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Unravelling Bidding Strategies in M&A Transactions: Evidence from the Private Phase of the Deal Process

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Abstract

Using details from the private phase of the takeover process, we examine how bidding strategies associate with key takeover outcomes. We find that higher initial offers are followed by fewer bid revisions and an increased likelihood of being the winning bidder. Though there is a positive relation between a higher first offer and the final premium, bidder returns at the first public announcement of the deal are positively related to the initial bid strength in target-initiated deals. In bidder-initiated transactions, stronger initial bids correlate with higher combined target and acquirer returns. In a similar vein, more precise initial bids also increase the likelihood of target acceptance and result in higher acquirer returns in case of auctions, bidder-initiated and cash-paid transactions.

Keywords: Mergers and Acquisitions, Bidding, Auctions, Negotiations, Offer Precision

JEL Classifications: G34

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Unravelling Bidding Strategies in M&A Transactions: Evidence from the Private Phase of the Deal Process

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September 20, 2024

Abstract

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1. Introduction

Empirical work reveals that approximately half of all acquisitions fail to achieve positive announcement returns (e.g., Alexandridis et al., 2017) and some acquirers even experience large negative returns (Moeller et al., 2004). One potential explanation for these findings is that bidders, especially those in a competitive auction process, fall prey to the winner's curse and overpay for the target. Such overpayment could imply irrational and suboptimal bidding behavior that is often ascribed to managerial hubris (Roll, 1986; Malmendier and Tate, 2008). However, other evidence suggests that acquiring firms, who on average earn breakeven returns, do not systematically overbid in the face of direct competition from other bidders (e.g., Boone and Mulherin, 2008).

Despite a well-developed stream of academic literature examining the drivers of merger and acquisition (M&A) performance,[1] empirical evidence on bidding strategies remains largely underexplored despite its likely influence on negotiation proceedings (length, bid revision amounts, competing offers), securing a deal with the target, and ensuing shareholder wealth effects. We fill this gap by investigating bidding behavior during the private phase of the deal process and how these strategies are associated with key deal outcomes.

Our focus on the private phase of the deal process is motivated by empirical evidence showing that public takeover bidding is only the tip of the iceberg of actual takeover competition and that many targets run auctions rather than negotiating exclusively with one bidder (e.g., Boone and Mulherin, 2007).[2] Nevertheless, every merger negotiation (i.e., a target discussing a deal with

[1] See, for example, Renneboog and Vansteenkiste (2019) for a comprehensive literature review.
[2] See, for example, Andrade et al. (2001); Moeller (2007); and Dimopoulos and Sacchetto (2014) use the public deal phase to analyze competition and find that only about five percent of all target firms receive public offers from more than one bidder.

only one other party) is exposed to latent competition as a low offer could incite the target company to solicit other interested parties by running an auction process (e.g., Aktas et al., 2010; Betton et al., 2009). Therefore, the full picture of bidding and negotiations must consider the pre-public phase because these aspects are largely completed by the public announcement of the deal (Boone and Mulherin, 2007, 2008; Liu and Mulherin, 2018).[3]

Our empirical tests are based on a sample of acquisitions of US listed firms during 2005-2016. Following Boone and Mulherin (2007), we use hand-collected information on the private bidding process from the 'Background of the Merger' section found in U.S. Securities and Exchange Commission (SEC) EDGAR filings. Eckbo (2009) states that "to the extent that strategic bidding behavior exists, it is more likely to be evident in the first offer than in subsequent bids." Therefore, we focus on the first offer in the private deal process and create a measure of initial bidding strength by comparing the first observed bid premium with the expected bid premium based on a benchmark model. Our results demonstrate that strategically high first offers are associated with fewer price revisions and with a higher likelihood of successfully buying the target.

We further document a positive relation between the extent of initial bidding strength and the final premium paid. In target-initiated transactions, the bidder's cumulative abnormal returns (CARs) at the public deal announcement are significantly higher for this group. This evidence suggests that acquiring firm shareholders approve the outcome of stronger initial bidding behavior in the private phase of a target-initiated deal. In bidder-initiated transactions, however, the strength

[3] Figure 1 illustrates the full bidding process and provides an overview of the typical stages involved. As highlighted by Liu et al. (2022), the private bidding process is typically fluid. Some bidder-initiated negotiations eventually result in auction processes, while auctions might also end up as a one-to-one negotiation in a second phase. The bidding process ends either when the parties fail to reach an agreement, and the target abandons the sale, or when the target selects a winning bidder and finalizes a merger agreement that is then publicly announced.

of the first offer seems to mainly capture the extent of expected synergies, eventually leading to higher combined gains at the public announcement of the transaction but not affecting acquirer value creation separately.

This evidence begs the question of why bidders would make stronger (i.e., higher) first offers. One potential reason for making a strong initial bid is to mitigate target resistance, and hence, speeding up the deal process and encouraging targets to avoid running a full-fledged auction process (e.g., Boone and Mulherin, 2007; Aktas et al., 2010; Dimopoulos and Sacchetto, 2014. These pre-emptive offers can be particularly successful if the target managers view the costs of organizing an auction as greater than the potential loss of a lower final offer from fewer bidders (e.g., Dimopoulos and Sacchetto, 2014; Bulow and Klemperer, 2009). For example, revealing valuable information about the target to multiple prospective buyers, including direct competitors, might decrease the perceived value of the target for the interested parties. Another potential reason for a stronger first bid is to deter bidding competition, in turn lowering the final price needed to secure the deal with the target (e.g., Fishman, 1988; Hirshleifer and Png, 1989). While this notion is intuitively appealing, most rival bidders do not publicly observe other bids and target firms rarely reveal the precise level of other bids and the identity of those bidders (Hansen, 2001; Quint and Hendricks, 2018). Instead, targets typically communicate whether an indication of interest is adequate and whether the bidder is allowed to continue the bidding process (Gentry and Stroup, 2019).

Given the arguments above, we contend that our evidence is consistent with the target resistance rationale. We demonstrate that higher initial bids are associated with lower subsequent price revisions and fewer competing bids, which provides further evidence that bidders make

offers to persuade targets that they are serious about the deal and will pay a sufficiently high premium.

Next to the level of the initial premium offered, we contend that the precision of the offer can provide important information to target managers. Social psychology scholars have identified a so-called 'round-number heuristic', indicating that individuals tend to offer round numbers as cognitive reference points, especially in complicated settings with limited information (e.g., Fraser-Mackenzie et al., 2015; Zhang and Schwarz, 2013; Janiszewski and Uy, 2008). In M&A transactions, more precise offers can signal that the bidder has committed resources to adequately assess relevant information and determine its valuation of the target. Accordingly, the target's management might refrain from engaging in a costly auction process.

While the round-number heuristic has been shown to influence the behavior of investors and corporations in different financial settings (e.g., Bhattacharya et al. 2012; Bradley et al. 2004; Lin and Pursiainen, 2021), academic evidence on its impact in an M&A context is scarce. A notable exception is Hukkanen and Keloharju (2019) who provide evidence that more specific offers are associated with a higher likelihood of deal completion and lower final purchasing prices. Yet again, they only focus on the first public bidder, ignoring the preceding private negotiation process. The first public announcement already captures an offer price that has been agreed upon by target management, and hence its precision might differ from the true initial private offer.

Next, more precise offers have a similar signaling function. We define precise offers as unrounded dollar offers and compare these to rounded bids or bids comprising a range of dollar values. We find that more precise first bids coincide with fewer bid revisions and lower bid (price) revisions, while also being associated with a higher likelihood of target acceptance. Interestingly,

more precise initial offers are associated with higher final premiums in target-initiated deals but result in lower ultimate premiums if transactions are initiated by the bidder. Moreover, these precise offers correspond to significantly higher bidder returns in auctions, bidder-initiated and cash-paid transactions.

Our findings offer important contributions. To the best of our knowledge, we are among the first to provide systematic evidence on bidding behavior based on the first private offer, rather than relying on the first public bid that is simply the outcome of the private bidding behavior. A contemporaneous paper to ours explores private bidding as well (Liu et al., 2022). However, while their paper mainly addresses the interconnectedness between auctions and negotiation processes and their fluid nature, our study focuses on the impact of the first offer on subsequent bidding behavior and acquirer wealth effects as of the deal announcement. We demonstrate that stronger initial bids are associated with lower target resistance and a smoother deal process. In addition, the higher chance of winning the deal is not found to be at the expense of shareholder value creation.

Further, we identify the precision of the first offer as an additional signal of the first bidder's diligence and interest and demonstrate that more precise offers are instrumental in deterring bidding competition and convincing target shareholders to sell. In general, we illustrate the importance of the initial bidding strategy in the private M&A process. This study also meets the call for more empirical work on the extent of strategic bidding behavior in mergers and acquisitions (Eckbo, 2009).

2. Bidding strategies in M&A

2.1. Pre-emptive bidding and target resistance

Bidders interested in potentially acquiring a target must determine their bidding strategy. If the benefits of acquiring a target firm are, in part, common to several potential bidders, the opening public bid could notify rivals of an interesting investment opportunity, and hence trigger competing offers (Eckbo, 2009). If bids are publicly revealed, bidders that wish to subvert competition could offer higher initial premiums rather than starting low and raising the bid if competing offers emerge. Fishman (1988) models the bidding process as an open (English) auction in an environment of asymmetric and costly information. He argues that the first offer provides information about the bidder's valuation of the target. As such, the initial bidder might strategically submit a high first (i.e., pre-emptive) bid to signal a high valuation and deter other potential buyers.

Besides, the positive signal associated with such a high initial offer might even induce better financing terms (Liu, 2012). Similarly, targets weigh the costs of organizing the auction against the potential loss from accepting a lower offer in a one-on-one negotiation. It could be more efficient to deal with just one bidder at a time so that auction entry costs only need to be incurred if the early bidders have a low target valuation (Bulow and Klemperer, 2009). In that context, Hansen (2001) argues that targets might rationally accept pre-emptive bids to avoid disclosing valuable information to competitors.

Empirical testing of pre-emptive bidding is difficult because potential bids that were discouraged by the rival's initial offer are not observable (Eckbo, 2009). Moreover, existing empirical studies often rely on public initial offers and bidding contests, thereby neglecting the most competitive part of the process (i.e., the private phase) as well as the target's reaction

following the private offer(s). In line with pre-emptive bidding, Betton et al. (2009) report a slightly higher initial public offer premium in single-bidder versus multiple-bid contests. In addition, Betton and Eckbo (2000) show that rival offers typically exhibit large bid jumps, supporting the argument of high bidding costs.

Aktas et al. (2010) also demonstrate that latent competition increases the bid premium in negotiated transactions, while auction costs are found to reduce the premium. Dimopoulos and Sacchetto (2014) establish that small entry costs are sufficient to explain significant pre-emption activity, even though they illustrate that takeover premiums are eventually determined by target resistance rather than pre-emptive bidding. However, Bessler et al. (2015), find no support for the pre-emptive bidding hypothesis, analyzing the first public offer for a global sample of M&A transactions. The level of the initial public premium is not found to significantly affect the probability of subsequent offers. Yet, they report strong evidence supporting the role of toeholds and termination fees in deterring public bidder competition.

Importantly, the existing theoretical models on pre-emption, as well as the empirical studies testing these theories in an M&A setting, typically rely on initial offers and bidding contests being public, thereby neglecting the most competitive part of the process (i.e., the *private* phase). In the private realm of the deal process, rival bidders do not directly observe competing offers. It is the target firm that eventually decides whether and how to use information on private offers when communicating with other bidders (Liu et al., 2022). As a consequence, a strategic bidding strategy should be aimed at reducing target resistance. If the initial bid is high enough, the target will realize that the cost of organizing an auction process (like increased fees for legal and financial advice and the disclosure of imperative competitive information) outweighs the potential loss of

accepting a lower offer in a one-to-one negotiation (e.g., Dimopoulos and Sacchetto, 2014; Bulow and Klemperer, 2009; Hansen, 2001).

The sales process rarely terminates following the first offer. In a negotiation, target managers, perhaps to illustrate they have extracted the highest possible amount for shareholders, often state that the first bid is inadequate to acquire the firm. Thus, the bidder must decide how much, if at all, to raise the offer. In auctions, targets often receive multiple indications of interest and respond by either narrowing the field and/or asking participants to increase their offer.

As noted above, bidders often do not have specific details on other bids in a takeover auction setting, and thus must choose how to proceed based on their own valuation and in consideration of the competitive landscape. An aggressive subsequent jump bid could signal a high valuation, which can potentially lead the target to end the sales process or cause other bidders to terminate their participation. The downside of a jump bid strategy is that the bidder could overpay relative to what the second value bidder would have offered or what the target would have accepted, thus diminishing its gains to the deal.

2.2. Bid precision

Insights from social psychology reveal the existence of a 'round-number heuristic', an inclination to use round numbers as a cognitive shortcut when facing complex settings, like valuation exercises (e.g., Fraser-Mackenzie et al., 2015; Zhang and Schwarz, 2013). Janiszewski and Uy (2008) illustrate that subsequent price adjustments following a first numerical anchor are less prominent if the anchor is set more precise compared to rounded. They argue that precise anchors are represented on a more fine-grained subjective scale than rounded numbers. As such, a series

of movements on this mental subjective scale with finer resolution leads to a smaller overall correction than the same number of jumps from a rounded offer.

In addition, numerical offer precision provides a signal about uncertainty and the efforts that a bidder has put in valuing the investment opportunity. In the context of analyst forecasts, Dechow and You (2012) argue that analysts carefully trade off the benefits and costs of providing informative and precise forecasts. As a consequence of lower effort put forth in valuing firms that generate less brokerage or investment banking business, the analyst will be more uncertain about the forecast, and hence, be more inclined to round the earnings forecast. In line with these arguments, Herrmann and Thomas (2005) show that rounded analyst forecasts are less accurate than precise forecasts.

This cognitive bias has been found to play a significant role in diverse situations of price setting in the finance literature. Bhattacharya et al. (2012), for example, indicate that stock traders focus on round numbers as cognitive reference points for value. Similarly, Kuo et al. (2015) show that cognitive limitation is manifested in the futures market by a disproportionately large volume of limit orders submitted at round-number prices. Bradley et al. (2004) find that initial returns are significantly higher for IPOs with integer offer prices versus those priced on the fraction of the dollar. Hervé and Schwienbacher (2018) provide evidence of a comparable round-number cognitive bias in the equity crowdfunding market. Likewise, Lin and Pursiainen (2021) demonstrate that a round number goal in reward-based crowdfunding campaigns leads to a lower success rate, as it conveys a bad signal about the entrepreneur's quality.

Within the perspective of M&A transactions, more precise offers signal that bidders are well informed and more confident about the target's valuation. Further, it could impede rival

bidders from entering a bidding war, and hence, being exposed to the winner's curse. Even though rivals might not observe the level of the first bid in the private phase of the deal process, the precision of the initial offer sends an important signal to the target. Bidders who submit more precise offers are likely to be perceived by target management as more competent, which could result in greater openness to discuss and reach agreement on a corporate combination (Hukkanen and Keloharju, 2019). Additionally, targets are less likely to expect upward bid revisions if the initial bid is based on a thorough valuation exercise that results in a precise number. As the target's management rationally compares the odds of significantly higher alternative offers to the costs associated with a costly auction process (Dimopoulos and Sacchetto, 2014), they are less inclined to resist the initial precise bid.

If precise offers generally lead to better deal outcomes, one can question why not all offers are precise. Would there be a cost to not rounding the first offer? First, rounded offers are cognitively least costly, especially in cases of higher uncertainty (Fraser-Mackenzie et al., 2015; Zhang and Schwarz, 2013; Mason et al., 2013; Yaniv and Foster, 1995). In addition, professional advisors (like investment bankers) could simply be unaware of the gaming aspect of making precise offers and, hence, go with the market practice of making rounded first offers (Hukkanen and Keloharju, 2019). Finally, making a more precise offer could potentially signal a stronger interest or eagerness in doing the acquisition, and hence, weaken the acquirer's bargaining position.

To the best of our knowledge, the only study empirically examining the link between the precision of cash offers and M&A outcomes is Hukkanen and Keloharju (2019). They report a lower likelihood of deal completion and higher purchasing prices for round price-per-share offers. However, their study only considers the first public offer, ignoring prior bids that might have

preceded this public offer in the private part of the process. So, a round publicly-announced bid could just be the outcome of a private negotiation process, while the opening private offer was potentially more precise.

3. Sample and methodology

3.1. Data selection process

Our sample selection process begins by obtaining completed takeover deals announced between 2005 and 2016 from the Thomson One Banker Securities Data Company database (SDC). We employ the following selection criteria that are in line with previous literature examining the private bidding process (Boone and Mulherin, 2017; Gorbenko and Malenko, 2014): (1) Targets are US public firms; (2) Only targets that are non-financial and not active in the utility industry are retained (SIC codes 6000-6999 and 4000-4999 are excluded); (3) A change in control is realized where bidders held less than 50% of target shares before the transaction and owned 100% of the target's common shares after the transaction; (4) The deal is not an undisclosed value merger, spin-off, recap, self-tender, repurchase, minority stake purchase, acquire remaining interest or privatization; (5) Forms of the deals are "merger" and "acquire major interests"; (6) Deal value exceeds $50 million; (7) Final price per share is available

This refinement process yields 1,278 deals. Because our study explores the bidding strategy starting with the first bid premium, we obtain the target's characteristics at the initiation stage. Hence, we limit our sample to the availability of the target's information on Compustat and the Center for Research and Security Prices (CRSP). This step yields 1,136 deals.

Subsequently, we examine SEC filings related to takeovers (DEFM14A, PREM14A, 14D, TO-T, and S4) and find 1,031 transactions with information on the sales process. Among these,

we are able to extract 796 deals that include the following details: the initiation date, the first offer value, the date when the first bid was made, the identity of the party starting the process, and the sales method (auction or negotiation). Finally, for situations where we examine acquirer returns, and thus need the acquirer to be publicly listed, the sample drops to 384 deals.

Table 1 provides the distribution of our sample by year (unconstrained by having acquirer stock return data). The lowest number of observations at 44 occurred during the financial crisis in 2009, while 2006 had the highest number of observations at 97. We further distinguish between auctions and negotiations. Following Boone and Muherin (2007), we define negotiated deals as those with only one bidder signing a confidentiality contract, whereas auctioned deals are those with at least two bidders signing confidentiality contracts (Boone and Mulherin, 2007). The auction can be formal (i.e., a structured process with multiple bidding rounds) or informal (without clear rules laid out in advance). In private negotiations, the target only deals with one single bidder. Our sample is composed of more auctions (72.1%) than negotiations (27.9%). These fractions are in line with other recent papers, like Liu et al. (2022), and illustrate that auction processes have become more prevalent compared to the sample used in Boone and Mulherin (2007).

In addition, we differentiate between target- and bidder-initiated deals. A target-initiated process is defined as the target putting itself up for sale. In contrast, in a bidder-initiated deal, a bidder approaches the target and expresses the desire to acquire it (Masulis and Simsir, 2018). In line with existing literature (e.g., Fidrmuc and Xiao, 2019; Liu et al, 2022), the large majority of transactions are bidder-initiated (69.97%).

3.2. Methodology, key variables, and summary statistics

This section discusses the dependent and explanatory variables used in our analyses. An overview of all definitions is also provided in Appendix 1. The SEC merger background documents allow us to hand collect information on the various steps in the private deal process, including data on the structure and length of the process, the type of bidders involved and the level of their bids.

We first consider the level of the first bid. We therefore start by computing the *Initial Bid Premium* as: *[(Initial Offer Price – Benchmark Price)/Benchmark Price] x 100 (Eq. 1)*, where *Benchmark Price* is the market value of the target on the day that the sales process begins.

Given that the offered premium is likely to be affected by target characteristics, we also consider the strength of the initial bid by comparing the *Initial Bid Premium* to the *Expected Final Premium*, which we call *Initial Bid Strength*. We compute this variable as: *Initial Bid Premium – Expected Final Premium (Eq. 2), where* the *Expected Final Premium* is defined as: *[(Final Offer Price – Benchmark Price)/Benchmark Price] x 100 (Eq. 3)*

The benchmark model used to determine the *Expected Final Premium* is based on Bates and Becher (2017). The explanatory variables in this model include target characteristics, deal attributes and industry fixed effects. The results for this benchmark model are presented in Table 2. Consistent with prior work, we find that larger targets receive lower premiums. In addition, capital expenditures negatively affect acquisition premiums while R&D expenditures, leverage, the 52-week high stock price and the target's run-up have a positive impact. Target premiums are also found to be higher for cash offers and offers made by strategic (i.e., non-financial) buyers. Typically, the initial offer is below the expected final offer, and hence, our variable of interest (*Initial Bid Strength*) has a negative sign. The closer the first offer is to the expected final premium,

the less negative it will be. If the initial offer exceeds the predicted final premium, it will have a positive value.

The second variable of interest is *Bid Precision*, which is an indicator variable that takes the value of one if the initial offer is a specific unrounded value (e.g., $10.25) and zero if the value is rounded to the nearest dollar or is presented as a range (e.g., $10.50 to $11.50). Alternatively, we test the robustness of our results by comparing all exact initial offers (rounded and unrounded) to bids that comprise a range of values. For acquisitions involving public targets, most offers are made on a per share basis, so we also measure precision at the per share level, rather than based on the firm's total (equity) valuation. Next, it is important to note that, while the value of cash offers is fixed, the ultimate value of stock offers depends upon the evolution of the bidder's stock price. Nevertheless, the precision of a stock offer at the moment of the bid could send a strong signal about the confidence of the bidder in valuing the target. In the robustness section of the paper, we further explore whether the variable nature of stock offers results in different conclusions.

As our primary objective is to investigate the impact of certain bidding strategies on the M&A sales process and deal outcomes, we construct a set of dependent variables to capture how the bidding process unfolds. We consider measures for bid revisions, rival offers, deal duration, and the probability that the first bidder ends up winning the deal. Furthermore, we examine target, acquirer and combined cumulative announcement returns (CAR) to proxy for target and acquirer value creation as well as overall expected deal synergies.

Descriptive statistics with respect to our main variables are offered in Table 3. In addition to the full sample, we present values for auction/negotiation subsamples, bidder/target initiation

subsamples, and values for deals with publicly listed acquirers only. For the full sample, 2.66 bidders on average make 6.22 bids with a deal duration of 110 days. The jump in the second bid averages 9.63%, while the mean difference between the final and first offer is 15.39%. The first bid premium is 35.58%, while the final premium amounts to 50.97%, which is very close to the expected final premium. Unsurprisingly, negotiated deals have lower first and final premiums, lower offer price revisions, fewer bids, and shorter deal durations. Bidder-initiated deals, on average, tend to involve fewer interested parties, yet display more elevated premiums, offer revisions and takeover durations. Finally, the summary statistics for the subsample of listed acquirers are found to be comparable to the full sample.

Panel B of Table 3 links target characteristics to our variables of interest. We separately examine transactions based on the top and bottom quartile of the initial offer strength. In addition, we split our sample into precise and imprecise first offers. For each of these subsamples, we report mean target characteristics and explore differences between them. We find that stronger initial bids occur when targets have lower R&D expenses and intangible assets, indicating a greater difficulty in correctly valuing such assets at the start of the deal process. Larger targets with higher cash flow generation and capital expenditures are associated with stronger initial offers. Surprisingly, initial offers are found to be more precise for R&D intensive firms. Also, smaller firms with lower leverage, inferior cash flow generation and a lower market-to-book ratio are linked to more precise offers. Finally, higher latent competition as proxied by the number of firms in a target industry, is associated with a lower initial bid. So, while this is not consistent with bidders making higher initial offers when they have less bargaining power, it could be that bidders facing greater competition present lower initial offers in expectation that the target would demand higher bid revisions when there is more potential demand for their assets.

Finally, Panel C reports target, acquirer, and combined returns at the public announcement of the deal. Consistent with prior work, targets generate positive returns upon the public announcement with a mean value of 33% (though this statistic is likely downward biased as this metric does not account for information leakage and potential price runup), while acquirers exhibit break-even returns. Targets realize higher returns in negotiated and bidder-initiated transactions. We compute the combined CARs based on the weighted average of the acquirer's cumulative abnormal return and the target's cumulative abnormal return, considering the pre-acquisition market value of the acquirer and target companies. We find that combined returns are positive and average about 13%, indicating that these deals generate overall positive value.

Figure 2 reflects how median bid premiums evolve according to the number of bids made by the ultimate (winning) acquirer. Observably, a higher initial premium (strong first bid) reduces the number of bidding rounds, while offering a weaker initial bid is associated with more frequent bid revisions. In addition, high initial offers are found to eventually result in higher final offer premiums, despite fewer bid revisions.

4. Results

4.1. Initial bid strength and sales process outcomes

The goal of our study is to document how initial bids condition key outcomes of the sales process. This analysis enables us to ascertain whether higher initial offers correlate to positive outcomes for the bidder or instead cause the bidder to potentially overpay for the target assets. As noted in Section 3, we compute a measure of *Initial Bid Strength* by capturing how close the first offer is to the expected final premium, relying on a benchmark model based on target characteristics. We then regress this measure on key factors of the sales process.

The impact of *Initial Bid Strength* on the *Final Bid Premium* is depicted in Table 4. We include key deal characteristics as controls. In addition, we control for the use of top-tier investment banks by targets and bidders. Golubov et al. (2012) demonstrate that highly reputed advisors have an increased ability in identifying interesting targets, structuring deal terms, and negotiating a greater share of synergies. Following prior literature (Fang, 2005; Golubov et al., 2012), we classify the top 8 investments banks by deal value as top-tier.

To help disentangle strategic bidding behavior from bidder bargaining power, we include two measures of bargaining power in our regression models. *Industry Count* captures the (natural log of the) number of other firms in the target's industry that are larger than the target. This measure proxies for the amount of potential competition for the target's assets (Boone and Mulherin, 2008). We also include a *Recession* indicator based on NBER recession data. As argued by Aktas et al. (2010), recessions generate tightening financing conditions, hence reducing the overall financial strength of potential rival bidders. A check of the correlations among the various explanatory variables (see Appendix 2) does not reveal any multicollinearity issues and the variance inflation factors never surpass four.

In our full sample and across all subsamples, a stronger initial bid has a consistent and significantly positive effect on the expected final premium. So, private deal processes that kick off with higher offers relative to what can be expected from a benchmark model (based upon target features) are associated with higher ultimate premiums being paid. An increase of one percentage point in the *Initial Bid Strength* (resulting from a higher *Initial Bid Premium*), leads to an increase of the *Final Bid Premium* by 0.745 percentage points. In line with our descriptive statistics, negotiations have a lower final premium, particularly when the bidder initiates the deal. Further, we observe higher ultimate premiums in tender offers, when the acquirer is a strategic buyer (as

compared to financial buyers), and when more potential rival bidders are present in the target's industry.

Targets will rationally weigh the costs versus benefits of approaching other interested parties and hence starting (or continuing) a competitive bidding process. The stronger the initial bid, the higher the likelihood that the cost of organizing an auction will outweigh the potential loss of not receiving the highest possible offer. Table 5 confirms this notion by revealing that higher initial bid strength coincides with fewer subsequent bids (consistent with Figure 2) and lower bid (price) revisions, while it raises the probability that the first bidder successfully acquirers the takeover target. Therefore, even in the absence of clear signals that the bidder can send to rival bidders (due to the private nature of the process), strong initial bids help reduce subsequent bidding competition.

We do not find any significant impact of *Initial Bid Strength* on deal duration, the number of competing bidders, nor on the bid jump. Top-tier investment banks, both on the target and acquirer side, succeed in significantly reducing the duration of the deal process. Next, as expected, negotiated transactions involve a lower number of bids and bidders, complete faster, and raise the likelihood that the first bidder wins the takeover contest. In industry-related transactions, the first bidder has a higher likelihood of winning the bidding process despite a stronger bid jump and a greater offer revision following the initial bid. Finally, more potential bidders (*Industry Count*) result in a larger bid jump.

Next, we investigate the impact of a stronger initial bid on the gains realized by analyzing the acquirer and combined CAR. The results in Table 6A demonstrate that a stronger initial bid is not associated with lower returns for acquirers. Therefore, despite higher initial offers leading to

higher final premiums, acquiring firms' shareholders do not respond negatively to the deal terms. In addition, Table 6B indicates that a strong initial offer is associated with larger combined gains, particularly for bidder-initiated deals. One possible reason for this finding is that bidders are more comfortable making a strong initial offer when they believe synergies from the deal are likely to be higher. The higher combined gains indeed illustrate that investors recognize greater synergy potential from the corporate combination in deals that started with a stronger initial bid (especially if that results in a one-to-one negotiation). That high first offer allows bidders to complete the transaction process with fewer bid revisions and without a negative reaction from their shareholders.

The conclusions, however, are different for the subset of target-initiated transactions. For these deals, the *Initial Bid Strength* has a significantly positive effect (although only at 10% level) on the acquirer return, while not having any significant effect on the combined gains. This evidence suggests that bidding strategically through a strong initial bid might be especially relevant in the case of transactions initiated by the target (leading to a tradeoff between target and acquirer returns), while bids in bidder-initiated transactions are more likely to be driven by expected synergy potential.

Masulis and Simsir (2018) argue that target initiation is a manifestation of negative private information about the target's value. Targets are typically found to be financially weaker and more likely to be overvalued (see also Fidrmuc and Xia, 2019). As a result, the informational costs that would be incurred when targets opt for a full-fledged auction process are relatively higher compared to the potential disadvantage of foregoing a higher offer. This creates an opportunity for the initial bidder to acquire the target company at a relative bargain by making a strong initial bid, and hence, avoid target resistance and bidding competition, eventually leading to higher value

creation upon the public announcement of the transaction. Bidder-initiated transactions, on the other hand, are typically triggered by positive information held by the bidding firm regarding potential synergy realization, rather than opportunistic pricing opportunities (e.g., Masulis and Simsir, 2018).

Our findings regarding control variables are generally in line with prior literature. For example, we observe higher acquirer and combined returns for cash-paid transactions and for deals executed by strategic acquirers.

4.2. Bid precision

We next examine the impact of precise initial offers (*Initial Bid Precision*) on the final premium paid, the deal process, and acquirer and combined CARs. Table 7 presents regression models with the final premium as the dependent variable. We again estimate these models for the full sample and the negotiation, auction, target initiation and bidder initiation subsamples. Given that we do not rely on any benchmark model for the variable of interest (in contrast to Table 4), we explicitly control for various target characteristics. In addition, in one model we include an interaction between *Initial Bid Strength* and *Initial Bid Precision* (column 6).

Our findings regarding the full sample indicate that a more precise initial offer is not associated with the final premium. In addition, the interaction term between the strength of the first bid and its precision is also insignificant. There is, however, a marked difference between target- versus bidder-initiated transactions. While for target-initiated deals a more precise offer is accompanied by a higher final premium, the opposite holds for bidder-initiated deals. This result could indicate that a precise offer only signals competence and seriousness when true synergies are driving the deal initiation (i.e., in bidder-initiated transactions). In these cases, targets might

refrain from organizing a costly auction when receiving a relatively strong first initial bid, leading to lower ultimate premiums being paid. In contrast, a more precise offer in target-initiated deals might reflect lower information asymmetry about the target's value in general and hence lower costs of inviting rival bidders to join the bidding process, leading to elevated final premiums.

Table 8 displays that more precise bids are associated with a lower number of bids and simultaneously boost the likelihood of the first bidder successfully acquiring the target. This evidence is consistent with the notion that a more precise offer signals the bidder is serious and better informed, making the target less likely to resist the first bid. Interestingly, we find some (weak) evidence that more precise initial offers lead to more speedy deal processes. No significant impact of bid precision on the other aspects of the deal process could be identified. Regarding the control variables, we notice that both target-initiated and negotiated transactions result in a faster deal process, despite more observed offers in target-initiated deals.

As can be derived from Table 9A, more precise offers, on average, exhibit higher acquirer returns within the full sample, and these results mainly stem from the subgroups of auctions and bidder-initiated deals. For the full sample, a precise (i.e., unrounded) offer results in a 1.3% higher acquirer CAR compared to a non-rounded offer or a range. Given none of these groups exhibit a positive relation between a more precise offer and combined CARs (Table 9B), there is no evidence that a more precise offer serves as a signal of higher expected deal synergies. Instead, it suggests that bidders feel more confident in correctly valuing the target. Consequently, targets are less likely to anticipate future upward bid revisions and might even rationally accept an offer that is lower than what could be obtained in a competitive auction. This notion seems to be confirmed especially in bidder-initiated transactions, also given the significantly negative impact of *Initial Bid Precision* on the final premium paid (see Table 9A).

5. Robustness checks and post-hoc analyses

5.1. Alternative definitions of key variables

We first test whether our conclusions regarding the level of the initial bid persist when we use the simple *Initial Bid Premium*, rather than comparing it to the expected ultimate premium based upon a benchmark model (*Initial Bid Strength*). As specified in section 3, the premium of the initial bid is calculated as the difference between the initial bid price and the market value of the target on the day of the initiation of the sales process.

The results in Table 10A illustrate the robustness of our results. We find that a higher initial premium typically leads to a larger final premium being paid. Notably, such an elevated initial premium is associated with higher acquirer value creation upon the announcement of the deal in target-initiated transactions (significant at 5% level), suggesting that shareholders approve of the bidding strategy. In bidder-initiated deals on the other hand, higher initial premiums seem to be a signal of larger synergy potential, resulting in greater combined target and acquirer returns (rather than impacting acquirer returns separately). While a higher initial premium is associated with lower revisions following that initial offer (Table 10B), we do not find any significant relation with the number of bids, nor the likelihood of the first bidder winning the bid competition. Remarkably, a high initial premium results in a larger subsequent bid jump.

Next, we examine an alternative definition of bid precision by comparing fixed number offers (both rounded and unrounded) to ranges of offer prices. Following this modified definition of bid precision, we continue to find that more precise offers are associated with faster deal processes, are less contested by other bidders, and increase the likelihood of eventually acquiring the target. However, the results regarding acquirer and combined wealth effects are not found to

be significant anymore. These additional tests are not reported in the paper but can be obtained from the authors upon request.

Finally, we examine whether our conclusions regarding shareholder wealth effects remain stable for a longer event window. More specifically, we assess investor reactions over a 5-day window surrounding the acquisition announcement. Untabulated results again demonstrate the robustness of our findings. We observe higher combined CARs for deals initiated by stronger first bids, while more precise initial offers result in superior acquirer returns.

5.2. Method of payment

Next to the level and precision of the bid, the likelihood of a target accepting the offer also depends upon the payment method. Stock offers help share post-merger deal risk with target shareholders. In addition, information asymmetry might allow bidders to benefit from temporary overvaluation by offering stock (Shleifer and Vishny, 2003; Rhodes-Kropf and Viswanathan, 2004). On the other hand, bidders might strategically opt for cash payments when they have an informational advantage over other market participants, to avoid sharing these gains with target shareholders (Luypaert and Van Caneghem, 2017).

In Table 11, we rerun our regression models in subsamples of full cash transactions versus stock or mixed offers. We find that our conclusions regarding *Initial Bid Strength* hold in both samples. A stronger initial bid results in a higher final premium, while not having a negative impact on the acquirer returns upon the public announcement of the deal. In addition, the combined returns (proxying for expected synergy gains) are significantly higher in situations with relatively high initial offers.

Interestingly, the results in Table 11B show that the positive impact of bid precision on the acquirer's cumulative abnormal returns only holds in cash-paid transactions, with a 1.7% higher acquirer CAR for precise versus unrounded (or range) offers. Given that stock transactions typically imply an exchange ratio of acquirer shares to target shares, the actual amount that is offered depends on the market reaction upon the public announcement of the deal (that is unknown at the moment of the initial offer). This makes the signal that is sent through the precision of the initial bid less informative, and hence will not help in convincing target shareholders about the accuracy of the offer made.

5.3. Strategic versus financial acquirers

Our sample includes both strategic and financial bidders. Strategic buyers are typically companies operating in the same or a related line of business, while financial buyers are mainly private equity firms (Bargeron et al., 2008; Gorbenko and Malenko, 2014). Consequently, the type of targets and the motives driving acquisitions by both types of acquirers are naturally different. While strategic bidders aim to achieve synergies, financial bidders create value through efficiency improvements, leverage effects or market timing (i.e., multiple arbitrage). In Table 12, we test whether our results hold in subsamples of deals that were either initiated by a financial or strategic bidder. Given that financial bidders are typically private companies, and the initial bidder is often the ultimate acquirer, we can only assess acquirer and combined stock market reactions for the subset of bids made by strategic bidders.

The results in Table 12 demonstrate that our conclusions are largely robust. A stronger initial bid leads to a higher initial premium in both subsamples. A more precise initial offer results in a lower ultimate premium, although only significant at 5% level. Moreover, leaving out those deals that were initiated by financial buyers does not change our findings regarding shareholder

reactions. A stronger bid is positively related to the combined acquirer and target CAR, while bid precision only positively affects the acquirer wealth creation.

6. Conclusion

We explore the private phase of the acquisition process to investigate how the strength and precision of the initial bid shapes the subsequent sales process and the deal value creation. We illustrate that a high initial offer can be a good bidding strategy, despite being correlated with higher final premiums. Stronger initial offers have fewer rounds of successive bids, reduced magnitude of bid revisions, and a greater likelihood of the initial bidder successfully securing the takeover target. Moreover, stronger offers have higher acquirer returns upon the public announcement of target-initiated deals, and higher combined returns for bidder-initiated deals. Though these findings indicate that stronger offers are associated with positive deal outcomes for the bidder, we cannot rule out that bidders make stronger offers when they anticipate the deal to be more valuable.

Next to the level of the initial bid, the precision of that offer can also be an instrumental aspect of bidding strategy. More precise offers are followed by fewer subsequent bids, reduced length of the deal process, and a higher likelihood of ultimately acquiring the target company. While not affecting combined returns, more precise initial offers also have higher acquirer returns upon the public announcement of the deal. The latter only holds for cash-paid transactions, given that the value of stock and mixed offers is not fixed at the moment of making the offer.

Our study illuminates how bidding strategies in the private phase of the deal process can significantly smoothen the deal process and still can exhibit elevated wealth effects upon the public announcement of the transaction. Therefore, our findings are highly relevant for corporate M&A

teams and advisors to both the target and acquiring firms (Aktas et al., 2021). Finally, our findings also illustrate the importance of and the need for additional research on the private negotiations process. More specifically, investigating the bidding steps and target reactions following the initial offer constitutes an interesting avenue for future research.

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FIGURE 1: OVERVIEW OF THE M&A BIDDING SEQUENCE

This figure illustrates how an M&A process unfolds from the initiation (either by target or bidder), over the private bidding process through an auction or negotiation (with negotiations possibly shifting to auctions and vice versa), to eventually the public announcement of the transaction.

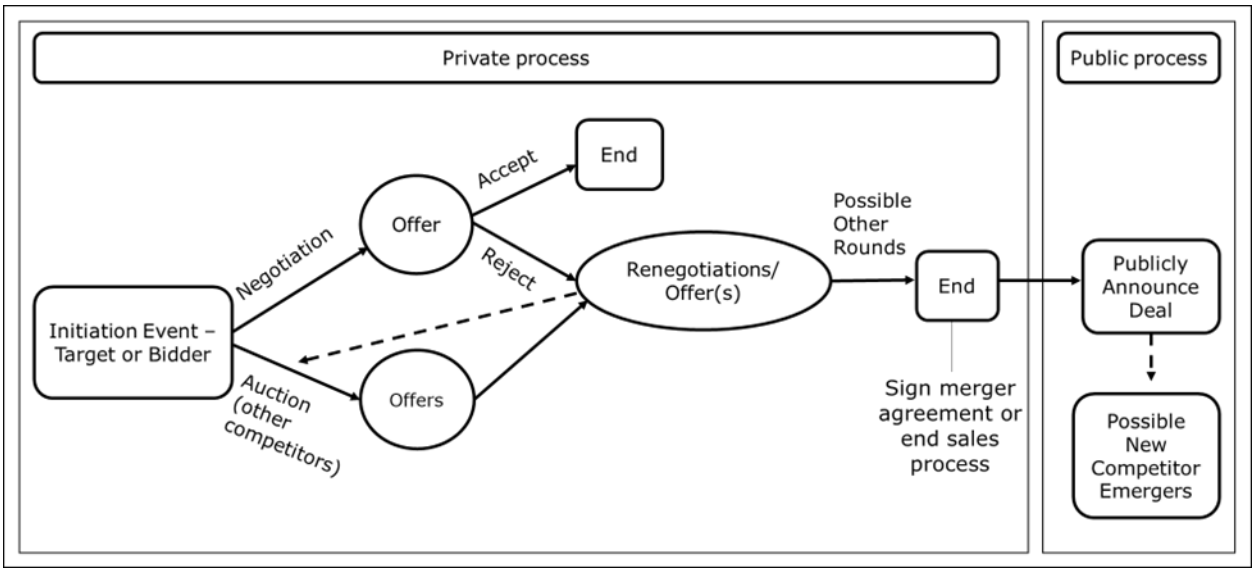


FIGURE 2: PREMIUMS IN MULTIPLE ROUNDS OF BIDDING

This graph displays the median premium paid by participants who submit multiple bids (ranging from 2 to 6) during negotiations for a merger. We present the median premium for the initial and subsequent bids in a sample of 89 transactions where the winning bidder made two offers. Additionally, we depict the median premium for the first, second, and third bids in a set of 117 deals where the acquirer submitted three offers. Furthermore, we display the median premium for the first, second, third, and fourth bids in a group of 116 transactions involving four offers. Similarly, we showcase the median premium for the first, second, third, fourth and fifth bids in a collection of 111 deals where the bidder made five offers. Lastly, we exhibit the median premium for the first, second, third, fourth, fifth, and sixth bids in a subset of 73 transactions where bidders submitted six offers. The premium is calculated based on the target's market prices at the initiation date.

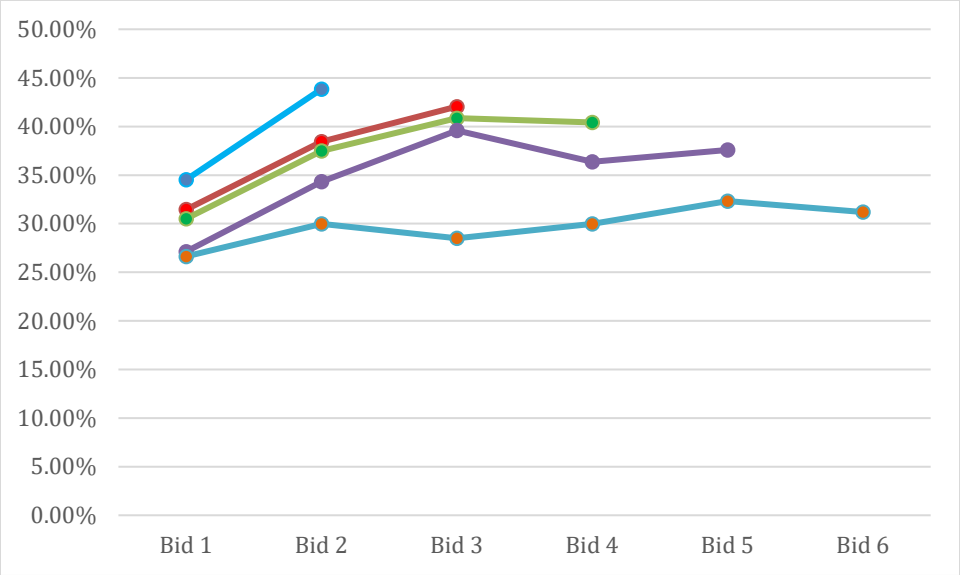


TABLE 1: DISTRIBUTION OF SAMPLE BY YEAR

This table displays the yearly distribution of our M&A sample based on available data in merger documents filed with the SEC. We also break down the values based on negotiation (single bidder) and auctions (multiple potential bidders) and by target- versus bidder-initiated deals.

Year	Total	Negotiation	Auction	Target Initiation	Bidder Initiation
2005	62	20	42	26	36
2006	91	29	62	26	65
2007	85	25	60	34	51
2008	57	24	33	16	41
2009	44	11	33	13	31
2010	85	28	57	22	63
2011	70	18	52	22	48
2012	68	17	51	19	49
2013	60	8	52	17	43
2014	50	13	37	13	37
2015	61	16	45	13	48
2016	63	13	50	18	45
Total	**796**	**222**	**574**	**239**	**557**
%	**100%**	**27.89%**	**72.11%**	**30.03%**	**69.97%**

TABLE 2: FINAL PREMIUM ESTIMATION

This table displays OLS regressions where the dependent variable in both regressions is the *Final Bid Premium*, which we obtain by subtracting the benchmark market price, which is the target value on the sales process initiation date, from the final offer price per share and scaled by the benchmark market price. The remaining variables are defined in Appendix 1.

	(1)	(2)
R&D Expenses	0.423*	0.330
	(0.234)	0(.238)
Target Size	-2.866***	-2.956***
	(1.089)	(1.109)
Debt/Assets	0.197**	0.224***
	(0.085)	(0.086)
Intangible Assets	-0.173	-0.193*
	(0.114)	(0.115)
Cash Flow	0.061	0.056
	(0.154)	(0.152)
Capital Expenditures	-1.767***	-1.696***
	(0.547)	(0.554)
Target MTB	-5.892**	-6.072**
	(2.917)	(2.905)
Target 52-Week High	1.05***	1.051***
	(0.108)	(0.108)
Target Runup	0.396***	0.387***
	(0.112)	(0.111)
Initiation	-8.771***	-8.43***
	(2.785)	(2.926)
Negotiation		-.573
		(2.796)
Cash Payment		6.215*
		(3.291)
Tender Offer		2.428
		(3.191)
Toehold		-7.121
		(5.560)
Same Industry		0.988
		(2.911)
Strategic Acquirer		9.771***
		(3.279)
Industry FE	YES	YES
Constant	61.157***	51.569***
	(14.537)	(15.388)
Observations	796	796
R-squared	0.269	0.283

Robust standard errors are in parentheses
*** p<.01, ** p<.05, * p<.1

TABLE 3: SUMMARY STATISTICS OF KEY VARIABLES

Panel A presents the mean (and median) values for our key variables on bidding behavior during the sales process of a takeover. Initial Bid Premium = initial offer relative to the pre-sales process price, Final Bid Premium = final offer price relative to the pre-sales process price, Initial Bid Strength = Final Bid Premium – Expected Final Premium based on a benchmark model (Table 2 - Model 1). Precision = 1 if the offer is precise and 0 otherwise, Revision = Final Bid Premium – Initial Bid premium, Bid-jump = Second Offer Price – Initial Offer Price, number of bids, number of bidders, First Winner = 1 if the first bidder wins the deal and 0 otherwise, Duration = number of days in the private sales process. Panel B presents target characteristics the quartile of transactions with the strongest and weakest initial offers and for the subsamples of precise and imprecise offers. We report R&D Expenses (scaled by total assets), size (defined as the natural log of the target's total assets), debt/assets, % intangible assets, cash flow, capex, target's MTB compared to the industry, target 52-week high, and run-up. Panel C displays target, acquirer, and combined CAR. Variables are defined in Appendix 1.

Panel A: Bidding Behavior

Variable	Full Sample	Negotiations	Auctions	Bidder Initiation	Target Initiation	Listed Acquirers
Initial Bid Premium	37.426	33.035	39.124	39.407	32.809	38.054
	(62.200)	(34.393)	(70.009)	(70.335)	(36.548)	(75.395)
Final Bid Premium	55.799	49.064	58.403	61.124	43.388	59.456
	(93.530)	(44.328)	(106.559)	(106.979)	(47.576)	(118.069)
Expected Final Premium	50.975	49.510	51.542	54.145	43.589	51.102
	(21.047)	(20.640)	(21.193)	(20.909)	(19.493)	(20.516)
Initial Bid Strength	-13.550	-16.476	-12.418	-14.738	-10.779	-13.048
	(57.217)	(32.043)	(64.355)	(65.489)	(30.085)	(69.982)
Revision	15.394	15.283	15.437	17.354	10.825	17.186
	(26.438)	(21.711)	(28.071)	(26.538)	(25.683)	(26.004)
Precision	0.289	0.329	.274	0.312	0.234	0.294
	(0.454)	(0.471)	(.446)	(0.464)	(0.424)	(0.456)
Bid Jump	9.634	7.688	10.402	11.055	6.385	8.327
	(36.420)	(17.115)	(41.632)	(40.528)	(24.339)	(20.978)
Number of Bidders	2.655	1.036	3.280	2.19	3.732	2.096
	(2.542)	(0.210)	(2.746)	(2.067)	(3.152)	(1.876)
Number of Bids	6.209	3.658	7.195	5.871	6.996	5.398
	(3.988)	(1.489)	(4.209)	(3.765)	(4.372)	(3.513)
First Winner	0.727	0.977	.631	0.743	0.690	.773
	(0.445)	(0.149)	(.483)	(0.437)	(0.463)	(.419)
Duration	110.074	86.559	119.169	114.485	99.795	100.841
	(91.904)	(67.941)	(98.190)	(95.654)	(81.733)	(93.631)
Observations	796	222	574	557	239	384

(*) Bid Jump has only 746 observations for the full sample.

Panel B: Target Characteristics and Variables of Interest

Variable	Quartile with lowest Initial Bid Strength	Quartile with highest Initial Bid Strength	*t-stat for difference*	Precision=0	Precision=1	*t-stat for difference*
R&D Expenses	9.025	6.673	*2.3916*	6.659	7.804	*-1.6215*
Target Size	5.633	5.937	*-2.3251*	6.054	5.638	*4.0693*
Debt/Assets	13.774	14.848	*-0.5875*	16.013	12.084	*2.7912*
Intangible Assets	83.361	80.466	*1.5123*	81.591	81.695	*-0.0704*
Cash Flow	4.978	8.456	*-2.5629*	9.067	7.141	*1.9810*
Capital Expenditures	3.33	4.372	*-2.7768*	3.778	3.979	*-0.7352*
Target MTB	.648	.693	*-0.9587*	.710	.613	*2.6783*
Target 52-Week High	28.487	24.82	*2.3569*	22.613	22.717	*-0.0897*
Target Run-up	1.939	.799	*0.7733*	.533	2.418	*-1.7572*
Industry Count	5.048	4.778	2.2379	4.799	5.151	*-2.7491*
Recession	.211	.156	1.4248	.182	.186	*-0.0936*
Observations	199	199		566	230	

Panel C. Target and Acquirer Returns

Variable	Full Sample	Negotiations	Auctions	Bidder Initiation	Target Initiation
Target CAR	32.677 ***	34.995 ***	31.531***	33.709 ***	30.005***
	(29.367)	(29.466)	(29.299)	(29.427)	(29.159)
Acquirer CAR	0.261	-0.767	-0.110	-0.298	-0.164
	(6.968)	(7.470)	(6.708)	(7.245)	(6.227)
Combined CAR	12.835***	13.414***	12.550***	13.278***	11.697***
	(10.967)	(10.716)	(11.098)	(10.872)	(11.177)
Observations	384	127	257	277	107

TABLE 4: IMPACT OF INITIAL BID STRENGTH ON FINAL PREMIUM

This table presents OLS regressions for the (1) full, (2) negotiations, (3) auctions, (4) target initiation, and (5) bidder initiation samples. The dependent variable in all regressions is the *Final Bid Premium*, which is computed by subtracting the benchmark market price from the final price per share and scaled by the benchmark market price. The benchmark market price is the target market price at the sales process initiation date**.** The variable *Initial Bid Strength* is calculated as the difference between *Initial Bid Premium* and *Expected Final Premium* from Table 2. Other variables are defined in Appendix 1.

	(1) Full Sample	(2) Negotiation	(3) Auction	(4) Target Initiation	(5) Bidder Initiation
Initial Bid Strength	.745***	.677***	.766***	.886***	.723***
	(.047)	(.111)	(.050)	(.071)	(.057)
Target_Toptier_Bank	-.42	-.362	-.323	-2.36	.583
	(2.405)	(3.823)	(2.983)	(4.369)	(2.85)
Acquirer_Toptier_Bank	1.815	2.542	1.587	2.138	.36
	(2.546)	(4.02)	(3.203)	(4.91)	(2.941)
Negotiation	-1.728			-6.958	-5.792**
	(2.521)			(5.736)	(2.876)
Cash Payment	-.265	4.532	-2.929	-4.278	.306
	(2.997)	(4.237)	(4.062)	(6.117)	(3.406)
Tender Offer	6.866**	1.489	7.898**	5.525	5.714*
	(3.001)	(5.422)	(3.567)	(6.031)	(3.439)
Toehold	6.091	-1.794	9.538	-8.486	10.011
	(5.813)	(6.687)	(8.18)	(6.256)	(7.025)
Same Industry	1.304	4.469	.386	3.334	1.862
	(2.833)	(4.158)	(3.601)	(5.571)	(3.2)
Strategic Acquirer	8.141***	2.833	8.908**	2.701	8.819**
	(3.037)	(5.667)	(3.585)	(5.465)	(3.69)
Industry Count	4.503***	5.734***	3.96***	3.037*	4.828***
	(1.023)	(1.608)	(1.267)	(1.706)	(1.257)
Recession	-1.733	2.607	-2.686	-1.534	.245
	(3.721)	(6.133)	(4.71)	(5.985)	(4.714)
Constant	32.205***	24.424***	36.795***	39.856***	34.576***
	(5.732)	(8.308)	(7.37)	(11.075)	(6.944)
Observations	796	222	574	239	557
R-squared	.342	.36	.343	.406	.347

Robust standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

TABLE 5: INITIAL BID STRENGTH AND THE DEAL PROCESS

This table displays regression models of the first bidder offer strength on deal outcomes. OLS regressions are presented in columns (1) to (5), column (6) contains a logit model. The dependent variables are labeled in the first row**.** *Bid Jump* = Second Offer Price – Initial Offer, scaled by the benchmark market price. The benchmark market price is the target market price at the sales process initiation date**.** *Number of bids*, *number of bidders*, *Duration* = number of days in the private sales process, *Revision* = Final Bid – Initial Bid, scaled by the benchmark market price. *First Winner* = 1 if the first bidder wins the deal and 0 otherwise. The variable *Initial Bid Strength* is calculated as the difference between *Initial Bid Premium* and *Expected Final Premium* from Table 2. Other variables are defined in Appendix 1.

	(1) BID JUMP	(2) NUMBER OF BIDDERS	(3) NUMBER OF BIDS	(4) DURATION	(5) REVISION	(6) FIRST WINNER
Initial Bid Strength	.008	0.001	-.002**	-.001	-.212***	.007**
	(.022)	(.001)	(.001)	(.001)	(.038)	(.003)
Target_Toptier_Bank	.539	-.041	-.034	-.231***	.574	-.067
	(1.126)	(.043)	(.038)	(.07)	(1.82)	(.185)
Acquirer_Toptier_Bank	1.134	-.017	.052	-.121*	3.138	.19
	(1.174)	(.045)	(.04)	(.07)	(1.932)	(.188)
Negotiation	.383	-.817***	-.555***	-.223***	-1.303	3.167***
	(1.165)	(.033)	(.039)	(.079)	(1.9)	(.477)
Cash Payment	1.058	.033	-.003	.081	-1.182	.053
	(1.336)	(.045)	(.044)	(.085)	(2.378)	(.232)
Tender Offer	-1.138	.036	.033	-.035	.959	-.066
	(1.298)	(.05)	(.045)	(.088)	(2.309)	(.208)
Toehold	.977	-.102	.081	-.394*	4.046	.21
	(2.584)	(.083)	(.071)	(.221)	(4.376)	(.414)
Same Industry	2.459*	-.485***	-.379***	-.129	6.048***	.672***
	(1.45)	(.062)	(.052)	(.087)	(2.34)	(.211)
Strategic Acquirer	-.491	.013	.042	-.103	-.367	.175
	(1.324)	(.046)	(.043)	(.086)	(2.159)	(.219)
Industry Count	1.529***	-.004	-.004	-.019	1.176	.03
	(.499)	(.019)	(.018)	(.03)	(.81)	(.077)
Recession	1.691	.104*	-.014	-.066	-.59	.382
	(1.673)	(.054)	(.052)	(.1)	(3.038)	(.249)
Constant	-2.966	1.258***	2.05***	4.731***	1.416	-.162
	(2.688)	(.106)	(.096)	(.158)	(4.68)	(.453)
Observations	746	796	796	793	796	796
R-squared	0.024	0.382	0.267	0.053	.0.078	
Pseudo R^2						.165

Robust standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

TABLE 6A: INITIAL BID STRENGTH AND ACQUIRER CAR

This table presents OLS regressions for different subsamples: (1) full sample, (2) negotiation sample, (3) auction sample, (4) target initiation sample, (5) bidder initiation sample**.** The dependent variable for all regressions is the cumulative abnormal return of acquirer stock, computed over a 3-day event window**.** The variable *Initial Bid Strength* is calculated as the difference between *Initial Bid Premium* and *Expected Final Premium* from Table 2. Other variables are defined in Appendix 1.

	(1) Full Sample	(2) Negotiation	(3) Auction	(4) Target Initiation	(5) Bidder Initiation
Initial Bid Strength	.005	-.001	.005	.031*	-.005
	(.009)	(.019)	(.011)	(.018)	(.011)
Target_Toptier_Bank	-.875	.237	-1.561**	-1.991*	-.478
	(.535)	(1.082)	(.638)	(1.086)	(.649)
Acquirer_Toptier_Bank	.377	-.693	1.078*	1.111	-.053
	(.527)	(1.021)	(.625)	(1.064)	(.636)
Negotiation	-.436			-1.13	-.286
	(.592)			(1.685)	(.662)
Cash Payment	2.109***	2.819**	1.627**	.26	2.848***
	(.671)	(1.275)	(.79)	(1.106)	(.833)
Tender Offer	-.111	1.079	-.417	-.063	.003
	(.553)	(1.219)	(.66)	(1.193)	(.666)
Toehold	-2.276*	-2.636*	-.452	-3.127	-1.843
	(1.353)	(1.398)	(2.482)	(2.259)	(1.594)
Same Industry	.876*	.295	1.069*	.932	.812
	(.506)	(1.059)	(.567)	(.815)	(.616)
Strategic Acquirer	2.564**	6.332***	1.693	1.294	2.628*
	(1.184)	(1.404)	(1.342)	(2.637)	(1.362)
Industry Count	-1.092***	-1.225***	-.897***	-.921*	-1.184***
	(.263)	(.456)	(.324)	(.49)	(.308)
Recession	-1.301**	-2.891**	-.518	-1.36	-1.4*
	(.579)	(1.287)	(.636)	(.972)	(.719)
_cons	1.657	-1.907	1.634	3.62	1.432
	(1.699)	(1.752)	(2.177)	(2.767)	(2.052)
Observations	384	127	257	107	277
R-squared	.113	.191	.106	.176	.123

Robust standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

TABLE 6B: INITIAL BID STRENGTH AND COMBINED CARs

This table presents OLS regressions for different subsamples: (1) full sample, (2) negotiation sample, (3) auction sample, (4) target initiation sample, (5) bidder initiation sample**.** The dependent variable for all regressions is Combined CAR, which is derived from the weighted average of the acquirer's cumulative abnormal return and the target's cumulative abnormal return, considering the market value of the acquirer and target companies. The variable *Initial Bid Strength* is calculated as the difference between *Initial Bid Premium* and *Expected Final Premium* from Table 2. Other variables are defined in Appendix 1.

	(1) Full Sample	(2) Negotiation	(3) Auction	(4) Target Initiation	(5) Bidder Initiation
Initial Bid Strength	.063***	.084***	.052**	.036	.071***
	(.017)	(.023)	(.023)	(.045)	(.018)
Target_Toptier_Bank	-.487	.394	-.775	-.573	-.308
	(.916)	(1.546)	(1.124)	(1.741)	(1.109)
Acquirer_Toptier_Bank	-.011	-1.909	1.064	2.285	-.894
	(.911)	(1.494)	(1.167)	(1.924)	(1.067)
Negotiation	1.038			.215	.663
	(.958)			(2.694)	(1.082)
Cash Payment	2.151**	1.74	2.253*	1.415	2.249*
	(.978)	(1.51)	(1.238)	(1.86)	(1.167)
Tender Offer	1.15	4.514**	-.344	4.062	.141
	(1.038)	(2.071)	(1.258)	(2.517)	(1.185)
Toehold	-2.343	-3.022	.416	-5.441	-1.914
	(2.757)	(2.937)	(5.165)	(3.421)	(3.541)
Same Industry	.508	-1.486	1.552	1.578	.147
	(.905)	(1.445)	(1.139)	(1.932)	(1.045)
Strategic Acquirer	-1.984	6.155**	-3.887	1.035	-2.266
	(3.599)	(2.533)	(4.406)	(3.682)	(4.041)
Industry Count	-.214	.159	-.452	-.701	-.118
	(.398)	(.639)	(.525)	(.694)	(.483)
Recession	-.378	-1.638	-.663	-.432	-.361
	(1.199)	(2.034)	(1.545)	(2.142)	(1.449)
_cons	14.374***	7.388**	16.637***	10.884**	15.589***
	(4.197)	(2.895)	(5.252)	(4.146)	(4.874)
Observations	384	127	257	107	277
R-squared	.079	.203	.071	.105	.091

TABLE 7: INITIAL BID PRECISION AND FINAL PREMIUM

This table presents OLS regressions for the (1 & 6) full, (2) negotiations, (3) auctions, (4) target initiation, and (5) bidder initiation samples. The dependent variable in all regressions is the *Final Bid Premium*, which is computed by subtracting the benchmark market price from the final price per share and scaled by the benchmark market price. The benchmark market price is the target market price at the sales process initiation date**.** The variable *Initial Bid Precision* carries the value of 1 if the first bid is an unrounded value dollar offer (for example, $85.5; $65.55) and 0 if the first bid is a rounded number ($85; $65) or a range (for example, from $85.5 to $90). The variable *Initial Bid Strength* is calculated as the difference between *Initial Bid Premium* and *Expected Final Premium* from Table 2. Other variables are explained in Appendix 1.

	(1) Full Sample	(2) Negotiation	(3) Auction	(4) Target Initiation	(5) Bidder Initiation	(6) Full Sample
Initial Bid Precision	-1.846	-8.3*	-.659	14.526**	-8.246**	-1.264
	(2.96)	(4.726)	(3.675)	(6.013)	(3.357)	(2.829)
Initial Bid Strength						.848***
						(.047)
Initial Bid Strength* Initial Bid Precision						-.142
						(.088)
Initiation	-8.333***	-4.065	-8.822**			-12.962***
	(2.992)	(7.194)	(3.444)			(2.24)
Target_Toptier_Bank	1.351	8.215*	-1.7	1.991	.836	2.147
	(2.759)	(4.376)	(3.454)	(5.233)	(3.233)	(1.963)
Acquirer_Toptier_Bank	5.234**	1.877	6.288*	6.206	3.397	3.821*
	(2.63)	(4.942)	(3.234)	(4.993)	(3.162)	(1.969)
R&D Expenses	.262	.827*	.061	.539	.233	.235
	(.247)	(.5)	(.298)	(.483)	(.287)	(.164)
Target Size	-3.91***	-2.607	-5.174***	-3.315	-3.748**	-4.119***
	(1.317)	(2.027)	(1.703)	(2.421)	(1.567)	(.947)
Debt/Assets	.215**	-.035	.31***	.431***	.073	.14**
	(.088)	(.15)	(.111)	(.141)	(.112)	(.069)
Intangible Assets	-.202*	-.249	-.208	-.146	-.222	-.259***
	(.114)	(.18)	(.14)	(.199)	(.136)	(.083)
Cash Flow	.034	.101	.01	.278	-.044	-.027
	(.155)	(.257)	(.189)	(.251)	(.194)	(.103)
Capex	-1.766***	-1.675*	-1.745**	-.497	-2.409***	-2.252***
	(.549)	(.893)	(.691)	(1.031)	(.607)	(.394)
Target MTB	-5.079*	-11.855**	-2.835	-9.999	-3.398	-5.789***
	(3.018)	(5.878)	(3.656)	(6.119)	(3.491)	(2.206)
Target 52 Week High	1.059***	.922***	1.122***	1.324***	.944***	1.069***
	(.108)	(.18)	(.133)	(.231)	(.121)	(.084)
Target Runup	.382***	.357	.388***	.381*	.383***	.435***
	(.11)	(.235)	(.124)	(.196)	(.13)	(.085)
Negotiation	-.573			-1.658	-1.948	-2.649
	(2.838)			(6.644)	(3.147)	(2.004)
Cash Payment	5.387	1.623	6.351	7.665	3.693	-2.352
	(3.408)	(6.089)	(4.392)	(6.017)	(4.166)	(2.518)
Tender Offer	2.963	-3.555	4.132	8.203	1.173	-.305
	(3.186)	(5.525)	(3.774)	(6.747)	(3.581)	(2.392)
Toehold	-5.96	-14.607*	-1.265	-14.444*	-4.108	3.906
	(5.656)	(7.743)	(7.52)	(7.991)	(7.004)	(4.242)
Winner Type	9.175***	1.39	10.658***	9.363	9.487**	5.267**
	(3.3)	(6.097)	(3.955)	(5.902)	(3.995)	(2.362)
Strategic Acquirer	.455	5.945	-.258	-6.286	2.606	.568
	(2.92)	(4.849)	(3.722)	(6.072)	(3.398)	(2.184)
Industry Count	.454	2.075	-.255	.278	.719	-.136
	(1.486)	(2.552)	(1.82)	(2.651)	(1.774)	(1.125)
Recession	-5.391	7.067	-9.824**	-6.01	-4.386	-.525
	(3.787)	(6.213)	(4.663)	(5.296)	(5.025)	(3.021)
Industry FE	YES	YES	YES	YES	YES	YES
Constant	56.303***	63.903**	61.863***	18.364	69.538***	88.377***
	(17.814)	(27.175)	(22.536)	(29.598)	(21.334)	(13.392)
Observations	796	222	574	239	557	796
R-squared	.290	.325	.305	.384	.277	.618

TABLE 8: INITIAL BID PRECISION AND THE DEAL PROCESS

This table displays tests of first bid revision on deal outcomes. Column (1) to (5) contain OLS regression and column (6) contains a logit regression. The dependent variables are labeled in the first row. *Bid Jump* = Second Offer Price – Initial Offer, scaled by the benchmark market price. The benchmark market price is the target market price at the sales process initiation date. *Number of bids*, *number of bidders*, *Duration* = number of days in the private sales process, *Revision* = Final Bid – Initial Bid, scaled by the benchmark market price. *First Winner* = 1 if the first bidder wins the deal and 0 otherwise. The variable *Initial Bid Precision* carries the value of 1 if the first bid is an unrounded value dollar offer (for example, $85.5; $65.55) and zero if the first bid is a rounded number ($85; $65) or a range (for example, from $85.5 to $90). Other variables are explained in Appendix 1.

	(1) BID JUMP	(2) NUMBER OF BIDDERS	(3) NUMBER OF BIDS	(4) DURATION	(5) REVISION	(6) FIRST WIN
Initial Bid Precision	.993	-.064	-.091**	-.136*	1.97	.729***
	(1.215)	(.047)	(.043)	(.082)	(2.366)	(.222)
Target_Toptier_Bank	1.159	-.036	-.023	-.161**	2.001	.16
	(1.187)	(.047)	(.041)	(.077)	(1.981)	(.209)
Acquirer_Toptier_Bank	1.816	-.018	.039	-.08	3.804*	.385*
	(1.224)	(.045)	(.042)	(.072)	(2.022)	(.204)
R&D Expenses	.078	-.002	-.003	-.002	-.153	-.023
	(.098)	(.003)	(.003)	(.006)	(.16)	(.016)
Target Size	-.816	.003	.007	-.099***	-1.394	-.193*
	(.577)	(.022)	(.02)	(.038)	(1)	(.099)
Debt/Assets	-.048	.001	0	-.001	-.048	0
	(.038)	(.001)	(.001)	(.002)	(.072)	(.006)
Intangible Assets	0	-.001	-.005***	-.003	-.13	.009
	(.047)	(.002)	(.002)	(.003)	(.083)	(.007)
Cash Flow	.057	.005**	.001	-.002	-.097	.001
	(.064)	(.002)	(.002)	(.004)	(.104)	(.01)
Capex	-.162	-.006	-.023***	-.011	-.867**	.039
	(.25)	(.008)	(.008)	(.014)	(.39)	(.039)
Target MTB	-2.004	-.144***	-.12***	-.115	-.628	-.003
	(1.305)	(.05)	(.046)	(.083)	(2.237)	(.212)
Target 52 Week High	.126***	.002	.002	0	.1	-.004
	(.048)	(.002)	(.001)	(.003)	(.091)	(.007)
Target Runup	.071	.001	0	.001	.105	-.009
	(.048)	(.001)	(.001)	(.002)	(.086)	(.006)
Initiation	-2.144	.23***	-.042	-.222***	-6.644***	.285
	(1.331)	(.052)	(.046)	(.076)	(2.228)	(.195)
Negotiation	.075	-.729***	-.532***	-.247***	-3.118	3.192***
	(1.234)	(.036)	(.043)	(.083)	(2.074)	(.481)
Cash Payment	.135	.037	-.038	.012	-4.19*	.094
	(1.416)	(.047)	(.046)	(.085)	(2.528)	(.248)
Tender Offer	-2.213*	.044	.018	-.068	-.563	.062
	(1.315)	(.05)	(.045)	(.089)	(2.454)	(.219)
Toehold	.551	-.094	.096	-.378*	5.921	.228
	(2.544)	(.084)	(.072)	(.224)	(4.407)	(.422)
Strategic Acquirer	1.701	-.427***	-.353***	-.172*	3.897*	.75***
	(1.458)	(.061)	(.053)	(.091)	(2.346)	(.228)
Same Industry	-.564	.019	.051	-.062	.116	.23
	(1.322)	(.046)	(.043)	(.084)	(2.233)	(.235)
Industry Count	.506	.031	.021	-.081**	.023	.007
	(.724)	(.026)	(.023)	(.041)	(1.173)	(.111)
Recession	2.316	.149***	.048	-.007	1.058	.246
	(1.721)	(.056)	(.054)	(.105)	(3.144)	(.26)
Industry FE	YES	YES	YES	YES	YES	YES
Constant	5.317	1.084***	2.502***	6.019***	35.482***	-.068
	(7.321)	(.255)	(.238)	(.407)	(13.438)	(1.116)
Observations	746	796	796	793	796	796
R-squared	0.068	0.422	0.295	0.080	0.058	
Pseudo R^2						.189

*Robust standard errors are in parentheses, *** p<.01, ** p<.05, * p<.1*

TABLE 9A: IMPACT OF INITIAL BID PRECISION ON ACQUIRER CAR

This table presents regressions of the precision of the first offer on acquirer CARs for the (1) full, (2) negotiation, (3) auction, (4) target initiation, and (5) bidder initiation samples. The dependent variable for all regressions is the cumulative abnormal return of acquirer stock, computed over a 3-day event window**.** The variable *Initial Bid Precision* carries the value of 1 if the first bid is an unrounded value dollar offer (for example, $85.5; $65.55) and zero if it is a rounded number ($85; $65) or a range (for example, from $85.5 to $90). Other variables are explained in Appendix 1.

	(1) Full Sample	(2) Negotiation	(3) Auction	(4) Target Initiation	(5) Bidder Initiation
Initial Bid Precision	1.287**	.745	1.363**	1.075	1.573**
	(.58)	(1.311)	(.662)	(1.221)	(.713)
Target_Toptier_Bank	-.599	1.095	-1.606**	-1.512	-.383
	(.574)	(1.189)	(.689)	(1.324)	(.699)
Acquirer_Toptier_Bank	.294	.662	.564	1.028	.124
	(.528)	(1.182)	(.646)	(1.317)	(.618)
R&D Expenses	.027	.14	.01	.037	.029
	(.043)	(.089)	(.053)	(.08)	(.055)
Target Size	-.236	-.578	.009	.067	-.31
	(.265)	(.593)	(.284)	(.503)	(.327)
Debt/Assets	.048**	.03	.045*	.008	.055**
	(.019)	(.037)	(.023)	(.034)	(.025)
Intangible Assets	.047	.084	.027	.062	.045
	(.029)	(.07)	(.034)	(.054)	(.038)
Cash Flow	.021	.041	.015	.023	.023
	(.03)	(.061)	(.036)	(.056)	(.039)
Capex	.094	.089	.043	.213	.059
	(.123)	(.255)	(.158)	(.232)	(.154)
Target MTB	-1.228*	-1.026	-1.243	-1.055	-1.583*
	(.73)	(1.626)	(.828)	(1.543)	(.871)
Target 52 Week High	.026	.058	.024	.041	.026
	(.017)	(.037)	(.02)	(.034)	(.022)
Target Runup	.006	.08*	-.005	-.01	.015
	(.018)	(.046)	(.02)	(.037)	(.022)
Initiation	-.253	-1.785	-.046		
	(.595)	(1.543)	(.667)		
Negotiation	-.518			-1.771	-.223
	(.624)			(1.903)	(.700)
Cash Payment	2.607***	2.042	2.515***	.706	3.372***
	(.736)	(1.417)	(.857)	(1.315)	(.927)
Tender Offer	-.426	.645	-.523	.071	-.442
	(.556)	(1.312)	(.67)	(1.323)	(.671)
Toehold	-2.655*	-3.612**	-1.119	-4.961*	-2.014
	(1.361)	(1.721)	(2.447)	(2.624)	(1.547)
Strategic Acquirer	3.427***	3.817	2.256	3.203	2.998*
	(1.314)	(2.469)	(1.732)	(3.395)	(1.626)
Same Industry	.617	-.034	.916	.602	.414
	(.527)	(1.124)	(.573)	(1.128)	(.65)
Industry Count	-1.231***	-1.139	-1.144**	-.937	-1.394***
	(.381)	(.712)	(.469)	(.722)	(.463)
Recession	-.922	-2.244	-.07	-1.467	-.902
	(.598)	(1.446)	(.692)	(1.212)	(.749)
Industry FE	YES	YES	YES	YES	YES
Constant	-2.276	-3.816	-1.984	-4.985	-.744
	(4.329)	(9.149)	(5.495)	(6.997)	(5.932)
Observations	384	127	257	107	277
R-squared	.176	.316	.174	.195	.204

Robust standard errors are in parentheses

**** p<.01, ** p<.05, * p<.1*

TABLE 9B: IMPACT OF INITIAL BID PRECISION ON COMBINED CAR

This table presents five OLS regressions for the (1) full, (2) negotiation, (3) auction, (4) target initiation, and (5) bidder initiation samples. The dependent variable for all regressions is Combined CAR, which is derived from the weighted average of the acquirer's cumulative abnormal return and the target's cumulative abnormal return, considering the market value of the acquirer and target companies. The variable *Initial Bid Precision* carries the value of 1 if the first bid is an unrounded value dollar offer (for example, $85.5; $65.55) and zero if it is a rounded number ($85; $65) or a range (for example, from $85.5 to $90). Other variables are explained in Appendix 1.

	(1) Full Sample	(2) Negotiation	(3) Auction	(4) Target Initiation	(5) Bidder Initiation
Initial Bid Precision	.967	1.605	.219	2.85	.426
	(.968)	(1.589)	(1.158)	(1.992)	(1.181)
Target_Toptier_Bank	.022	1.175	-.202	1.751	-.136
	(.921)	(1.47)	(1.132)	(1.89)	(1.107)
Acquirer_Toptier_Bank	.207	-1.813	1.213	.755	-.749
	(.902)	(1.612)	(1.122)	(1.972)	(1.073)
R&D Expenses	.024	.215*	0	-.132	.084
	(.077)	(.118)	(.092)	(.148)	(.095)
Target Size	-.662	.319	-1.264*	-1.686*	-.309
	(.453)	(.611)	(.66)	(.998)	(.525)
Debt/Assets	.007	-.064	.054	.126*	-.035
	(.034)	(.054)	(.045)	(.068)	(.04)
Intangible Assets	.021	-.014	.034	.109	.028
	(.046)	(.069)	(.058)	(.092)	(.06)
Cash Flow	-.098*	-.183*	-.062	-.102	-.098
	(.051)	(.103)	(.058)	(.09)	(.063)
Capex	.092	-.138	.075	.271	.099
	(.201)	(.29)	(.265)	(.453)	(.236)
Target MTB	-3.815***	-3.182	-3.987***	-5.15**	-3.752***
	(1.118)	(2.003)	(1.362)	(2.181)	(1.342)
Target 52 Week High	.085**	.141**	.08**	.065	.082**
	(.034)	(.063)	(.04)	(.062)	(.041)
Target Runup	-.041	.103*	-.082	-.077	-.037
	(.039)	(.052)	(.05)	(.083)	(.045)
Initiation	-1.163	-2.465	-1.278		
	(1.013)	(1.717)	(1.222)		
Negotiation	1.52			.449	2.007*
	(.972)			(2.383)	(1.121)
Cash Payment	3.522***	1.088	4.374***	3.541	3.508***
	(1.052)	(1.435)	(1.347)	(2.171)	(1.257)
Tender Offer	-.026	3.162	-.831	3.884*	-1.016
	(1.023)	(2.102)	(1.253)	(2.198)	(1.186)
Toehold	-3.811	-6.177**	-1.295	-9.469***	-3.1
	(2.555)	(3.028)	(4.165)	(3.518)	(3.154)
Strategic Acquirer	-.669	6.671**	-1.72	11.269**	-2.454
	(3.233)	(2.834)	(4.257)	(4.732)	(3.314)
Same Industry	.482	-3.208**	1.994*	1.81	.365
	(.923)	(1.539)	(1.151)	(1.863)	(1.115)
Industry Count	-.707	-1.253	-.802	-2.311*	-.444
	(.603)	(.875)	(.802)	(1.236)	(.657)
Recession	.637	-1.565	.257	-.829	.708
	(1.171)	(1.966)	(1.582)	(2.36)	(1.478)
Industry FE	YES	YES	YES	YES	YES
Constant	17.935**	14.623	20.546*	6.121	17.89*
	(8.185)	(9.504)	(11.023)	(12.8)	(9.542)
Observations	384	127	257	107	277
R-squared	.18	.432	.184	.278	.187

TABLE 10A: IMPACT OF INITIAL BID PREMIUM ON FINAL PREMIUM, ACQUIRER CAR, AND COMBINED CAR

This table presents OLS regressions for the (1) full, (2) target initiation, and (3) bidder initiation samples. The dependent variable in the first three regressions is the *Final Bid Premium*, the dependent variable for the next three regressions is *Acquirer's CAR*, and the dependent variable for the last three regressions is *Combined CAR*. *Acquirer's CAR* is the cumulative abnormal return of acquirer stock, computed over a 3-day event window. Combined CAR is derived from the weighted average of the acquirer's cumulative abnormal return and the target's cumulative abnormal return, considering the market value of the acquirer and target companies. *Initial Bid Premium* is the first bid scaled by the benchmark price at the initiation of bidding process. All variables are defined in Appendix 1.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Final Premium			*Acquirer CAR*			*Combined CAR*		
	FULL SAMPLE	TARGET INITIAION	BIDDER INITIATION	FULL SAMPLE	TARGET INITIAION	BIDDER INITIATION	FULL SAMPLE	TARGET INITIATION	BIDDER INITIATION
Initial Bid Premium	.888***	.936***	.866***	.018**	.027**	.012	.063***	.036	.071***
	(.033)	(.054)	(.041)	(.008)	(.014)	(.009)	(.017)	(.045)	(.018)
Target_Toptier_Bank	.498	-1.182	1.177	-.929*	-1.973*	-.53	-.487	-.573	-.308
	(1.85)	(3.352)	(2.242)	(.531)	(1.084)	(.647)	(.916)	(1.741)	(1.109)
Acquirer_Toptier_Bank	2.788	2.713	2.27	.407	1.081	.05	-.011	2.285	-.894
	(1.969)	(3.776)	(2.327)	(.523)	(1.032)	(.634)	(.911)	(1.924)	(1.067)
Negotiation	-1.417	-2.91	-3.315	-.435	-.934	-.325	1.038	.215	.663
	(1.939)	(3.863)	(2.281)	(.589)	(1.67)	(.666)	(.958)	(2.694)	(1.082)
Cash Payment	-2.001	-1.601	-2.014	1.976***	.404	2.664***	2.151**	1.415	2.249*
	(2.405)	(4.976)	(2.755)	(.663)	(1.102)	(.83)	(.978)	(1.86)	(1.167)
Tender Offer	1.276	-2.516	2.117	-.276	-.304	-.09	1.15	4.062	.141
	(2.36)	(4.833)	(2.737)	(.559)	(1.239)	(.665)	(1.038)	(2.517)	(1.185)
Toehold	5.607	-4.729	8.652	-2.155	-3.231	-1.665	-2.343	-5.441	-1.914
	(4.567)	(5.841)	(5.589)	(1.312)	(2.304)	(1.546)	(2.757)	(3.421)	(3.541)
Same Industry	-.233	1.954	-.31	.829	.88	.729	.508	1.578	.147
	(2.211)	(4.43)	(2.54)	(.505)	(.826)	(.62)	(.905)	(1.932)	(1.045)
Strategic Acquirer	5.975**	2.098	7.122**	2.373**	1.683	2.438*	-1.984	1.035	-2.266
	(2.372)	(4.178)	(3.003)	(1.175)	(2.677)	(1.342)	(3.599)	(3.682)	(4.041)
Industry Count	1.677**	1.516	1.627	-1.148***	-.97*	-1.232***	-.214	-.701	-.118
	(.836)	(1.402)	(1.056)	(.268)	(.508)	(.312)	(.398)	(.694)	(.483)
Recession	-.146	2.883	-.749	-1.241**	-1.207	-1.383*	-.378	-.432	-.361
	(3.141)	(4.893)	(4.112)	(.573)	(.965)	(.715)	(1.199)	(2.142)	(1.449)
Constant	6.761	4.829	9.19	1.574	2.139	1.691	14.374***	10.884**	15.589***
	(4.631)	(8.713)	(5.933)	(1.635)	(2.509)	(1.991)	(4.197)	(4.146)	(4.874)
Observations	796	239	557	384	107	277	384	107	277
R-squared	.593	.628	.580	.124	.183	.126	.079	.105	.091

Robust standard errors are in parentheses
**** p<.01, ** p<.05, * p<.1*

TABLE 10B: INFLUENCE OF INITIAL BID PREMIUM ON DEAL PROCESS

This table displays regression models of the *Initial Bid Premium* on deal outcomes. *Initial Bid Premium* is the first bid scaled by the benchmark price at the initiation of bidding process. OLS regressions are presented in columns (1) to (5), column (6) contains a logit model. The dependent variables are labeled in the first row**.** *Bid Jump* = Second Offer Price – Initial Offer, scaled by the benchmark market price. The benchmark market price is the target market price at the sales process initiation date**.** *Number of bids*, *number of bidders*, *Duration* = number of days in the private sales process, *Revision* = Final Bid – Initial Bid, scaled by the benchmark market price. *First Winner* = 1 if the first bidder wins the deal and 0 otherwise. Other variables are defined in Appendix 1.

	(1) BID JUMP	(2) NUMBER OF BIDDERS	(3) NUMBER OF BIDS	(4) DURATION	(5) REVISION	(6) FIRST WINNER
Initial Bid Premium	.047**	0	-.001	0	-.112***	.003
	(.021)	(.001)	(.001)	(.001)	(.033)	(.002)
Target_Toptier_Bank	.543	-.041	-.034	-.23***	.498	-.081
	(1.119)	(.043)	(.038)	(.07)	(1.85)	(.185)
Acquirer_Toptier_Bank	1.169	-.017	.049	-.123*	2.788	.208
	(1.174)	(.045)	(.04)	(.07)	(1.969)	(.188)
Negotiation	.41	-.817***	-.556***	-.223***	-1.417	3.162***
	(1.16)	(.033)	(.039)	(.079)	(1.939)	(.476)
Cash Payment	.694	.035	-.009	.071	-2.001	.098
	(1.327)	(.045)	(.044)	(.085)	(2.405)	(.23)
Tender Offer	-1.527	.036	.036	-.04	1.276	-.071
	(1.297)	(.05)	(.046)	(.089)	(2.36)	(.208)
Toehold	1.319	-.105	.093	-.38*	5.607	.15
	(2.567)	(.083)	(.072)	(.223)	(4.567)	(.411)
Strategic Acquirer	2.221	-.485***	-.379***	-.133	5.975**	.676***
	(1.443)	(.062)	(.052)	(.087)	(2.372)	(.21)
Same Industry	-.614	.013	.043	-.105	-.233	.168
	(1.318)	(.046)	(.043)	(.086)	(2.211)	(.218)
Industry Count	1.44***	-.004	0	-.018	1.677**	.016
	(.494)	(.019)	(.018)	(.03)	(.836)	(.077)
Recession	1.961	.103*	-.011	-.06	-.146	.346
	(1.662)	(.054)	(.052)	(.1)	(3.141)	(.249)
Constant	-3.827	1.252***	2.089***	4.741***	6.761	-.322
	(2.757)	(.106)	(.095)	(.159)	(4.631)	(.457)
Observations	746	796	796	793	796	796
R-squared	0.034	0.382	0.264	0.053	0.042	
Pseudo R^2						.16

Robust standard errors are in parentheses
*** p<.01, ** p<.05, * p<.1

TABLE 11A: SUBSAMPLES METHOD OF PAYMENT - IMPACT OF INITIAL BID STRENGTH

This table presents OLS regressions for the subsamples of cash payment versus stock and mixed payments. The dependent variable in the first two regressions is the *Final Bid Premium*, the dependent variable for the next two regressions is the *Acquirer CAR*, and the dependent variable for the last two regressions is *Combined CAR*. *Acquirer CAR* is the cumulative abnormal return of acquirer stock, computed over a 3-day event window. *Combined CAR* is derived from the weighted average of the acquirer's cumulative abnormal return and the target's cumulative abnormal return, considering the market value of the acquirer and target companies. The variable *Initial Bid Strength* is calculated as the difference between *Initial Bid Premium* and *Expected Final Premium* from Table 2. All variables are defined in Appendix 1.

	(1)	(2)	(3)	(4)	(5)	(6)
	Final premium		*Acquirer CAR*		*Combined CAR*	
	CASH	STOCK/ MIXED	CASH	STOCK/ MIXED	CASH	STOCK/ MIXED
Initial Bid Strength	.801***	.608***	-.004	.018	.076***	.046*
	(.049)	(.099)	(.009)	(.019)	(.023)	(.027)
Target_Toptier_Bank	1.932	-7.719	-1.255**	0	-.681	.115
	(2.704)	(4.96)	(.533)	(1.243)	(1.111)	(1.598)
Acquirer_Toptier_Bank	.519	6.057	.173	.625	.246	-.338
	(2.913)	(5.499)	(.529)	(1.252)	(1.109)	(1.664)
Negotiation	.273	-6.632	.291	-1.944	1.754	-.406
	(2.939)	(4.88)	(.607)	(1.237)	(1.165)	(1.717)
Cash Payment						
Tender Offer	9.08***	-6.131	-.441	.909	1.712	-.955
	(3.354)	(5.691)	(.549)	(1.707)	(1.19)	(2.162)
Toehold	7.423	.755	-3.826**	-.01	-4.86	1.35
	(7.054)	(7.097)	(1.894)	(1.696)	(3.295)	(4.125)
Same Industry	1.569	-.002	.983*	.294	1.409	-1.91
	(3.367)	(5.211)	(.516)	(1.173)	(1.075)	(1.777)
Strategic Acquirer	7.509**	5.12	2.285*		-2.617	
	(3.276)	(10.469)	(1.189)		(3.736)	
Industry Count	3.764***	7.149***	-.803***	-1.585***	-.047	-.554
	(1.167)	(2.212)	(.294)	(.497)	(.475)	(.699)
Recession	-2.316	-2.196	-.76	-1.813	-.55	-.895
	(4.206)	(7.612)	(.587)	(1.272)	(1.463)	(2.089)
Constant	35.188***	24.981*	2.506	7.11***	15.606***	15.597***
	(6.093)	(13.955)	(1.813)	(2.587)	(4.508)	(3.732)
Observations	601	195	257	127	257	127
R-squared	.368	.299	.112	.133	.086	.051

TABLE 11B: SUBSAMPLES METHOD OF PAYMENT - IMPACT OF INITIAL BID PRECISION

This table presents OLS regressions for the subsamples of cash payment versus stock and mixed payments. The dependent variable in the first two regressions is the *Final Bid Premium*, the dependent variable for the next two regressions is the *Acquirer CAR*, and the dependent variable for the last two regressions is *Combined CAR*. *Acquirer CAR* is the cumulative abnormal return of acquirer stock, computed over a 3-day event window. *Combined CAR* is derived from the weighted average of the acquirer's cumulative abnormal return and the target's cumulative abnormal return, considering the market value of the acquirer and target companies. The variable *Initial Bid Precision* carries the value of 1 if the first bid is an unrounded value dollar offer (for example, $85.5; $65.55) and zero if it is a rounded number ($85; $65) or a range (for example, from $85.5 to $90). All variables are defined in Appendix 1.

	(1)	(2)	(3)	(4)	(5)	(6)
	Final Premium		*Acquirer CAR*		*Combined CAR*	
	CASH	STOCK/ MIXED	CASH	STOCK/ MIXED	CASH	STOCK/ MIXED
Initial Bid Precision	-4.321	4.614	1.722***	.818	.651	2.388
	(3.348)	(6.551)	(.627)	(1.426)	(1.201)	(1.966)
Target_Toptier_Bank	2.141	2.36	-.805	.904	-.089	1.228
	(3.096)	(6.179)	(.571)	(1.507)	(1.112)	(1.908)
Acquirer_Toptier_Bank	5.421*	6.07	.024	1.041	.183	-.627
	(2.927)	(6.443)	(.499)	(1.52)	(1.035)	(2.029)
R&D Expenses	.269	.175	.022	-.045	-.023	.035
	(.269)	(.621)	(.042)	(.133)	(.091)	(.168)
Target Size	-4.552***	-4.638*	-.178	-.614	-.892	-.686
	(1.532)	(2.584)	(.268)	(.622)	(.567)	(.783)
Debt/Assets	.29***	.1	.04**	.046	-.005	.038
	(.102)	(.17)	(.019)	(.042)	(.045)	(.048)
Intangible Assets	-.261**	.058	.071*	-.006	-.072	.199***
	(.132)	(.206)	(.039)	(.052)	(.069)	(.065)
Cash Flow	-.17	.632*	.033	.005	-.137**	.004
	(.165)	(.344)	(.032)	(.078)	(.065)	(.094)
Capex	-1.839***	-1.364	.143	-.146	-.154	.643**
	(.649)	(.979)	(.155)	(.219)	(.28)	(.304)
Target MTB	-5.45	-9.428	-1.691**	-.257	-3.671***	-5.306**
	(3.312)	(7.368)	(.764)	(1.715)	(1.355)	(2.297)
Target 52 Week High	1.106***	.914***	.025	.037	.093**	.049
	(.124)	(.232)	(.018)	(.046)	(.042)	(.066)
Target Runup	.455***	.051	-.003	.037	-.059	.003
	(.118)	(.269)	(.018)	(.048)	(.047)	(.088)
Initiation	-8.697***	-9.987	-1.102*	1.363	-1.231	-.122
	(3.352)	(6.923)	(.614)	(1.381)	(1.263)	(1.84)
Negotiation	-.348	-3.144	-.254	-1.016	1.782	.278
	(3.244)	(6.144)	(.61)	(1.466)	(1.183)	(1.795)
Tender Offer	4.264	-8.632	-.703	.955	.309	-2.094
	(3.471)	(6.716)	(.548)	(1.823)	(1.144)	(2.334)
Toehold	-2.288	-19.033	-3.751*	-.931	-5.473	-.425
	(6.539)	(12.88)	(1.91)	(2.361)	(3.443)	(4.337)
Strategic Acquirer	8.995**	2.843	3.107***		-1.213	
	(3.496)	(11.296)	(1.193)		(3.162)	
Same Industry	2.266	-2.949	.908*	-.154	1.292	-1.2
	(3.479)	(5.281)	(.519)	(1.302)	(1.167)	(1.819)
Industry Count	-1.026	4.101	-.607	-1.837**	-.134	-1.957
	(1.713)	(3.268)	(.396)	(.858)	(.695)	(1.341)
Recession	-9.57**	3.731	-.26	-2.087	.412	.934
	(4.237)	(8.425)	(.609)	(1.454)	(1.402)	(2.214)
Industry FE	YES	YES	YES	YES	YES	YES
Constant	76.238***	35.267	-4.543	10.926	29.47***	5.88
	(19.366)	(38.367)	(4.844)	(7.064)	(10.334)	(10.737)
Observations	601	195	257	127	257	127
R-squared	.345	.224	.232	.204	.209	.196

TABLE 12A: SUBSAMPLES STRATEGIC VERSUS FINANCIAL BIDDER INITIATION - IMPACT OF INITIAL BID STRENGTH

This table presents OLS regressions for the subsamples of deals initiated by strategic versus financial bidders. The dependent variable in the first two regressions is the *Final Bid Premium*, the dependent variable for model 3 is the *Acquirer CAR*, and the dependent variable for the final regression is *Combined CAR*. *Acquirer CAR* is the cumulative abnormal return of acquirer stock, computed over a 3-day event window. *Combined CAR* is derived from the weighted average of the acquirer's cumulative abnormal return and the target's cumulative abnormal return, considering the market value of the acquirer and target companies. The variable *Initial Bid Strength* is calculated as the difference between *Initial Bid Premium* and *Expected Final Premium* from Table 2. All variables are defined in Appendix 1.

	(1)	(2)	(3)	(4)
	Final Premium		*Acquirer CAR*	*Combined CAR*
	STRATEGIC BIDDER INITIATION	FINANCIAL BIDDER INITIATION	STRATEGIC BIDDER INITIATION	STRATEGIC BIDDER INITIATION
Initial Bid Strength	.714***	.809***	-.009	.07***
	(.064)	(.109)	(.011)	(.019)
Target_Toptier_Bank	4.206	-8.286	-.569	.231
	(3.349)	(5.148)	(.683)	(1.142)
Acquirer_Toptier_Bank	.395	-1.209	-.402	-.508
	(3.324)	(5.935)	(.679)	(1.097)
Negotiation	-6.548**	-2.749	.021	1.03
	(3.284)	(6.184)	(.691)	(1.095)
Cash Payment	-1.803	9.961	2.865***	2.209*
	(3.693)	(8.461)	(.859)	(1.189)
Tender Offer	2.271	21.316***	.286	.231
	(3.741)	(7.913)	(.688)	(1.213)
Toehold	13.863	1.834	-1.929	-2.288
	(8.953)	(11.603)	(1.645)	(3.532)
Same Industry	1.673	9.863	.69	.237
	(3.266)	(11.434)	(.648)	(1.074)
Industry Count	6.272***	.352	-1.217***	.231
	(1.512)	(2.167)	(.341)	(.49)
Recession	-.387	2.792	-1.467**	-.058
	(5.169)	(9.795)	(.743)	(1.458)
Constant	37.216***	49.608***	4.183**	10.987***
	(7.952)	(12.173)	(1.805)	(2.64)
Observations	437	120	258	258
R-squared	.338	.425	.123	.098

TABLE 12B: SUBSAMPLES STRATEGIC VERSUS FINANCIAL BIDDER INITIATION - IMPACT OF INITIAL BID PRECISION

This table presents OLS regressions for the subsamples of deals initiated by strategic versus financial bidders. The dependent variable in the first two regressions is the *Final Bid Premium*, the dependent variable for model 3 is the *Acquirer CAR*, and the dependent variable for the final regression is *Combined CAR*. *Acquirer CAR* is the cumulative abnormal return of acquirer stock, computed over a 3-day event window. *Combined CAR* is derived from the weighted average of the acquirer's cumulative abnormal return and the target's cumulative abnormal return, considering the market value of the acquirer and target companies. The variable Initial Bid Precision carries the value of 1 if the first bid is an unrounded value dollar offer (for example, $85.5; $65.55) and zero if it is a rounded number ($85; $65) or a range (for example, from $85.5 to $90). All variables are defined in Appendix 1.

	(1)	(2)	(3)	(4)
	Final Premium		*Acquirer CAR*	*Combined CAR*
	STRATEGIC BIDDER INITIATION	FINANCIAL BIDDER INITIATION	STRATEGIC BIDDER INITIATION	STRATEGIC BIDDER INITIATION
Initial Bid Precision	-7.772*	-12.126*	1.292*	.786
	(3.964)	(7.152)	(.743)	(1.223)
Target_Toptier_Bank	5.238	-16.393**	-.356	.45
	(3.714)	(6.358)	(.738)	(1.121)
Acquirer_Toptier_Bank	.226	.776	.044	.066
	(.339)	(.545)	(.058)	(.099)
R&D Expenses	-3.954**	-.028	-.421	-.307
	(1.77)	(3.391)	(.346)	(.52)
Target Size	-.009	.388*	.057**	-.024
	(.129)	(.23)	(.027)	(.042)
Debt/Assets	-.297*	.099	.035	.024
	(.167)	(.258)	(.041)	(.062)
Intangible Assets	-.002	.095	.042	-.077
	(.23)	(.438)	(.041)	(.067)
Cash Flow	-2.954***	-1.192	-.001	.048
	(.795)	(1.088)	(.174)	(.246)
Capex	-2.995	-7.503	-1.679*	-3.11**
	(4.175)	(8.433)	(.928)	(1.388)
Target MTB	.977***	.75***	.034	.09**
	(.141)	(.274)	(.023)	(.044)
Target 52 Week High	.359**	.457*	.014	-.04
	(.149)	(.243)	(.022)	(.045)
Target Runup	-7.772*	-12.126*	1.292*	.786
	(3.964)	(7.152)	(.743)	(1.223)
Negotiation	-2.312	1.358	-.021	1.942*
	(3.547)	(7.644)	(.722)	(1.14)
Cash Payment	2.721	-7.133	3.331***	3.634***
	(4.62)	(9.065)	(.955)	(1.297)
Tender Offer	-1.436	11.286	-.294	-.907
	(3.995)	(7.362)	(.696)	(1.226)
Toehold	2.788	-21.08*	-2.03	-3.496
	(8.828)	(11.455)	(1.562)	(3.265)
Same Industry	3.406	16.376*	.207	.476
	(3.557)	(9.29)	(.693)	(1.145)
Industry Count	1.23	-1.428	-1.456***	-.211
	(2.113)	(4.142)	(.512)	(.706)
Recession	-3.897	-8.013	-.87	.897
	(5.612)	(11.753)	(.766)	(1.487)
Industry FE	YES	YES	YES	YES
Constant	87.303***	42.686	3.766	12.278
	(25.373)	(49.816)	(5.724)	(8.524)
Observations	437	120	258	258
R-squared	.269	.398	.2	.171

APPENDIX 1: VARIABLE DEFINITIONS

Variable	Definition	Notes
DEPENDENT VARIABLES		
Final Bid Premium	[(Final Offer Price - Benchmark Price) / Benchmark Price)] x 100 where the benchmark price equals the target's market value on the day of the sales process initiation	Winsorized at 5%
Revision	(Final Offer Price – Initial Offer Price)/ Benchmark Price x 100	
Bid Jump	(Second Offer Price - Initial Offer Price)/ Benchmark Price x 100	
Number of Bidders	Natural log value of the total number of bidders offering bids in the private bidding process	
Number of Bids	Natural log value of the total number of bis during the private bidding process	
First Winner	Dummy variable carrying the value of 1 if the first bidder becomes the winner and 0 otherwise	
Duration	Total number of days from the first bid date to the announcement date	
Target CAR	The cumulative target abnormal stock return is calculated by the difference between observed and expected target returns (based upon a market model) for the event window [-1;+1]	Winsorized at 5%
Acquirer CAR	The cumulative acquirer abnormal stock return is calculated by the difference between observed and expected acquirer returns (based upon a market model) for the event window [-1;+1]	Winsorized at 5%
Combined CAR	(Acquirer market value x Acquirer CAR + Target market value x Target CAR) / (Acquirer market value + Target market value)	
VARIABLES OF INTEREST		
Initial Bid Premium	[(Initial Offer Price- Benchmark Price)/ Benchmark price)] x 100 where the benchmark price equals the target's market value on the day of the sales process initiation	Winsorized at 5%
Initial Bid Strength	Initial Bid Premium – Expected Final Premium where Expected Final Premium is the predicted value of Final Bid Premium based on a benchmark model	
Initial Bid Precision	The dummy variable carries the value of 1 if the first bid is an unrounded value dollar offer (for example, $85.5; $65.55) and zero if the first bid is a rounded number ($85; $65) or a range (for example, from $85.5 to $90)	
CONTROL VARIABLES		
R&D Expenses	Target research and development expenses/total assets	Winsorized at 5%, missing values replaced by 0
Target Size	Natural log of the target's total assets	Winsorized at 5%
Debt/Assets	Target's long-term debt/total assets	Winsorized at 5%
Intangible Assets	[1- (Target's net plant, property, and equipment/total assets)]	Winsorized at 5%
Cash Flow	Target's EBITDA/total assets	Winsorized at 5%

Capital Expenditures	Target's capital expenditure/total assets	Winsorized at 5%
Target MTB	Dummy variable carrying the value of 1 if the target's market-to-book ratio exceeds that of the 2-digit SIC industry and 0 otherwise	
Target 52-Week High	The highest target's market price within 252 days before the date of the first bid minus the benchmark target price at the initiation date, scaled by the highest target's market price within 252 days, then multiplied by 100.	Winsorized at 5%
Target Run-up	Abnormal return (multiplied by 100) for 42 days before the 1st Bid calculated on a market model estimated on a window (-365; -42) The return for the market is based on the equally weighted index from CRSP.	Winsorized at 5%
Relative Size	Natural log of the acquirer's market value divided by target market value at 40 days before the announcement date.	
Target_TopTier_Bank	Dummy variable carrying the value of 1 if target advisor is among the list of top-8 financial advisor: Goldman Sachs, Merri Lynch (Bank of America Merrill Lynch, Morgan Stanley, JP Morgan, Credit Suisse First Boston, Salomon Smith Barney, Lehman Brothers (Barclays Capital), and Lazard; and 0 otherwise	
Acquirer_TopTier_Bank	Dummy variable carrying the value of 1 if acquirer advisor is among the list of top-8 financial advisor: Goldman Sachs, Merri Lynch (Bank of America Merrill Lynch, Morgan Stanley, JP Morgan, Credit Suisse First Boston, Salomon Smith Barney, Lehman Brothers (Barclays Capital); and 0 otherwise	
Target Initiation	Dummy variable carrying the value of 1 if target is the party who initiates the deal and 0 otherwise	
Negotiation	Dummy variable carrying the value of 1 if there is one bidder signs a confidentially contract and 0 otherwise	
Cash Payment	Dummy variable carries value of 1 if acquirer pays by cash and 0 otherwise	
Tender Offer	Dummy variable carrying the value of 1 in case of a tender offer and 0 otherwise	
Toehold	Dummy variable carrying the value of 1 in case of toeholds offer and 0 otherwise	
Same Industry	Dummy variable carrying the value of 1 if target and acquirer have the same first two digits in SIC code and 0 otherwise	
Strategic Acquirer	Dummy variable carrying the value of 1 if the acquirer is strategic bidder and 0 otherwise	
Industry Count	Natural log of the number of firms in the same two digit SIC industry as the target with a market value greater than the target in the year prior to the merger.	
Recession	Dummy variable for the financial crisis 2008, carrying value of 1 for deals announced between June 2007 and December 2009.	

APPENDIX 2: PAIRWISE CORRELATIONS

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Final Bid Premium	1.000										
(2) Initial Bid Strength	0.551***	1.000									
(3) Initial Bid Premium	0.763***	0.832***	1.000								
(4) Bid Precision	-0.004	-0.085**	-0.048	1.000							
(5) R&D Expenses	0.191***	-0.023	0.178***	0.057*	1.000						
(6) Target Size	-0.136***	0.009	-0.135***	-0.143***	-0.387***	1.000					
(7) Debt/Assets	0.045	0.037	0.080**	-0.099***	-0.265***	0.407***	1.000				
(8) Intangible Assets	0.110***	-0.010	0.105***	0.002	0.383***	-0.264***	-0.305***	1.000			
(9) Cash flow	-0.228***	0.050	-0.195***	-0.070**	-0.611***	0.315***	0.136***	-0.304***	1.000		
(10) Capex	-0.152***	0.031	-0.127***	0.026	-0.252***	0.137***	0.146***	-0.720***	0.292***	1.000	
(11) Target MTB	-0.090**	0.004	-0.093***	-0.095***	0.092***	-0.093***	-0.053	-0.012	0.078**	0.065*	1.000
(12) Target 52 Week High	0.435***	-0.018	0.451***	0.003	0.151***	-0.111***	0.040	0.067*	-0.281***	-0.039	-0.051
(13) Target Runup	0.173***	-0.038	0.144***	0.062*	-0.003	-0.051	-0.004	0.003	-0.059*	0.005	-0.024
(14) Initiation	-0.119***	0.082**	-0.053	-0.079**	-0.066*	-0.088**	0.023	-0.051	0.011	-0.003	0.006
(15) Negotiation	-0.027	-0.006	-0.029	0.055	-0.078**	0.130***	0.064*	-0.012	0.070**	0.017	0.118***
(16) Cash payment	0.066*	0.108***	0.123***	-0.056	0.099***	-0.245***	-0.253***	0.171***	-0.032	-0.163***	-0.031
(17) Tender	0.128***	0.042	0.132***	-0.032	0.169***	-0.111***	-0.110***	0.093***	-0.153***	-0.060*	-0.046
(18) Toehold	-0.018	-0.095***	-0.059*	0.016	-0.012	-0.023	-0.023	-0.048	-0.015	0.011	0.035
(19) Same Industry	0.071**	0.014	0.054	0.035	0.224***	0.059*	0.040	0.073**	-0.108***	-0.035	0.060*
(20) Strategic Acquirer	0.121***	0.022	0.062*	0.010	0.191***	0.030	-0.041	0.117***	-0.138***	-0.085**	0.076**
(21) Industry Count	0.129***	-0.030	0.106***	0.135***	0.478***	-0.405***	-0.226***	0.374***	-0.376***	-0.216***	-0.018
(22) Recession	-0.036	-0.080**	-0.059*	-0.005	0.070**	-0.073**	-0.015	0.086**	-0.115***	-0.057*	0.310***

Variables	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
(12) Target 52 Week High	1.000										
(13) Target Runup	0.096***	1.000									
(14) Initiation	-0.043	-0.037	1.000								
(15) Negotiation	-0.073**	-0.016	-0.273***	1.000							
(16) Cash payment	0.020	0.012	0.023	-0.160***	1.000						
(17) Tender	0.138***	-0.001	-0.039	-0.078**	0.171***	1.000					
(18) Toehold	0.042	0.038	-0.027	0.033	0.036	0.154***	1.000				
(19) Same Industry	0.032	0.016	-0.018	0.043	-0.154***	0.079**	-0.071**	1.000			
(20) Strategic Acquirer	0.000	0.033	-0.105***	0.148***	-0.253***	0.119***	-0.056	0.343***	1.000		
(21) Industry Count	0.106***	0.018	-0.014	-0.113***	0.139***	0.130***	-0.012	0.104***	0.080**	1.000	
(22) Recession	0.050	-0.006	0.041	0.056	-0.019	0.115***	0.118***	-0.031	0.039	0.085**	1.000

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