debt divided by total debt plus market value of equity. *Interest coverage* is interest expense/EBITDA. *Operating margin* is EBITDA/sales. *ROA* is EBIT/total assets. *Asset tangibility* is PPE/total assets. The sample is 4,636 takeover bids for public U.S. firms, 1996–2016.

	Target initiated		Bidder initiated		Jointly initiated		Bidder–Target	
	Mean (1)	Median (2)	Mean (3)	Median (4)	Mean (5)	Median (6)	Diff. (7)	t-value (8)
A. Target characteristics								
Market cap (\$ mil.)	951	163	1748	285	2392	302	797	5.31
Total assets (\$ mil.)	2596	282	2946	398	5646	378	350	0.48
M/B	2.787	1.615	4.096	1.841	3.826	1.982	1.309	1.30
Sales growth	0.142	0.068	0.151	0.076	0.201	0.102	0.009	0.71
Market leverage	0.295	0.245	0.251	0.186	0.250	0.191	−0.044	−5.26
Cash/total assets	0.165	0.068	0.183	0.089	0.196	0.087	0.018	2.66
R&D/total assets	0.041	0.000	0.043	0.000	0.048	0.000	0.003	1.00
Capex/total assets	0.041	0.022	0.044	0.027	0.047	0.028	0.004	2.16
Asset tangibility	0.199	0.098	0.216	0.113	0.232	0.117	0.017	2.28
Interest coverage	0.203	0.011	0.129	0.033	0.517	0.021	−0.074	−0.61
Operating margin	−0.053	0.133	−0.007	0.131	−0.047	0.142	0.046	1.13
ROA	−0.003	0.044	0.025	0.054	−0.004	0.045	0.028	4.52
High-tech	0.288	0.000	0.317	0.000	0.339	0.000	0.029	2.00
Listing age	13	10	15	11	14	9	1.863	4.71
1yr mkt-adj. return	−0.225	−0.117	−0.129	−0.091	−0.154	−0.070	0.097	5.39
Stock-return vol.	0.601	0.478	0.546	0.451	0.588	0.499	−0.055	−4.64
External pressure	0.244	0.200	0.267	0.239	0.204	0.161	0.022	3.69
HHI	0.062	0.050	0.067	0.058	0.064	0.054	0.005	3.10
Industry merger wave	0.209	0.000	0.227	0.000	0.281	0.000	0.018	1.41
B. Acquirer characteristics								
Market cap (\$ mil.)	12020	1475	17345	2584	13701	1447	5325	3.25
Total assets (\$ mil.)	25616	2390	23922	3092	22808	1808	−1695	−0.42
M/B	5.222	2.222	4.721	2.363	4.738	2.326	−0.501	−0.31
Sales growth	0.243	0.125	0.242	0.118	0.241	0.128	−0.001	−0.04
Market leverage	0.277	0.221	0.242	0.186	0.243	0.175	−0.035	−3.69
Cash/total assets	0.137	0.051	0.152	0.070	0.163	0.075	0.015	2.06
R&D/total assets	0.032	0.000	0.033	0.000	0.040	0.000	0.001	0.30
Capex/total assets	0.035	0.019	0.040	0.025	0.044	0.030	0.005	2.54
Asset tangibility	0.180	0.086	0.208	0.119	0.225	0.120	0.028	2.97
Interest coverage	0.176	0.026	0.067	0.042	0.106	0.040	−0.109	−1.13
Operating margin	0.136	0.235	0.160	0.215	0.120	0.207	0.024	0.80
ROA	0.051	0.059	0.062	0.067	0.050	0.060	0.011	2.03
High-tech	0.229	0.000	0.267	0.000	0.323	0.000	0.038	2.83
Listing age	19	14	21	15	18	12	2	2.90
2yr mkt-adj. return	−0.019	0.011	0.044	0.035	0.013	0.015	0.063	3.40
Stock-return vol.	0.429	0.353	0.427	0.355	0.479	0.401	−0.002	−0.21
External pressure	0.240	0.222	0.260	0.226	0.203	0.154	0.019	3.46
HHI	0.062	0.055	0.064	0.057	0.061	0.052	0.002	1.52
Industry merger wave	0.226	0.000	0.212	0.000	0.263	0.000	−0.014	−1.05
Acquisitions last 5y	0.632	0.000	0.628	0.000	0.532	0.000	−0.004	−0.07
Publicly listed	0.656	1.000	0.697	1.000	0.887	1.000	0.041	2.81
Financial buyer	0.203	0.000	0.174	0.000	0.062	0.000	−0.028	−2.30
C. Pair characteristics								
Local deal	0.194	0.000	0.217	0.000	0.297	0.000	0.022	1.31
Hoberg-Phillips TNIC3	0.610	1.000	0.631	1.000	0.644	1.000	0.021	1.08
Same SDC industry	0.507	1.000	0.543	1.000	0.617	1.000	0.036	2.31
Same primary SIC3	0.313	0.000	0.338	0.000	0.425	0.000	0.025	1.70
Bidder industry overlap	0.420	0.375	0.424	0.333	0.493	0.500	0.003	0.28
Target industry overlap	0.343	0.250	0.350	0.250	0.408	0.333	0.007	0.63

Table 3
Target ownership, CEO characteristics, and pay by type of initiation

The table shows average target ownership, CEO characteristics, and pay by takeover initiation (target, bidder, or jointly initiated). Column 7 lists the difference in mean between bidder- and target-initiated takeovers and Column 8 the t-value of the difference. All variables are defined in Table 4 and are from the last DEF14A filing prior to the takeover. *Directors own (%)* is the percent ownership of the firm's directors and officers, excluding that of the CEO. *Board size* is the number of directors. A large shareholder (block) owns $\geq 5\%$ of the firm. *No. outside board seats* is the number of board seats on other corporations held by the CEO. The sample is 4,636 takeover bids for public U.S. firms, 1996–2016. CEO ownership, compensation, and age variables are hand-collected from the target's last DEF 14A proxy statement prior to the bid.

	Target initiated		Bidder initiated		Jointly initiated		Bidder–Target	
	Mean	Median	Mean	Median	Mean	Median	Diff.	t-value
	(1)	(2)	(3)	(4)	(5)	(6)	(3)–(1)	(8)
A. Target block ownership and board structure								
CEO own (%)	6.43	2.55	5.26	2.00	5.14	1.74	–1.16	–3.51
Directors own (%)	20.98	15.10	17.52	11.40	16.81	10.80	–3.46	–5.95
No. of blocks	3.10	3.00	3.24	3.00	2.79	3.00	0.14	2.38
Largest block (%)	17.97	13.12	16.23	12.00	15.22	11.30	–1.74	–3.75
3 largest blocks (%)	31.23	28.10	29.47	26.81	26.85	24.30	–1.76	–2.88
All blocks (%)	67.74	63.58	64.49	59.98	57.99	53.00	–3.26	–2.48
Board size	7.88	7.00	8.03	8.00	8.22	8.00	0.15	1.77
Board staggered	0.55	1.00	0.54	1.00	0.58	1.00	–0.01	–0.76
B. Target CEO characteristics and compensation								
Male	0.97	1.00	0.97	1.00	0.98	1.00	0.00	0.53
Age	54.24	55.00	54.42	54.00	52.71	53.00	0.18	0.66
Tenure	7.50	5.00	7.25	5.00	6.43	4.00	–0.24	–1.04
No. outside board seats	0.79	0.00	0.69	0.00	1.04	1.00	–0.10	–2.21
CEO-Chairman duality	0.50	0.00	0.51	1.00	0.55	1.00	0.01	0.83
CEO board tenure	9.63	7.00	9.21	7.00	8.37	6.00	–0.42	–1.58
Total pay (\$ mil.)	2.50	0.89	3.18	1.26	4.33	1.29	0.68	3.24
Cash pay (\$ mil.)	1.00	0.59	1.25	0.71	1.43	0.65	0.25	4.34
Equity pay (\$ mil.)	1.50	0.14	1.93	0.31	2.90	0.36	0.43	2.26
Total vested equity (\$ mil.)	39.74	5.29	39.54	7.06	44.88	7.81	–0.20	–0.03
Vested stock (\$ mil.)	37.12	4.61	35.53	5.50	37.84	6.11	–1.59	–0.23
Exercisable options (\$ mil.)	2.62	0.06	4.01	0.16	7.04	0.22	1.39	3.16
Total unvested equity (\$ mil.)	1.39	0.00	2.92	0.17	3.80	0.09	1.53	5.90
Unvested stock (\$ mil.)	0.33	0.00	1.06	0.00	0.70	0.00	0.73	5.92
Unexercisable options (\$ mil.)	1.06	0.00	1.86	0.04	3.11	0.03	0.80	3.67

Table 4
Variable definitions

Variable	Definition
<i>Firm fundamentals (Compustat/CRSP, last fiscal year before the bid year)</i>	
Market cap (\$ mil.)	Market value of equity in \$ millions.
Total assets (\$ mil.)	Book value of total assets in \$ millions.
M/B	Market value of equity divided by book value of equity.
Sales growth	Growth in sales over the last year.
Market leverage	Total debt divided by total debt plus market value of equity.
Cash/total assets	Cash and short-term investments over total assets.
R&D/total assets	R&D expenses over total assets (zero if missing).
Capex/total assets	Capital expenditures over total assets.
Asset tangibility	Net PPE over total assets.
Interest coverage	Interest expense divided by EBITDA.
Operating margin	EBITDA divided by sales.
ROA	EBIT divided by total assets.
High-tech	Indicator for high-tech industry.
Listing age	Years since the firm first appears in CRSP.
1yr (2yr) mkt-adj. return	Market-adjusted buy-and-hold stock return over the one (two) years ending prior to the bid.
Stock-return vol.	Annualized volatility of daily stock returns over the 12 months prior to the bid.
External pressure	Fraction of merger bids by private (unlisted) U.S. bidders among all merger bids in the firm's FF49 industry and calendar year, requiring an inflation-adjusted deal value of at least \$10 million (Eckbo et al., 2018).
HHI	Herfindahl–Hirschman index of sales concentration in the firm's industry.
Industry merger wave	Indicator that the annual value of SDC mergers to Compustat total assets in the firm's FF49 industry exceeds its time-series mean by more than one standard deviation (Maksimovic et al., 2013).
<i>Ownership and board (proxy statements, 13F-filings)</i>	
No. 13F owners	Number of 13F institutions holding at least 5% of the firm.
Largest 13F own (%)	Ownership of the largest 13F institution.
All 13F own (%)	Aggregate 13F institutional ownership.
CEO own (%)	CEO percent ownership of shares outstanding.
Directors own (%)	Percent ownership of directors and officers, excluding the CEO.
Blocks	Shareholders owning at least 5% of the firm.

Continued on next page

Table 4 continued from previous page

Variable	Definition
Board size / staggered	Number of directors; indicator for classified board.
Poison pill	Indicator for a shareholder rights plan in place.
<i>CEO characteristics and pay (hand-collected from proxy statements for deal firms; ExecuComp/BoardEx in the matched-control models)</i>	
Tenure / board tenure	Years as CEO; years on the board.
CEO age brackets	Indicators for age 18–53, 59–63, 64–66, and 67–99 (Jenter and Lewellen, 2015); ages 54–58 omitted.
Cash / equity / total pay	Salary and bonus; stock and option grants; their sum.
Vested equity	Value of vested stock plus exercisable options.
Unvested equity	Value of unvested stock plus unexercisable options.
<i>Deal and pair variables (SDC, SEC filings, CRSP)</i>	
Premium k -day	Offer price over the target price k trading days before the announcement, in percent (Eaton et al., 2021).
Target/Acquirer CAR	Cumulative abnormal return over the indicated window in trading days relative to announcement.
Relative size	Target over acquirer total assets (book) or market capitalization (market).
All-cash / All-stock	Indicators for 100% cash (stock) consideration.
LBO / Financial buyer	Indicators for leveraged buyout deals and private-equity acquirers.
Toehold	Acquirer ownership in the target prior to the bid.
Local deal / Distance	Indicator that bidder and target headquarters are within 30 miles; great-circle distance in km computed from headquarters zip-code coordinates (Kedia et al., 2008); in logs in the regressions.
Hoberg–Phillips TNIC3	Product-market rivals in the text-based network industry classification of Hoberg and Phillips (2016).
Same SDC industry / SIC3	Same SDC macro industry; same 3-digit primary SIC code.
Industry overlap	Number of overlapping 4-digit SIC codes, scaled by the firm’s number of codes.

Table 5
Extensive margin: target, acquirer, and control firm characteristics

The table compares the takeover sample with industry- and size-matched control firms. For each target and acquirer, we select the closest match and the five closest matches by industry and size in the year prior to the takeover bid. The industry definitions are based on the narrowest SIC grouping that includes at least five firms, starting with 4 digits. Column 10 shows the difference in mean between the takeover sample and the closest match, and Column 11 lists the t-value of the difference using a t-test. All variables are defined in Table 4 and are from the last financial statement prior to the takeover bid. The sample is 4,636 takeover bids for public U.S. firms, 1996–2016.

	Industry and size matched control firms										
	Takeover sample			Closest match			Five closest matches			Diff.	t-value
	N	Mean	Median	N	Mean	Median	N	Mean	Median		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
A. Target characteristics											
Four digit SIC	4636	5274	5961	4636	5273	5961	23180	5273	5961	1	0.01
Total assets (\$ mil)	4636	3116	338	4636	2617	336	23180	2068	318	499	1.11
Market cap (\$ mil.)	4381	1488	216	4372	1687	262	21932	1392	246	−199	−1.72
M/B	4366	3.505	1.772	4559	3.921	1.836	22805	6.389	1.829	−0.416	−0.75
Sales growth	4343	0.153	0.076	4178	0.155	0.089	20823	0.162	0.088	−0.002	−0.26
Market leverage	4354	0.270	0.204	4342	0.235	0.148	21834	0.236	0.155	0.035	6.40
Cash/total assets	4622	0.177	0.077	4612	0.187	0.091	23038	0.190	0.091	−0.010	−2.29
R&D/total assets	4598	0.043	0.000	4613	0.041	0.000	23067	0.041	0.000	0.002	1.09
Capex/total assets	4602	0.043	0.025	4597	0.044	0.025	23007	0.044	0.024	−0.001	−0.57
Asset tangibility	4434	0.210	0.108	4453	0.204	0.107	22275	0.206	0.106	0.006	1.25
Interest coverage	4460	0.208	0.022	4479	0.064	0.010	22424	0.048	0.010	0.144	1.81
Operating margin	4411	−0.031	0.133	4387	−0.007	0.146	21950	−0.012	0.143	−0.024	−0.92
ROA	4233	0.010	0.049	4436	0.021	0.049	22174	0.020	0.048	−0.011	−2.72
High-tech	4636	0.307	0.000	4636	0.272	0.000	23180	0.273	0.000	0.036	3.78
Listing age	4636	14	10	4636	15	11	23180	14	10	−1	−2.45
1yr mkt-adj. return	4548	−0.174	−0.099	4487	−0.093	−0.051	22359	−0.094	−0.054	−0.080	−6.84
Stock-return vol.	4619	0.575	0.467	4604	0.550	0.446	23018	0.558	0.460	0.025	3.31
External pressure	4395	0.250	0.214	4411	0.245	0.203	22028	0.245	0.203	0.005	1.19
HHI	4636	0.064	0.055	4636	0.063	0.054	23180	0.063	0.055	0.002	1.47
Industry merger wave	4636	0.226	0.000	4636	0.209	0.000	23180	0.209	0.000	0.016	1.91
B. Acquirer characteristics											
Four digit SIC	2907	5165	5961	2907	5165	5961	14535	5165	5961	0	−0.01
Total assets (\$ mil)	2907	23414	2697	2907	16147	2269	14535	11577	1779	7267	3.17
Market cap (\$ mil.)	2861	14134	1895	2859	7605	1439	14276	5439	1241	6529	8.12
M/B	2746	4.942	2.283	2881	4.370	2.188	14411	4.174	2.182	0.572	0.61
Sales growth	2721	0.243	0.123	2720	0.162	0.094	13627	0.161	0.093	0.081	7.28
Market leverage	2842	0.257	0.198	2847	0.277	0.215	14195	0.269	0.210	−0.020	−3.15
Cash/total assets	2903	0.148	0.062	2903	0.157	0.074	14501	0.161	0.075	−0.010	−1.93
R&D/total assets	2900	0.033	0.000	2902	0.033	0.000	14509	0.034	0.000	0.000	0.28
Capex/total assets	2884	0.039	0.024	2898	0.043	0.024	14458	0.042	0.025	−0.004	−2.76
Asset tangibility	2798	0.200	0.106	2785	0.205	0.112	13963	0.203	0.111	−0.005	−0.73
Interest coverage	2815	0.117	0.037	2812	0.112	0.030	14104	0.073	0.027	0.005	0.12
Operating margin	2795	0.144	0.224	2780	0.151	0.204	13948	0.141	0.204	−0.007	−0.35
ROA	2786	0.056	0.063	2775	0.058	0.060	13871	0.057	0.060	−0.001	−0.43
High-tech	2907	0.324	0.000	2907	0.295	0.000	14535	0.296	0.000	0.029	2.35
Listing age	2907	20	14	2907	20	16	14535	19	15	0	−0.94
1yr mkt-adj. return	2848	0.016	0.024	2834	−0.044	−0.015	14195	−0.042	−0.014	0.059	4.79
Stock-return vol.	2894	0.435	0.360	2897	0.446	0.367	14463	0.454	0.375	−0.011	−1.58
External pressure	2756	0.218	0.179	2759	0.211	0.169	13795	0.211	0.169	0.007	1.64
HHI	2907	0.061	0.048	2907	0.060	0.048	14535	0.059	0.048	0.001	1.12
Industry merger wave	2907	0.233	0.000	2907	0.225	0.000	14535	0.227	0.000	0.008	0.69

Table 6
Extensive margin: target ownership, CEO characteristics, and pay

The table compares target ownership, CEO characteristics, and pay in the takeover sample with industry- and size-matched control firms. Column 7 lists the difference in mean between the takeover sample and the matched controls and Column 8 the t-value of the difference using a t-test. All variables are defined in Table 4 and are measured in the fiscal year preceding the takeover bid. CEO characteristics and compensation are from ExecuComp and BoardEx; institutional ownership is from 13F filings. Compensation and equity holdings are in \$ thousands. The sample is 4,636 takeover bids for public U.S. firms, 1996–2016. Data sources: ExecuComp, BoardEx, and 13F-filings.

	Sample of takeover bids			Industry+size-matched controls			Difference	
	N	Mean	Median	N	Mean	Median	Diff.	t-value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. Target block ownership and board structure (13F-filings)								
No. 13F owners	4636	2	2	23180	2	1	0.173	6.51
Largest 13F own (%)	4636	8.280	8.047	23180	7.646	7.526	0.634	5.01
3 largest 13F own (%)	4636	8.767	0.000	23180	7.727	0.000	1.040	4.96
All 13F own (%)	4636	16.317	13.326	23180	14.781	11.113	1.536	6.25
Poison pill	1340	0.445	0	7199	0.410	0	0.035	2.36
Board staggered	1340	0.529	1	7199	0.553	1	−0.024	−1.63
B. Target CEO characteristics and compensation (ExecuComp, BoardEx)								
CEO age	1272	56	56	9046	55	55	1	3.39
CEO tenure	1202	8	5	8316	9	6	−1	−4.37
CEO-Chairman duality	1278	0.532	1.000	9083	0.482	0.000	0.050	3.33
CEO own (%)	1273	1.736	0.170	8938	2.724	0.339	−0.988	−5.34
CEO total pay	1276	4925	2275	9052	4298	1765	626.670	2.10
CEO cash pay	1278	1145	842	9083	1013	737	132.441	2.05
CEO equity pay	1276	3778	1149	9052	3284	760	494.773	1.78
Exercisable options	1275	7801	1192	8913	7673	886	128.422	0.14
Unexercisable options	1275	2263	233	8913	2932	210	−668.230	−1.05
Restricted stock	1275	2486	230	8913	1880	0	606.064	3.31

Table 7
Firms participating in target-initiated takeovers

The table shows conditional logit estimates of the probability that a firm initiates the sale of the company. In Columns (1) and (2), the dependent variable equals one for the target in a target-initiated deal and zero for its industry- and size-matched control firms (deal fixed effects). Columns (3) and (4) repeat the estimation for the buyer in target-initiated deals versus its matched control firms. Columns (2) and (4) add CEO compensation and age variables (ExecuComp/BoardEx subsample). t-statistics, based on standard errors clustered by deal-match group, are in parentheses. All variables are defined in Table 4 and are measured at the end of the fiscal year prior to the year of the takeover bid. The sample is 1996–2016 and includes both completed and non-completed transactions.

Model	Seller characteristics		Buyer characteristics	
	(1)	(2)	(3)	(4)
1yr mkt-adj. return	−0.38 (−6.51)	−0.68 (−4.33)	0.13 (1.27)	0.21 (1.29)
External pressure	1.43 (2.18)	0.28 (0.24)	2.19 (3.19)	2.61 (3.98)
Industry merger wave	0.25 (0.75)	0.69 (1.49)	0.13 (0.37)	0.02 (0.06)
Listing age	−0.01 (−1.60)	−0.00 (−0.81)	−0.01 (−2.80)	−0.00 (−0.25)
High-tech	1.17 (5.04)	0.27 (0.83)	0.72 (3.08)	0.02 (0.09)
No. 13F owners	0.04 (1.64)	0.02 (0.36)	−0.12 (−3.70)	−0.07 (−1.65)
Largest 13F own (%)	0.01 (1.81)	0.00 (0.50)	−0.01 (−2.15)	−0.03 (−3.77)
Ln Total assets (\$ mil)	0.33 (4.14)	0.47 (3.02)	1.48 (11.26)	1.70 (10.80)
M/B	−0.00 (−0.79)	−0.02 (−1.02)	0.00 (2.02)	0.00 (1.81)
Market leverage	0.43 (2.63)	0.41 (0.98)	−0.57 (−2.57)	−0.92 (−2.64)
Cash/total assets	−0.71 (−3.38)	−0.86 (−1.71)	−1.19 (−3.58)	−1.66 (−3.35)
R&D/total assets	0.72 (1.53)	2.11 (1.63)	0.96 (0.99)	−0.08 (−0.05)
Capex/total assets	−2.15 (−2.51)	−4.77 (−2.41)	−3.09 (−2.12)	−4.10 (−2.00)
Asset tangibility	0.33 (1.21)	0.91 (1.49)	−0.05 (−0.12)	0.26 (0.48)
Ln CEO cash pay		−0.05 (−0.74)		0.06 (1.14)
Ln CEO equity pay		0.02 (0.66)		0.04 (1.48)
CEO own (%)		0.01 (0.55)		−0.01 (−0.74)
Ln Exercisable options		0.05 (2.16)		0.02 (0.96)
Ln Unexercisable options		−0.03 (−1.38)		0.01 (0.48)
Ln Restricted stock		0.03 (1.68)		−0.00 (−0.12)
CEO age in [18,53]		−0.31 (−2.12)		0.33 (2.57)
CEO age in [59,63]		0.11 (0.74)		−0.04 (−0.26)
CEO age in [64,66]		−0.40 (−1.52)		0.17 (0.73)
CEO age in [67,99]		−0.27 (−0.92)		−0.28 (−1.02)
Deal fixed effects	Yes	Yes	Yes	Yes
Pseudo R-squared	0.036	0.059	0.142	0.212
Number of sellers	1514	391	956	613
Number of matches	6594	1842	4472	2861
Number of obs.	8108	2233	5428	3474

Table 8
Firms participating in bidder-initiated takeovers

The table shows conditional logit estimates of the probability that a firm is party to a bidder-initiated takeover. In Columns (1) and (2), the dependent variable equals one for the target in a bidder-initiated deal and zero for its industry- and size-matched control firms (deal fixed effects). Columns (3) and (4) repeat the estimation for the buyer in bidder-initiated deals versus its matched control firms. Columns (2) and (4) add CEO compensation and age variables (ExecuComp/BoardEx subsample). t-statistics, based on standard errors clustered by deal-match group, are in parentheses. All variables are defined in Table 4 and are measured at the end of the fiscal year prior to the year of the takeover bid. The sample is 1996–2016 and includes both completed and non-completed transactions.

Model	Seller characteristics		Buyer characteristics	
	(1)	(2)	(3)	(4)
1yr mkt-adj. return	−0.16 (−2.69)	−0.53 (−3.52)	0.42 (3.98)	0.39 (2.42)
External pressure	1.70 (2.65)	2.41 (3.20)	2.00 (2.45)	1.59 (2.03)
Industry merger wave	1.27 (4.81)	1.28 (3.95)	−0.08 (−0.24)	−0.39 (−1.01)
Listing age	−0.01 (−3.34)	−0.00 (−1.31)	−0.01 (−4.74)	−0.01 (−2.08)
High-tech	1.14 (5.46)	0.19 (0.67)	0.68 (2.88)	0.28 (1.07)
No. 13F owners	0.10 (5.01)	0.08 (2.44)	−0.04 (−1.40)	−0.00 (−0.08)
Largest 13F own (%)	0.00 (0.70)	−0.01 (−1.19)	−0.01 (−1.46)	−0.01 (−1.46)
Ln Total assets (\$ mil)	0.49 (6.06)	0.92 (5.46)	1.78 (13.62)	2.14 (12.74)
M/B	−0.00 (−0.86)	0.00 (3.38)	0.00 (0.47)	0.00 (0.28)
Market leverage	0.28 (1.79)	0.80 (2.38)	−1.18 (−5.25)	−1.40 (−4.08)
Cash/total assets	−0.50 (−2.68)	−0.47 (−1.12)	−0.59 (−1.93)	−1.01 (−2.22)
R&D/total assets	0.87 (1.84)	−0.23 (−0.19)	−0.40 (−0.42)	−1.26 (−0.97)
Capex/total assets	−0.40 (−0.55)	−1.73 (−1.18)	−3.13 (−2.21)	−2.50 (−1.13)
Asset tangibility	0.07 (0.29)	0.15 (0.32)	0.21 (0.47)	0.80 (1.27)
Ln CEO cash pay		0.07 (0.90)		0.03 (0.89)
Ln CEO equity pay		−0.03 (−1.06)		0.05 (1.92)
CEO own (%)		−0.04 (−2.96)		−0.01 (−0.84)
Ln Exercisable options		−0.02 (−1.29)		−0.00 (−0.13)
Ln Unexercisable options		0.01 (0.58)		0.05 (2.64)
Ln Restricted stock		0.04 (2.68)		−0.02 (−1.44)
CEO age in [18,53]		0.05 (0.39)		0.37 (3.05)
CEO age in [59,63]		0.30 (2.13)		−0.20 (−1.50)
CEO age in [64,66]		0.26 (1.18)		−0.10 (−0.46)
CEO age in [67,99]		−0.16 (−0.67)		−0.25 (−0.89)
Deal fixed effects	Yes	Yes	Yes	Yes
Pseudo R-squared	0.044	0.099	0.185	0.265
Number of bidders	1674	579	1072	696
Number of matches	7486	2717	4991	3277
Number of obs.	9160	3296	6063	3973

Table 9
The probability of target-initiated mergers using seller, buyer, and common information

The table shows conditional logit estimates of the probability of a target-initiated merger at the level of the target-acquirer pair. Each actual pair is matched with counterfactual pairs formed from the industry- and size-matched control firms of the target and the acquirer, and the estimation includes deal fixed effects. Columns (1) and (2) list the coefficients on seller characteristics, and the corresponding columns (1 cont.) and (2 cont.) list the coefficients on buyer and common (pair) characteristics from the same regression. Model (2) adds CEO compensation and age variables (ExecuComp/BoardEx subsample). *Distance in km* is the natural logarithm of the distance between the headquarters of the two firms. *Hoberg-Phillips TNIC3* indicates that the two firms are product market rivals in the text-based network industry classification of Hoberg and Phillips (2016). t-statistics, based on standard errors clustered by deal-match group, are in parentheses. All variables are defined in Table 4. The sample is 1996–2016 and includes both completed and non-completed transactions.

Model	Seller characteristics		Buyer and common characteristics	
	(1)	(2)	(1 cont.)	(2 cont.)
1yr mkt-adj. return	−0.37 (−3.03)	−0.30 (−0.68)	0.39 (2.50)	0.67 (1.32)
External pressure	0.92 (0.64)	−1.75 (−1.05)	1.74 (1.92)	1.11 (0.77)
Industry merger wave	−0.17 (−0.36)	−0.47 (−0.60)	−0.07 (−0.18)	−0.72 (−0.98)
Listing age	−0.01 (−1.25)	−0.01 (−1.21)	−0.00 (−0.69)	0.00 (0.49)
High-tech	1.11 (2.90)	0.07 (0.13)	0.34 (1.17)	−0.53 (−1.04)
No. 13F owners	0.01 (0.30)	0.04 (0.41)	−0.09 (−2.06)	0.05 (0.50)
Largest 13F own (%)	0.01 (0.62)	0.02 (0.97)	−0.02 (−2.64)	−0.00 (−0.01)
Ln Total assets (\$ mil)	0.66 (3.17)	0.15 (0.36)	1.62 (8.81)	2.11 (4.16)
M/B	−0.00 (−0.51)	0.01 (1.30)	−0.01 (−0.69)	0.01 (1.78)
Market leverage	0.09 (0.29)	1.73 (1.58)	−0.61 (−1.83)	−2.94 (−3.39)
Cash/total assets	−0.77 (−1.82)	−2.12 (−1.79)	−1.78 (−3.62)	−2.45 (−1.77)
R&D/total assets	0.23 (0.22)	4.14 (1.15)	1.80 (1.25)	1.40 (0.38)
Capex/total assets	−1.38 (−0.78)	−6.57 (−1.81)	−3.64 (−1.66)	−0.40 (−0.09)
Asset tangibility	−0.07 (−0.13)	2.39 (1.96)	−0.46 (−0.77)	0.54 (0.51)
Ln CEO cash pay		−0.19 (−1.13)		−0.67 (−1.35)
Ln CEO equity pay		0.13 (1.48)		0.24 (0.85)
CEO own (%)		0.01 (0.23)		−0.01 (−0.58)
Ln Exercisable options		0.03 (0.58)		0.11 (0.50)
Ln Unexercisable options		−0.07 (−1.38)		0.24 (1.27)
Ln Restricted stock		0.02 (0.61)		0.08 (0.59)
CEO age in [18,53]		−0.72 (−2.66)		0.88 (2.84)
CEO age in [59,63]		0.01 (0.02)		−0.21 (−0.64)
CEO age in [64,66]		−0.90 (−1.75)		0.48 (0.81)
CEO age in [67,99]		−0.05 (−0.08)		−0.41 (−0.69)
Distance in km			−0.46 (−12.22)	−0.30 (−3.44)
Hoberg-Phillips TNIC3			1.84 (10.00)	1.86 (4.60)
Deal fixed effects			Yes	Yes
Pseudo R-squared			0.374	0.517
Number of sellers			728	165
Number of matches			2762	705
Number of obs.			3495	871

Table 10
The probability of target initiation vs. bidder- and jointly initiated deals

The table shows probit estimates within the sample of initiation-coded takeover bids. The dependent variable equals one if the deal was initiated by the target (seller) and equals zero otherwise. *Ln deal value* is the natural logarithm of the transaction value from SDC. *NBER recession* indicates that the bid was announced during an NBER recession month. *Buyer no past acquisitions 2y* indicates that the buyer made no acquisition in the past two years. t-statistics are in parentheses. All other variables are defined in Table 4. The sample is 1996–2016 and includes both completed and non-completed transactions. CEO ownership and compensation variables are hand-collected from the target’s last DEF 14A proxy statement prior to the bid.

Model	(1)	(2)	(3)	(4)
Seller listing age	−0.00 (−1.11)			−0.00 (−0.88)
Seller high-tech	0.03 (0.50)			0.15 (1.83)
Seller industry merger wave	−0.19 (−2.92)			−0.09 (−1.01)
Seller external pressure	−0.05 (−0.36)			−0.11 (−0.55)
Seller volatility	−0.15 (−2.13)			−0.27 (−2.34)
Seller 1yr mkt-adj. return	−0.12 (−3.18)			−0.07 (−1.23)
NBER recession	−0.02 (−0.30)			−0.15 (−1.69)
Ln deal value	−0.12 (−9.31)			−0.27 (−6.86)
Buyer high-tech	−0.20 (−3.18)			−0.21 (−2.45)
Buyer industry merger wave	0.19 (2.89)			0.17 (1.87)
Buyer external pressure	−0.12 (−0.80)			0.16 (0.77)
Buyer no past acquisitions 2y	0.03 (1.63)			0.03 (0.89)
Seller Ln total assets		−0.10 (−8.17)		0.13 (3.29)
Seller M/B		−0.00 (−0.97)		0.00 (0.04)
Seller market leverage		0.53 (5.30)		−0.15 (−0.94)
Seller cash/total assets		−0.43 (−3.35)		−0.25 (−1.40)
Seller R&D/total assets		−0.10 (−0.34)		0.61 (1.52)
Seller capex/total assets		−0.11 (−0.21)		0.90 (1.25)
Seller asset tangibility		−0.30 (−2.38)		0.01 (0.04)
Seller CEO own (%)			−0.00 (−1.46)	−0.00 (−0.90)
Seller directors own (%)			0.01 (3.11)	0.00 (1.80)
Seller all blocks (%)			0.00 (0.99)	0.00 (0.71)
Seller CEO tenure			0.01 (2.47)	0.00 (1.07)
Seller no. outside boards			0.04 (1.95)	0.06 (2.31)
Seller CEO-Chairman duality			−0.05 (−0.99)	−0.08 (−1.34)
Seller CEO cash pay			−0.04 (−1.14)	0.05 (1.01)
Seller CEO equity pay			−0.00 (−0.17)	0.01 (0.53)
Seller CEO vested equity			0.01 (0.35)	0.07 (3.59)
Seller CEO unvested equity			−0.11 (−6.61)	−0.09 (−4.71)
Intercept	0.67 (6.80)	0.42 (4.63)	−0.52 (−7.99)	0.40 (1.76)
Pseudo R-squared	0.030	0.020	0.028	0.063
Number of target initiations	1832	1621	1219	951
Number of other initiations	2410	2268	1692	1403
Number of obs.	4242	3889	2911	2354

Table 11
Intensive margin: deal characteristics by type of initiation

The table shows mean deal characteristics, offer premiums, and announcement returns by takeover initiation (target, bidder, or jointly initiated). Column 7 shows the difference in mean between bidder- and target-initiated takeovers and Column 8 the t-value of the difference using a t-test. All variables are defined in Table 4. *Relative size, book (market)* is the ratio of target to acquirer book value of total assets (market value of equity). Offer premiums are in percent of the target stock price 42, 63, and 105 trading days, respectively, prior to the bid announcement (Eaton et al., 2021). *Holding per. return* is the target holding period return from the indicated day through the day after the announcement. CARs are cumulative abnormal stock returns over the indicated event window in trading days relative to the announcement. The sample is 4,636 takeover bids for public U.S. firms, 1996–2016.

	Target initiated		Bidder initiated		Jointly initiated		Bidder–Target	
	Mean	Median	Mean	Median	Mean	Median	Diff.	t-value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. Deal characteristics								
Relative size, book	0.38	0.19	0.40	0.21	0.57	0.35	0.019	0.87
Relative size, market	0.31	0.15	0.32	0.17	0.45	0.30	0.011	0.59
All-cash	0.42	0.00	0.45	0.00	0.18	0.00	0.032	2.06
All-stock	0.24	0.00	0.22	0.00	0.50	0.00	−0.017	−1.26
LBO	0.13	0.00	0.11	0.00	0.03	0.00	−0.019	−1.90
Deal completed	0.89	1.00	0.88	1.00	0.92	1.00	−0.001	−0.11
Toehold dummy	0.05	0.00	0.06	0.00	0.04	0.00	0.008	1.08
Toehold size (%)	1.11	0.00	1.14	0.00	1.12	0.00	0.031	0.17
B. Offer premiums and CARs								
Premium 42-day	39.63	30.95	45.85	36.99	37.24	31.27	6.225	3.28
Premium 42-day wo dividends	39.43	30.67	45.64	36.95	37.01	30.94	6.209	3.27
Holding per. return [−42,1]	28.29	22.56	35.14	28.84	27.57	23.20	6.847	5.65
Premium 63-day	41.30	32.23	47.45	38.89	37.37	31.09	6.158	3.38
Premium 63-day wo dividends	40.90	31.92	47.13	38.72	37.05	30.53	6.232	3.41
Holding per. return [−63,1]	30.05	23.81	37.23	31.46	28.03	24.22	7.180	5.18
Premium 105-day	40.91	31.95	50.35	40.16	42.01	33.24	9.441	4.56
Premium 105-day wo dividends	40.27	31.42	49.85	39.67	41.39	32.35	9.582	4.62
Holding per. return [−105,1]	30.37	24.61	39.88	32.70	32.37	27.41	9.512	5.37
Target CAR [−1,1]	0.16	0.14	0.20	0.18	0.16	0.13	0.034	5.57
Target CAR [−3,3]	0.17	0.15	0.21	0.19	0.16	0.14	0.036	5.48
Target CAR [−42,−2]	0.06	0.04	0.07	0.05	0.04	0.04	0.006	0.83
Target CAR [−105,−2]	0.06	0.05	0.07	0.06	0.05	0.03	0.007	0.52
Acquirer CAR [−1,1]	−0.02	−0.01	−0.02	−0.01	−0.03	−0.02	−0.001	−0.31
Acquirer CAR [−3,3]	−0.02	−0.01	−0.02	−0.01	−0.03	−0.02	−0.003	−0.97
Acquirer CAR [−42,−2]	0.01	0.00	−0.00	0.00	0.01	0.01	−0.009	−1.42
Acquirer CAR [−105,−2]	0.02	0.00	0.00	−0.00	0.01	−0.02	−0.015	−1.22

Who *initiates* takeovers?

Internet Appendix

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A Legal standards related to the sale of a company

B Illustrative examples of bidder- and target-initiated deals

B.1 Bidder-initiated deal: Netflix-Warner Bros. Discovery

B.2 Target-initiated deal: Metsera-Pfizer

C Matched-control samples and empirical design

C.1 Matched control firms

C.2 Firm-level extensive-margin specification

C.3 Pair-level specification

C.4 Within-deal specification

D Additional extensive-margin regression results

A Legal standards related to the sale of a company

The fiduciary duties of the board receive particular attention when the sale of a company involves a transfer of control to another group of shareholders. It is critical that, in coming to a decision to sell the company, management and the board have used good procedures that visibly demonstrate their adherence to the duties of care and loyalty. Delaware law has established a number of principles that the board must observe in the sale of a company.

The Revlon standard implies that a target company must seek the highest price for its shareholders in a sale of the company. As soon as the judgment is made that a sale is in the best interest of shareholders, or is inevitable, directors have a fiduciary duty to obtain the best price for the shareholders. Under the Revlon doctrine, the directors of the target company do not have the ability to balance the interests of various stakeholders, but must act on behalf of the shareholders alone. Once the firm is going to be sold, the fiduciary duties of the board collapse into one goal: to make sure that shareholders receive the highest possible price in exchange for their shares.¹⁷ While this principle is straightforward, a trickier question is exactly when a company shifts from normal mode to so-called Revlon mode.

The potential ambiguity of the Revlon standard became apparent in the 1989 case *Paramount Communications, Inc. v. Time, Inc.* Time entered into a stock-for-stock merger agreement with Warner Communications, under which roughly 40 percent of the combined company would be owned by legacy shareholders of Time. While waiting for shareholder approval of the merger agreement, Paramount Communications made a hostile cash tender offer for all of Time's shares. In response, Time's board defended itself against the hostile bid by making a cash tender offer for 51 percent of Warner Communications' shares. The Delaware Supreme Court held that the initial transaction with Warner Communications did not trigger Revlon duties because there was no change in control. The stock-for-stock structure of the deal, which created a majority control shift from one "fluid aggregation of shareholders" to another, was considered a strategic alliance by the court, not a sale of Time to Warner. As such, Time was never "in play" to other bidders, and Time's board was at liberty to resist the hostile bidder based on its desire to preserve corporate intangibles such as culture and journalistic integrity.¹⁸

The intricacies of the change-of-control concept were highlighted in a subsequent transaction when Paramount Communications agreed to a friendly merger with Viacom in a mixed cash and stock deal. QVC entered into a bidding war for Paramount, but all of its bids were rejected by Paramount, even though they were often higher than those made by Viacom. QVC sued the Paramount directors on the ground that Paramount was in Revlon mode and therefore had to consider competing bids. The Delaware Supreme Court ruled that the Paramount board had agreed to a change in control through its agreement with Viacom. The critical point was that Viacom had a majority shareholder, Sumner Redstone, to whom the Paramount shareholders

¹⁷Revlon, Inc. v. MacAndrews & Forbes Holdings, Inc., 506 A.2d 173 (Del. 1986).

¹⁸Paramount Communications, Inc. v. Time, Inc., 571 A.2d 1140 (Del. 1990).

effectively ceded control through the merger. The court wrote: *“the public shareholders (in the aggregate) currently own a majority of Paramount’s voting stock. Control of the corporation is not vested in a single person, entity, or group, but vested in the fluid aggregation of unaffiliated stockholders. In the event the Paramount-Viacom transaction is consummated, the public shareholders will receive cash and a minority equity voting position in the surviving corporation. Following such consummation, there will be a controlling stockholder [Redstone].”*¹⁹

The two cases may not seem that different, but Time was deemed a strategic alliance with no change of control, while the QVC case was deemed a sale with a change in control. Clearly, if the target board agrees to a cash transaction, it moves the company into Revlon mode and must consider the highest cash bid. If the offer contains a substantial portion of equity, the answer is less clear-cut and ultimately depends on whether the court deems the transaction to involve a change of control. Thus, a target board can safely start an auction process—without entering Revlon mode—before it gets serious with a cash buyer or a buyer with a majority shareholder. For the purposes of this paper, the legal environment implies that initiating a sales process is a low-commitment action for the board, which helps explain the high frequency of target initiations that we document.

¹⁹Paramount Communications v. QVC Network, 637 A.2d 34 (Del. 1994).

B Illustrative examples of bidder- and target-initiated deals

To illustrate the distinction between bidder- and target-initiated transactions, this appendix summarizes two recent merger negotiations. The first example, the sale of Warner Bros. Discovery (WBD), a bidder-initiated process that culminated in a public topping contest won by Paramount Skydance (Warner Bros. Discovery, Inc., 2026). The second example, Pfizer’s acquisition of Metsera, illustrates a target-initiated process in which the target actively managed and stimulated competition among potential acquirers, as documented in the Metsera merger proxy (Metsera, Inc., 2025).

B.1 Bidder-initiated deal: Netflix–Warner Bros. Discovery

Prior to receiving acquisition proposals, Warner Bros. Discovery (WBD) was pursuing a planned separation of its Streaming & Studios and linear networks businesses, which management viewed as the preferred standalone strategy for creating shareholder value. The company was therefore not actively seeking a sale.

The process began when Paramount-Skydance (PSKY) made an unsolicited proposal to acquire WBD in September 2025. The WBD board rejected this and subsequent revised proposals, concluding that they undervalued the company and carried significant financing, governance, and regulatory risks. Nevertheless, the repeated unsolicited approaches prompted the board to reassess its strategic alternatives.

On October 20, 2025, WBD authorized a formal strategic review and contacted multiple potential counterparties. Netflix, which had previously expressed interest in WBD’s Streaming & Studios business, quickly entered the process and participated alongside several competing bidders. Following due diligence and bidding rounds, Netflix emerged as the preferred bidder because of its attractive valuation, greater transaction certainty, and willingness to accept WBD’s proposed transaction structure.

Although Netflix became the preferred bidder, the process was fundamentally bidder-initiated. WBD had been pursuing a standalone strategy and launched a sale process only after receiving unsolicited acquisition proposals, which resulted in a competitive auction and a signed merger agreement with Netflix.

B.2 Target-initiated deal: Metsera–Pfizer

The acquisition of Metsera by Pfizer illustrates a target-initiated sale process. Throughout 2024 and 2025, Metsera’s board and management actively explored strategic alternatives and maintained discussions with several potential pharmaceutical acquirers, including Pfizer.

Pfizer conducted due diligence and submitted an initial proposal in June 2025, but Metsera rejected the offer as inadequate and continued discussions with both Pfizer and other interested parties. During the summer, Metsera encouraged potential bidders to accelerate their evaluations

and actively managed a competitive process involving several acquirers. A competing bidder (“Party 2”) temporarily emerged as the leading candidate and received exclusivity, but withdrew in early September 2025.

Following Party 2’s withdrawal, Metsera reopened discussions with Pfizer and other interested parties, shared additional information, imposed a deadline for announcing a transaction, and repeatedly sought improved offers. By mid-September, the competition had narrowed to Pfizer and Party 1. Although Party 1 offered higher nominal consideration, the board viewed its proposal as significantly riskier because of regulatory uncertainty and deal-completion concerns. Pfizer subsequently improved its bid, and on September 21, 2025, Metsera’s board approved a merger agreement with Pfizer.

This process exhibits the hallmarks of a target-initiated transaction: the target actively cultivated bidder interest, encouraged competition among multiple acquirers, solicited improved bids, and managed a structured sale process before selecting the winning bidder.

Subsequent public bidding. Both examples were followed by public topping contests. In the Metsera–Pfizer transaction, Novo Nordisk submitted a series of unsolicited competing proposals in late October 2025, after Metsera had already signed with Pfizer and shortly before the scheduled shareholder vote. This triggered Pfizer’s matching rights and a bidding contest that escalated the offer substantially. After considering the legal and regulatory risks associated with Novo Nordisk’s proposal, Metsera’s board reaffirmed the Pfizer transaction on November 8, 2025, at a raised offer price, and Novo Nordisk withdrew from the contest.

The Warner Bros. Discovery example followed a similar pattern. After WBD signed a merger agreement with Netflix, Paramount Skydance launched an unsolicited tender offer and subsequently increased its bid to \$31.00 per share in cash plus ticking consideration. Following a limited waiver that permitted discussions with Paramount, WBD’s board determined that Paramount’s final proposal constituted a superior proposal under the Netflix merger agreement. Netflix declined to match the offer, and WBD terminated the Netflix agreement and entered into a merger agreement with Paramount, which was subsequently approved by WBD shareholders.

These post-signing bidding contests affected the ultimate outcome of both transactions but do not alter their classification based on the initiation of the original sale process.

C Matched-control samples and empirical design

This appendix details the construction of the matched-control samples and the specifications underlying the extensive-margin, pair-level, and within-deal tests.

C.1 Matched control firms

Following Bena and Li (2014), we benchmark each takeover participant against observationally similar firms that do not enter the corresponding takeover role. For each target and each publicly listed acquirer, we select control firms from the universe of CRSP–Compustat firms in the same industry, requiring that a control firm is not itself a party to a takeover bid. We match within the firm’s four-digit SIC industry, selecting the five firms closest in total assets in the fiscal year ending before the bid; if the four-digit industry contains fewer than five candidate control firms, we match within the three-digit industry, and so on at successively coarser SIC levels until five candidates are available. We construct two control samples from this procedure: the closest match and the five closest matches. The reported tables use the five closest matches; results with the closest match are similar.

Acquirer controls are additionally required to have made no acquisition in the three years preceding the match, so that the buyer-side comparison contrasts the acquiring firm with otherwise similar firms that did not acquire. As a robustness check, and again following the menu in Bena and Li (2014), we also construct control samples matched on industry, size, and book-to-market using propensity scores; all results are qualitatively similar. Table 5 confirms the quality of the match for targets: four-digit SIC codes are identical, and differences in total assets and market capitalization between takeover firms and controls are statistically insignificant. Acquirers remain larger than their controls, reflecting the no-acquisition screen, which is why size is included as a covariate in all multivariate specifications below.

C.2 Firm-level extensive-margin specifications

The extensive-margin tests ask which firm characteristics predict entry into an announced takeover process, separately by initiation type. For each side of the transaction (seller and buyer) and each initiation type (target-, bidder-, and jointly initiated), we estimate conditional logit models of the form

$$\Pr(y_{im} = 1 \mid \mathbf{x}_{im}, \alpha_m) = \frac{\exp(\alpha_m + \beta' \mathbf{x}_{im})}{\sum_{j \in m} \exp(\alpha_m + \beta' \mathbf{x}_{jm})}, \quad (1)$$

where m indexes the matched set formed by a takeover firm and its control firms, y_{im} equals one for the takeover firm and zero for its matched controls, and α_m is a matched-set (deal) fixed effect. Identification therefore comes from within-set variation, and standard errors are clustered by matched set. Explanatory variables $\mathbf{x}_{im}$ are measured at the end of the fiscal year preceding

the bid year and comprise firm fundamentals, institutional ownership from 13F filings, and industry conditions (Table 4). A second specification, estimated on the ExecuComp/BoardEx subsample, adds CEO compensation, equity incentives, and the age-bracket indicators of Jenter and Lewellen (2015): ages 18–53, 59–63, 64–66, and 67–99, with ages 54–58 as the omitted category. The matched-control design requires identically constructed variables for takeover firms and controls, which is why these models use the commercial databases rather than our proxy-collected data.

Buyer-side models are restricted to publicly listed acquirers with Compustat coverage. In rival-bidder-initiated deals the eventual acquirer did not itself make the first approach, so the combined bidder-initiated estimates characterize firms that become the eventual buyer in a bidder-opened process (Section 2.2). Because we observe only initiation processes that culminate in an announced bid, the estimates characterize firms whose initiation efforts lead to an announced transaction rather than all attempted initiations (Section 2.1).

C.3 Pair-level specifications

The pair-level tests ask why the observed target–acquirer pair, rather than an observationally similar alternative, transacts. For each observed pair we construct counterfactual pairs in both directions: the actual acquirer is paired with each of the target’s five matched control firms, and the actual target is paired with each of the acquirer’s five matched control firms, yielding up to ten counterfactual pairs per deal. We then estimate conditional logit models of the form in equation (1), where the dependent variable equals one for the observed pair and zero for its counterfactual alternatives and the fixed effect is defined at the deal-level matched set. The pair-level specifications include the firm characteristics of both parties plus two proximity measures: the log great-circle distance between the firms’ headquarters, computed from zip-code coordinates (Kedia et al., 2008), and an indicator that the two firms are product-market rivals under the text-based network industry classification of Hoberg and Phillips (2016). The models are estimated separately for target-, bidder-, and jointly initiated deals (Tables 9, IA.2, and IA.3).

C.4 Within-deal specifications

The within-deal tests condition on an announced, initiation-coded bid and ask which transactions the target initiates and how initiation relates to deal outcomes. Table 10 reports probit models in which the dependent variable equals one for target-initiated bids and zero for all other initiation types; these specifications use the governance and CEO variables hand-collected from each target’s last DEF 14A proxy statement before the bid, so coverage extends beyond the ExecuComp universe. Table 11 compares payment method, completion rates, offer premiums, and announcement returns across initiation types, with premiums measured 42, 63, and 105 trading days before announcement (Eaton et al., 2021). Premium regressions that control for target

size, leverage, R&D intensity, pre-bid price rundown, payment method, industry relatedness, and industry and year fixed effects yield similar conclusions (footnote 16).

D Additional extensive-margin regression results

This section reports the extensive-margin estimates referenced but not tabulated in the paper. Table IA.1 presents the firm-level conditional logit estimates for jointly initiated deals (joint efforts and mergers of equals), complementing the estimates for target- and bidder-initiated deals in Tables 7 and 8 of the paper. Tables IA.2 and IA.3 present the target–acquirer pair-level estimates for bidder- and jointly initiated deals, complementing the estimates for target-initiated deals in Table 9 of the paper. All specifications follow the matched-control design described in Section C: conditional logit models with deal-level matched-set fixed effects, standard errors clustered by matched set, and explanatory variables measured at the end of the fiscal year preceding the bid (Table 4 of the paper).

Table IA.1
Firms participating in jointly initiated mergers

The table shows conditional logit estimates of the probability that a firm is party to a jointly initiated takeover (joint effort or merger of equals). In Columns (1) and (2), the dependent variable equals one for the target in a jointly initiated deal and zero for its industry- and size-matched control firms (deal fixed effects). Columns (3) and (4) repeat the estimation for the buyer in jointly initiated deals versus its matched control firms. Columns (2) and (4) add CEO compensation and age variables (ExecuComp/BoardEx subsample). t-statistics, based on standard errors clustered by deal-match group, are in parentheses. All variables are defined in Table 4 and are measured at the end of the fiscal year prior to the year of the takeover bid. The sample is 1996–2016 and includes both completed and non-completed transactions.

Model	Seller characteristics		Buyer characteristics	
	(1)	(2)	(3)	(4)
1yr mkt-adj. return	−0.22 (−1.77)	−0.78 (−2.50)	0.38 (2.50)	0.83 (2.73)
External pressure	1.42 (0.99)	4.67 (1.36)	0.92 (0.79)	1.50 (1.30)
Industry merger wave	1.08 (1.49)	0.96 (1.12)	−0.54 (−0.77)	−0.36 (−0.49)
Listing age	−0.01 (−1.07)	−0.00 (−0.41)	−0.01 (−2.27)	−0.01 (−1.17)
High-tech	2.17 (5.66)	1.99 (3.30)	0.59 (1.40)	−0.45 (−0.95)
No. 13F owners	−0.05 (−1.01)	−0.21 (−2.34)	−0.03 (−0.65)	0.03 (0.42)
Largest 13F own (%)	−0.00 (−0.36)	0.01 (0.67)	−0.01 (−1.03)	−0.03 (−2.30)
Ln Total assets (\$ mil)	1.37 (7.13)	2.10 (8.39)	1.42 (8.26)	2.04 (9.16)
M/B	−0.00 (−1.17)	−0.00 (−1.08)	0.00 (0.02)	0.00 (0.05)
Market leverage	−0.21 (−0.69)	0.25 (0.39)	−0.14 (−0.35)	−0.18 (−0.29)
Cash/total assets	−0.16 (−0.44)	0.21 (0.23)	−0.01 (−0.02)	0.19 (0.30)
R&D/total assets	1.04 (1.12)	1.79 (0.62)	2.30 (1.54)	0.70 (0.32)
Capex/total assets	−3.62 (−2.29)	−6.04 (−1.70)	−3.44 (−1.42)	−7.13 (−2.05)
Asset tangibility	0.79 (1.36)	2.47 (2.35)	0.13 (0.17)	0.44 (0.43)
Ln CEO cash pay		0.28 (1.17)		−0.06 (−1.08)
Ln CEO equity pay		0.04 (0.65)		0.02 (0.49)
CEO own (%)		−0.11 (−3.18)		−0.02 (−1.25)
Ln Exercisable options		−0.04 (−1.30)		0.00 (0.02)
Ln Unexercisable options		−0.02 (−0.45)		−0.02 (−0.50)
Ln Restricted stock		−0.01 (−0.16)		−0.05 (−1.76)
CEO age in [18,53]		−0.15 (−0.53)		0.07 (0.31)
CEO age in [59,63]		−0.25 (−0.89)		−0.11 (−0.45)
CEO age in [64,66]		−0.32 (−0.54)		0.02 (0.05)
CEO age in [67,99]		−0.10 (−0.18)		−0.89 (−1.78)
Deal fixed effects	Yes	Yes	Yes	Yes
Pseudo R-squared	0.099	0.245	0.147	0.255
Number of joint initiations	432	144	350	230
Number of matches	1931	663	1604	1062
Number of obs.	2363	807	1954	1292

Table IA.2
The probability of bidder-initiated mergers using seller, buyer, and common information

The table shows conditional logit estimates of the probability of a bidder-initiated merger at the level of the target-acquirer pair. Each actual pair is matched with counterfactual pairs formed from the industry- and size-matched control firms of the target and the acquirer, and the estimation includes deal fixed effects. Columns (1) and (2) list the coefficients on seller characteristics, and the corresponding columns (1 cont.) and (2 cont.) list the coefficients on buyer and common (pair) characteristics from the same regression. Model (2) adds CEO compensation and age variables (ExecuComp/BoardEx subsample). t-statistics, based on standard errors clustered by deal-match group, are in parentheses. All variables are defined in Table 4. The sample is 1996–2016 and includes both completed and non-completed transactions.

Model	Seller characteristics		Buyer and common characteristics	
	(1)	(2)	(1 cont.)	(2 cont.)
1yr mkt-adj. return	−0.18 (−1.57)	−0.30 (−0.88)	0.53 (3.91)	0.15 (0.47)
External pressure	1.17 (1.07)	1.93 (1.88)	1.14 (1.72)	2.16 (1.88)
Industry merger wave	0.95 (2.38)	0.84 (1.67)	−1.25 (−2.83)	−0.18 (−0.35)
Listing age	−0.01 (−1.77)	−0.00 (−0.40)	−0.01 (−2.05)	−0.01 (−1.31)
High-tech	0.97 (2.92)	0.29 (0.66)	0.67 (2.37)	−0.30 (−0.55)
No. 13F owners	0.02 (0.48)	0.23 (3.13)	−0.03 (−0.62)	0.08 (0.93)
Largest 13F own (%)	0.01 (0.94)	−0.06 (−2.38)	−0.01 (−1.25)	−0.06 (−2.79)
Ln Total assets (\$ mil)	0.31 (1.98)	1.35 (2.83)	1.73 (9.34)	2.08 (4.51)
M/B	−0.02 (−1.55)	−0.03 (−0.92)	0.00 (0.02)	−0.00 (−0.42)
Market leverage	0.11 (0.36)	−0.17 (−0.25)	−1.46 (−4.51)	−1.87 (−2.81)
Cash/total assets	−0.54 (−1.36)	−1.66 (−1.75)	−1.36 (−3.51)	−1.19 (−1.17)
R&D/total assets	0.96 (1.05)	1.47 (0.48)	−0.78 (−0.60)	−2.72 (−0.64)
Capex/total assets	0.35 (0.20)	−0.26 (−0.09)	−6.60 (−2.83)	−4.43 (−0.81)
Asset tangibility	−0.05 (−0.08)	−0.46 (−0.46)	0.44 (0.69)	0.34 (0.28)
Ln CEO cash pay		0.16 (0.86)		−0.56 (−1.22)
Ln CEO equity pay		0.01 (0.13)		−0.06 (−0.21)
CEO own (%)		−0.05 (−2.18)		0.01 (0.41)
Ln Exercisable options		−0.03 (−0.81)		0.33 (2.17)
Ln Unexercisable options		0.04 (1.11)		0.10 (0.62)
Ln Restricted stock		0.04 (1.18)		0.04 (0.32)
CEO age in [18,53]		−0.08 (−0.33)		−0.13 (−0.48)
CEO age in [59,63]		0.25 (0.88)		−0.23 (−0.87)
CEO age in [64,66]		0.05 (0.13)		0.10 (0.26)
CEO age in [67,99]		0.08 (0.14)		−0.43 (−0.72)
Distance in km			−0.39 (−11.84)	−0.33 (−6.14)
Hoberg-Phillips TNIC3			2.17 (13.47)	1.88 (6.73)
Deal fixed effects			Yes	Yes
Pseudo R-squared			0.431	0.536
Number of bidders			847	246
Number of matches			3233	1060
Number of obs.			4080	1306

Table IA.3
The probability of jointly initiated mergers using seller, buyer, and common information

The table shows conditional logit estimates of the probability of a jointly initiated merger (joint effort or merger of equals) at the level of the target-acquirer pair. Each actual pair is matched with counterfactual pairs formed from the industry- and size-matched control firms of the target and the acquirer, and the estimation includes deal fixed effects. Columns (1) and (2) list the coefficients on seller characteristics, and the corresponding columns (1 cont.) and (2 cont.) list the coefficients on buyer and common (pair) characteristics from the same regression. Model (2) adds CEO compensation and age variables (ExecuComp/BoardEx subsample). t-statistics, based on standard errors clustered by deal-match group, are in parentheses. All variables are defined in Table 4. The sample is 1996–2016 and includes both completed and non-completed transactions.

Model	Seller characteristics		Buyer and common characteristics	
	(1)	(2)	(1 cont.)	(2 cont.)
1yr mkt-adj. return	−0.22 (−1.16)	0.21 (0.18)	0.65 (3.19)	2.79 (1.81)
External pressure	−0.82 (−0.38)	1.01 (0.39)	1.12 (0.59)	−1.78 (−0.93)
Industry merger wave	0.52 (0.45)	−0.12 (−0.11)	−1.00 (−1.17)	−0.52 (−0.46)
Listing age	−0.03 (−2.95)	−0.07 (−2.31)	0.00 (0.07)	−0.00 (−0.03)
High-tech	2.69 (3.48)	2.70 (2.03)	0.17 (0.32)	−4.09 (−2.40)
No. 13F owners	−0.10 (−1.18)	−0.80 (−1.64)	0.01 (0.09)	−0.06 (−0.13)
Largest 13F own (%)	−0.01 (−0.38)	−0.03 (−0.39)	−0.04 (−1.93)	−0.12 (−1.67)
Ln Total assets (\$ mil)	1.68 (4.05)	7.48 (4.81)	1.68 (4.97)	8.71 (3.33)
M/B	−0.00 (−0.13)	−0.00 (−0.08)	0.01 (1.11)	−0.18 (−1.11)
Market leverage	−0.23 (−0.44)	4.16 (0.80)	−0.19 (−0.32)	−6.94 (−2.38)
Cash/total assets	−0.64 (−0.96)	−2.75 (−0.89)	−0.41 (−0.53)	3.57 (0.71)
R&D/total assets	1.32 (0.71)	15.61 (2.16)	0.82 (0.32)	1.62 (0.16)
Capex/total assets	−3.41 (−1.04)	−1.98 (−0.20)	−5.77 (−1.63)	8.66 (0.54)
Asset tangibility	−0.68 (−0.71)	8.17 (1.54)	1.23 (1.33)	−1.32 (−0.38)
Ln CEO cash pay		2.68 (3.18)		−2.61 (−2.22)
Ln CEO equity pay		0.21 (0.65)		−0.66 (−0.59)
CEO own (%)		−0.37 (−3.05)		−0.26 (−1.85)
Ln Exercisable options		−0.26 (−1.64)		0.50 (1.30)
Ln Unexercisable options		0.05 (0.34)		−0.92 (−2.01)
Ln Restricted stock		−0.07 (−0.40)		−0.31 (−1.09)
CEO age in [18,53]		−1.98 (−1.65)		−0.95 (−1.10)
CEO age in [59,63]		−0.57 (−0.38)		−1.53 (−1.51)
CEO age in [64,66]		−4.91 (−1.62)		−0.44 (−0.35)
CEO age in [67,99]		2.53 (1.79)		−3.66 (−1.83)
Distance in km			−0.37 (−7.37)	−0.71 (−3.14)
Hoberg-Phillips TNIC3			2.66 (7.35)	2.81 (2.76)
Deal fixed effects			Yes	Yes
Pseudo R-squared			0.505	0.779
Number of joint initiations			280	95
Number of matches			1075	390
Number of obs.			1355	485

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