

BROKEN PROMISES: THE ROLE OF REPUTATION IN PRIVATE EQUITY CONTRACTING AND STRATEGIC DEFAULT[†]

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Abstract

This paper examines reputation and contract design in private equity acquisitions. We use a novel dataset of both completed and terminated private equity buyouts from 2004 through 2010. We find that private equity firms and targets rely on reputation to fill intentional contractual gaps. During the financial crisis private equity firms complete uneconomic, pre-agreed takeovers up to the point when estimated buyout losses rise to at least 7% of sponsors' fund sizes, or \$200 to \$400 million in nominal values. Target firms are willing to engage with defaulting private equity firms in future transactions but they penalize these firms by demanding significantly larger contract nonperformance penalties. We conclude that both reputation and explicit contracting can play important and interrelated roles in private equity and complex business relationships generally.

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“I will fight this until the day I die Private equity firms have taken over America, and we will fight it. These guys are getting away with dishonest behavior, and I won’t tolerate it.”

-Jon Huntsman, CEO, Huntsman Corporation¹

1. Introduction

In the wake of the financial crisis, private equity firms strategically defaulted on a significant number of previously agreed-to takeover transactions. During 2007-2008 takeover terminations reached an aggregate transaction value of \$168 billion, representing an economically sizeable 20% of our total sample period. The ability of private equity firms to walk from these transactions was a result of the unique private equity contracting structure which permitted the private equity firm to breach their acquisition contract with limited penalty. Instead and historically, an unwritten pre-financial crisis understanding held that private equity firms do not back out of their arrangements to acquire takeover targets. In other words, the private equity relationship with a target was one in which reputation and trust played an important role filling an intentional contractual gap (Davidoff 2012).

However, the trade-off between reputation and buyout losses reached a tipping point in 2007-2008 as many financial sponsors faced potential losses in the \$billions on their bids for target firms of declining value . The 2007-2008 financial crisis thus provides a natural testing ground for analyzing reputation and contract design in the arena of private equity buyouts. In this study we examine a novel, hand-coded dataset of 227 buyouts between 2004 and 2010. We isolate a subset of acquisition agreements that became nonperforming at the discretion of buyout firms. Because the rate of bidder-initiated terminations increased significantly during the recent

¹ Susan Pullman and Peter Lattman, “Buyout Bust Turns Bitter, A Major Deal Lands in Court”, *Wall Street Journal*, Sept. 9, 2008.

financial crisis, we focus our study on the contracting terms that are most closely driven by reputation and trust concerns.

If reputation has no value, then a private equity firm should walk away from any deal that declines in economic value before the acquisition is completed. However, we find that private equity firms are willing to bear losses on uneconomic, pre-agreed transactions up to about 5% to 9% of their fund sizes, or around \$200 to \$400 million in nominal dollars. Beyond these limits reputational incentives no longer suffice to ensure contract performance. These results hold even after controlling for debt financing availability and other merger contract details that provide for an easy walk-away right. The sharp increase in bidder defaulting behavior around potential losses of 5% to 9% of fund sizes implies a discontinuous relation between buyout losses and contract nonperformance. In some specifications, we find that the probability of a nonperformance decision is nearly 100% for transactions that fall above the 5% border region of buyout losses relative to sponsors' fund sizes.

Our empirical analysis also documents the dynamic nature of contract terms in this relationship. We measure pre- and post-financial crisis bargaining among targets and private equity firms by recording reverse termination fees and the presence or absence of specific performance clauses. In the pre-financial crisis private equity contract, specific performance, or the ability to seek legal enforcement of the agreement, was generally barred and the contract limited a private equity firm's monetary damages for breach of the contract to approximately three percent of the transaction value, a cap known as a reverse termination fee. We find that contract structure is economically significant and that the size of a reverse termination fee and presence of a specific performance clause drives the decision of a private equity firm to renege on its contractual obligations. We also find that average reverse termination fees in post-crisis

transactions are significantly greater than those observed in pre-crisis transactions. The penalty fees are about 50% higher for private equity firms with a previous nonperformance decision. It appears that targets demand a higher default penalty from tainted private equity bidders to compensate for a reduced level of reputation or trust between the contracting parties.

Our results also imply that reputational incentives may not provide a perfect substitute for detailed contracting terms. Consistent with this problem, we find evidence that private equity firms are predominantly involved in smaller deals, on average, following the financial crisis. This evidence can be interpreted such that to a certain extent targets are still penalizing private equity firms by refusing to bargain with them.

Ultimately, we document the unique and shifting contractual terms negotiated in private equity takeovers. We also document how trust and contractual terms can play dynamic roles in even the most complex contracting relationships. Our results have implications for those who study reputation and contract design. These factors play a role not only in legal environments with weak rule of law but also in the most complex business relationships where formal contracting regularly occurs.

The remainder of the paper proceeds as follows: Section 2 provides a brief primer on the private equity acquisition contract, develops testable hypotheses, and summarizes relevant literature, Section 3 describes the sample and provides descriptive statistics, Section 4 presents empirical findings, and Section 5 concludes.

2. Hypothesis development and related literature

2.1. A brief primer on the Private Equity Contract

As Figure 1 shows, the standardized private equity acquisition contract utilized prior to the financial crisis involved a highly engineered transaction structure. This intricate structure

was driven by private equity funds' reliance on debt financing to undertake acquisitions. Without this financing, the private equity fund would be without sufficient funds to acquire the takeover target. However, because of the need for regulatory and shareholder approvals, private equity acquisitions do not complete immediately. Instead, a significant period of months typically elapses between the time the acquisition agreement is signed and when the acquisition is completed. Private equity firms could not guarantee that this necessary financing would be available at this later time.

Thus, private equity funds did not become a party to these contracts. Rather the funds created thinly-capitalized shell subsidiaries. These subsidiaries were the actual parties to the acquisition contract with the target. In order to ensure that the shell subsidiaries had sufficient funds to make the acquisition, the subsidiaries also entered into debt commitment letters with lenders and equity commitment letters with the private equity fund.

As part of this arrangement, the acquisition agreement between the shell subsidiaries and the target capped the amount of monetary damages the shell subsidiaries were liable for if they breached the agreement, typically at three percent of the transaction value. Some contracts also barred specific performance meaning that the monetary cap was the sole remedy of the target for contractual breach. Even if specific performance was permitted, the contract's terms required a target to sue the shell subsidiaries and win a judgment forcing the subsidiaries to then litigate to draw on their debt and equity commitment letters, a difficult feat of litigation gymnastics. In either case, though, the use of a reverse termination fee and specific performance was negotiated in each contract and varied in each transaction.

The net effect of this structure was to ensure that private equity firms would not have to self-finance an acquisition. But as a consequence the agreements also provided minimal penalties

for private equity firms who breached their acquisition agreement, an intentional contractual gap which targets likely presumed was covered by the reputational incentives of private equity firms to complete the takeover (Davidoff 2012). The private equity takeover agreement thus consisted of a formal contract and an accompanying promise to complete the takeover even when the contract did not require it. It was also a contract that mixed and matched reverse termination fees with the availability of specific performance, contract terms which presumably varied dependent upon the negotiating power of the parties.²

2.2 Hypothesis development

In this section we develop tests of the relation between contracting and reputation within the private equity industry. In particular, we develop testable hypotheses about the incentives of private equity firms to honor their promises to acquire targets. In doing so we model the dynamics of the private equity target relationship to further develop the role of reputation and contracting in a complex contracting environment,

Private equity is a repeat interaction business where private equity firms continually make acquisitions. Economic theory on contracting thus predicts that private equity firms have an incentive to honor their acquisition contracts in order to protect their future contracting flexibility (Klein and Leiffer 1981). If a private equity firm defaults on a contract today, then it may lose the trust of future transaction lawyers, investment bankers, and potential takeover target manager-directors and may be forced to make concessions in future contracts. From this theory we can derive a set of equations to predict the values at which a private equity firm would be willing to renege on its contractual commitments.

² Two other studies have examined the use of reverse termination fees. Afsharipour (2010) examines the use of reverse termination fees to allocate deal risk while Quinn (2010) highlights the optionality of reverse termination fees and posits that they may be inefficient terms.

In order for the private equity firm to honor a given contract, the one-time wealth gain from defaulting must be less than or equal to the loss of its “good” reputation. Formally,

$$\text{Net gain on default} \leq \text{discounted value of good reputation} - \text{discounted value of bad reputation} \quad (1)$$

If a sponsor honors a contract that results in a short-term investment loss, then it values its reputation by more than this amount. The net gain on default serves as a proxy for the reputational value effects from various sources. These include the ability of sponsors to negotiate and contract with future buyout targets.

In the context of the strategic defaults which occurred in 2007-2008, the net gain on default amounts to minimizing the expected loss on the contract. Private equity firms were repeatedly forced to evaluate the declining value of a target relative to the agreed purchase price, as well as the expected costs of contract termination, and then compare this to the value of the private equity firm’s reputation. The net gain then is given by:

$$\text{Net gain on default} = (\text{equity commitment} - \text{updated target equity value}) - \text{termination penalty} \quad (2)$$

If the termination penalty exceeds the difference between the purchase price and current value of the target to the private equity firm, the net gain from defaulting is negative and the firm will honor the contract. However, if the value of a target falls sufficiently and the termination penalty is minor, the net gain becomes positive and the private equity firm must then compare this gain to the reputational damage it will suffer following a default. If equation (1) is not satisfied, then the private equity firm defaults and suffers the consequences. Equation (1) provides an upper bound of the difference between the value of good minus bad reputation for the subsample of terminated transactions. This gives rise to the question: *How much is a private equity firm’s reputation worth?* Ex ante, we expect that defaulting private equity firms will subsequently be forced to offer more target-favorable contracting terms, assuming target firms

care about firm-specific reputation. Thus, the following question arises: *How badly was the reputation of defaulting private equity firms damaged?* By answering both questions, we hope to reveal the role that trust and reputation play in the private equity relationship with targets.

2.3. Related literature

The literature on contracting, reputation and business relationships is voluminous, but for our purposes we focus on the general and financial literature which predicts the behavior of private equity firms with respect to their relationships with buy-out targets. With respect to general reputation theory, Kreps (1990) shows that reputation can provide incentives when a market exists for the buying and selling of one's reputation. This holds even if individuals survive only one period in the model, since they earn a premium by honoring their commitments and selling their good reputation to the next agent. Klein and Leffler (1981) show that in a repeat-purchase setting, "[c]heating will be prevented and high quality products will be supplied only if firms are earning a continual stream of rental income that will be lost if low quality output is deceptively produced. The present discounted value of this rental stream must be greater than the one-time wealth increase obtained from low quality production."³ Hörner (2002) shows how competition induces firms to exert effort in order to maintain high quality reputations, and MacLeod (2007) reviews the substantial literature on reputation as an informal enforcement mechanism that can provide an efficient substitute for more formal penalties to contractual breaches. Bernstein (1992) details how reputation and norms in the retail diamond industry can substitute for a formal contracting environment, fulfilling the same function as a contractual legal scheme.

³ However, it is necessary to distinguish between "sunk" production costs and salvageable capital in their model. We are able to ignore this distinction since contractual performance in our setting does not involve literal production costs.

Tirole (1996) models collective reputation as a function of individual reputations. The model demonstrates that individual reputations are influenced by the collective group's reputation. History dependence in the model implies that group reputations may suffer long after an incidence of poor group behavior, even after the misbehaving group members are extinct. Moreover, "after episodes of bad behaviour, either the group is stuck in a bad-reputation steady state, or trust takes several periods to re-establish, after which the group's reputation returns progressively to the good-reputation level" (p. 18). The speed at which reputation converges to a good-reputation state increases with the turnover rate of group members and decreases with the level of trust required by counterparties.

Several studies examine reputation in the finance arena. Karpoff, Lee, and Martin (2008) show that individuals charged with financial misrepresentation suffer not only formal penalties (e.g., criminal charges and jail sentences), but also various informal sanctions on reputation, including loss of current employment, declines in shareholdings, and reduced future employment opportunities. Hazarika, Karpoff, and Nahata (2012) document that boards tend to forcibly oust CEOs of firms that manage earnings, and Barnett and Pollock (2012) provide a broad survey of the literature on corporate reputation and the factors that contribute to its formation.

Contracting and reputation play important roles for both parties in a buyout transaction. Buyout firms are concerned with the ability to enforce their cash flow and ownership rights in target firms. Lerner and Schoar (2005) show that international private equity contracts are structured to provide ownership-oriented remedies when legal protection is poor. The contracting process at least partially addresses legal environments by providing economic remedies when contracts become unenforceable. Because of the lack of a viable third party enforcer in international settings, private equity contracts may include contingent clauses when

needed. In a different setting, Kaplan and Stromberg (2003) provide a detailed analysis of venture capital contracts and document how ownership rights revert to the venture capitalists when target firms perform poorly. In our setting, we analyze how bidder reputation interacts with remedies of contract enforcement and economic penalties upon contracting failures.

There are multiple facets to private equity firm reputation. One aspect relates to the reputation for increasing value within and across portfolio investments. This reputation is valuable as it improves the ability of the firm to attract future capital investments from limited partners (Kaplan and Schoar 2005; Chung et al. 2011). It can also enhance bidding results on target firms. For example, Hsu (2004) shows that highly reputable venture capital firms are more likely to have their competed offers accepted by start-ups, and that they acquire start-up equity at a significant discount to the price paid by less reputable venture capitalists. Atanasov, Ivanov, and Litvak (2011) show that venture capital firms who are sued suffer declines in future venture capital business, highlighting the importance of reputation as a deterrent for opportunism.

3. Sample and descriptive statistics

3.1. Sample construction

Our sample contains all transactions listed in the FactSet MergerMetrics database and announced from 2004 through 2010 that meet the following criteria: 1) The acquirer is a private equity firm or involves a consortium of private equity firms, 2) the target is a U.S. firm publicly traded on the NYSE, AMEX, or NASDAQ stock exchanges, 3) the transaction size is at least \$100 million⁴, 4) the offer price is at least \$5 per share, and 5) a merger agreement is signed and publicly disclosed through an SEC filing. These filters result in a sample of 227 buyouts announced from 2004 through 2010, including both completed and withdrawn transactions.

⁴ The majority of strategic defaults occurred in these larger deals during this timeframe.

From MergerMetrics we obtain data on the transaction value, offer price, consideration offered, deal attitude (hostile/friendly), form of acquisition (tender offer/merger), competing bids, target industry, offer price renegotiations, and transaction outcomes. We verify transaction outcomes by reading news stories surrounding termination announcements of each failed transaction, as well as settlement agreements that are publicly disclosed. We record the structure of reverse termination fees, the presence of a specific performance clause, and other contract provisions from the acquisition agreements filed with the SEC. The amounts of debt, equity, and excess cash utilized by private equity groups in financing the transactions are recorded from proxy statements mailed to target shareholders for voting approval of the transactions. We obtain information on fund size and dry powder (unused capital) from Preqin. All stock price data is obtained from CRSP.

3.2. *Contract structures*

We begin by examining the private equity industry generally during our sample time period. Figure 2 documents the recent private equity investment wave by charting the aggregate enterprise value of announced transactions from 2004 through 2010. Both the aggregate value and average size of transactions peaked in 2007, with about \$364 billion of announced deals in the first half of 2007 alone. Deal activity dropped off sharply following this peak, with only two \$100+ million transactions announced during 2nd half 2008 into 1st half 2009.

Table 1 provides summary statistics on the sample of 227 announced private equity buyouts. Panel A shows that the percentage of debt financing used by private equity firms to finance their buyouts averages 57.2% over the full sample period, but ranges from 0% to 100% at the extremes. Hence the phrase “leveraged” buyout may actually be a misnomer for some transactions. Panel B reveals that less than 86% of the transactions are ultimately completed.

Panel C summarizes the reasons for transaction failures, and shows that of the 32 failed transactions, 46.9% are terminated by targets in favor of post-announcement competing bids, 9.4% are terminated due to lack of regulatory clearance, and about 37.6% are terminated by bidders due to credit market conditions, outright financing failures, or poor target performance. Finally, Panel D documents a fairly high concentration of targets within the Fama-French 38 Industries of services (both business and personal), retail, and finance, insurance, and real estate.

Figure 3 provides a graphical illustration of the various transaction outcomes over the full sample period. Transaction terminations or renegotiations are reported in more detail across announcement years in Table 2. Commensurate with the peak of announced volume in 2007, the percentage of transactions that were eventually terminated by bidders increased sharply. Overall, the aggregate enterprise value of bidder-initiated terminations during the sample period is about \$170 billion, with \$168 billion of that occurring during the financial crisis in 2007-2008. To put this in context, the terminations of 2007-announced transactions represents an economically sizeable 39% of total announced private equity bids in 2007 and 20% of the total over the full sample period.⁵

We now examine various private equity acquisition contract terms in Table 3. These terms are presented for the full sample in Panel A, and by announcement year in Panel B. Panel A shows that in general, some variation exists in the size of both termination and reverse termination fees. Moving from the 25th to 75th percentile increases the reverse termination fee from 2.1% to 3.9% of enterprise value, and increases the termination fee from 2.0% to 3.6%. This is similar to the amount of variation in fee sizes documented by Bates and Lemmon (2003)

⁵ The low percentage of deals with downward price renegotiations is somewhat surprising. Less than 2% of announced private equity investments involve offer price decreases, compared with about 14% that see price increases. In contrast, among a sample of public acquirers, Denis and Macias (2012) report a higher percentage (8.1%) of downward price renegotiations and a lower percentage (2.1%) of upward price renegotiation.

and Officer (2003). The evolution of contract termination provisions through time is presented in Panel B. Following the numerous transaction failures in 2007-2008, the reverse termination fee more than doubles from a median of 1.9%-2.3% in 2004-2006 to a median of 5.7% in 2010. The results indicate that targets responded to bidder strategic defaults in 2007-2008 by raising penalties for such conduct.

Specific performance may be a more efficient mechanism for the enforcement of merger contracts (Klein and Leffler 1981; Ulen 1984). However, targets are only permitted to seek unconditional specific enforcement of merger contracts 17.7% to 30.0% of the time across sample years. The highest percentage occurs in 2009 following the 2007-2008 strategic defaults, indicating some shift towards third party enforcement through specific performance clauses. The lack of specific performance clauses, particularly in early sample years, points towards the use of private equity reputation as a bonding mechanism. In comparison, a bidder is permitted to enforce the contract in a court through a specific performance clause in 85% to 100% of transactions across sample years, consistent with a lack of target reputation as a bonding component in these transactions.⁶

We next turn to documenting how the contract termination structures are associated with bidder defaults.

4. *Empirical results*

4.1. *Contract structure and strategic defaults*

We attempt to identify contract features and other factors that predict intentional defaults by private equity firms by estimating probit models in Table 4. The dependent variable equals one if a transaction announced during 2007-2008 resulted in a bidder-initiated termination, and

⁶ This makes intuitive sense since targets are not repeat players and can only be acquired once.

zero otherwise. Because contract terms may reflect the parties' view of deal failure risk, we attempt to control for target characteristics that may predict deal risk, such as return volatility and the amount of time between merger signing and expiration of the agreement. We further control for credit market conditions by including the TED Spread in all models. The variable reverse termination fee, which represents the bidder's break-up fee as a percentage of deal enterprise value, is significant and negative in all columns. Consistent with Quinn (2010) we find that private equity firms that negotiated cheaper options were more willing to default on these transactions. This is further confirmed by the significance of the variable no third party enforcer, which is one if the target is not permitted to seek performance of the contract in a court (i.e., specific performance) and zero otherwise. The variable is positive and statistically significant in all columns at either the 1% or 5% levels. The lack of a specific performance clause thus appears to be a key driver in the decision by a private equity firm to strategically default on a contract.

Contract structure is economically significant: a one standard deviation decrease in the reverse termination fee increases the predicted probability of contract nonperformance by 8.7%, and predicted nonperformance increases by 6.0% when specific performance is unavailable.⁷ As the observed nonperformance rate in these regressions is 11.4%, the contract features predict a substantial amount of variation in strategic defaulting behavior.

These contract components are more predictive of default than extra-contractual factors such as the size of the transaction, initial offer premium and the debt financing percentage. In all columns, these variables are not statistically significant. The failure of the debt financing percentage and other variables to produce statistically significant results implies that the decision to default was not based directly on credit availability during the financial crisis.

⁷ We evaluate the one standard deviation change around the sample means of the reverse termination fee and other continuous variables.

Finally, in column (5), the variable equity commitment / GP fund size is included, which measures the amount of equity committed by the private equity buyer as a fraction of the general partner's total fund size. This variable is positive and significant in column (5), indicating that during the financial crisis and consistent with equation (1), private equity firms were more likely to back out of those transactions which had the greatest potential impact on their overall investment portfolios. This finding is consistent with our hypothesis about the tradeoff between reputation and potential losses, as equation (2) predicts the losses may increase with higher equity commitments.

Thus, at this stage we can conclude that private equity firms are more likely to default when the penalty for breach of their contractual agreement is smaller and that contract structure and the presence or absence of a specific performance clause influences this decision.

4.2. Case studies

In order to undertake a further, in-depth examination of the drivers of strategic default in private equity contracts, we collect detailed information surrounding the 12 bidder-initiated terminations from news stories, SEC filings, and company press releases. This information and the contract termination structures are presented in Table 5. We note that bidders generally pay out 1-3% of target enterprise value (EV) in order to exit transactions if specific performance is barred, but may pay up to 10% or more of target value if specific performance is permitted. This finding supports our prior conclusion that contract termination structure is economically important in failed transactions and that the lower the economic penalty the more likely a private equity firm is to default.⁸

⁸ Davidoff (2009) provides more detail on the litigation and settlements surrounding many of these terminations.

To illustrate the importance of contract structure, consider two cases. First, as an example of a transaction without third party enforceability through a specific performance clause, in the buyout of Reddy Ice Holdings, Inc. by GSO Capital Partners, the contract barred specific performance and contained a reverse termination fee of \$21 million. The deal was terminated with GSO paying this \$21 million fee to Reddy Ice. Second, in the buyout of Penn National Gaming, Inc. by a private equity consortium consisting of Fortress Investment Group and Centerbridge Partners, the contract permitted specific performance and there was a \$200 million reverse termination fee. The deal was terminated on July 3, 2008 and the bidders paid a \$225 million cash fee and purchased 12,500 shares of target preferred stock for \$1.25 billion.

Our case study of transactions in Table 5 leads us to conclude that both reverse termination fees and specific performance clauses are important to contracting parties following strategic defaulting behavior by bidders. In 87.5% of the bidder-initiated terminations in 2007-2008 where there is a reverse termination fee and specific performance is barred, the ultimate termination fee paid by the private equity bidder(s) approximates the reverse termination fee amount. In contrast, in most of the transactions allowing specific performance and therefore providing for a third party court enforcer in the form of a judicial court, the settlement amount is substantially lower than the full possible liability of the private equity firm but higher than the reverse termination fee amount.⁹

⁹ We believe the difference is likely due to the litigation positions of the parties upon a strategic default. In the former case, the contract is relatively clear about the right of a target to collect the reverse termination fee upon default. In the latter case, though, any outcome is dependent upon a third party enforcer and the inherent uncertainties of such litigation. This uncertainty leads to bargaining by parties with reference to the litigation risks and costs with a settlement floor being the reverse termination fee and a ceiling being the full amount of the private equity firm's equity commitment.

4.3. *Estimating the value of reputation*

Having established evidence that contract structure affects the private equity firm decision to default, in this section we examine the value of reputation and the effect of contract design on reputation. We also attempt to identify the “tipping point” of reputation by asking “*When are private equity firms incentivized to abandon reputational incentives and strategically default?*”

In Table 6 we estimate the upper and lower bounds of the value of reputation based on the equations developed in Section II.B. We construct upper bound estimates of sponsor reputation in Panel A based on terminated transactions. In what follows, we only estimate reputation values for observations that represented a clear decision by the private equity firm(s) to strategically default; we drop transactions that were terminated due to financing failures or other exogenous reasons as these observations do not imply a tradeoff between reputation and profit.

In Panel A of Table 6 the updated equity values are all well below the initial equity commitments from the private equity firms, with half of these investments completely worthless. Subtracting the termination penalty paid by the firms to exit these transactions from the change in equity values produces net gains on default that range from \$180 million to \$2.5 billion. As a proportion of the size of the sponsors’ funds which contributed the equity, the reputation values range from a low of 1.23% to a high of 40.37%.

In Panels B and C of Table 6, we form lower bound estimates of sponsor reputation. This return is reported in Column (2) of Panel B as “Min Industry Return.” The sponsor’s updated valuation of its equity commitment in the transaction is its initial equity commitment multiplied by one plus the minimum return. This imputes a drop in the value of its potential buyout

investment based on broad industry declines between the transaction announcement and completion. The remaining columns are constructed as in Panel A, with the “Potential Gain” on a strategic default representing the loss that a sponsor could have avoided, had it chosen to terminate the acquisition agreement and paid the termination penalty in Column (4). Results from this analysis are reported if the Reputation / Fund Size in Column (7) is greater than 1%, as lower values are uninformative for the lower bound estimates. The highest value is 14.52%, with the second highest being 5.77%, and several additional observations in the 2% - 3% range. Thus, in several buyouts, sponsors could have strategically defaulted on pending acquisitions and recouped a portion of their capital funds, but chose not to.

In Panel C, we approach the lower bound estimation process using minimum target trading prices between transaction announcement and completion instead of industry proxies. Because target prices are a function of the transaction premium and the probability of deal completion, most observations do not decline significantly in price during this period. “Min Target Return” is the cumulative minimum return on the target’s stock, relative to the target’s average trading price from 45 to 30 days pre-announcement, during the period between deal announcement and completion. This return is multiplied by the sponsor’s equity commitment to obtain the “Updated Equity Value” in Column (3). The remaining columns are constructed as in Panel B. For only two observations, the “Reputation / Fund Size” in Column (7) is greater than 1%, and these values range from 3% to 4%. Both of these are the same observations as those in Panel B, but the lower bound estimate is greater for one of these in Panel C (3.12% vs. 2.92%). Hence Panel C provides one additional unique observation relative to Panel B.

In Panel D, we summarize the results from Panels A through C. The lower bound estimates are from Panels B and C, with \$mm from Column (5), % Equity from Column (6), and

% Fund from Column (7). The upper bound estimates are from Panel A, with \$mm from Column (6), % Equity from Column (7), and % Fund from Column (8). If an estimate is derived from an observation involving multiple sponsors (“club deals”), the \$mm column is split equally among those bidders and the bidder names are indented in the first column in Panel D. As a percentage of sponsor fund size, the highest lower bound value of 14.52% and the lowest upper bound value of 1.23% appear to be outliers.¹⁰ Moving to the next values in the sortings, the reputational value estimates range from around 5% to 9%, providing a relatively tight bound on the estimation of the value that private equity firms place on their reputations.

To summarize, the lower bound estimates are based on *completed* buyouts that may have declined in value, while the upper bound estimates are based on *terminated* buyouts that clearly declined in value. The “tipping point” for contract nonperformance decisions appears to occur when private equity firms face nominal losses in the \$200 to \$400 million range, 51-58% of sponsor equity, or 5%-9% of overall fund value. We note that this decision represents a discrete jump in default probability around these thresholds. Figure 4 graphically represents the data points from Panel D of Table 6. As shown, when plotting reputation as a fraction of fund size, almost every transaction is terminated when potential buyout losses exceed the 7% threshold.

The descriptive evidence from Table 6 implies that sponsor firms are willing to bear losses up to a certain point, but beyond that point the probability of deal failure jumps significantly. To examine the robustness of these data, in Table 7 we calculate a multivariate analysis to assess whether a discontinuity in reputation stakes explains changes on the probability of deal failure.

¹⁰ It is difficult to make cross-sectional comparisons across the estimates because each estimate pertains to a different private equity firm. Different firms may place disparate values on their reputations. Moreover, many firms do not have informative observations because they did not announce any public buyouts during the short interval under consideration (late 2007) in our study.

Results from Table 7 show that contract structure remains salient in predicting bidder-initiated defaults. The coefficient on RTF (i.e., reverse termination fee) is negative and significant while the No 3rd Party Contract Enforcer (i.e., specific performance) coefficient is positive and significant in all columns, similar to the findings from Table 4. Further, the indicator variable for reputation being above a given threshold is positive and significant in all models. This indicates that private equity firms are significantly more likely to strategically default on a transaction when they face buyout losses above a given level. In column 5, the likelihood of a default increases to almost 100% when sponsors face losses in excess of 5% of their fund size.¹¹ The results confirm that one's reputation provides an incentive for contract performance only up to a certain point. Beyond this level of potential losses, reputational concerns no longer suffice to ensure contract performance.

4.4. *The dynamic nature of contracting*

Having assessed the reputational and economic impact of a private equity firm's strategic default, the next issue is to examine how targets react to such defaults by private equity firms. In this section we explore the impact of strategic defaults on future contracting terms and subsequent private equity buying activity.

Table 8 reports summaries of various contract terms across multiple time periods: 2004-2006, the period before the wave of strategic defaults, and 2008-2010, the period following the transactions which were terminated by late 2007. In Panel A, we compare the participation in transactions by three categories of private equity firms: defaulting bidders on single-bidder transactions, defaulting bidders from club deals (i.e., private equity transactions involving multiple firms as buyers), and non-defaulting bidders. These categories are not mutually

¹¹ We also estimate models with higher borders, such as 7% or 9%. These models produce perfect predictions of default with the indicator variable and so are unable to estimate the remaining coefficients.

exclusive, as some bidders are in both single-bidder and club deal subgroups after defaulting on several transactions. Bidders that defaulted on 2007-announced transactions were involved in about 19%-20% of 2004-2006 transactions, while non-defaulting bidders were involved in about 85% of 2004-2006 transactions. Following the 2007 terminations, the defaulting single bidders were involved in 15.5% of transactions while defaulting club deal bidders were involved in only 8.6% of transactions. Thus, there is some descriptive evidence that the defaulters have been penalized through lower incidence of winning bids in 2008-2010. In unreported results, we also document that average deal sizes are significantly smaller among all private equity firms post-crisis. It appears that private equity firms are involved in almost none of the very large transactions after the financial crisis.

Panel B documents the median default penalty in greater detail across four categories: defaulting single bidders vs. non-defaulters, and 2004-2006 (pre-defaults) transactions vs. 2008-2010 transaction (post-defaults). Following the wave of defaults in 2007, the median reverse termination fee increased for both those bidders who defaulted and those who did not default. The increase was 2.3% greater for the defaulting bidders – i.e., a change of about 100% relative to pre-crisis levels, implying that reputational damage may have been more severe for the individual defaulters.

We document the extent of collective, industry-wide reputational damage in Panel C of Table 8. The average size of reverse termination fees triples from the 2004-2006 period to the 2008-2010 period. The median size of the fees doubles and remains statistically significant at the 1% level. Thus, Panel C produces descriptive evidence that is consistent with a collective decline in reputation for the private equity industry as a whole following the 2007 defaults. Somewhat surprisingly then, the rate at which targets are barred from seeking specific enforcement of the

contract actually *increases* across the periods. This runs counter to the predictions arising from models of reputation. One explanation is that firms tend to trade off the amount of reverse termination fees with the right of specific performance. To the extent that parties efficiently adjust contract terms following defaulting behavior by one side, the results may be driven less by reputational damage and more by a dynamic rebalancing of contract terms.¹²

We next examine the effect of bidder defaulting behavior on the future contractual bidder default penalties (i.e., reverse termination fees) negotiated between bidders and targets. In columns (1) and (2) of Table 9, the regressions do not document any significant reputational damage to individual bidders that have previously defaulted on a contract, reflected by the insignificant coefficient on *Bidder has Prior Default*. We do find, however, robust evidence that default costs have risen substantially since the 2007 wave of defaults, as reverse termination fee amounts are significantly higher in transactions *Announced in 2008-2010*. In Columns (3) and (4) the Sponsor Equity / Fund Size > 7% indicator variable is positive and significant in the 2008-2010 interaction term. Thus, large transactions announced following the wave of defaults during the financial crisis tend to have larger RTFs, which compensates targets for inadequate reputational coverage on larger deals. Moreover, in these columns the *Bidder has Prior Default* indicator is positive and significant, consistent with reputational damage showing up in this contracting term. The coefficient of 0.01 implies that default penalties are about 50% higher for these sponsors relative to the pre-crisis RTF median of 2.1%.

¹² Another explanation of the industry-wide trend in the default penalty shown in Panel C is that perhaps reputation has not changed at all, but rather the probability of a market disruption has increased through the financial crisis. To evaluate this concern, we report mean and median arbitrage spreads over offer prices five days following transaction announcements in the final column of Panel C. As indicated by the insignificant p-values for the differences across the 2004-2006 and 2008-2010 categories, arbitrage spreads have not increased since the financial crisis. If this alternative explanation were correct, we would expect the market to price this event risk in arbitrage spreads.

Expected default penalty amounts are not the only contract termination component that bidders and targets negotiate. As prior tables document, the availability of specific performance influences bidder defaulting behavior as well as post-termination settling up. In Table 10, we explore the extent to which parties altered the use of specific performance clauses following the wave of terminations during the financial crisis. The table reports probit models in which the dependent variable equals one if the target is permitted to seek specific performance, and zero otherwise. Independent variables are defined the same way as in Table 9. Results from these models are largely insignificant. The Bidder has Prior Default variable is insignificant, as is the Sponsor Equity / Fund Size > 7% * Announced in 2008-2010 interaction term. We are thus unable to make any conclusions as to the reasons why private equity firms and targets shifted behavior in the use of specific performance clauses in the wake of the financial crisis other than our prior speculations.

4.5. Robustness

We now explore several alternative explanations and robustness checks of our primary results. One possibility is that the dynamic shift in contracting terms following the financial crisis is compensated for through other changes in bidding dynamics. For example, perhaps private equity bidders are now forced to offer higher bid premiums to entice targets to transact with them. To explore this possibility, Table 11 regresses the offer premium against the same independent variables as those in Tables 9 and 10. The results are insignificant, which implies that reputation and defaulting behavior primarily influence those contracting terms related to issues of contract performance.

It is also possible that the population of private equity bidders may have changed following the financial crisis. If targets are less willing to interact with financial sponsors

following their defaults, this would represent an additional reputational penalty that does not show up in the contracting terms we measure. Table 8 provided some descriptive evidence to support this possibility. In Table 12, we evaluate this prospect by exploring the level of capital available to private equity firms. If private equity bidders have greater levels of unused capital following their defaults, this would provide some support for the idea that targets are not satisfied with contractual penalties and instead are refusing to conduct business with them entirely. Panel A reports descriptive statistics for three variables. The first is sponsors' total capital each year, which includes all U.S.-focused buyout funds closed by a private equity firm in the trailing four years. This level is CPI-adjusted to 2010 U.S. dollars. The second variable is dry powder, which is the dollar amount of capital that has not yet been called up by the general partners for investments. The third variable is the percentage of capital represented by dry powder.¹³

The lower portion of Panel A reports the median levels of each variable by year for the full Preqin sample of 886 firm-years, and for the subsample of sponsors that strategically defaulted on a transaction at some point during the sample period. The defaulters were significantly larger firms each year, and they saw an increase in their capital under management for each sample year. Thus, the contract defaults in 2007-2008 do not appear to have had an adverse effect on their ability to raise funds going forward. Capital under management and dry powder remain relatively stable across years for the full Preqin sample. Dry powder for future defaulters increased in 2006-2007, but dropped sharply in 2008 through the remainder of the sample. Thus, descriptively, it appears that defaulting sponsors continue to raise funds and invest

¹³ The minimum levels of dry powder are negative because some sponsors call up more than 100% of the capital that was initially committed to a given fund.

heavily in U.S. buyouts following the financial crisis. We find no descriptive evidence in panel A to indicate that targets are unwilling to transact with them.

In panel B of Table 12 we evaluate these trends empirically by running OLS panel regressions with both year and firm fixed effects. The year fixed effects would pick up any industry-wide changes in private equity capital following the wave of defaults. An additional independent variable, *Bidder has Prior Default*, equals one in any year following a strategic default for a given private equity firm, and zero for the years prior to a default or for all years of non-defaulting bidders. This variable measures changes in capital for individual bidders following their defaults. Column (1) reports total capital in \$US billions, Column (2) reports dry powder in \$US billions, and Column (3) reports dry powder as a percentage of total capital.¹⁴ Consistent with the descriptive evidence, total capital and dry powder for all private equity firms increase significantly for each of 2006 through 2010, relative to 2004 levels. However, dry powder as a percentage of total capital decreased significantly in 2008 and 2009, and also decreased slightly (but not statistically significantly) in 2010. Thus, we find no evidence to indicate that the private equity industry as a whole is being shut out of transactions following the financial crisis, since the industry does not have a greater proportion of unused capital following the wave of defaults. The coefficient on *Bidder has Prior Default* is insignificant in all three columns. If it were positive in Column (3), this would indicate an excess of unused capital following strategic defaults. But the insignificance of this coefficient implies that targets remain willing to agree to buyouts with private equity firms following their defaults.

¹⁴ We also compute the models using logs of the dependent variables in Columns (1) and (2) to address skewness. Results are qualitatively unchanged.

5. Conclusion

This paper examines the relation between the value of reputation and financial contracting in 227 private equity buyouts of U.S. targets from 2004-2010. We find that contract terms became highly salient amidst the financial crisis. Private equity bidders were more likely to breach contracts during the financial crisis of 2007-2008 when the penalty for doing so was lower. For example, bidders were more likely to default if the reverse termination fee payable was lower and if the target was not permitted to seek specific enforcement of the contract.

We use a variety of empirical techniques to determine the value of private equity reputation. Using details of target valuation changes and contract default penalties, we estimate the gains from backing out of these contracts, as well as the losses to honoring unprofitable contracts. We find that sponsors are willing to bear losses of up to 5% to 9% of their fund sizes, 51% to 58% of their equity commitments, or around \$200 million to \$400 million in nominal dollars. Beyond these boundaries, reputation no longer serves as a sufficient enforcement mechanism for contract performance. Consistent with economic theory, private equity's reputation among targets has an identifiable economic value.

We assess the reputational damage resulting from the wave of terminations during the financial crisis and find evidence consistent with models of both individual and collective reputation. Expected default penalties for private equity firms have more than doubled following the wave of terminations, with median reverse termination fees rising from 2.2% pre-crisis to 4.7% post-crisis. Defaulting private equity firms have experienced an additional 50% increase in contract penalty terms. We also find descriptive evidence that private equity firms are predominantly involved in smaller deals, on average, following the financial crisis.

The importance of contracting terms in the decision to renege and the adjustment in contract terms following the financial crisis shows the dynamic nature of contracting as the private equity industry substitutes more formal contracting default mechanisms in place of reputational capital. It also provides a real-time test of the theory of reputation, contract (non)performance as well as the most efficient means of contracting. Our evidence will help future parties in assessing both the value of reputation and the most efficient means of contracting based on perceptions of reputation and potential for defaulting behavior. Ultimately, models of collective reputation suggest that private equity firms may rebuild their lost trust through repeated successful interactions with market participants going forward. With time, all may be forgiven.

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Table 1. Sample Descriptive Statistics

Descriptive statistics on 227 private equity buyouts listed in MergerMetrics and announced from 2004 through 2010. The sample is limited to buyouts with a transaction value of at least \$100 million, an offer price of at least \$5 per share, a target company which is publicly traded on the NYSE, AMEX, or NASDAQ, and deals for which a merger agreement is signed and publicly disclosed. Both completed and withdrawn buyouts are included. Transaction Value is the total value offered to acquire the outstanding common stock of the target. Enterprise Value equals transaction value plus net debt. Initial Offer Premium at announcement and Final Offer Premium are over target's trading price 30 days prior to merger announcement. Debt Financing % is the percentage of transaction-related funding that the private equity firm or group obtained from debt sources. Sponsor Equity / Fund Size is the private equity firm's equity contribution towards a given transaction as a fraction of the size of the sponsor's fund from which the contribution is made. Arb Spread is the difference between the offer price and the target's equity trading price five days after announcement, divided by the trading price.

<i>Panel A</i>	<u>Mean</u>	<u>St. Dev.</u>	<u>Min</u>	<u>25th %</u>	<u>Median</u>	<u>75th %</u>	<u>Max</u>
Transaction Value (\$mm)	\$2,468.2	\$4,740.8	\$104.5	\$340.8	\$816.1	\$2,117.4	\$31,802.4
Enterprise Value (\$mm)	\$3,707.0	\$10,463.8	\$62.4	\$373.5	\$1,119.0	\$2,875.1	\$130,659.3
Initial Offer Premium	28.4%	63.9%	-7.1%	11.8%	22.2%	32.7%	938.8%
Final Offer Premium	30.0%	64.3%	-8.6%	13.2%	23.9%	34.3%	938.8%
Debt Financing %	57.2%	22.6%	0.0%	47.8%	62.4%	71.8%	100.0%
Sponsor Equity / Fund Size	12.9%	12.8%	1.0%	5.5%	8.6%	15.7%	86.8%
Arb Spread (+5)	2.4%	3.7%	-10.4%	0.9%	2.2%	3.8%	21.8%

<i>Panel B</i>	<u>N</u>	<u>%</u>
Merger Consideration = Cash ¹	227	100.0%
Deal Completed	195	85.9%
Management Buyout	18	7.9%
Hostile / Unsolicited Deal	12	5.3%
Club Deal	51	22.5%

<i>Panel C: Reason for Deal Failure</i>			
Competing Bid	15	46.9%	(target-initiated)
Lack of Financing / Credit Market Developments	10	31.3%	(bidder-initiated)
Lack of Regulatory Approval	3	9.4%	(exogenous)
Target Performance	2	6.3%	(bidder-initiated)
Lack of Shareholder Approval	<u>2</u>	<u>6.3%</u>	(target-initiated)
	32	100.0%	

¹ Two transactions included a choice of cash or stock.

Table 1 (Continued)

<i>Panel D: Industry Composition</i> <i>(Fama-French 38 Industries)</i>	<u>Full Sample Period</u>		<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
Services	87	38.3%	50.0%	26.5%	27.5%	35.3%	66.7%	60.0%	48.5%
Retail Stores	37	16.3%	6.3%	38.2%	15.7%	11.8%	0.0%	10.0%	18.2%
Finance, Insurance, and Real Estate	26	11.4%	25.0%	11.8%	13.7%	14.7%	6.7%	0.0%	0.0%
Electrical and Electronic Equipment	12	5.3%	0.0%	2.9%	5.9%	7.4%	0.0%	10.0%	6.1%
Wholesale	9	3.4%	0.0%	8.8%	2.0%	1.5%	20.0%	10.0%	0.0%
Transportation	9	3.4%	0.0%	2.9%	3.9%	5.9%	0.0%	0.0%	6.1%
Instruments and Related Products	6	2.6%	6.3%	0.0%	5.9%	2.9%	0.0%	0.0%	0.0%
Machinery, Except Electrical	6	2.6%	0.0%	2.9%	2.0%	4.4%	0.0%	0.0%	3.0%
Other Industries	35	15.4%							

Table 2. Transaction Outcomes by Announcement Year

Frequency of target-initiated, bidder-initiated, and regulatory-induced transaction failures by announcement year, in Panel A, and price renegotiations in Panel B. Price renegotiation data is from MergerMetrics, and transaction failure information is obtained from MergerMetrics and cross-checked against news stories and company press releases.

<i>Panel A: Deal Failures</i>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Total</u>
	(N =16)	(N =34)	(N =51)	(N =68)	(N =15)	(N=10)	(N=33)	(N=227)
Target-initiated transaction failures	1 6.3%	4 11.8%	2 3.9%	4 5.9%	2 13.3%	2 20.0%	2 6.1%	17 7.5%
Bidder-initiated transaction failures	1 6.3%	1 2.9%	1 2.0%	9 13.2%	0 0.0%	0 0.0%	0 0.0%	12 5.3%
Regulatory-induced transaction failures	1 6.3%	0 0.0%	0 0.0%	2 2.9%	0 0.0%	0 0.0%	0 0.0%	3 1.3%
Total	3 18.8%	5 14.7%	3 5.9%	15 22.1%	2 13.3%	2 20.0%	2 6.1%	32 14.1%
<i>Panel B: Offer Price Renegotiations</i>								
Offer price increase	0 0.0%	6 17.6%	11 21.6%	10 14.7%	2 13.3%	1 10.0%	2 6.1%	32 14.1%
Offer price decrease	1 6.3%	1 2.9%	0 0.0%	1 1.5%	0 0.0%	0 0.0%	0 0.0%	3 1.3%

Table 3. Individual Merger Contract Provisions

Descriptive statistics on provisions in merger contracts from the private equity buyout sample described in Table 1. *RTF* is reverse termination fee payable by the bidder(s) and *TF* is termination fee payable by the target. *Enterprise Value* is the total value offered to acquire the outstanding common stock of the target plus net debt. *# Days to Drop Dead Date* is the number of days between merger announcement and the deadline given for closing the merger. *3rd Party Contract Enforcement*, i.e., specific performance, is the ability of one party to go to a third party contract enforcer – such as the legal courts – to force the other firm to close a transaction.

<i>Panel A: Variable Distributions</i>								
	<u>N</u>	<u>Mean</u>	<u>St. Dev.</u>	<u>Min</u>	<u>25th %</u>	<u>Median</u>	<u>75th %</u>	<u>Max</u>
<i>Affects bidder's termination option</i>								
Reverse Termination Fee (\$mm) ¹	174	\$99.8	\$161.5	\$0.5	\$13.0	\$37.7	\$120.0	\$1,000.0
RTF / Enterprise Value ¹	174	4.1%	8.9%	0.02%	2.1%	3.0%	3.9%	114.5%
<i>Affects target's termination option</i>								
Termination Fee (\$mm) ¹	226	\$74.9	\$140.8	\$3.0	\$12.0	\$27.5	\$65.0	\$1,000.0
TF / Enterprise Value ¹	226	2.9%	1.2%	0.1%	2.0%	2.8%	3.6%	7.9%
# Days to Drop Dead Date	225	200	70	52	162	183	226	574

¹ The calculations of these statistics include only transactions with a stated (nonzero) value for the given variable.

Table 3 (continued)

<i>Panel B: Frequencies by Announcement Year</i>	Full Sample Period		2004	2005	2006	2007	2008	2009	2010
	N	%	<i>(N =16, 7%)</i>	<i>(N =34, 15%)</i>	<i>(N =51, 22%)</i>	<i>(N =68, 30%)</i>	<i>(N =15, 7%)</i>	<i>(N=10, 4%)</i>	<i>(N=33, 15%)</i>
<i>Affects bidder's termination option</i>									
Reverse Termination Fee (Yes)	174	76.7%	50.0%	35.3%	86.3%	91.2%	86.6%	80.0%	81.8%
Median RTF / Enterprise Value ¹			1.9%	2.2%	2.3%	2.9%	3.3%	4.6%	5.7%
3 rd Party Contract Enforceable	50	22.0%	18.8%	26.5%	17.7%	22.1%	20.0%	30.0%	24.2%
3 rd Party Contract Enforceable only if Debt Financing Available	51	22.5%	50.0%	50.0%	21.6%	13.2%	6.7%	20.0%	9.1%
No 3 rd Party Contract Enforcement	126	55.5%	31.2%	23.5%	60.7%	64.7%	73.3%	50.0%	66.7%
<i>Affects target's termination option</i>									
Termination Fee (Yes)	226	99.6%	100.0%	100.0%	100.0%	98.5%	100.0%	100.0%	100.0%
Median TF / Enterprise Value ¹			1.9%	3.6%	2.4%	2.9%	3.1%	3.5%	3.1%
3 rd Party Contract Enforceable	208	91.6%	87.5%	85.3%	88.2%	92.6%	100.0%	100.0%	100%
Median #Days to Drop Dead Date			189	179	181	222	180	134	174

¹ The calculations of these statistics include only transactions with a stated (nonzero) value for the given variable.

Table 4. Predicting Contract Nonperformance

Probit models in which the dependent variable equals one if a transaction announced during 2007-2008 resulted in a bidder-initiated termination, and zero otherwise. *TED Spread* is the difference between the three month LIBOR rate and the three month T-Bill rate, at 45 days after transaction announcement. *Target Std Dev Returns* is the standard deviation of daily returns for the target company, calculated over one year prior to 30 days before the merger announcement. *Time to Agreement Expiration* is the time from announcement to the merger agreement's drop dead date, in months; *Arbitrage Spread* is the difference between the offer price and the target's equity trading price five days after announcement, divided by the trading price. *No 3rd Party Contract Enforcer* equals one if the target is not permitted to go to a third party contract enforcer, i.e., seek specific performance of the contract, and zero otherwise. *Reverse Termination Fee* is the bidder's break-up fee as a percentage of deal enterprise value. *Equity Commitment / GP Fund Size* is the private equity bidder's fund equity contributed towards the purchase price as a fraction of the general partner's total fund size at closing. The sample and all other variables are defined in the headers to Tables 1-3. Robust standard errors are clustered at the target industry level, defined using the Fama-French 38-industry classifications. P-values are reported in parentheses with ***, **, and * representing significance at the 1%, 5%, and 10% levels, respectively.

Dependent Variable:	Bidder-Initiated Transaction Failure = 1, All Other Outcomes = 0				
	(1)	(2)	(3)	(4)	(5)
Intercept	-2.235 (0.334)	-2.032 (0.304)	-2.465 (0.213)	-3.046 (0.228)	-14.083 ** (0.024)
TED Spread	1.053 ** (0.021)	0.762 * (0.068)	1.332 *** (0.002)	1.239 ** (0.024)	3.725 ** (0.022)
Log Transaction Value	-0.135 (0.441)	-0.200 (0.333)	-0.091 (0.575)	-0.119 (0.551)	-0.250 (0.327)
Initial Offer Premium	-0.415 (0.544)	-0.720 (0.322)	-0.175 (0.857)	-0.593 (0.560)	-5.877 * (0.063)
Debt Financing %		0.662 (0.624)		0.663 (0.613)	4.699 (0.164)
Arbitrage Spread			-11.093 * (0.059)	-17.089 (0.174)	-84.974 ** (0.024)
Target Std Dev Returns	-0.342 (0.319)	-0.024 (0.957)	-0.267 (0.315)	0.336 (0.653)	2.138 ** (0.046)
Time to Agreement Expiration	0.150 *** (0.002)	0.146 *** (0.002)	0.164 *** (0.000)	0.183 *** (0.008)	0.412 *** (0.002)
No 3 rd Party Contract Enforcer	0.614 ** (0.038)	0.793 ** (0.013)	0.441 (0.119)	0.723 ** (0.025)	1.207 ** (0.028)
Reverse Termination Fee %	-64.775 ** (0.045)	-81.901 ** (0.016)	-81.754 ** (0.019)	-121.115 ** (0.023)	-196.310 *** (0.005)
Equity Commitment / GP Fund Size					14.803 *** (0.001)
N	75	65	75	65	62
Pseudo R ²	35.32%	33.14%	38.69%	37.51%	54.73%

Table 5. Strategic Defaults: Reasons, Contract Structures, and Penalties

This table summarizes the reasons for the failure of the 12 bidder-initiated withdrawn private equity buyouts. *Contract Structure* contains the outcome-relevant data recorded from the merger agreement, and *Reason for Failure* and *Outcome* are collected from various news and legal sources. *RTF* stands for reverse termination fee payable by the bidder. *EV* is deal enterprise value in \$mm. *Equity Value* is the private equity firm’s equity contributed in the transaction, as reported in SEC proxy filings.

	Ann. Date	Target	Acquirer	Reason for Failure	Contract Structure	Outcome	EV	Equity Value	Penalty/ EV	Penalty/ Equity
1	10/27/2004	Prime Group Realty Trust	Mansur & Co., / The Prime Group, Inc.	Target claimed acquirer failed to obtain sufficient debt financing; Acquirer claimed target attempted to back out of deal.	\$5mm RTF on financing failure; No 3 rd Party Enforcement.	Bidder paid \$7mm in damages and purchased select assets of target.	\$637	N/A	1.1%	N/A
2	5/31/2005	School Specialty, Inc.	Bain Capital	Lack of financing.	No RTF; Financing condition; 3 rd Party Enforceable.	Agreement terminated, with no fees triggered.	\$1,305	\$460	0.0%	0.0%
3	9/7/2006	Embarcadero Technologies, Inc.	Thoma Cressey Equity Partners	Target disclosed options backdating scandal, deteriorating performance.	\$12.15mm RTF; No RTF payable on target breach of its representations and warranties in the merger agreement.	Bidders terminated deal, but subsequently acquired target at a reduced price.	\$202	\$66	0.0%	0.0%
4	4/16/2007	SLM Corporation (“Sallie Mae”)	J.C. Flowers / Friedman Fleisher & Lowe / Bank of America / JPMorgan Chase	Bidders accused target of suffering a “Material Adverse Change” (MAC) in business.	\$900mm RTF; No financing condition; No 3 rd Party Enforcement; Target MAC clause with six exclusions.	Agreement terminated, with no fees triggered.	\$130,659	\$8,800	0.0%	0.0%
5	4/24/2007	Myers Industries, Inc.	Goldman Sachs Capital Partners	Weak credit market conditions and/or poor performance of target.	\$35mm RTF; No financing condition; No 3 rd Party Enforcement.	Bidders paid \$35mm RTF.	\$1,235	\$285	2.8%	12.3%

Table 5 (continued)

	Ann. Date	Target	Acquirer	Reason for Failure	Contract Structure	Outcome	EV	Equity Value	Penalty/ EV	Penalty/ Equity
6	4/26/2007	Harman International Industries, Inc.	Kohlberg Kravis Roberts & Co. / Goldman Sachs Capital Partners	Bidders accused target of suffering a “Material Adverse Change” (MAC) in business and a breach of the merger agreement.	\$225mm RTF; No financing condition; No 3 rd Party Enforcement; Target MAC clause with 15 exclusions.	Bidders purchased \$400mm of target convertible notes.	\$7,832	\$3,500	N/M	N/M
7	5/16/2007	Axiom Corp.	ValueAct Capital Partners / Silver Lake Partners	Weak credit market conditions and/or poor performance of target.	\$66.75mm RTF on financing failure; No financing condition; No 3 rd Party Enforcement.	Bidders paid \$65mm RTF.	\$2,911	\$761	2.2%	8.5%
8	6/15/1007	Penn National Gaming, Inc.	Fortress Investment Group / Centerbridge Partners	Weak credit market conditions and/or poor performance of target.	\$200mm RTF; No financing condition; 3 rd Party Enforceable.	Bidders paid \$225mm RTF and purchased 12,500 shares of target preferred stock for an aggregate purchase price of \$1.25 billion.	\$10,161	\$3,061	2.2%	7.4%
9	7/2/2007	Reddy Ice Holdings, Inc.	GSO Capital Partners	Weak credit market conditions and/or poor performance of target.	\$21mm RTF; No financing condition; No 3 rd Party Enforcement.	Bidders paid \$21mm RTF.	\$1,100	\$311	1.9%	6.8%
10	7/12/2007	Huntsman Corp.	Apollo Management / Hexion Specialty Chemicals, Inc.	Weak credit market conditions and/or poor performance of target. Bidders accused target of suffering a “Material Adverse Change” in business.	\$325mm RTF; No financing condition; 3 rd Party Enforceable if debt financing available.	Court ordered S.P. Bidders and banks then settled and paid \$750mm in damages and purchased \$250mm of target convertible notes.	\$10,053	N/A ¹	7.5%	N/A
11	7/23/2007	United Rentals, Inc.	Cerberus Capital Management	Weak credit market conditions and/or poor performance of target.	\$100mm RTF; No financing condition; No 3 rd Party Enforcement.	Bidders paid \$100mm RTF.	\$8,000	\$1,500	1.3%	6.7%
12	7/23/2007	Cumulus Media, Inc.	Merrill Lynch Global Private Equity	Deteriorating performance of target.	\$15mm RTF; No financing condition; No 3 rd Party Enforcement.	Bidder paid \$15mm RTF.	\$1,366	\$346	1.1%	4.3%

¹ Apollo committed no direct equity in the transaction, but contributed equity indirectly through its holdings in Hexion.

Table 6. The Value of Reputation

This table reports estimates of the value of reputation based on equations (1) and (2). Panel A reports upper bound reputation value estimates using bidder-terminated transactions. Panel B reports lower bound reputation value estimates based on transactions completed following negative returns in the target's 4-digit SIC industry. Panel C reports lower bound reputation value estimates based on transactions completed following target price declines between transaction announcement and completion dates. Panel D summarizes the lower bounds and upper bounds from the first three panels, in raw dollars, as a % of transaction equity, and as a % of the sponsor's fund size. All dollars are in \$mm.

Panel A reports details on the six terminated transactions in the sample which contain sufficient information to calculate the relevant variables. *Equity Commitment* is the private equity firm's equity contributed to the transaction (excluding excess cash in the target), *Deal Debt* is the debt financing for the transaction, and *EV at Termination* is transaction EV * the change in the target's actual EV from 30 days before transaction announcement to one day following transaction termination. EV is defined as target's market value of equity plus market value of debt less excess cash. *Updated Equity Value* equals *EV at Termination* minus *Deal Debt* or zero if this is negative. *Termination Penalty* is the amount paid by the private equity firms to terminate the contract or settle litigation following breach of the agreement. *Net Gain on Default* is defined by Equation (2): $Net\ gain\ on\ default = (equity\ commitment - updated\ target\ equity\ value) - termination\ penalty$. *Reputation / Equity* is the Net Gain divided by the sponsor's equity commitment in the transaction, and *Reputation / Fund Size* is the Net Gain divided by the size of the sponsor's fund affiliated with the given transaction. For club deals, this variable utilizes the sum of the sponsors' funds. The observations are reported in an ascending sort on Reputation / Fund Size.

Panel B reports details on completed transactions which were associated with a decline in industry returns between the announcement and completion dates. *Equity Commitment* and *Termination Penalty* are defined as above in Panel A. *Min Industry Return* is calculated as follows: An equal-weighted portfolio of all firms in the target's 4-digit SIC code is constructed (excluding the target), rebalanced daily, and daily returns to this portfolio are compounded from the announcement date + 1 through the completion date. The minimum cumulative return is then taken over this interval for each observation. If this is positive, the observation is dropped. The *Updated Equity Value* is imputed as the sponsor's Equity Commitment times one plus the Min Industry Return. The remaining columns are calculated as above in Panel A. The observations are reported in a descending sort on Reputation / Fund Size, and only those observations with a ratio > 1% are reported.

Panel C reports details on completed transactions which were associated with a decline in the target's stock price between the announcement and completion dates. *Min Target Return* is the cumulative minimum return on the target's stock, relative to the target's average trading price from 45 to 30 days pre-announcement. *Updated Equity Value* is one plus this return times the sponsor's equity commitment. The remaining columns are calculated as above in Panel A. The observations are reported in a descending sort on Reputation / Fund Size, and only those observations with a ratio > 1% are reported.

Panel D combines the results reported in Panels A, B, and C. The lower bound estimates are from Panels B and C, with \$mm from Column (5), % Equity from Column (6), and % Fund from Column (7). The upper bound estimates are from Panel A, with \$mm from Column (6), % Equity from Column (7), and % Fund from Column (8). If an estimate is derived from an observation involving multiple sponsors ("club deals"), the bidder names are indented in the first column, the \$mm column is split equally among those bidders, but the % Fund is based on each sponsor's respective fund size.

Table 6 (continued)

Panel A: Upper bound reputation value estimates based on bidder-initiated deal terminations

Ann. Date	Club Deal / Single Bidder	Equity Commitment	Deal Debt	EV at Termination	Updated Equity Value	Termination Penalty	Net Gain on Default	Reputation / Equity	Reputation / Fund Size
		(1)	(2)	(3)	(4) =Max[(3)-(2), \$0]	(5)	(6) =(1)-(4)-(5)	(7) =(6)/(1)	(8) =(6)/Fund
Apr 07	Single	\$285.0	\$950.0	\$895.7	\$0.0	\$35.0	\$250.0	87.72%	1.23%
Jul 07	Single	\$310.8	\$789.2	\$899.0	\$109.8	\$21.0	\$180.0	57.92%	9.00%
May 07	Club	\$760.5	\$2,150.0	\$1,804.7	\$0.0	\$65.0	\$695.5	91.45%	9.80%
Jul 07	Single	\$1,500.0	\$6,500.0	\$5,994.1	\$0.0	\$100.0	\$1,400.0	93.33%	18.67%
Jun 07	Club	\$3,061.0	\$7,100.0	\$7,414.8	\$314.8	\$225.0	\$2,521.2	82.37%	40.37%
Jul 07	Single	\$346.0	\$1,020.0	\$1,151.7	\$131.7	\$15.0	\$199.3	57.60%	N/A

Panel B: Lower bound reputation value estimates based on completed deals during target industry declines

Ann. Date	Club Deal / Single Bidder	Equity Commitment	Min Industry Return	Updated Equity Value	Termination Penalty	Potential Gain	Reputation / Equity	Reputation / Fund Size
		(1)	(2)	(3) =(1)*[1+(2)]	(4)	(5) =(1)-(3)-(4)	(6) =(5)/(1)	(7) =(5)/Fund
Dec 08	Single	\$142.3	-33.86%	\$94.1	\$10.0	\$38.2	26.84%	14.52%
Sep 07	Single	\$560.0	-51.48%	\$271.7	\$0.0	\$288.3	51.48%	5.77%
Jul 07	Single	\$500.0	-21.06%	\$394.7	\$25.0	\$80.3	16.06%	2.92%
Jun 07	Club	\$2,700.0	-16.81%	\$2,246.1	\$200.0	\$253.9	9.40%	2.33%
Feb 06	Single	\$213.4	-7.17%	\$198.1	\$0.0	\$15.3	7.17%	2.28%
Apr 07	Single	\$7,171.0	-15.07%	\$6,090.0	\$700.0	\$381.0	5.31%	2.16%
Oct 07	Single	\$660.0	-15.02%	\$560.8	\$28.0	\$71.2	10.78%	1.92%
Jun 06	Single	\$76.5	-13.12%	\$66.5	\$0.5	\$9.5	12.47%	1.91%

Panel C: Lower bound reputation value estimates based on completed deals following target trading price declines

Ann. Date	Club Deal / Single Bidder	Equity Commitment	Min Target Return	Updated Equity Value	Termination Penalty	Potential Gain	Reputation / Equity	Reputation / Fund Size
		(1)	(2)	(3) =(1)*[1+(2)]	(4)	(5) =(1)-(3)-(4)	(6) =(5)/(1)	(7) =(5)/Fund
Sep 07	Single	\$560.0	-34.43%	\$367.2	\$0.0	\$192.8	34.43%	3.86%
Jul 07	Single	\$500.0	-22.18%	\$389.1	\$25.0	\$85.9	17.18%	3.12%

Table 6 (continued)

Panel D: Reputation value ranges for private equity firms

private equity Firm	Lower Bound			Upper Bound		
	<u>\$mm</u>	<u>% Equity</u>	<u>% Fund Size</u>	<u>\$mm</u>	<u>% Equity</u>	<u>% Fund Size</u>
Green Courte Partners	\$38.2	26.84%	14.52%			
Sun Capital Partners	\$288.3	51.48%	5.77%			
Platinum Equity	\$85.9	17.18%	3.12%			
Citigroup Inc.	\$42.3	9.40%	1.28%			
Deutsche Bank	\$42.3	9.40%	N/A			
Madison Dearborn Partners	\$42.3	9.40%	0.65%			
Merrill Lynch Global Private Equity	\$42.3	9.40%	N/A			
Pamlico Capital	\$42.3	9.40%	3.85%			
Wachovia Capital Partners	\$42.3	9.40%	N/A			
InterMedia Partners	\$15.3	7.17%	2.28%			
Kohlberg Kravis Roberts & Co.	\$381.0	5.31%	2.16%			
Vestar Capital Partners	\$71.2	10.78%	1.92%			
Liberty Partners	\$9.5	12.47%	1.91%			
Goldman Sachs Capital Partners				\$250.0	87.72%	1.23%
GSO Capital Partners				\$180.0	57.92%	9.00%
ValueAct Capital Partners				\$347.8	91.45%	9.94%
Silver Lake Partners				\$347.8	91.45%	9.66%
Cerberus Capital Management				\$1,400.0	93.33%	18.67%
Fortress Investment Group				\$1,260.6	82.37%	41.40%
Centerbridge Partners				\$1,260.6	82.37%	39.39%

Table 7. Transaction Failures, Buyout Contract Terms, and Reputational Capital

Probit models with dependent variable equal to one for bidder-initiated terminations and zero otherwise. Reputation values are calculated as in Table 6, Panel B for columns labeled *Industry* and as in Table 6, Panel C for columns labeled *Target*. The reputation independent variable is coded one for reputation values above a set discontinuity border and zero for values below the border. Borders are 2% in Columns (1)-(2), 3% in Columns (3)-(4), and 5% in Columns (5)-(6). All other variables are defined in Tables 1-4. Robust standard errors are clustered at the target industry level, defined using the Fama-French 38-industry classifications. P-values are reported in parentheses with ***, **, and * representing significance at the 1%, 5%, and 10% levels, respectively.

Dependent Variable:	Bidder-Initiated Transaction Failure = 1, All Other Outcomes = 0					
	2%		3%		5%	
Border: Reputation / Fund Size	2%		3%		5%	
Reputation Measure:	<i>Industry</i>	<i>Target</i>	<i>Industry</i>	<i>Target</i>	<i>Industry</i>	<i>Target</i>
	<u>(1)</u>	<u>(2)</u>	<u>(3)</u>	<u>(4)</u>	<u>(5)</u>	<u>(6)</u>
Intercept	-3.423 (0.325)	-3.456 (0.326)	-3.888 (0.167)	-9.815 *** (0.004)	-8.847 *** (0.000)	-3.134 (0.374)
Log Transaction Value	-0.210 (0.478)	-0.276 (0.394)	-0.227 (0.380)	-0.341 (0.448)	0.046 (0.848)	-0.256 (0.419)
Initial Offer Premium	-0.985 (0.217)	0.191 (0.867)	-0.915 ** (0.010)	-1.840 * (0.074)	-2.116 *** (0.004)	-0.158 (0.893)
Target Std Dev Returns	-0.194 (0.829)	-0.261 (0.790)	0.215 (0.707)	0.917 ** (0.023)	0.292 (0.284)	-0.223 (0.809)
Time to Agreement Expiration	0.168 *** (0.005)	0.182 *** (0.001)	0.180 *** (0.001)	0.300 ** (0.026)	0.105 (0.138)	0.173 *** (0.004)
No 3 rd Party Contract Enforcer	1.666 *** (0.003)	1.838 *** (0.000)	1.344 *** (0.000)	4.210 ** (0.014)	5.633 *** (0.008)	1.555 *** (0.001)
Reverse Termination Fee %	-40.888 ** (0.022)	-42.519 ** (0.036)	-45.346 ** (0.014)	-61.128 * (0.074)	-26.585 * (0.056)	-42.246 ** (0.026)
(0,1) Indicator for Reputation Above Border Discontinuity	3.021 *** (0.003)	3.054 ** (0.013)	1.826 *** (0.008)	4.177 ** (0.010)	7.687 *** (0.008)	3.071 *** (0.006)
N	69	69	69	69	69	69
Pseudo R ²	52.34%	52.46%	42.63%	67.65%	42.20%	52.91%
Change in P(Failure) moving from below to above the border	28.10%	49.07%	66.26%	65.39%	99.97%	70.09%

Table 8. The Dynamic Nature of Contracting

Panel A reports participation by different categories of private equity firms among transactions in 2004-2006 versus 2008-2010. The categories are not mutually exclusive, as some bidders are in both single-bidder and club deals across different transactions. Panels B and C report contract terms for private equity categories in 2004-2006 versus 2008-2010. Reverse termination fee (RTF %) is given as a percentage of deal enterprise value. In Panel C, arbitrage spreads scaled by offer prices are measured five days following transaction announcement dates. Means are listed first with medians in [brackets] below. P-Values are given for difference of means using t-tests and in [brackets] are given for difference of medians using Wilcoxon rank-sum tests.

<i>Panel A: Firm-Specific</i>	In 2004-2006 Transactions	In 2008-2010 Transactions		
Defaulting Single Bidders	N=20 19.8%	N=9 15.5%		
Defaulting Club Deal Bidders	N=20 19.8%	N=5 8.6%		
Non-Defaulting Bidders	N=86 85.2%	N=50 86.2%		
<i>Panel B: Median RTF %</i>	2004-2006	2008-2010	Difference	
Defaulting Single Bidders	2.1%	6.8%	4.7% [0.001]	
Non-Defaulting Bidders	2.3%	4.7%	2.4% [0.000]	
Difference	-0.2% [0.806]	2.1% [0.194]	2.3%	
<i>Panel C: Industry-Wide</i>	N	No 3rd Party Contract Enforcer	Reverse Termination Fee %	Arbitrage Spread (+5)
2004-2006 Transactions	101 (44%)	43.6%	2.6% [2.2%]	2.2% [2.3%]
2008-2010 Transactions	58 (26%)	65.5%	7.7% [4.7%]	2.6% [1.8%]
P-Value		0.008	0.015 [0.000]	0.476 [0.457]

Table 9. Explaining the Size of Reverse Termination Fees

OLS regressions with the bidder's reverse termination fee / deal enterprise value as the dependent variable. *Bidder has Prior Default* equals one if the bidder previously terminated an acquisition attempt and zero otherwise. *Sponsor Equity / Fund Size > 7%* is an indicator variable that equals one if the private equity firm contributes an amount of equity towards a given transaction that exceeds 7% of the size of the fund from which the contribution is made, and zero otherwise. Other variables are defined in Table 9. Robust standard errors are clustered at the target industry level, defined using the Fama-French 38-industry classifications. P-values are reported in parentheses with ***, **, and * representing significance at the 1%, 5%, and 10% levels, respectively.

	Dependent Variable: Reverse Termination Fee %			
	(1)	(2)	(3)	(4)
Intercept	0.001 (0.956)	0.025 (0.362)	0.027 *** (0.006)	0.029 ** (0.014)
Log Transaction Value	-0.004 * (0.050)	0.002 (0.598)	-0.001 (0.322)	-0.001 (0.499)
Debt Financing %		-0.115 (0.179)		-0.006 (0.588)
Target Std Dev Returns	0.009 (0.168)	0.015 ** (0.019)	0.002 (0.395)	0.002 (0.454)
Time to Agreement Expiration	0.002 (0.108)	0.002 (0.100)	-0.000 (0.401)	-0.000 (0.382)
Announced in 2007	-0.000 (0.939)	0.001 (0.654)	0.006 *** (0.002)	0.006 *** (0.001)
Announced in 2008-2010	0.047 ** (0.045)	0.032 ** (0.019)	0.014 *** (0.000)	0.013 *** (0.002)
Bidder has Prior Default	-0.007 (0.426)	-0.007 (0.504)	0.010 ** (0.039)	0.010 ** (0.034)
Sponsor Equity / Fund Size > 7%			-0.000 (0.985)	-0.000 (0.894)
Sponsor Equity / Fund Size > 7% * Announced in 2008-2010			0.021 ** (0.021)	0.021 ** (0.029)
N	174	161	145	144
R ²	8.60%	14.56%	34.67%	34.23%

Table 10. Explaining Specific Performance Clauses

Probit models in which the dependent variable equals one if the merger agreement permits the target to seek third party enforcement of the contract (i.e., specific performance) and zero otherwise. *Bidder has Prior Default* equals one if the bidder previously terminated an acquisition attempt and zero otherwise. *Sponsor Equity / Fund Size > 7%* is an indicator variable that equals one if the private equity firm contributes an amount of equity towards a given transaction that exceeds 7% of the size of the fund from which the contribution is made, and zero otherwise. Other variables are defined in Table 4. Robust standard errors are clustered at the target industry level, defined using the Fama-French 38-industry classifications. P-values are reported in parentheses with ***, **, and * representing significance at the 1%, 5%, and 10% levels, respectively.

	Dependent Variable = 1 if 3rd Party Contract Enforcement Available			
	(1)	(2)	(3)	(4)
Intercept	0.689 (0.310)	0.803 (0.338)	0.840 (0.337)	0.906 (0.307)
Log Transaction Value	-0.157 *** (0.004)	-0.108 (0.195)	-0.159 * (0.077)	-0.150 * (0.092)
Debt Financing %		-0.647 * (0.071)		-0.353 (0.503)
Target Std Dev Returns	0.336 *** (0.000)	0.304 *** (0.002)	0.156 (0.221)	0.184 (0.196)
Time to Agreement Expiration	-0.010 (0.634)	-0.010 (0.659)	-0.009 (0.700)	-0.007 (0.786)
Announced in 2007	-0.477 ** (0.020)	-0.453 ** (0.032)	-0.397 ** (0.035)	-0.393 ** (0.039)
Announced in 2008-2010	-1.081 *** (0.007)	-1.218 *** (0.000)	-0.633 (0.123)	-0.690 * (0.081)
Bidder has Prior Default	0.089 (0.583)	0.154 (0.470)	0.150 (0.440)	0.152 (0.449)
Sponsor Equity / Fund Size > 7%			0.164 (0.375)	0.153 (0.425)
Sponsor Equity / Fund Size > 7% * Announced in 2008-2010			-0.619 (0.230)	-0.573 (0.230)
N	224	200	162	161
Pseudo R ²	10.31%	10.02%	7.53%	7.73%

Table 11. Offer Premium Analysis

OLS models in which the dependent variable equals the offer premium over the target's trading price 30 days prior to the merger announcement. *Bidder has Prior Default* equals one if the bidder previously terminated an acquisition attempt and zero otherwise. *Sponsor Equity / Fund Size > 7%* is an indicator variable that equals one if the private equity firm contributes an amount of equity towards a given transaction that exceeds 7% of the size of the fund from which the contribution is made, and zero otherwise. Other variables are defined in Table 4. Robust standard errors are clustered at the target industry level, defined using the Fama-French 38-industry classifications. P-values are reported in parentheses with ***, **, and * representing significance at the 1%, 5%, and 10% levels, respectively.

	Dependent Variable: Offer Premium			
	(1)	(2)	(3)	(4)
Intercept	-0.049 (0.843)	-0.126 (0.690)	-0.535 (0.443)	-0.317 (0.562)
Log Transaction Value	0.019 (0.460)	0.041 (0.227)	0.059 (0.364)	0.079 (0.293)
Debt Financing %		-0.226 (0.168)		-0.630 (0.174)
Target Std Dev Returns	0.147 (0.318)	0.191 (0.321)	0.304 (0.331)	0.314 (0.320)
Time to Agreement Expiration	-0.004 (0.682)	-0.005 (0.619)	-0.004 (0.661)	-0.003 (0.758)
Announced in 2007	-0.116 (0.221)	-0.123 (0.201)	-0.118 (0.206)	-0.113 (0.232)
Announced in 2008-2010	-0.076 (0.777)	-0.190 (0.564)	-0.325 (0.530)	-0.412 (0.461)
Bidder has Prior Default	-0.046 (0.465)	-0.023 (0.637)	-0.038 (0.487)	-0.028 (0.656)
Sponsor Equity / Fund Size > 7%			-0.135 (0.510)	-0.162 (0.463)
Sponsor Equity / Fund Size > 7% * Announced in 2008-2010			0.123 (0.580)	0.169 (0.460)
N	224	200	162	161
R ²	5.08%	6.75%	8.87%	11.00%

Table 12. Fundraising and Dry Powder at Private Equity Firms

Panel A reports descriptive statistics on 243 sponsors' total capital and dry powder across 886 firm-years. This data is on all private equity firms with U.S. buyout funds reported by Preqin. Total capital includes all funds closed by a private equity firm in the trailing four years, and is CPI-adjusted to billions of 2010 US Dollars. Dry powder is the amount or percentage of total capital that has not yet been called up by the sponsor at the end of a given year.

Panel B presents OLS panel regressions of sponsors' total capital in Column (1), dry powder in Column (2), and dry powder as a % of total capital in Column (3). *Bidder has Prior Default* equals one if the bidder previously terminated an acquisition attempt and zero otherwise. The year fixed effects are relative to 2004. All regressions also include firm fixed effects. Standard errors are clustered by firm and year. P-values are reported in parentheses with ***, **, and * representing significance at the 1%, 5%, and 10% levels, respectively.

<i>Panel A: Variable Distributions</i>	<u>N</u>	<u>Mean</u>	<u>St. Dev.</u>	<u>Min</u>	<u>25th %</u>	<u>Median</u>	<u>75th %</u>	<u>Max</u>
<u>Full Preqin Sample</u>								
Total Sponsor Capital (\$bb)	886	\$2.26	\$4.45	\$0.01	\$0.35	\$0.78	\$1.95	\$36.70
Dry Powder (\$bb)	886	\$1.13	\$2.30	-\$0.21	\$0.15	\$0.38	\$1.00	\$19.91
Dry Powder (% of Capital)	886	51.39%	24.25%	-19.80%	32.60%	52.45%	69.90%	100.00%
<u>Bidders with Prior/Future Defaults</u>								
Total Sponsor Capital (\$bb)	35	\$9.84	\$8.55	\$0.78	\$4.01	\$7.00	\$17.64	\$30.05
Dry Powder (\$bb)	35	\$4.28	\$5.06	-\$0.21	\$1.11	\$1.68	\$5.63	\$18.02
Dry Powder (% of Capital)	35	45.51%	26.09%	-3.00%	28.50%	37.60%	69.83%	88.30%
<u>Medians by Year</u>		<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
<u>Full Preqin Sample</u>								
Total Sponsor Capital (\$bb)		\$0.78	\$0.82	\$0.79	\$0.78	\$0.76	\$0.78	\$0.82
Dry Powder (\$bb)		\$0.37	\$0.39	\$0.41	\$0.35	\$0.30	\$0.34	\$0.48
Dry Powder (% of Capital)		46.70%	59.64%	54.00%	53.70%	50.24%	51.80%	53.19%
<u>Bidders with Prior/Future Defaults</u>								
Total Sponsor Capital (\$bb)		\$5.18	\$4.09	\$7.46	\$7.30	\$8.08	\$11.00	\$14.07
Dry Powder (\$bb)		\$2.67	\$1.86	\$5.11	\$5.63	\$1.54	\$2.58	\$3.03
Dry Powder (% of Capital)		49.75%	46.65%	64.17%	53.40%	28.46%	61.99%	35.74%

Table 12 (continued)

<i>Panel B: OLS Regressions</i>	Capital \$bb	Dry Powder \$bb	Dry Powder %
	(1)	(2)	(3)
Intercept	0.783 * (0.062)	0.470 ** (0.025)	0.560 *** (0.000)
Bidder has Prior Default	1.967 (0.237)	-1.137 (0.377)	-0.075 (0.477)
2005	0.023 (0.920)	0.055 (0.739)	0.033 (0.469)
2006	1.200 ** (0.018)	0.818 ** (0.021)	-0.019 (0.690)
2007	1.770 *** (0.001)	0.865 *** (0.002)	-0.039 (0.388)
2008	1.673 *** (0.001)	0.761 *** (0.002)	-0.074 * (0.095)
2009	1.996 *** (0.001)	0.922 *** (0.003)	-0.089 ** (0.029)
2010	2.238 *** (0.001)	0.922 *** (0.001)	-0.065 (0.135)
Observations	886	886	886
Firms	243	243	243
R ²	81.42%	70.18%	43.67%

Figure 1. Private Equity Structure Circa 2005-2007

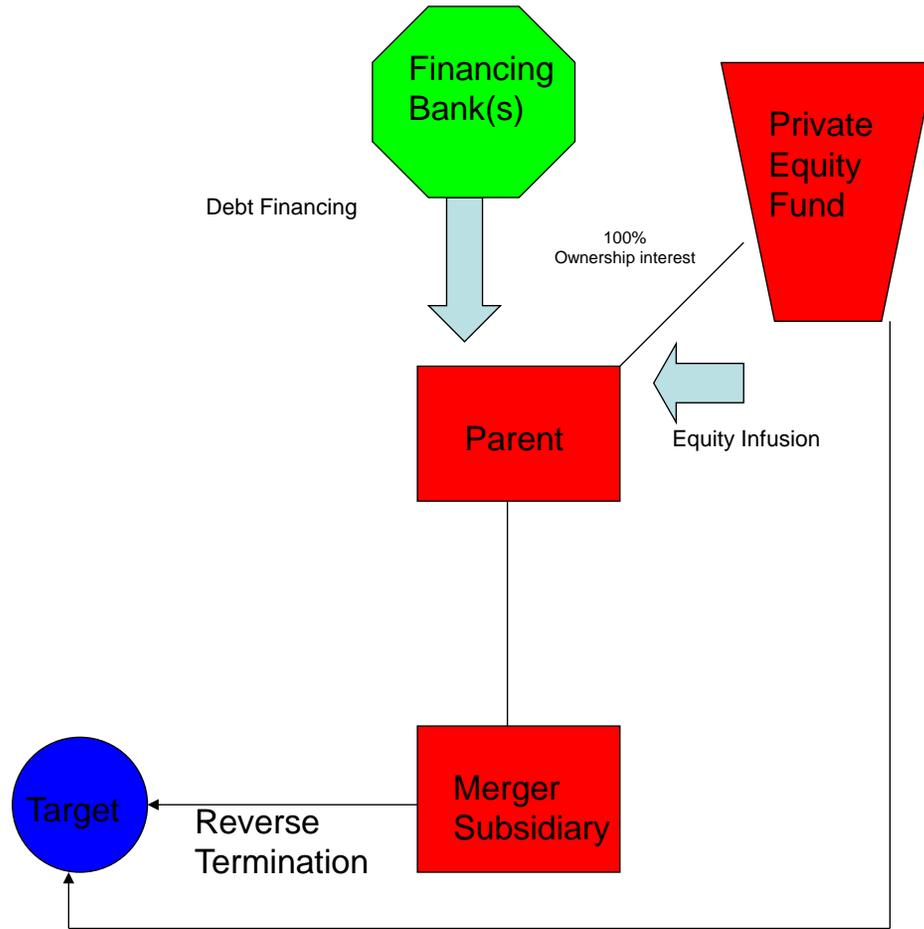
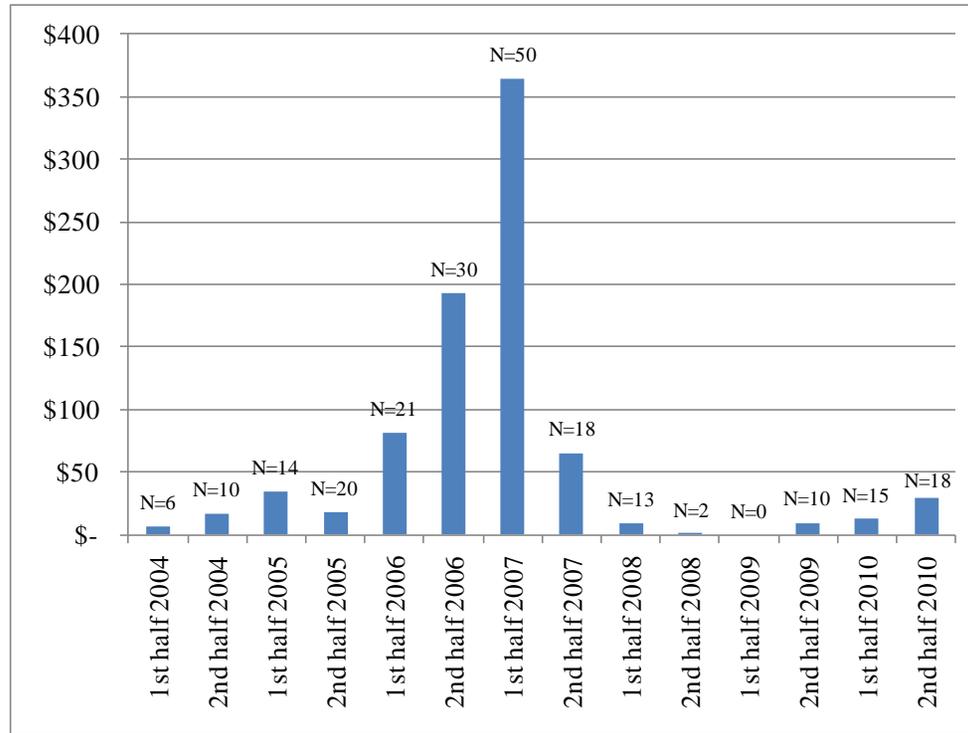
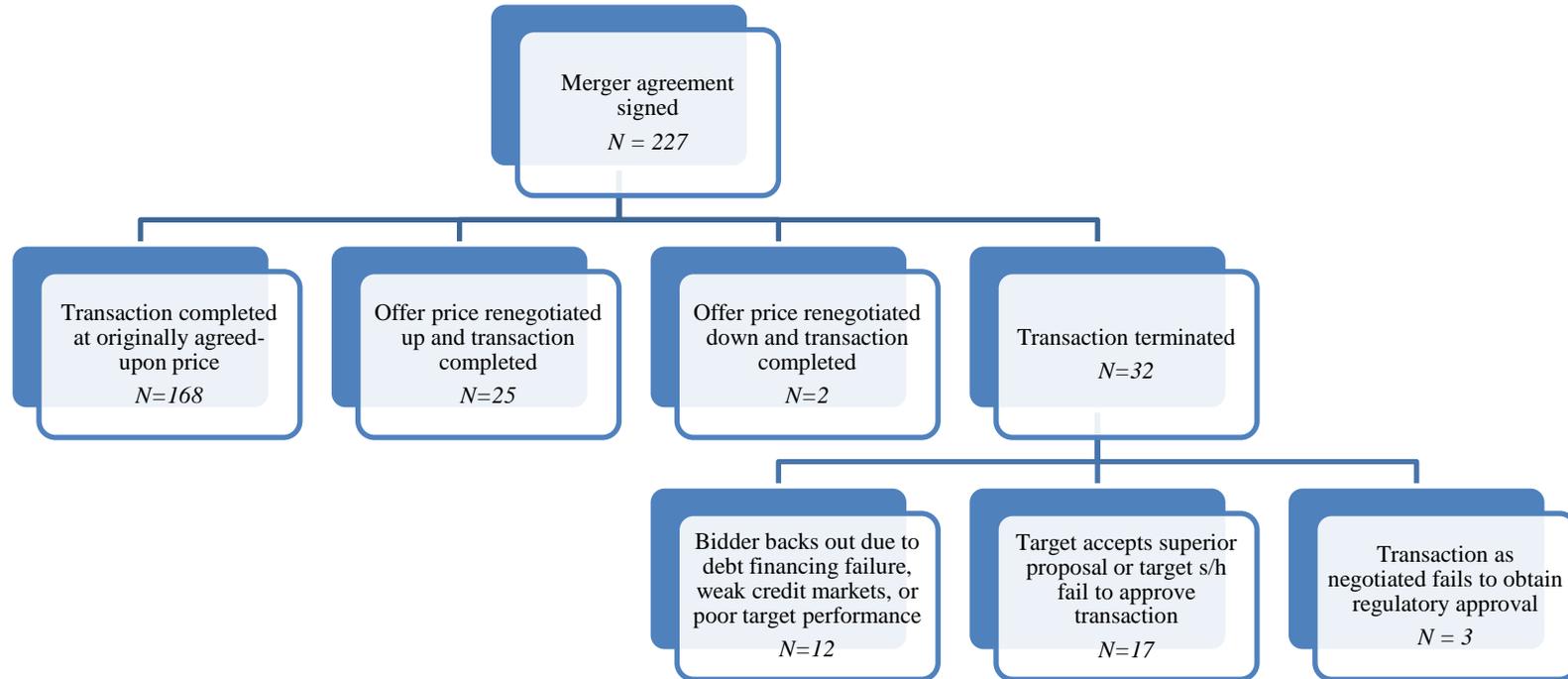


Figure 2. Aggregate Enterprise Value of Announced Transactions, in \$Billions



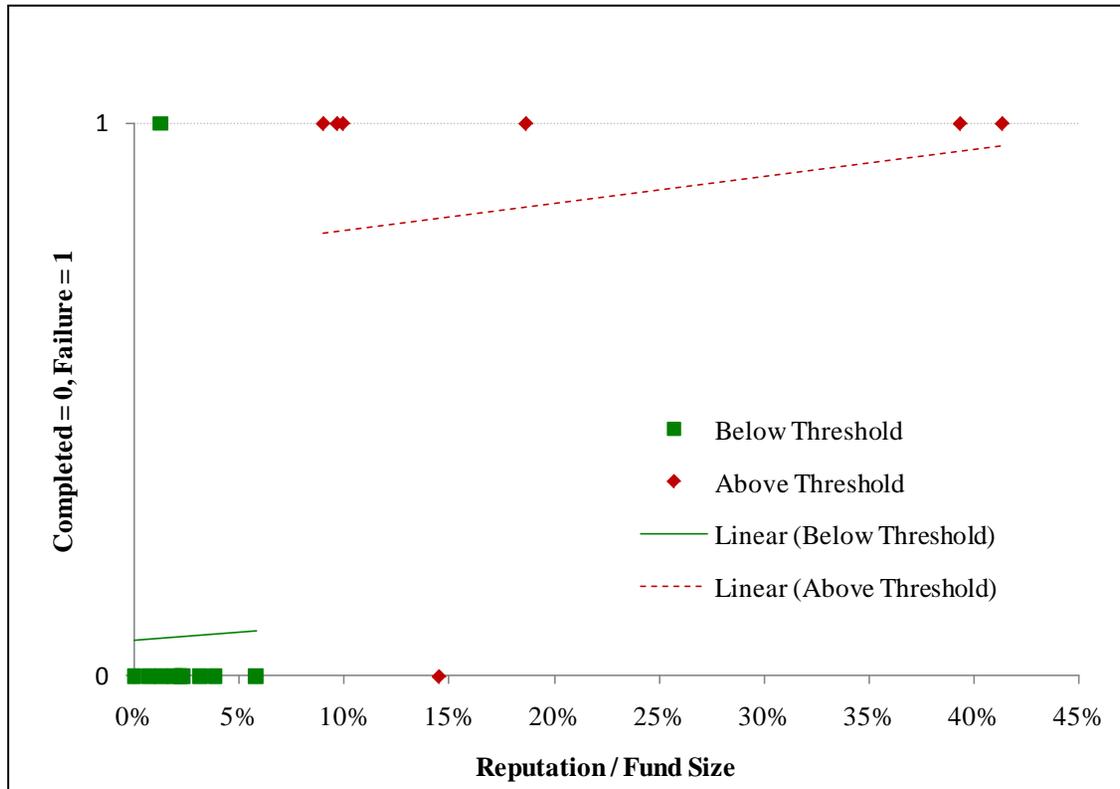
This figure shows the aggregate enterprise value of 277 private equity buyout transactions announced from 2004 through 2010. Data are from MergerMetrics. The sample is limited to buyouts with a transaction value of at least \$100 million, an offer price of at least \$5 per share, a target company which is publicly traded on the NYSE, AMEX, or NASDAQ, and deals for which a merger agreement is signed and publicly disclosed. Both completed and withdrawn buyouts are included. Enterprise Value equals total value offered to acquire the outstanding common stock of the target plus net debt.

Figure 3. Buyout Outcomes Over Full Sample Period



This chart details the frequency of various merger outcomes for the full buyout sample, the details of which are explained in Table 1.

Figure 4. Probability of Bidder-Initiated Transaction Failure and Reputation / Fund Size



This figure plots the reputation estimates as a percentage of private equity fund size, as calculated in Table 6, Panel D. The square dots represent estimates below a border threshold of 7%, and the diamond dots represent estimates above 7%. The lower horizontal axis equal to zero corresponds to completed transactions and the upper axis equal to one corresponds to bidder-initiated defaults. The fitted lines represent the change in probability of default for a discontinuous change in reputational value estimates around the border region of 7%.