

Are Private Equity Consortia Anticompetitive? The Economics of Club Bidding

Elizabeth M. Bailey

With the costs required to comply with the Sarbanes-Oxley Act and the pressure public companies face to deliver consistent earnings growth, many companies are “going private.” A company goes private when its stock (i.e., equity) is acquired by private investors, as opposed to being traded on a public stock exchange, such as the New York Stock Exchange or NASDAQ. Private equity firms, such as Blackstone Group, The Carlyle Group, and Texas Pacific Group, raise funds from institutional investors (e.g., pension funds and college endowments) as well as wealthy individuals and use these funds, along with bonds and/or bank loans (i.e., debt), to purchase companies on the block (Target Companies). A private equity firm expects to profit from its purchase through its exit strategy, typically by fixing up the Target Company and then selling it several years later to a strategic buyer, to another private equity firm, or through an initial public offering.¹

There has been a growing trend toward private equity firms combining in consortia to submit bids for a Target Company rather than individual private equity firms making independent bids.² A private equity bidding consortium, or club, is comprised of two or more private equity firms that pool their funds in order to submit a joint bid for a Target Company. For example, in August 2005, SunGard was acquired by a consortium of seven private equity firms, including Bain Capital, Blackstone Group, Goldman Sachs Capital Partners, Kohlberg Kravis Roberts (KKR), Providence Equity Partners, Silver Lake, and Texas Pacific Group, for \$11.4 billion.³ Similarly, in December 2005, a consortium of private equity firms, including The Carlyle Group, Clayton, Dubillier & Rice, and Merrill Lynch Global Private Equity purchased Hertz Corporation from the Ford Motor Company for \$15 billion.⁴ And in December 2006, a consortium of private equity firms, including Blackstone Group, The Carlyle Group, Permira Advisors, and Texas Pacific Group, completed an almost \$18 billion buyout of Freescale Semiconductor.⁵

The trend toward consortium bidding has attracted the interest of the U.S. Department of Justice. In October 2006, it was reported that several private equity firms received letters con-

■
Elizabeth M. Bailey
is a Clinical Assistant Professor in the Department of Economics at Arizona State University and a Special Consultant at NERA Economic Consulting. She also is on the Editorial Board of The Antitrust Source. The author would like to thank Dale Collins, Robert Marquez, and Ian Reynolds for helpful comments and conversations.

¹ Private equity firms often take a role in the management and oversight of the Target Company's operations, including working with the existing management team to improve operations and strategic decision making, serving on the board of directors, and/or replacing the existing management.

² Sharon Tancredi, *The Uneasy Crown-Private Equity*, *Economist*, Feb. 8, 2007.

³ SunGard, Press Release, Consortium of Private Equity Funds Completes Acquisition of SunGard; Transaction Ranks as Second Largest LBO Ever (Aug. 11, 2005), available at <http://www3.sungard.com/news/default.aspx?id=521&year=2005&iid=2>.

⁴ Ford Motor Co., Press Release, Ford Completes Sale of the Hertz Corporation to Private Equity Group (Dec. 21, 2005), available at http://media.ford.com/newsroom/release_display.cfm?release=22241.

⁵ Freescale Semiconductor, Press Release, Consortium of Private Equity Firms Completes Acquisition of Freescale Semiconductor (Dec. 1, 2006), available at http://media.freescale.com/phoenix.zhtml?c=196520&p=irol-newsArticle_print&ID=937966&highlight=.

taining a voluntary request for information from the New York office of the DOJ.⁶ As it has been reported, these letters suggest that the DOJ is interested in understanding whether and how consortium bidding softens competition. The plaintiffs' bar has been quick to follow, with at least one class action lawsuit filed against 13 private equity firms for joint bidding practices.⁷

This article provides an economic framework for evaluating whether consortium bidding by private equity firms is pro- or anticompetitive. In addition, this article proposes some empirical strategies to disentangle competitively neutral bidding practices from anticompetitive bidding practices when there is no "smoking gun." Outside counsel advising private equity firms on the competitive effects of consortia bidding practices under a rule of reason analysis will find these empirical analyses helpful in distinguishing between bidding practices that are competitively neutral and bidding practices that are potentially anticompetitive.

The Competitive Concern: Fewer Bidders Lead to Lower Prices

Private equity firms bid to purchase a Target Company in an auction setting.⁸ The competitive concern in this setting is one of monopsony power: the potential for bidders to depress the price paid for the Target Company to a level that is below the competitive price.⁹ These auctions can take a variety of forms, but are best described as either a first-price sealed bid auction or an ascending bid auction.¹⁰ In a first-price sealed bid auction, each bidder independently values the Target Company, chooses a bid price, and then offers to buy that Target Company at the price it bids. After the auction closes, the sealed bids are opened and the winner is the highest bidder. The winning bid price is equal to that firm's bid. In an ascending bid auction, bidders successively raise their bid prices. The winning bidder is the last bidder that remains, once no higher bids are received, and the winning price is that firm's bid. Unlike a sealed bid auction, in an ascending bid auction each bidder can observe and respond to its rivals' bids during the auction.¹¹

Assuming all private equity firms are able to bid individually, bidding by a consortium of those firms reduces the number of entities available to submit a bid. With fewer bidders, some economic models predict the auction will result in lower prices paid, on average, for the Target Company.¹² The intuition for the softening of competition is straightforward. The more bidders there are, the

⁶ Dennis K. Berman & Henny Sender, *Private-Equity Firms Face Anticompetitive Probe*, WALL ST. J., Oct. 10, 2006, at A3.

⁷ *Murphy v. Kohlberg Kravis Roberts & Co. et al.*, No. 06-cv-13210 (S.D.N.Y. filed Nov. 15, 2006).

⁸ A Target Company may also be acquired through bilateral negotiations (called "negotiated" deals) between a buyer and the Target Company. These agreements may contain provisions (called a "go shop" provision) that permit the Target Company to shop for a better offer during a specified period of time after the agreement is in place. If a more attractive offer is obtained from another firm, counteroffers may result, thus approximating rounds of bidding. If another offer is accepted, a break-up fee to the initial buyer is typically required. As an example, the Maytag Corporation reached a buyout agreement with a consortium of private equity firms and then shopped itself around, ultimately accepting a higher offer from the Whirlpool Corporation. See, e.g., Brenon Daly, *Maytag Could Draw Higher Bids*, DAILY DEAL, May 20, 2005.

⁹ For a discussion of monopsony power, see U.S. Dep't of Justice & Fed. Trade Comm'n, *Horizontal Merger Guidelines* (1992 revised 1997), available at <http://www.ftc.gov/bc/docs/horizmer.htm>.

¹⁰ For two useful introductions to the economics of auctions, see R. Preston McAfee & John McMillan, *Auctions and Bidding*, 25 J. ECON. LIT. 699 (June 1987); Paul Milgrom, *Auctions and Bidding: A Primer*, 3 J. ECON. PERSP., Summer 1989, at 3.

¹¹ Bid prices for Target Companies are not always readily observable in each round of bidding. In many cases, the seller's investment bank running the auction may only indicate to the bidders that they need to bid higher in the subsequent round if they want to win the auction without revealing the identity of the other bidders or other bid prices. Public trade press reports may provide some contemporaneous information on rivals' bids. And a seller's investment bank may have some discretion over the dissemination of information related to the identity of rival bidders and rival bid prices.

higher (on average) the highest valuations of the Target Company will be and thus the higher (on average) the highest price bid.

Competitive concerns surrounding joint bidding is nothing new. For example, during the early 1970s, joint bids for federal outer-continental shelf (OCS) oil lease tracts by two or more of the largest oil companies were becoming increasingly common. Policy makers at the U.S. Department of Interior and in Congress expressed concern that joint bidding was an attempt by oil companies to diminish the number of bidders in the OCS auctions in order to lower bid prices. As a result of this concern, regulations were adopted in 1975 that prohibited certain oil companies from submitting joint bids for OCS leases.¹³

The Competitive Concern Breaks Down: The Wrong Counterfactual

... without consortia of private equity firms, there may be fewer bidders participating in auctions for these companies, potentially resulting in significantly lower bids.

Any argument that starts with the premise that a bidding consortium reduces the number of bidders available to bid is predicated on an assumption that the consortium members would bid individually absent the consortium. For large buyout deals, however, this counterfactual is likely to be wrong. Most private equity firms do not have funds large enough to permit them to submit a bid individually for very large Target Companies. While there are estimated to be 2,700 private equity firms, only about ten private equity firms, such as Blackstone Group, The Carlyle Group, Thomas H. Lee Partners, KKR, and Texas Pacific Group, are estimated to have funds at or above \$8 billion, with the largest fund rumored to be between \$16–20 billion.¹⁴ For this reason, no single private equity firm is able (at this time) to bid individually for very large companies. As a result, without consortia of private equity firms, there may be fewer bidders participating in auctions for these companies, potentially resulting in significantly lower bids.

A related reason why consortium bidding may increase rather than decrease bid prices is that consortium bidding allows private equity firms to limit their exposure to risk. Even very large private equity firms with funds in excess of the valuation of the Target Company may limit the amount of equity the fund can put into any one investment.¹⁵ For example, an \$8 billion fund may be limited to investing substantially less than \$8 billion in any one investment. Consortium bidding allows private equity firms to bid on transactions that they would otherwise not bid on due to concerns about their investment portfolio being too heavily concentrated in a single investment. By allowing private equity firms to diversify, consortium bidding results in more bids being submitted for large Target Companies.

While it may seem possible for a large number of private equity firms to come together to form a consortium to buy a Target Company, coordination costs limit that possibility. For a Target Company with an estimated value of \$10 billion, a consortium of 10 private equity firms each with \$1 billion funds available would seem to be equally as viable as a consortium of 100 private equi-

¹² For additional discussion, see McAfee & McMillan, *supra* note 10.

¹³ For a more detailed discussion of OCS bidding behavior, see Kenneth Hendricks & Robert H. Porter, *Joint Bidding in Federal OCS Auctions*, 82 AM. ECON. REV.: PAPERS & PROCEEDINGS 506 (1992). Hendricks and Porter argue their empirical results are consistent with consortium bidding reducing bid prices for OCS leases. However, others have argued empirical results are consistent with consortium bidding increasing bid prices for OCS leases. See C.E. Moody, Jr. & W.J. Kravant, *Joint Bidding, Entry, and the Price of OCS Leases*, 29 RAND J. ECON. 276 (1988).

¹⁴ See *supra* note 2.

¹⁵ Similarly, it is common for financial intermediaries to limit risk by setting a limit on the maximum amount of loans made to a single borrower, single industry and/or single geographic region. For additional discussion of this point, see ANTHONY SAUNDERS & MARCIA MILLON CORNETT, *FINANCIAL INSTITUTIONS MANAGEMENT: A RISK MANAGEMENT APPROACH* 342 (5th ed. 2006).

ty firms each with \$100 million funds available and equally as viable as two private equity firms each with \$5 billion funds available.¹⁶ However, there are substantial costs associated with coordination among a large number of private equity firms that deter a consortium structure with many members. These coordination costs include reaching agreement on management strategy, on governance structure such as voting rights and board seats, and on the exit strategy. As a result, for the largest of these Target Companies, coordination costs likely would limit the number of participants in consortia and thus the number of possible consortia available to bid.

Finally, it is important to keep in mind that the universe of bidders for a Target Company is often not limited to private equity firms bidding individually or as part of a consortium. Strategic bidders, such as horizontal competitors as well as firms that operate upstream or downstream from the Target Company, also bid to purchase Target Companies. For example, during late 2004 and early 2005, Hollywood Entertainment Corporation, a video rental retailer, entertained bids from at least three firms, including one private equity firm, Leonard Green & Partners LP, and two strategic players that are also video rental retailers, Blockbuster Inc. and Movie Gallery Inc.¹⁷

Information Pooling Provides Additional Benefits

An additional reason consortium bidding may increase rather than decrease bid prices is that consortium bidding allows private equity firms to pool information. In the economics literature on auctions, the information that bidders have about the value of the object being bid on comes in two general forms: the private value model and the common value model.¹⁸

In the private value model, the object up for bid has a different value to each bidder with each bidder knowing its own valuation but not the valuation of the other bidders. In the common value model, the object up for bid has the same value to each bidder and no bidder knows the true value of the object. Each bidder has its own estimate of the value of the object and these individual estimates are not known to the other bidders.

The private equity buyout context contains an element of both the private value model and the common value model. Some bidders may value the Target Company more than other bidders because they have identified, based on their individual expertise, ways in which to enhance the value of the Target Company that other bidders do not see because they lack that expertise. This corresponds to the private value model. On the other hand, some components of the Target Company may have the same value to each bidder, such as the current stock of inventory or future industry demand conditions. This corresponds to the common value model.

In the common value model, there is uncertainty about the true value of the object up for bid. Since bidders are uncertain about the true value, each bidder must form its own independent estimate of the value of the Target Company. Since it is difficult to value a Target Company, some bidders will have analyses that overestimate the true value while other bidders will have analyses that underestimate the true value.¹⁹ Those firms that estimate a high valuation are likely to bid high, resulting in a winning bidder that is likely to be a bidder that overestimated the true value of the Target Company. Therefore, the bidder that bids the highest, thereby winning the Target Company,

¹⁶ This illustration is a slight simplification as private equity firms typically purchase the Target Company with a combination of equity and debt. As a result, \$10 billion in equity from one or more funds is not typically required in order to purchase a Target Company at a price of \$10 billion.

¹⁷ See Ron Orol, *Blockbuster to Launch Hollywood Bid*, DAILY DEAL, Dec. 29, 2004.

¹⁸ For additional exposition on these models as well as variations on them, see *supra* note 10.

¹⁹ The true value of the object is assumed to equal the mean of the bidders' valuations.

will know it overpaid. The winner's ex post regret on having won is called the "winner's curse" because winning indicates to the bidder that its price bid was too high.²⁰ Anticipating that they may suffer from the winner's curse, bidders reduce their bid prices.

Learning other bidders' valuations limits the winner's curse because it provides additional information about the true value of the object up for auction. By having a second opinion, the likelihood that the winning bidder's bid will be substantially above the true valuation is reduced. For example, suppose a bidder's independent analysis estimates a high valuation of the Target Company. At this point, the bidder is unsure whether its valuation is high because the value of the Target Company is truly high or because its analysis overestimated the true value of the Target Company. Without additional information, the bidder may reduce its bid in an attempt to mitigate the possibility of overpaying. Now suppose the bidder gets a second opinion, say by learning another bidder's independent estimate of the Target Company's true valuation. If that other bidder's independent valuation is also high, then it is less likely that the initial bidder's high valuation is due to an erroneous analysis and, as a result, that bidder is less likely to reduce its bid to mitigate overpaying. As there is a common value component to the value of a Target Company, learning another private equity bidder's valuation provides useful information about the true value of the Target Company and, all else equal, results in higher bids on average.²¹

... learning another

private equity bidder's

valuation provides

useful information

about the true value of

the Target Company

and, all else equal,

results in higher

bids

Repeated Games Allow for Signaling and Punishment Threats

While there are good reasons why a bidding consortium may result in higher not lower bid prices, in a repeated game, there are additional factors to take into account. These additional factors may lead to lower prices paid for the item being auctioned.

Competition may be softened when the same bidders compete against one another in multiple auctions over time.²² Competition can be softened, or even eliminated, through explicit agreements on which bidder will win the auction. Competition also can be softened through implicit understandings among bidders on their bidding practices.

In a repeated game, if players are able to observe rival players' past actions, players may be able to signal their intent to rival players. The signal may come as an expression of interest in winning a certain auction. The signal may also come as a threat to punish certain rival bidders after observing their past actions. The ability to signal and threaten punishment may result in lower prices paid for the object up for auction if the rival players find it in their unilateral best interest to soften their bidding strategy based on the observed signal.

One does not need to look too hard to find examples of signaling and threats in repeated auctions. For example, during the Federal Communication Commission wireless spectrum auctions held during the mid-1990s, bidders were alleged to have signaled information to other bidders. By embedding three digits at the end of their bid amount, bidders were able to signal to rival bidders which licenses they wanted to purchase and signal which of their bids were submitted in

²⁰ For more on the winner's curse, see *supra* note 10.

²¹ See Vlad Mares & Mikhael Shor, *Industry Concentration in Common Value Auctions: Theory and Evidence* (Working paper 2006), available at <http://ssrn.com/abstract=901067>. The authors find that information pooling leads to higher bid prices, on average. Using experiments, the authors also find that the effect of the reduction in the number of bidders outweighs the effect of information pooling resulting, on average, in lower bid prices.

²² For additional discussion, see *supra* note 10.

retaliation for continued aggressive bidding by rival bidders.²³ To disrupt this practice, subsequent FCC spectrum auctions introduced rule changes that limited the increments in which bidders could bid. The DOJ also pursued antitrust complaints against certain bidders.²⁴

While the precise structure of auctions for Target Companies differs from those held for wireless spectrum,²⁵ these auctions have the flavor of a repeated game in that some private equity firms face each other time and time again in auctions for different Target Companies. For example, Blackstone Group and Texas Pacific Group were both part of the winning bidding consortia in the auction for SunGard in 2005 and in the auction for Freescale Semiconductor in 2006.²⁶ Similarly, KKR, Bain Capital, and Silver Lake were all part of the bidding consortium that won the auction for SunGard in 2005 and a different consortium that lost the auction for Freescale Semiconductor in 2006.²⁷ In addition, all five of these private equity firms bid jointly (and won) the auction for SunGard but were members of different consortia bidding against one another in the Freescale Semiconductor auction.

As the FCC spectrum auctions demonstrate, a bidding consortium is not necessary in order for firms to signal and/or to threaten punishment. However, the presence of bidding consortia in a repeated game is likely to heighten concern that bidders will be able to signal information effectively to one another due to the information exchange inherent in the formation of such consortia.

In forming a bidding consortium, the private equity firms contemplating the consortium typically discuss the terms of the joint bid including bid price, governance provisions, and exit strategy. In communicating this type of information to one another, private equity firms may reveal, intentionally or unintentionally, their strategy with respect to other companies that are expected to come on the block in the future. Further, through these types of communications, private equity firms may be able to send signals that have the potential to soften competition in future auctions, such as “if you don’t bid on my deal, I won’t bid on yours” or “if you drop out of certain auctions, I’ll compensate you by allowing you to take an interest in the Target Company after I win.”

Empirical Strategies

It can be difficult to distinguish anticompetitive bidding behavior from competitively neutral bidding behavior without a smoking gun. For example, observing that a private equity firm dropped out of an auction is consistent with multiple hypotheses, some competitively neutral and some potentially anticompetitive. A private equity firm may not bid in an auction for a particular Target Company for a wide range of reasons, including (1) the magnitude of the expected (or observed) bids exceeds that private equity firm’s valuation of the Target Company; (2) the private equity firm

²³ Bids for wireless spectrum licenses were often above \$1,000,000. Rather than bidding in whole numbers, bidders were alleged to have used the last three digits to send a signal. For example, the 483 in a hypothetical bid of \$1,000,483 corresponds to the letters GTE on a telephone keypad. For additional discussion, see Peter Crampton & Jesse Schwartz, *Collusive Bidding: Lessons from the FCC Spectrum Auctions*, 17 J. REG. ECON. 229 (2000); Peter Crampton & Jesse Schwartz, *Collusive Bidding in the FCC Spectrum Auctions*, 1 CONTRIB. TO ECON. ANAL. AND POL’Y 11 (2002).

²⁴ See, e.g., Competitive Impact Statements for the DOJ’s Final Judgment entered into with Omnipoint Corp., available at <http://www.usdoj.gov/atr/cases/f2000/2066.htm>, and with Mercury PCS II, L.L.C., available at <http://www.usdoj.gov/atr/cases/f2000/2063.htm>.

²⁵ One difference is that unlike the auction for a Target Company, the wireless spectrum auctions had many different licenses auctioned off simultaneously.

²⁶ See *supra* notes 3 & 5.

²⁷ See *id.*; Henny Sender & Don Clark, *Freescale Agrees to Blackstone Offer of \$17.6 Billion*, WALL ST. J., Sept. 16, 2006, at A3.

identified another potential investment that it estimates has a higher risk-adjusted expected return than the Target Company; or (3) the private equity firm communicated with the members of a previous consortium that if it failed to bid on this particular Target Company, the other consortium members would not bid on a different Target Company in the future. Only the third scenario would raise antitrust concerns.

Using bid data, economists can provide helpful empirical analyses to assist in distinguishing between bidding practices that are competitively neutral and bidding practices that are anti-competitive. Outside counsel advising private equity firms should consider retaining an economist to assess the effect of bidding practices using historical bid data as these strategies are likely to be employed by economists at an enforcement agency. As well, these empirical analyses can help private equity firms' outside counsel evaluate the ultimate likelihood of success of class action litigation against various private equity firms.

*Using bid data,
economists can provide*

The following are some of the key considerations that must be addressed in a quantitative analysis that assesses the competitive effect of consortium bidding behavior:

*helpful empirical
analyses to assist in
distinguishing between
bidding practices that
are competitively
neutral and . . .
anticompetitive.*

- **Account for the Relevant Factors that Affect Bid Prices.** Any econometric estimate of the relationship between the number of distinct bidders and the winning bid price needs to control for the relevant characteristics of the Target Company as well as demand and cost factors that affect bid prices. Failure to do so may lead to omitted variable bias and the potential for misleading interpretations of the coefficient estimates. Indeed, a simple regression of the winning bid price on whether a bidding consortium is present or not is likely to show that bid prices are higher in the presence of a bidding consortium compared to bid prices when no bidding consortium is present because bidding consortia are more often observed in auctions for large Target Companies for the reasons discussed above (e.g., fund size constraints and diversification requirements).
- **Identify a Competitive Benchmark.** To assess whether bid data are more consistent with competition than with collusion, one needs to specify a competitive regime (the control group) to which one can compare the bid patterns during the regime of possible coordination (the test group). The appropriate competitive regime may be the behavior of the same set of firms in a particular time period before or after the time period of the test regime. On the other hand, the appropriate competitive regime may be a different set of firms within the same time period as the test regime.
- **Specify How the Coordination Scheme Works.** To assess whether bid data are more consistent with competition than with collusion, the alleged method by which competition is softened must be specified. For example, is the mechanism one of forgone bids: Do consortium members agree not to bid against one another when one consortium member bids individually for a Target Company? On the other hand, is the mechanism one of false bids: When one consortium member bids individually on a Target Company, do the other consortium members agree to submit false bids to simulate the appearance of competition?
- **Rule out Alternate Hypotheses.** Any attempt to assess empirically whether consortium bidding results in lower bid prices must be able to rule out alternate explanations for the observed bidding patterns. For example, economic data can be used to assess whether the opportunity cost of tying up funds in a particular investment exceeds the firm's valuation of a Target Company.

Conclusion

Absent a smoking gun identifying explicit coordination, it can be difficult to distinguish between those bidding practices that result in competitively neutral outcomes from those that result in anti-competitive outcomes. It can also be difficult to determine with certainty the number of bidders that are necessary to obtain a competitive outcome. As discussed above, under a rule of reason analysis, there are numerous reasons why bidding consortia may have no effect on competition and may in fact lead to more aggressive bidding for companies on the auction block. ●