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Abstract

CEOs have a conflict of interest when their company is the target of an acquisition attempt: They can bargain for private benefits, such as retention by the acquirer, rather than for a higher premium to be paid to their shareholders. We find that target CEO retention by the bidder does not appear to be driven by the CEO bargaining for his own interests at the expense of shareholders. Retention is not associated with a lower premium. Retention is more likely when it is more valuable to the bidder in running the merged firm, in that the CEO is more likely to be retained when she has skills and knowledge that bidder executives do not have and when the incentives of target insiders are well aligned with those of target shareholders. Regardless of retention, shareholders of acquired firms whose CEO is at retirement age receive lower premiums than shareholders of acquired firms with younger CEOs. This lower premium seems to be explained by the apparent reduced acquisition value of firms led by retirement age CEOs rather than by the target CEO conflict of interest.

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The CEO of a firm faces a conflict of interest when that firm becomes an acquisition target. The CEO can fight the bid and, if successful, keep her job, but the shareholders lose the acquisition premium. She can work hard to drive up the premium offered by the acquirer but, as she does so, she is more likely to have to find a new job if the acquisition takes place. Finally, she can bargain less vigorously for a higher premium in the hope of or even in exchange for keeping her job and/or receiving other private benefits, such as the acceleration of the vesting of options and retirement benefits. In this paper, we investigate whether the target CEO is more likely to be retained and whether the premium received by target shareholders is lower when the conflict of interest between shareholders and the CEO is stronger using both acquisitions by public firms and acquisitions by private firms, including private equity firms.

We find that CEO retention takes place when the retained CEO has skills and knowledge that make her valuable to the bidder for the operation of the merged entity and when the conflict of interest is lower because target insiders have a larger stake in the target's equity; further, target shareholders do not receive a lower premium when the CEO is retained. Everything else equal, we would expect the conflict of interest to be worse for CEOs of retirement age since they have little reason to worry about their reputation in the labor market (see, e.g., Graham, Harvey, and Rajogopal (2005) for evidence on the importance of career concerns of top executives). Shareholders of firms led by CEOs of retirement age receive significantly lower premiums. However, this lower premium seems more likely to be due to a lower acquisition value of firms led by CEOs of retirement age than to the target CEO conflict of interest.

Courts and the press have recognized the conflict of interest of target CEOs. For instance, in a recent decision, a judge concludes that a CEO "had powerful interests to agree to a price and terms suboptimal for public investors so long as the resulting deal" gave him some benefits including "the chance to continue his managerial positions for a reasonable time."[1] This conflict of interest is even more serious when target managers are allied with the acquirer as is common in acquisitions made by private equity firms. Incumbent management's heightened conflict of interest in such acquisitions has been the subject of much attention in the press. For instance, an article in the Financial Times notes that "[t]here are

[1] In Re: Lear Corporation Shareholder Litigation, Opinion, Court of Chancery, Delaware, June 15, 2007.

always conflicts of interest between shareholders and managers of public companies, but they escalate when private equity firms hove into view. Take Justin King, chief executive of Sainsbury's, the supermarket chain. We are told that Kohlberg Kravis Roberts, CVC Capital Partners and Blackstone want him to stay if they buy the business and will no doubt give him a stake. Whose side is Mr. King now on?"[2]

We call the hypothesis that shareholders receive a lower premium because target CEOs put their interests ahead of those of the shareholders the "CEO conflict of interest" hypothesis. With this hypothesis, we expect that CEOs are less likely to trade retention for a lower premium if the incentives of insiders are well aligned with those of shareholders because they have a large stake in the target and thus would bear more of the costs of a lower premium. We also expect that CEOs are more likely to trade retention for a lower premium if their compensation is unusually high compared to other firms since it would be harder for them to replicate such compensation elsewhere unless it reflects unusually high ability. Hence, everything else equal, with the conflict of interest hypothesis we expect retention to be more likely for targets where insiders have a low stake in the target and more likely for CEOs with abnormally high compensation.

Of course, a CEO could be willing to have the firm taken over for a lower premium even when she is not retained in exchange for other private benefits, such as retirement benefits, the vesting of options, or guarantees that her legacy projects will be kept intact. An acquisition could also provide liquidity to the CEO by allowing her to exchange her shares for cash, a benefit that might have no value for diversified shareholders. Many of these private benefits from acquisitions not associated with retention would appear to be more important for retirement age CEOs and some of these benefits would be especially valuable for CEOs who do not have confidence in potential successors and/or do not have confidence in the future prospects of their firm as a stand-alone firm.

Though much attention has been paid to the view that the conflict of interest between target CEOs and their shareholders can be costly for shareholders, an acquirer might instead find the acquisition to be

[2] "Sleepwalking into a new insider scandal," by John Gapper, The Financial Times, February 5, 2007.

more valuable precisely because of the anticipated retention of the target's CEO and might therefore pay less for the acquisition if the CEO were to exit at or shortly after the completion of the merger. For instance, part of the attraction of acquiring Bank One for JP Morgan Chase was the fact that the CEO of Bank One, Jamie Dimon, was viewed as a likely future CEO of the acquirer.[3] We call this hypothesis the "valuable CEO" hypothesis. We expect a CEO to be more valuable to the acquirer if the target firm has good performance, if it is specialized so that the CEO is less likely to be a more easily replaceable generalist, and if the bidder is making a diversifying acquisition, so that bidder management has limited skills in the industry of the target.

We find strong evidence that CEO retention does not typically take place because it benefits the target CEO at the expense of shareholders. A CEO is more likely to be retained when the interests of insiders are better aligned with those of shareholders, which contrasts with the prediction of the conflict of interest hypothesis. We also show that the CEO is more likely to be retained when the target firm is a specialized firm rather than a diversified firm and when the target has good performance. We find no evidence that target CEO retention is associated with a lower premium. In contrast to the absence of a relation between retention and the gains to target shareholders, we find a negative relation between the premium paid and whether the CEO is at or approaching retirement age (age 60 or more). The premium paid by the bidder is lower by about 6 percentage points when the CEO is of retirement age. However, a CEO of retirement age is neither more nor less likely to be retained by the bidder.

We examine various extensions and alternative specifications of our regression models. First, we use a sample for which compensation data for the CEO is available. We find evidence that CEOs with higher abnormal compensation are less likely to be retained, which is inconsistent with the conflict of interest hypothesis since such CEOs would value retention more as long as the higher abnormal compensation is not compensation for higher unmeasured skills. Note that if the higher abnormal compensation were compensation for unmeasured skills, we would expect CEOs to be more likely to be retained with the

[3] The New York Times article "Banking Giant: The Overview; $58 Billion Deal to Unite 2 Giants of U.S. Banking" dated January 15, 2004 states, "[Dimon] is to take over as chief executive in two years from J. P. Morgan's leader, William B. Harrison, settling the persistent question of succession."

valuable CEO hypothesis. Second, we extend our sample to include cases where the target CEO is not retained but non-CEO target managers are retained. We find that our results are robust when this extended sample is used and gain further insight as to why shareholders of firms with retirement age CEOs receive lower acquisition premiums. We show that the premium received by a target is not lower when the CEO is of retirement age and members of his team are retained by the target. Third, a concern with our results is that the premium and retention may be determined simultaneously. This concern is reduced by the fact that, in our regressions, the premium does not explain retention and retention does not explain the premium. Nevertheless, we explore further the possibility that the simultaneous determination or reciprocal causation of the premium and retention could make our estimates unreliable. We find that the Durbin-Wu-Hausman test for endogeneity does not raise concerns about our specifications. Further, using various two-stage estimation methods we find that our results continue to hold. Specifically, either using an instrumental variable for retention in the premium regression or a system of simultaneous equations in which the endogenous premium variable is continuous and the retention variable is dichotomous, we find our results are unchanged.

Our paper contributes to the literature that investigates the role of CEO's private benefits in acquisitions. Hartzell, Ofek, and Yermack (2004) use a sample of friendly acquisitions from 1995 to 1997 to show that an acquisition results in the CEO of the acquired firm receiving significant payments. It is not surprising that the target CEO would receive a payment if the target is acquired because CEOs who lose their job in an acquisition rarely show up again as CEOs of other public companies (see, e.g., Agrawal and Walkling, 1994). However, Hartzell et al. show that target shareholders receive a smaller premium when the CEO receives unusually high private benefits. Coates and Kraakman (2010) consider the benefits that CEOs on the cusp of retirement might gain from accepting an acquisition offer. Moeller (2005) predicts that target shareholders receive more in an acquisition if the target CEO is less powerful because a powerful CEO bargains more for private benefits and finds supportive evidence using a sample of acquisitions from the 1990s. McConnell and Martin (1991) compare disciplinary takeovers, which they define as takeovers where the CEO of the target changes soon after the acquisition, and non-disciplinary

takeovers using a sample of tender offers from 1958 to 1984. They find that there is no difference in the cumulative abnormal return for the 41 days surrounding the announcement between the two types of acquisitions. Wulf (2004) shows that shareholders of firms acquired in 53 merger-of-equals deals from 1991 through 1999, where the incumbent CEO remains with the corporation, receive lower returns relative to other deals. Similarly, Brewer, Jackson, and Wall (2006) find that banking acquisitions where the target CEO is retained by the bidder have lower premiums. Hadlock, Houston, and Ryngaert (1999) also investigate bank acquisitions. They find that the CEO is less likely to be retained if inside directors own more shares in the target. Finally, Ghosh, and Ruland (1998) show that managers are more likely to be retained when an acquisition is paid for with equity and when their equity holdings are large.

The most direct precedent in the literature for our valuable CEO hypothesis is Matsusaka (1993). He argues that for some acquisitions target management is the main asset acquired. He calls such acquisitions "managerial-synergy" acquisitions and shows that for a sample of mergers from the 1960s and early 1970s bidder returns are higher when target management is retained. It follows from his analysis that, to the extent target shareholders capture some of these synergy gains, target shareholders could gain more from the acquisition when target management is retained by the bidder.

The existing literature offers mixed results on the relation between retention and target shareholder gains using very different samples. None of the existing papers investigate directly the determinants of retention. Further, these papers only look at acquisitions made by public firms. Recent evidence shows that private acquirers pay less for targets than public acquirers (see, e.g., Bargeron, Schlingemann, Stulz, and Zutter, 2008). However, DeAngelo, DeAngelo, and Rice (1984) study going private transactions in a different era and find that the average premium in all cash going private transactions is not different from the average premium in all cash tender offers by public firms. If acquisitions by private equity firms where the CEO is retained are mostly the equivalent of going private transactions, their results would imply that private equity firms would not pay less than public firms in acquisitions where the CEO is retained. We find that private equity firms pay lower premiums than public firms whether the CEO is

retained or not. Consequently, the greater likelihood of CEO retention in acquisitions by private equity firms cannot explain why private equity firms offer lower premiums than public firms.

The paper proceeds as follows. In Section I, we describe the sample construction. In Section II, we investigate the determinants of CEO retention. In Section III, we show how premiums are related to the retention of target CEOs and whether the target CEO is of retirement age. In Section IV, we examine some extensions of our results and provide some robustness checks. We conclude in Section V.

I. Sample Construction

Our sample of acquisitions comes from the Securities Data Company's (SDC) U.S. Merger and Acquisition Database. We focus on a sample of cash-only offers to have an apples-to-apples comparison between deals involving private bidders and those involving public bidders. To identify whether the CEO is retained, we use the deal documents. Consequently, our study requires acquisitions to be completed. We collect all completed majority acquisitions for the period 1994-2006 between U.S. public targets and U.S. bidders in which the acquirer owns 100% of the shares of the target after the deal and the form of payment is cash only. Our sample starts in 1994 because we require access to the Electronic Data Gathering, Analysis, and Retrieval system (EDGAR). We exclude all transactions with non-operating targets, without disclosed deal value, and labeled as spin-offs, recaps, self-tenders, exchange offers, repurchases, minority stake purchases, acquisitions of remaining interest, or privatizations. We check the Lexis-Nexis database for announcement press releases in order to verify the status of private bidders, and we exclude all cases where the bidder is a group of individual investors. We further require each target firm to be in the Center for Research in Securities Prices (CRSP) and Compustat databases and to have a share code indicating a public firm (10, 11). We follow Schwert (1996) and require that the acquisition from first bid to completion takes place in no more than one year. These filters result in a sample with 1,263 deals where 352 deals involve a private bidder. Of the 352 deals involving a private bidder, a private equity firm is the bidder in 50.85% of acquisitions.

Using the EDGAR database we find documents for 1,138 of the 1,263 deals announced from 1994 through 2006. We search these documents to determine whether any member of the target top management team, including the Chairman of the Board (COB), is retained by the bidder to be employed by the merged firm. The only individuals considered for retention are target officers or the COB listed in merger-related documents filed with the SEC.[4] We conclude that there is retention if at least one member of the target's management is retained.

Retention is generally indicated by one of two types of statements. First, there are general statements such as "it is generally expected that a number of our executive officers will remain after the merger is completed." Second, more specific statements clearly identify the managers who will be retained. An example of such a statement is "the executive officers of Il Fornaio that are expected to remain officers of Il Fornaio following completion of the merger are Michael J. Hislop (President and Chief Executive Officer), Michael J. Beatrice (Executive Vice President of Operations) and Paul J. Kelley (Executive Vice President and Chief Financial Officer)." A deal is classified as involving the retention of the CEO if the merger documents have a statement explicitly indicating that the CEO is retained. It could be, therefore, that in some retention cases the CEO is retained even though we find no information in the merger documents indicating that this is the case. In our analysis, we focus mostly on cases where the CEO is explicitly retained, but we also investigate the relation between the acquisition premium and retention of a top executive other than the CEO.

The deal is considered to have no retention if there is no mention of retention in the merger documents. In addition, we do not classify deals as retention deals if the target's managers are offered new employment agreements by the target firm before the merger unless there is language indicating the bidder's intention to not only honor the agreement (which could simply mean that the bidder intends to pay the severance attached to the new agreement), but also to retain the management after the merger. In

[4] We primarily review merger-related proxy statements, tender offers, and tender offer agreements. These include, but are not limited to, any iteration of S-4, PREM, DEFM, DEFA, DEFC, etc. for mergers and any iteration of 14-D and 14-C for tender offers. We examine all documents around the time of the merger announcement up to and including the effective date.

some cases, certain members of target management are indicated as being retained on a temporary basis to assist during the transition period of the merger. Such cases and other temporary employment cases (employment that is mentioned as temporary, transitional, or a term lasting one year or less) are not included in the retention sample. Managers who are offered consulting agreements are also not considered to be retained by the acquirer.

In 504 of the 1,138 deals we find that at least one individual is retained based on the above criteria. For the deals where there is retention, we determine whether the target CEO is retained. In 375 of the 504 deals with retention, the target CEO is retained. The target CEO is retained in 219 public bidder deals and 156 private bidder deals (66.67% of these deals involve a private equity firm). For 511 (123) public (private) bidder deals there is no retention. Of the 123 deals with a private firm acquirer where there is no retention, 38.21% are acquisitions involving a private equity firm.

After finding that a CEO is retained by the acquiring firm, we seek information concerning her position in the new merged firm. If no position information is available in the merger document, we search for articles on Factiva and Lexis Nexis that contain the CEO's name following the date of the merger to determine the position that the CEO ends up with at the completion of the merger. If there are no articles indicating a position title, we attempt to identify the CEO's new title using Google searches as well as by examining the 10-K and proxy statements of the acquiring firm (for public acquirers). The key finding of this search is that there is a strong asymmetry in outcomes. For acquisitions by public firms, the CEO of the target is most likely to be retained as CEO of a subsidiary, as president of a subsidiary, or as a vice-president general manager. Specifically, out of 219 acquisitions where the CEO is retained, the CEO has one of these titles in 141 acquisitions. In contrast, for acquisitions by private equity firms, the CEO is retained in 104 acquisitions and has the position of CEO in the new company in 82 cases. In acquisitions by private operating companies, the most likely outcome is the same as for acquisitions by public companies, namely that the CEO of the target becomes the CEO of a subsidiary.

A final step in our data collection involves collecting information on the level of insider ownership for the target firm, compensation of the target CEO, and age of the target CEO reported on the proxy

statement immediately before the acquisition announcement date as available from the Compact D Disclosure database. CEO compensation is the total remuneration reported on the proxy statement. Requiring deals to have available insider ownership and CEO age data removes 121 deals. Excluding 103 deals in which an executive (or the COB) other then the CEO is retained results in our base sample of 914 public target acquisitions. Our base sample includes 660 public bidder deals and 254 private bidder deals, of which 143 are private equity bidder deals and 111 are private operating bidder deals.

II. Determinants of Retention

The CEO conflict of interest and valuable CEO hypotheses have different implications for the characteristics of the target when the CEO is retained. In this section, we investigate how firm characteristics differ depending on whether the CEO is retained and whether differences in firm characteristics are supportive of the hypotheses we have developed concerning the retention of CEOs.

A. Univariate analysis of CEO retention

Table I provides comparisons of firm and deal characteristics by bidder type and CEO retention for our base sample of 914 deals. For these comparisons, we split the sample into acquisitions by public firms and by private firms. We further provide data separately for acquisitions by private equity firms and acquisitions by private operating firms. For each bidder type, we provide information separately for the acquisitions where the CEO is retained and those where she is not. CEO retention occurs in 55.91% of acquisitions by private firms, but only in 29.70% of acquisitions by public firms. Private equity bidders retain the target CEO in 68.53% of the acquisitions. The CEO is retained in 39.64% of the acquisitions by private operating companies. These differences in the frequency of CEO retention across the various bidder types suggest that it is not meaningful to unconditionally compare firm and deal characteristics or target premiums for acquisitions where the CEO is retained and those where she is not. Such comparisons would effectively amount to comparing public firm acquisitions to private firm acquisitions. Throughout Table I we report medians, except for binary variables where we report means. It is common in corporate

finance to focus on medians because they are less sensitive to outliers; however for binary variables the mean provides a meaningful measure of frequency.

We first investigate whether retention depends on firm size. We use the log of the market value of equity as our measure of size (LOGMVE). We use year 2005 dollars based on the Consumer Price Index (CPI) for the market value of equity. For each type of acquisition, there is no significant difference in the size of targets when the CEO is retained and when she is not. However, except for acquisitions by private equity firms where the CEO is retained, targets of private firms are significantly smaller than targets of public firms.

The valuable CEO hypothesis predicts that CEOs of firms with better performance are more likely to be retained. We next consider four measures of performance: Tobin's q (Q), industry-adjusted Tobin's q (IAQ), operating cash flow (OCF), and the past twelve month stock return (ARET_12). Tobin's q is defined as the ratio of the firm's market value of assets (defined as the book value of assets minus the book value of equity plus the market value of equity) to the book value of assets. Tobin's q is highest for public firm acquisitions and lowest for acquisitions by private operating firms. To the extent that Tobin's q, or industry-adjusted Tobin's q, captures managerial talent or managerial synergies, our valuable CEO hypothesis predicts a positive association between Tobin's q and CEO retention. Though Tobin's q does not differ between the CEO retention sample and the no retention sample for acquisitions by public companies or by private operating companies, it is significantly higher for private equity acquisitions when the CEO is retained than otherwise. Adjusting q for the firm's industry measured at the two-digit SIC level, we now find that targets of public bidders where the CEO is not retained have a significantly lower industry-adjusted Tobin's q than the targets where the CEO is retained. We find no difference in industry-adjusted q between targets of private firms where the CEO is retained and where she is not. Strikingly, however, the firms acquired by private bidders have significantly lower industry-adjusted q's than the firms acquired by public bidders irrespective of whether the CEO is retained or not.

We define operating cash flow as sales minus cost of goods sold, sales and general administrative expenses, and change in net working capital, divided by book value of assets. For public firm

acquisitions, there is no difference in operating cash flow between the CEO retention sample and the no retention sample. For private firm acquisitions, operating cash flow of firms where the CEO is retained is higher for targets of private operating firms but not for targets of private equity firms. However, targets of private equity firms where the CEO is retained have higher operating cash flow than targets of public firms where the CEO is retained.

Stock return performance, ARET_12, is measured as the market-adjusted buy-and-hold return for the 12 months prior to the runup period or from day -316 to day -63 relative to the announcement date. The stock return performance of target firms acquired by a private operating firm is worse if the target CEO is retained. This difference is inconsistent with the valuable CEO hypothesis.

Leverage (DEBT), defined as the debt-to-assets ratio, is calculated as the book value of debt divided by the sum of the book value of debt and the market value of equity. We find that leverage is higher for public firms when the CEO is not retained than otherwise. However, for other acquisitions, leverage is the same regardless of whether the CEO is retained.

Firms with greater volatility are likely to be firms with greater information asymmetries. CEO retention might be more valuable to the bidder for such firms since it is more likely that the target CEO has information that is useful to operate the firm and is not publicly available. As our measure of idiosyncratic volatility, we use the volatility of the stock's market model residual (STDEVAR) for days -379 to -127. There is no difference in this measure across firms acquired by different bidder types and between retention and no retention samples for any bidder type.

The valuable CEO hypothesis predicts that a CEO is more likely to be retained if she is less of a generalist. CEOs of diversified firms are more likely to be generalists. We investigate the extent to which acquired firms are diversified using the number of reported business segments (SEGMENTS) as our measure of diversification. We collect SEGMENTS from the Compustat Segments database and supplement with data from 10-K filings in case of missing Compustat data. We find that for acquisitions by private firms, the CEOs that are retained come from firms with fewer segments than the CEOs who are

not retained. The difference in the number of segments between the retained and non-retained samples has the same sign for public firms, but it is not significant.

Insider ownership (TARGET_INSIDE_OWN) in the case of targets of public firms is the same whether the CEO is retained or not. In contrast, targets acquired by private firms where the CEO is retained have significantly higher insider ownership. The differences are large, since they are roughly 10 percentage points for both types of acquisitions by private firms.

Our next measure is a measure of the liquidity of the assets of the target (TARLIQ) developed by Schlingemann, Stulz, and Walkling (2002). This measure is the ratio at the four-digit SIC code level of corporate control transactions to the assets of the firms in Compustat. A higher value of this measure means that the market for corporate control is more active. We would expect more potential competition if the market for the corporate assets is more liquid. With a more liquid market, we would expect conflicts of interest to be less important because there would be more potential entrants in the bidding for the firm, so that a bidder that agrees to retain the CEO might still see the premium driven to where it would have been without retention through competition. There is no difference in TARLIQ across bidder types or within bidder types across the retention and no retention samples.

For our data on compensation, we use the CEO's total remuneration (in millions of dollars) adjusted for growth in the CPI (CEO_COMP). With the conflict of interest hypothesis, we expect that CEOs with higher compensation would be more likely to be retained since they would value retention more as long as this higher compensation does not reflect higher ability only. We find no difference in compensation between retained CEOs and CEOs who are not retained. Strikingly, there is no difference in compensation between any of the acquisition types. We also estimate excess compensation (XS_CEO_COMP) as the residual from a regression model with CEO_COMP as the dependent variable.[5] There is no difference in excess compensation either between retained CEOs and CEOs who are not retained. This evidence is

[5] The CPI-adjusted total compensation of the CEO is regressed on LOGMVE, CEO_AGE, the number of months the firm has been listed on CRSP (FIRM_AGE), IAQ, DEBT, and STDEVAR. The model includes both year and industry dummies. The F-statistic and adjusted R-squared for this model are respectively 7.45 (*p*-value<0.001) and 16.28%.

inconsistent with the conflict of interest hypothesis since it predicts that CEOs with more excess compensation value retention more.

The last two target characteristics are the age of the CEO (CEO_AGE) and an indicator variable for whether the CEO is of retirement age at 60 years or older (RETIRE). We find that for acquisitions by public firms and by private equity firms, CEOs who are not retained are older. CEOs retained by private equity bidders are less likely to be in retirement age than those who are not.

We also report median values of several firm characteristics for the public bidders. Not surprisingly, the bidders are significantly bigger than the targets, have higher q, higher industry-adjusted q, and higher operating performance. The only significant difference between bidders that retain the target CEO and those that do not is that the firms that do not retain the CEO have better operating performance and higher idiosyncratic risk.

Finally, we consider several deal characteristics. All of our deal characteristics are binary variables so we report their mean values. We use the following characteristics: whether another offer is made (COMPETE) for the target prior to the winning bid, whether the offer makes the bidder more diversified by acquiring a firm in a two-digit SIC code that the bidder is not active in (DIVERSIFY), whether the announcement of the offer of the winning bidder is followed by a bid by another firm (INITBID), whether the offer is a tender offer (TENDER), whether the bidder has a toehold (TOEHOLD), whether the deal has a target termination fee (TARTERM), and finally whether the deal has bidder lockup provisions (BIDLOCK). COMPETE is significantly lower for acquisitions by operating companies, public or private, when the CEO is retained, but not for acquisitions by private equity firms. Such a result suggests that retention is lower when there is more competition for a firm and hence when it is harder for the incumbent CEO to trade retention for a lower premium. This result could be viewed as supportive of the CEO conflict of interest hypothesis. There is no difference in DIVERSIFY for acquisitions by public companies between the retention and the no retention samples, but acquisitions by private bidders where the CEO is retained are more likely to be diversifying acquisitions. Private equity acquisitions are almost always diversifying acquisitions because the SIC code of the acquired company is different from the SIC

code of a private equity company. CEO retention is not related to the probability of a subsequent bid. The bidder in private-firm acquisitions where the CEO is retained is more likely to have a toehold than the bidder in other private-firm acquisitions. For public firm acquisitions and private equity firm acquisitions, tender offers are less frequent when the CEO is retained. Finally, private operating companies that make acquisitions are more likely to enter a bidder lockup agreement if the CEO of the target is retained and less likely to enter in a target termination fee agreement.

Taken together, the data from Table I suggest that both hypotheses, the CEO conflict of interest hypothesis and the valuable CEO hypothesis, may play some role in explaining retention. The fact that retained CEOs come from better performing firms is supportive of the valuable CEO hypothesis. With the conflict of interest hypothesis, we would have expected retained CEOs to have excess compensation and to have lower holdings of target shares, which we do not find. However, there is evidence that CEOs are less likely to be retained with tender offers and in competitive situations, which suggests that there may be costs to CEOs from pushing for a higher premium, and that retained CEOs are younger, which could be consistent with them adding more value but also with them negotiating less aggressively for a higher premium because retention is more valuable to them as they could expect to stay in the job longer.

B. Logistic regression analysis of CEO retention

In Table II, we use logistic regressions to test the hypotheses of the CEO conflict of interest theory and of the valuable CEO theory. Regression (1) in Table II estimates a logistic regression where the dependent variable takes a value of one if the CEO is retained. We find that retention is more likely for acquisitions by private firms. The effect is particularly large for acquisitions by private equity firms since such acquisitions increase the probability of retention by 40 percentage points. The conflict of interest hypothesis predicts that retention is less likely for CEOs of retirement age. The coefficient on our indicator variable RETIRE is negative but not significant. The same hypothesis predicts that retention is more likely when the incentives of the insiders are less aligned with those of the other shareholders. We find that target insider ownership has a positive coefficient that is both statistically and economically significant. A one standard deviation increase in insider ownership increases the probability of retention

by four percentage points. With the valuable CEO hypothesis, the CEO would be more likely to be retained if the target performs well and if her skills are harder to replace. We find that CEOs of multi-segment target firms are less likely to be retained, which is consistent with the valuable CEO hypothesis since such CEOs are more likely to be generalists. A one segment increase reduces the probability of retention by seven percentage points. We would expect diversifying bidders to be more likely to retain the target CEO with the valuable CEO hypothesis. The coefficient on DIVERSIFY is positive, but not significant. Firm size is insignificant as well. CEOs of better performing targets as indicated by higher industry-adjusted Tobin's Q and operating cash flow are more likely to be retained, which is again consistent with the valuable CEO hypothesis. However, the past twelve month excess return is not significant. The measure of asset liquidity has a strong negative coefficient, so that the CEO is less likely to be retained in firms that are in industries with an active market for corporate control. A one standard deviation increase in asset liquidity decreases the probability of retention by seven percentage points. One interpretation of this result is that CEOs in industries with an active market for corporate control have more substitutes because of consolidation. However, it is also possible to interpret this coefficient as supportive of the conflict of interest hypothesis, in that if the firm is in an industry that has much corporate control activity, the CEO may have to go the route of an auction and may not be in a position to negotiate for his retention. We also find that competition and tender offers are associated with a lower probability of retention. Finally, the existence of a bidder lock-up agreement is associated with a positive coefficient, which again would seem supportive of the conflict of interest hypothesis, since a CEO who has managed to secure retention would want to make it less valuable for another firm to make a competing bid.

Regression (1) uses various deal characteristics as independent variables. A concern is that these variables might be determined simultaneously with retention. Regression (2) is regression (1) with the deal characteristics removed, except for the variables about the type of bidder. Regression (3) is regression (2) with the variables about the type of bidder removed as well. Because DIVERSIFY is very

high for private equity acquisitions, we remove that variable as well, since otherwise it might proxy for private equity acquisitions. Our conclusions hold for these regressions as well.

The results in Tables 1 and 2 reveal important differences between targets depending on whether the CEO is retained by the acquirer. The CEO is more likely to be retained when the target has performed well based on Tobin's q and operating cash flow as measures of performance. Such a result is supportive of the valuable CEO hypothesis. We also find that the CEO is more likely to be retained when insiders at the target firm own a greater fraction of the firm's shares. This result does not seem to support the conflict of interest hypothesis. At the same time, we find that the CEO is less likely to be retained when the bidder makes a tender offer and in acquisitions that involve competition. We would expect the bidder to make a tender offer precisely when the target CEO is entrenched and not valuable since tender offers bypass the target CEO. The existence of tender offers implies, therefore, that the valuable CEO hypothesis does not always apply. The CEO can affect the extent of competition. The fact that the CEO is less likely to be retained when there is competition suggests that there may be a personal cost to the target CEO from resisting aggressively and losing. The existence of such a cost would make it more likely that the CEO would bargain for private benefits at the expense of a higher premium. Consequently, our study of the determinants of retention, while supportive of the valuable CEO hypothesis, does not exclude the possibility that the CEO conflict of interest hypothesis affects retention as well, though some of our results are clearly inconsistent with this hypothesis. However, it could also be that competition is more likely when managerial synergies are low, so that the association between CEO retention and lack of competition might simply reveal that the merger is more valuable for a specific bidder because of managerial synergies and therefore would not indicate a cost of generating competition for the target CEO. To assess the relevance of the various hypotheses, it is therefore necessary to consider the relation between CEO retention and the premium paid.

III. Acquisition Premiums and CEO Retention

This section examines the return to target shareholders from acquisitions. We use the CRSP database to collect daily return data for our sample of targets. Because we use deal documents to identify retention, the market could have learned that the CEO will be retained at any time from when the offer was made to when the deal documents were produced. In particular, it is possible that the market did not know that the CEO would be retained at the announcement of the offer, perhaps because at the announcement the issue of whether the CEO would stay was not resolved. It follows that a premium measure that includes returns from the announcement date to the completion of the offer is more likely to reflect the impact on target shareholder wealth of target CEO retention in our sample. It is also possible that the runup before the offer announcement differs between acquisitions where the CEO is retained and acquisitions where she is not. All these considerations motivate our focus on a long-horizon measure of the premium, which we call WBC. We therefore estimate the premium using size and book-to-market portfolio adjusted buy-and-hold abnormal returns from 42 days before the *winning* bid to completion. As Schwert (1996) notes, this approach to estimating the premium has the advantage of including all of the days when the offer to the target shareholders might have changed as well as any pre-bid runup.

We also estimate target shareholder gains over a short event window using standard event study methods (see, e.g., Brown and Warner, 1985). We compute cumulative abnormal returns (CAR) using market model abnormal returns based on the CRSP value-weighted index. Market model parameters are estimated from day -379 to day -127 relative to the first acquisition announcement day as in Schwert (1996). Such a measure is commonly used. It is much less sensitive to benchmark specification (see, e.g., Brown and Warner, 1985, Kothari and Warner, 2007) than measures that cumulate returns over a long period of time, but such a measure may not reflect the impact on shareholder wealth of CEO retention if the market learns about retention after the offer announcement date. To the extent that the market only forms an expectation about CEO retention on the announcement date, the coefficient on an indicator variable for retention will be attenuated in a regression explaining the announcement return.

A. Univariate analysis of target returns

In Table III, we first show the mean and median WBC estimates for each type of acquirer and, for a given type of acquirer, for the sample where the CEO is retained and the sample where she is not retained. We find no significant differences between the retention sample and the no retention sample across types of acquirers. Not surprisingly, the premium paid by private acquirers is lower than the premium paid by public acquirers. When we turn to the CARs, we find that CAR3 (the three-day abnormal return) is lower for the no retention sample for acquisitions by private bidders than it is for the retention sample. This result is opposite to the prediction of the CEO conflict of interest hypothesis. Consequently, the only significant difference between the retention and the no retention samples is of opposite sign to the prediction of the CEO conflict of interest hypothesis.

We also investigate the stock-price reaction for the public bidders. As with target returns, we measure a long-horizon cumulative abnormal return (B_WBC) and a three-day stock price reaction (B_CAR3). Though we do not reproduce these results in the table, we find that average bidder returns using B_WBC are 2.08% with a p-value of 0.092. When we split the sample based on CEO retention, B_WBC is insignificant when the CEO is retained and significantly positive at the five percent level when the CEO is not retained. Furthermore, B_WBC is significantly higher if the CEO of the target is not retained. Although negatively signed, the difference in B_CAR3 between CEO retention and no retention for public bidder deals is not significant. Next, we estimate the combined return of the target and the bidder as in Bradley, Desai, and Kim (1988), which we call the total return. For the whole sample, the total long-horizon return (TOTAL_WBC) is 4.91% and is significant at the one percent level. Similarly, when we split the sample based on CEO retention, we find TOTAL_WBC to be insignificant when the CEO is retained and significantly positive at the one percent level when the CEO is not retained. Again, TOTAL_WBC is significantly higher if the target CEO is not retained.

B. Multiple regression analysis of target returns

Table III does not offer evidence that target shareholders are hurt by CEO retention, but instead offers some evidence that they benefit. Surprisingly, however, bidder shareholders gain less when the target

CEO is retained. However, we saw in Section II that there are target and deal characteristic differences between the CEO retention and no retention samples. It could be, therefore, that these differences in target characteristics and deal characteristics mask differences in premiums. Therefore, we estimate cross-sectional regressions in Table IV where the dependent variable is a measure of the premium. Our regressions control for variables that have been used in previous studies to explain premiums as well as variables that proxy for the intensity of the conflict of interest and the benefit from CEO retention. In addition, we use an indicator variable for whether the CEO is retained, CEO_RETENTION. We expect this indicator variable to attract a positive coefficient with the valuable CEO hypothesis and a negative coefficient with the CEO conflict of interest hypothesis.

Regression (1) of Table IV estimates the regression using the long-horizon measure of the premium, WBC. The coefficient on CEO_RETENTION is insignificant. Such a result is inconsistent with the CEO conflict of interest hypothesis. We find that offers by private equity bidders have a lower premium even controlling for retention, so that the higher retention in the case of private equity acquisitions does not explain the lower premium for these acquisitions. The coefficient on the indicator variable for offers by operating companies is negative, but not significant. We interact the retention indicator variable with the type of private bidder. The coefficients on the interactions are positive but not significant. The coefficient on the indicator variable RETIRE is negative and significant. The coefficient is also economically large as the acquisitions where the CEO is of retirement age have a lower premium of roughly six percentage points. As discussed earlier, we expect that the conflict of interest between the CEO and shareholders is stronger for CEOs of retirement age. The coefficient on RETIRE is therefore supportive of the CEO conflict of interest hypothesis. A negative coefficient on RETIRE would be consistent with the valuable CEO hypothesis if the coefficient on CEO_RETENTION were positive, since the value of retaining the CEO would be less if the CEO has a shorter horizon because of being of retirement age.

Few of the other independent variables are significant. Perhaps not surprisingly given the literature, larger targets receive smaller premiums and targets with better stock market performance receive smaller

premiums as well. Tender offers are associated with larger premiums and toeholds are associated with smaller premiums.

We re-estimate regression (1) but without deal characteristics except for the type of acquirer. Our conclusions are unchanged. Regression (3) repeats regression (1) with the addition of an interaction between CEO_RETENTION and RETIRE. We find that this interaction is insignificant and that adding this interaction does not affect our conclusions. Regression (4) estimates regression (1) using CAR3 as the dependent variable instead of the long-horizon premium. We find that the coefficient on CEO_RETENTION is insignificant. The coefficient on RETIRE is weaker, as it is almost insignificant at the 10% level. In contrast to the WBC regressions, now the stock-price reaction is significantly lower for acquisitions by private operating companies. The industry-adjusted Q has a negative significant coefficient. Further, COMPETE has a negative significant coefficient, which results from the fact that an earlier offer might have increased the firm's stock price, and TOEHOLD is not significant. In a regression not reproduced in the table, we re-estimated regression (4) without deal characteristics. The coefficient on CEO_RETENTION is insignificant in that regression; the coefficient on RETIRE is very marginally insignificant.

We now turn to regressions for bidder returns and for the total combined return of the bidder and target. We report results using the long-horizon cumulative abnormal return B_WBC and TOTAL_WBC. The coefficient on CEO_RETENTION is insignificant and so is the coefficient on RETIRE whether the dependent variable is B_WBC or TOTAL_WBC. Higher operating cash flows for the target and bidder lockup agreements are associated with lower bidder and total returns. Further, bidder returns are higher for competed deals and total returns lower for tender offer deals. In regressions not reproduced in the table, we also use the bidder's three-day stock price reaction (B_CAR3) as the dependent variable. The coefficient on CEO_RETENTION is insignificant. The coefficient on RETIRE is negative and significant, though only marginally so for the regression that uses the total return as the dependent variable. It is quite clear from these regressions that retention is not associated with a higher premium and does not lead to a higher bidder gain. Though retention is not associated with a lower premium or a higher

acquisition gain for the bidder, shareholders of firms where the target CEO is of retirement age receive a lower premium. This lower premium does not benefit the bidder when we use B_WBC, but does when we use B_CAR3. The lack of benefits to the bidder from making an acquisition of a firm with a retirement age CEO suggests that acquisitions of such firms are less worthwhile for acquirers, in that acquiring such firms generates fewer synergies. We provide further evidence supportive of this interpretation in the next section.

IV. Extensions and Robustness

We first investigate the relation between compensation and retention with compensation data for the CEO for the year before the acquisition offer is made. Compensation data is only available for a subset of 605 firms in our sample. In Table V, we show two logistic regressions estimating how compensation is related to the probability of retention. Regression (1) adds to regression (1) of Table II the logarithm of CEO compensation for the year before the acquisition in constant dollars. The logarithm of CEO compensation does not have a significant coefficient. The same result holds if we use instead the level of CEO compensation (unreported). In another unreported regression we use the residual from a regression using the logarithm of CEO compensation as the dependent variable regressed on the same regressors as in footnote 5. We refer to this residual as the excess log of CEO compensation and find that it does not have a significant relation with CEO retention either. Regression (2) of Table V allows for a differential effect for positive and negative values of the excess log of CEO compensation to have different coefficients. We find that a positive excess log of CEO compensation has a negative coefficient, so that if the CEO has abnormally high compensation she is less likely to be retained. Such a result is contrary to the prediction of the conflict of interest hypothesis that the CEOs who have more abnormal pay value retention more and are more likely to be retained. The coefficient on negative abnormal pay is positive but not significant.

We turn next to whether inclusion of CEO pay changes our inferences about the relation between the premium and retention. In regressions (3) and (4), respectively, we add the log of CEO compensation and

the positive and negative components of excess log of CEO compensation to regression (1) of Table IV. Neither the log of compensation nor the components of log of abnormal compensation are significant. We also estimate (but do not tabulate) OLS regressions where we interact the log of CEO compensation or excess log of CEO compensation with the type of bidder. The coefficients on these interactions are not significant either.

The prior analysis has focused on cases where the CEO is retained by the acquirer. When building the sample, we identified 103 cases where a top-level executive other than the CEO is retained. The fraction of non-CEO executive retention cases is highest for private operating acquisitions (11.91%) and lowest for private equity acquisitions (8.92%). There are 74 acquisitions by public firms where non-CEO executives are retained (10.08%). For these 74 cases, there is some evidence that the premium is higher for acquisitions where a non-CEO executive is retained than for acquisitions where a CEO is retained. Using the long-horizon return measure (WBC), the mean when a non-CEO executive is retained is 59.08% versus 42.43% when the CEO is retained and the difference is significant at the 6% level. The difference for the CAR3 measure is 39.41% versus 30.96% when comparing public bidders that retain non-CEO executives to those that retain the CEO, but it is not significantly different from zero. In contrast to the results for acquisitions by public firms, there is no evidence that differences for either premium measure are significant when comparing acquisitions by private firms where a non-CEO executive is retained to those where the CEO is retained. To conserve space these results are not tabulated.

We next estimate regressions to assess more precisely whether the premium paid by the bidder differs when a non-CEO executive is retained instead of the CEO. In regression (5) of Table V, we estimate regression (1) of Table IV with an additional indicator variable for non-CEO retention. Neither CEO retention nor non-CEO retention are related to the WBC premium. The same result holds if we use the three-day stock price reaction (CAR3) as our dependent variable. The significance of other coefficients is unchanged except for the coefficient on RETIRE. We show in regression (6) that the reason that RETIRE is not significant in regression (5) is that the significance of RETIRE shown in Table IV comes from the

cases where the CEO is of retirement age, is not retained, and nobody from his management team is retained. In other words, target shareholders receive a higher premium if the target has top managers retained by the bidder when the CEO is of retirement age than if it does not. This suggests that low premium firms are firms where the CEO has failed to groom potential successors and the firm is sold to remedy this lack of potential successors or, in light of Casamata and Guembel (2010), are firms that require a change in strategy, so that it is difficult to motivate a new CEO if the firm stays independent and retaining former top executives would be retaining executives loyal to the strategy being replaced.

The last issue we examine is the sensitivity of our conclusions to alternative approaches to deal with endogeneity and simultaneity. We have already seen that none of our inferences are altered if we estimate retention and premium regressions without deal characteristics. In regressions not reproduced here, we estimate the retention logistic regression using the premium measured by WBC (or by CAR3) as an independent variable. We find that the coefficient on the premium is not significant. We also use the Durbin-Wu-Hausman test to check whether we need an instrumental variable for CEO_RETENTION in the premium regression.[6] We are unable, based on the *p*-value of the coefficient on the residuals from our logistic regression models from Table II, to reject the hypothesis that CEO_RETENTION is exogenous. Nevertheless, we estimate the premium regression instrumenting for retention. Table II shows that the probability of retention falls as the number of segments of the target increases. We use the number of segments as an instrumental variable for retention. Regression (7) of Table V shows estimates of the premium regression when we instrument for retention.[7] The coefficient on retention is insignificant in that regression and the coefficient on RETIRE is significantly negative. However, the use of an instrument for retention renders several of the variables in the regression insignificant—including the indicator variable for private equity acquisitions. In a final check, we estimate but do not reproduce in the table, the

[6] See, e.g., Wooldridge (2002).

[7] The first-stage model is estimated as in model (1) of Table II. Because consistency of the second-stage estimates does not depend on the first-stage functional form (see, e.g., Angrist and Krueger, 2001) we also use an OLS first-stage specification, which avoids potential misspecification errors that could results from a non-linear first stage specification. Our conclusions are not affected by the choice between linear versus non-linear first-stage specifications.

retention and premium regressions as a system of simultaneous equations in which the continuous endogenous premium variable and the dichotomous retention variable are jointly determined. Again, we find no evidence that retention is associated with a lower premium.

V. Conclusion

In this paper we investigate the determinants of target CEO retention in an acquisition and the implications of target CEO retention for the premium paid by the acquirer. There is much concern that in an acquisition the CEO's interests may not be well-aligned with those of shareholders and that the CEO may choose to negotiate for private benefits, including possibly retention, at the expense of a higher premium for the shareholders. Our evidence is not supportive of the view that CEO conflicts of interest lead target shareholders to receive lower premiums.

We consider first the determinants of CEO retention. The valuable CEO hypothesis predicts that the target CEO will be more likely to be retained when the CEO has performed well and when she has skills that the bidder does not have. We find evidence that is supportive of these predictions. In particular, CEOs of more diversified firms are less likely to be retained. The conflict of interest hypothesis predicts that CEOs are more likely to be retained when the conflict of interest is more acute, which is when the interests of the target CEO and shareholders diverge more. We argue that such a greater divergence is more likely when insiders have a lower stake in the ownership of the target, the CEO is of retirement age, and she has positive abnormal compensation. Our evidence is not supportive of these predictions of the CEO conflict of interest hypothesis. Specifically, the probability of retention is positively related to insider ownership in the target, unrelated to whether the CEO is of retirement age, and negatively related to positive abnormal compensation. However, the CEO is less likely to be retained when there is more actual or potential competition for the target. This result is consistent with the CEO conflict of interest hypothesis.

When we examine the premium paid by the acquirer, we find that there is no evidence that retention is associated with a lower premium. In fact, the only significant evidence we find on a relation between

the premium and retention is the opposite, since there is some evidence that targets of private firms receive more when the CEO is retained. In contrast, we find that targets with CEOs at retirement age receive less. Further investigation shows, however, that this result is unlikely to be explained by the CEO conflict of interest hypothesis. Rather, it appears that targets where the CEO is of retirement age and where none of the top management is retained by the bidder are targets that are worth less. We investigate extensively the possibility that our results could be spurious because of the potential that the premium and retention could be determined simultaneously. However, we find no evidence that this could be the case.

In summary, target CEOs are retained mostly for reasons that are consistent with the valuable CEO hypothesis and not for reasons consistent with the conflict of interest hypothesis. However, the valuable CEO hypothesis only leaves traces in regressions explaining the premium paid when the CEO is of retirement age and nobody on her management team is retained by the bidder. Our results suggest that, whereas target shareholders do not lose because of the CEO's conflict of interest when an offer is made, they lose when the CEO reaches retirement age and fails to have surrounded herself with a valuable team.

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Table I
Summary statistics on target and deal characteristics

The sample includes all SDC completed cash-only merger and acquisition deals between a U.S. bidder and a U.S. public target announced from 1994 through 2006 that result in 100% ownership by the bidder. The natural log of the market value of equity (LOGMVE) is from CRSP calculated as the natural log of the CPI-adjusted (2005 dollars) price of the stock times the number of shares outstanding 63 days prior to the announcement date. Tobin's q (Q) is the firm market value assets divided by the book value of assets. Industry-adjusted Tobin's q (IAQ) is Tobin's q minus the median two-digit SIC code industry value of this variable. Operating cash flow (OCF) is sales minus costs of goods sold, sales and general administrative expenses, and change in net working capital, divided by book value of assets. ARET_12 is the market-adjusted buy-and-hold return from day -316 to day -63 relative to the announcement date. Debt-to-assets (DEBT) is calculated as the book value of debt divided by the sum of the book value of debt and the market value of equity. STDEVAR is defined as the standard deviation of the market model residuals from day -379 to day -127 relative to the announcement date. Target insider ownership (TARGET_INSIDE_OWN) is the aggregate insider ownership listed in the Compact D Disclosure database. TARLIQ is the liquidity of the market for corporate control for the target firm's industry and is the value of all corporate control transactions for $1 million or more reported by SDC for each year and two-digit SIC code divided by the total book value of assets of all Compustat firms in the same two-digit SIC code and year. CEO_COMP is total remuneration ($ million) reported on the proxy statement immediately before the acquisition announcement date as available on COMPACT D adjusted for growth in the CPI. XS_CEO_COMP is the excess of CEO_COMP, defined as the residual from a model where CEO_COMP is regressed on LOGMVE, CEO_AGE, the number of months the firm has been listed on CRSP (FIRM_AGE), IAQ, DEBT, and STDEVAR. CEO_AGE is the age of the CEO in years. B_LOGMVE, B_Q, B_IAQ, B_OCF, B_DEBT, B_STDEVAR are defined as above but for the bidder firm. SEGMENTS is the number of business segments reported by Compustat when available or stated in the firm's 10-K filing closest, but prior to the announcement date. RETIRE is an indicator variable equal to one if the CEO is 60 years or older and zero otherwise. COMPETE is an indicator variable equal to one if another deal for the same target is announced in SDC during the 12 months prior to the announcement date. DIVERSIFY is an indicator variable equal to one if the target and bidder firm have different two-digit SIC codes and zero otherwise. INITBID is an indicator variable equal to one if the announcement of the offer is followed by an offer by another firm, while no bids took place during the 12 months before the announcement. TENDER, TOEHOLD, TARTERM, and BIDLOCK are indicator variables from SDC equal to one if the deal respectively is a tender offer, involves a bidder that holds 0.5% or more of the target stock prior to the announcement, includes target termination fees, and includes bidder lockup provisions. Mean [median] values for the non-public bidder deals that are significantly different from the corresponding mean [median] value for the public bidder deals denoted with a, b, or c, are significant at the 1%, 5%, or 10% level, respectively. Within the bidder groupings, differences in means [medians] between CEO retention and no retention denoted with α, β, or γ, are significant at the 1%, 5%, or 10% level, respectively.

	Public bidder deals			Private bidder deals			Private equity bidder deals			Private operating bidder deals		
	CEO retention	No retention	Difference	CEO retention	No retention	Difference	CEO retention	No retention	Difference	CEO retention	No retention	Difference
n	196	464		142	112		98	45		44	67	
Median values												
LOGMVE	4.7786	4.8149	-0.0362	4.3975[c]	4.3409[a]	0.0565	4.6429	4.4335[b]	0.2094	4.0228[a]	4.3004[a]	-0.2775
Q	1.2933	1.2854	0.0079	1.2004[a]	1.0216[a]	0.1788[α]	1.2281[c]	1.0706[a]	0.1575[γ]	1.0695[a]	1.0149[a]	0.0546
IAQ	-0.0395	-0.1176	0.0781[γ]	-0.2285[a]	-0.2745[a]	0.0460	-0.2222[b]	-0.3101[b]	0.0879	-0.2365[b]	-0.2660[b]	0.0295
OCF	0.0895	0.0865	0.0030	0.1243[a]	0.0807	0.0436[α]	0.1396[a]	0.0966	0.0431	0.1081	0.0682	0.0399[β]
ARET_12	-0.1465	-0.1680	0.0215	-0.2020	-0.0777	-0.1243	-0.1750	-0.0628	-0.1122	-0.2349[c]	-0.0985	-0.1364[γ]
DEBT	0.0870	0.1124	-0.0254[β]	0.1798[a]	0.1616	0.0183	0.1845[a]	0.1849	-0.0004	0.1554	0.1565	-0.0011
STDEVAR	0.0353	0.0327	0.0026	0.0322	0.0347	-0.0025	0.0312	0.0364	-0.0051	0.0347	0.0306	0.0041
TARGET_INSIDE_OWN	0.1059	0.0995	0.0064	0.1510[c]	0.0751	0.0760[α]	0.1415	0.0411[b]	0.1004[α]	0.1799	0.0844	0.0956[γ]
TARLIQ	0.0454	0.0491	-0.0038	0.0462	0.0470	-0.0008	0.0470	0.0470	0.0000	0.0340	0.0454	-0.0113
CEO_COMP	0.3966	0.4400	-0.0434	0.4549	0.4519	0.0030	0.5065	0.5130	-0.0065	0.3673	0.4177	-0.0504
XS _CEO_COMP	-0.1090	-0.1171	0.0082	-0.0805	-0.0685	-0.0120	-0.0453	-0.0386	-0.0067	-0.1031	-0.1028	-0.0003
CEO_AGE	52.0000	54.0000	-2.0000[γ]	52.0000	54.0000	-2.0000[β]	51.0000[b]	56.0000	-5.0000[α]	54.5000	54.0000	0.5000
B_LOGMVE	8.5189	7.9831	0.5358	.	.	.	.	.	.	.	.	.
B_Q	1.6871	1.6324	0.0546	.	.	.	.	.	.	.	.	.
B_IAQ	0.0801	0.0451	0.0350	.	.	.	.	.	.	.	.	.
B_OCF	0.1136	0.1258	-0.0122[γ]	.	.	.	.	.	.	.	.	.
B_DEBT	0.1064	0.1171	-0.0107	.	.	.	.	.	.	.	.	.
B_STDEVAR	0.0185	0.0205	-0.0020[β]	.	.	.	.	.	.	.	.	.
Mean Values												
SEGMENTS	1.2959	1.3491	-0.0532	1.2887[b]	1.4464[a]	-0.1577[γ]	1.3673	1.6000[a]	-0.2327	1.1136[a]	1.3433[a]	-0.2296[β]
RETIRE	0.2041	0.2198	-0.0157	0.1408[b]	0.2679[a]	-0.1270[β]	0.0918[c]	0.2889[a]	-0.1971[β]	0.2500[a]	0.2537[a]	-0.0037
COMPETE	0.0306	0.0647	-0.0340[β]	0.0282[a]	0.1071	-0.0790[β]	0.0408[a]	0.0667[b]	-0.0259	0.0000[b]	0.1343	-0.1343[α]
DIVERSIFY	0.4541	0.4353	0.0187	0.7817[a]	0.5804[c]	0.2013[α]	0.9694[a]	0.9333	0.0361	0.3636[c]	0.3433	0.0204
INITBID	0.0306	0.0129	0.0177	0.0211	0.0268	-0.0057	0.0306	0.0222	0.0084	0.0000	0.0299	-0.0299
TENDER	0.4031	0.5172	-0.1142[α]	0.2465	0.3750	-0.1285[β]	0.2041	0.4667	-0.2626[α]	0.3409	0.3134[a]	0.0275
TOEHOLD	0.0510	0.0388	0.0122	0.0845	0.0357	0.0488[γ]	0.1224	0.0667	0.0558	0.0000[c]	0.0149	-0.0149
TARTERM	0.7245	0.7263	-0.0018	0.5915[c]	0.7321	-0.1406[β]	0.5918	0.6667	-0.0748	0.5909[a]	0.7761	-0.1852[β]
BIDLOCK	0.0714	0.0582	0.0132	0.0423	0.0179	0.0244	0.0102	0.0222	-0.0120	0.1136	0.0149	0.0987[γ]

Table II
CEO retention logistic regression analysis

The sample includes all SDC completed cash-only merger and acquisition deals between a U.S. bidder and a U.S. public target announced from 1994 through 2006 that result in 100% ownership by the bidder. The dependent variable (CEO_RETENTION) is equal to one for deals where the target CEO is retained by the bidder and zero otherwise. PEBIDDER (POBIDDER) is an indicator variable equal to one if the bidder is a private equity (private operating) firm. All remaining variables are defined in the header of Table I. Regressions include year and industry (two-digit SIC code main classifications) dummy variables. *p*-values are in brackets and are based on heteroskedasticity-consistent standard errors. Coefficients denoted with [a], [b], or [c], are significant at the 1%, 5%, or 10% level, respectively.

	(1)	(2)	(3)
	CEO_RETENTION	CEO_RETENTION	CEO_RETENTION
PEBIDDER	1.6815[a]	1.7767[a]	
	[0.000]	[0.000]	
POBIDDER	0.4031[c]	0.3962[c]	
	[0.080]	[0.078]	
RETIRE	-0.1369	-0.1093	-0.2149
	[0.498]	[0.578]	[0.248]
TARGET_INSIDE_OWN	0.8647[b]	0.8071[b]	0.8474[b]
	[0.016]	[0.023]	[0.015]
SEGMENTS	-0.3193[a]	-0.3211[a]	-0.2233[b]
	[0.009]	[0.007]	[0.039]
DIVERSIFY	0.1426	0.1238	
	[0.409]	[0.463]	
LOGMVE	0.0626	0.0325	-0.0097
	[0.371]	[0.629]	[0.877]
IAQ	0.1685[b]	0.1471[b]	0.1248[c]
	[0.046]	[0.041]	[0.099]
DEBT	-0.3937	-0.4142	0.0041
	[0.362]	[0.323]	[0.992]
OCF	1.1536[b]	1.0070[b]	1.2389[a]
	[0.021]	[0.036]	[0.009]
TARLIQ	-3.3730[a]	-3.5020[a]	-3.1421[b]
	[0.008]	[0.007]	[0.015]
ARET_12	-0.0437	-0.0558	-0.0646
	[0.726]	[0.659]	[0.588]
STDEVAR	2.1514	1.5694	-1.1442
	[0.661]	[0.747]	[0.806]
COMPETE	-0.9922[b]		
	[0.013]		
INITBID	0.5490		
	[0.315]		
TENDER	-0.5731[a]		
	[0.002]		
TARTERM	-0.0796		
	[0.665]		
TOEHOLD	0.3555		
	[0.350]		
BIDLOCK	0.6600[b]		
	[0.045]		
Constant	-1.0648	-1.0338	-0.1921
	[0.544]	[0.579]	[0.942]
Observations	914	914	914
Pseudo R-Squared	0.131	0.112	0.048

Table III
Target return measures for different bidder types

The sample includes all SDC completed cash-only merger and acquisition deals between a U.S. bidder and a U.S. public target announced from 1994 through 2006 that result in 100% ownership by the bidder. Means and medians [in brackets] return measures are reported for target firms based on bidder type: Public bidders, private bidders, and private bidders split into private equity and private operating bidders. For each bidder type, return measures are reported for deals with and without CEO retention. WBC is the Fama-French size and book-to-market portfolio-adjusted buy-and-hold return from 42 trading days prior to the announcement of the winning bid to the completion date. CAR3 is the 3-day cumulative abnormal returns around the announcement day, based on market model parameters. B_ and TOTAL_ refer to respectively bidder and total return measures. Mean [median] values for the non-public bidder deals that are significantly different from the corresponding mean [median] value for the public bidder deals denoted with a, b, or c, are significant at the 1%, 5%, or 10% level, respectively. Within the bidder groupings, differences in means [medians] between CEO retention and no retention denoted with α, β, or γ, are significant at the 1%, 5%, or 10% level, respectively.

	Public bidder deals			Private bidder deals			Private equity bidder deals			Private operating bidder deals		
	CEO retention	No retention	Difference	CEO retention	No retention	Difference	CEO retention	No retention	Difference	CEO retention	No retention	Difference
n	196	464		142	112		98	45		44	67	
WBC	0.4243	0.4534	-0.0291	0.3068[b]	0.3225[a]	-0.0158	0.2319[a]	0.2274[a]	0.0045	0.4736	0.3864	0.0872
	[0.3326]	[0.3894]	[-0.0568]	[0.2556[a]]	[0.2190[a]]	[0.0366]	[0.2148[a]]	[0.1639[a]]	[0.0508]	[0.4223]	[0.3149]	[0.1074]
CAR3	0.3096	0.3168	-0.0072	0.2726	0.2045[a]	0.0681[γ]	0.2453[b]	0.1754[a]	0.0698[γ]	0.3336	0.2241[b]	0.1095
	[0.2483]	[0.2537]	[-0.0054]	[0.2035[b]]	[0.1680[a]]	[0.0355]	[0.1982[b]]	[0.1373[a]]	[0.0609]	[0.2077]	[0.1734[a]]	[0.0343]
B_WBC	-0.0071	0.0326	-0.0397[γ]									
	[-0.0142]	[-0.0024]	[-0.0118]									
B_CAR3	0.0038	0.0091	-0.0053									
	[0.0052]	[0.0039]	[0.0014]									
TOTAL_WBC	0.0222	0.0603	-0.0380[γ]									
	[0.0076]	[0.0384]	[-0.0308[γ]]									
TOTAL_CAR3	0.0262	0.0342	-0.0079									
	[0.0198]	[0.0198]	[0.0000]									

Table IV
Target premium multiple regression analysis

The sample includes all SDC completed cash-only merger and acquisition deals between a U.S. bidder and a U.S. public target announced from 1994 through 2006 that result in 100% ownership by the bidder. The dependent variable in models (1) through (3) is WBC, in model (4) is CAR3, in model (5) is B_WBC, and in model (6) is TOTAL_WBC. The dependent variables are defined in the header of Table III. CEO_RETENTION is an indicator variable equal to one for deals where the target CEO is retained by the bidder and zero otherwise. PEBIDDER (POBIDDER) is an indicator variable equal to one if the bidder is a private equity (private operating) firm. CEO_RETENTION×PEBIDDER (CEO_RETENTION×POBIDDER) is an interaction term between CEO_RETENTION and PEBIDDER (POBIDDER). CEO_RETENTION×RETIRE is an interaction term between CEO_RETENTION and RETIRE. All remaining variables are defined in the header of Table I. Regressions include year and industry (two-digit SIC code main classifications) dummy variables. *p*-values are in brackets and are based on heteroskedasticity-consistent standard errors. Coefficients denoted with [a], [b], or [c], are significant at the 1%, 5%, or 10% level, respectively.

	(1) WBC	(2) WBC	(3) WBC	(4) CAR3	(5) B_WBC	(6) TOTAL_WBC
CEO_RETENTION	-0.0068	-0.0144	-0.0147	-0.0021	-0.0218	-0.0164
	[0.861]	[0.704]	[0.739]	[0.935]	[0.381]	[0.463]
PEBIDDER	-0.2063[a]	-0.2147[a]	-0.2052[a]	-0.1381[a]		
	[0.003]	[0.002]	[0.003]	[0.000]		
POBIDDER	-0.0705	-0.0734	-0.0703	-0.0924[a]		
	[0.242]	[0.224]	[0.243]	[0.009]		
CEO_RETENTION × PEBIDDER	0.0146	0.0014	0.0165	0.0708		
	[0.855]	[0.986]	[0.836]	[0.138]		
CEO_RETENTION × POBIDDER	0.0688	0.0728	0.0672	0.0948		
	[0.467]	[0.446]	[0.480]	[0.196]		
CEO_RETENTION × RETIRE			0.0368			
			[0.587]			
RETIRE	-0.0607[c]	-0.0627[c]	-0.0725[c]	-0.0358[c]	0.0234	0.0137
	[0.068]	[0.057]	[0.082]	[0.099]	[0.369]	[0.547]
TARGET_INSIDE_OWN	0.0393	0.0364	0.0405	0.0431	0.0340	0.0241
	[0.587]	[0.617]	[0.576]	[0.437]	[0.592]	[0.679]
DIVERSIFY	-0.0343	-0.0348	-0.0349	0.0066	0.0033	-0.0122
	[0.299]	[0.293]	[0.293]	[0.765]	[0.914]	[0.597]
LOGMVE	-0.0404[a]	-0.0382[b]	-0.0405[a]	-0.0197[c]	0.0002	0.009
	[0.008]	[0.015]	[0.008]	[0.055]	[0.991]	[0.435]
IAQ	-0.0107	-0.0091	-0.0106	-0.0233[b]	-0.0174	-0.0178[c]
	[0.405]	[0.480]	[0.411]	[0.015]	[0.119]	[0.074]
DEBT	0.1217	0.1151	0.1212	0.0070	0.1117	0.1043
	[0.189]	[0.217]	[0.191]	[0.908]	[0.128]	[0.107]
OCF	-0.0064	0.0025	-0.0054	0.0290	-0.1039[c]	-0.1209[b]
	[0.955]	[0.982]	[0.962]	[0.711]	[0.077]	[0.024]
TARLIQ	-0.1207	-0.1134	-0.1195	-0.1348	0.0961	0.079
	[0.363]	[0.394]	[0.367]	[0.102]	[0.588]	[0.528]
ARET_12	-0.0886[a]	-0.0842[a]	-0.0886[a]	-0.0706[a]	0.0259	0.0211
	[0.003]	[0.005]	[0.003]	[0.000]	[0.223]	[0.264]
STDEVAR	0.4028	0.4551	0.4251	0.5003	-0.5260	-0.9135
	[0.745]	[0.712]	[0.732]	[0.609]	[0.553]	[0.256]
COMPETE	0.0127		0.0123	-0.0787[a]	0.1529[c]	0.0951
	[0.814]		[0.820]	[0.003]	[0.073]	[0.125]
INITBID	0.0119		0.0124	-0.0489	-0.0809	-0.0676
	[0.882]		[0.876]	[0.386]	[0.124]	[0.188]
TENDER	0.0626[c]		0.0617[c]	0.0890[a]	-0.0499	-0.0503[c]
	[0.093]		[0.099]	[0.000]	[0.114]	[0.070]
TARTERM	0.0260		0.0257	0.0235	-0.0111	-0.0068
	[0.497]		[0.502]	[0.292]	[0.710]	[0.800]
TOEHOLD	-0.1018[c]		-0.1016[c]	0.0074	0.0406	0.0449
	[0.093]		[0.094]	[0.852]	[0.532]	[0.424]
BIDLOCK	-0.0134		-0.0128	0.0560	-0.0892[c]	-0.0964[b]
	[0.857]		[0.864]	[0.161]	[0.062]	[0.030]
B_LOGMVE					-0.0081	-0.0161[c]
					[0.569]	[0.071]
B_IAQ					0.0212	0.0156
					[0.146]	[0.214]
B_DEBT					0.2762	0.1705
					[0.130]	[0.105]
B_OCF					0.1251	0.1206
					[0.389]	[0.337]
B_STDEVAR					0.1694	0.3986
					[0.916]	[0.783]
Constant	1.0213[a]	1.0116[a]	1.0091[a]	0.3287[a]	0.3706[a]	0.5130[a]
	[0.000]	[0.000]	[0.000]	[0.004]	[0.001]	[0.000]
Observations	914	914	914	914	556	556
Adjusted R-squared	0.130	0.129	0.129	0.123	0.025	0.055

Table V
Robustness regression analysis

The sample includes all SDC completed cash-only merger and acquisition deals between a U.S. bidder and a U.S. public target announced from 1994 through 2006 that result in 100% ownership by the bidder. The dependent variable in logistic models (1) and (2) is CEO_RETENTION. WBC is the dependent variable in OLS models ((3) through (6) and in a 2SLS second-stage specification for model (7). The dependent variables are defined in the header of Table III. NON_CEO_RETENTION is an indicator variable equal to one if an executive of the target firm other than the CEO is retained and the CEO is not, and zero otherwise. LOG_CEO_COMP CEO is the natural log of the total remuneration ($ million) reported on the proxy statement immediately before the acquisition announcement date as available on COMPACT D adjusted for growth in the CPI. XS_LOG_CEO_COMP_POS (XS_LOG_CEO_COMP_NEG) is the excess of the natural log of CEO compensation when its value is positive (negative) and zero otherwise. The excess of the natural log of CEO compensation is the residual from a model where the log of CPI-adjusted total compensation of the CEO is regressed on LOGMVE, CEO_AGE, the number of months the firm has been listed on CRSP (FIRM_AGE), IAQ, DEBT, and STDEVAR. The remaining independent variables are defined in the header of Table I. Regressions include year and industry (two-digit SIC code main classifications) dummy variables. *p*-values are in brackets and are based on heteroskedasticity-consistent standard errors. Coefficients denoted with [a], [b], or [c], are significant at the 1%, 5%, or 10% level, respectively.

	(1) CEO_RETENTION	(2) CEO_RETENTION	(3) WBC	(4) WBC	(5) WBC	(6) WBC	(7) WBC (2SLS)
CEO_RETENTION			0.0271	0.0297	0.0102	0.005	-0.5102
			[0.591]	[0.557]	[0.757]	[0.898]	[0.128]
NON_CEO_RETENTION					0.1027	0.0421	
					[0.118]	[0.564]	
PEBIDDER	1.3908[a]	1.4267[a]	-0.1554[b]	-0.1584[b]	-0.2050[a]	-0.2091[a]	-0.0168
	[0.000]	[0.000]	[0.022]	[0.020]	[0.000]	[0.000]	[0.899]
POBIDDER	0.6322[b]	0.6679[b]	-0.0945	-0.0992	-0.0836[c]	-0.0806	0.001
	[0.033]	[0.024]	[0.208]	[0.186]	[0.097]	[0.109]	[0.987]
CEO_RETENTION × PEBIDDER			-0.07	-0.0702			
			[0.426]	[0.423]			
CEO_RETENTION × POBIDDER			0.0422	0.046			
			[0.711]	[0.686]			
RETIRE	-0.1974	-0.1854	-0.0375	-0.0381	-0.0335	-0.0731[c]	-0.0776[c]
	[0.417]	[0.447]	[0.338]	[0.327]	[0.305]	[0.079]	[0.054]
CEO_RETENTION × RETIRE						0.034	
						[0.612]	
NON_CEO_RETENTION × RETIRE						0.3158[b]	
						[0.024]	
LOG_CEO_COMP	-0.0382		0.0193				
	[0.788]		[0.447]				
XS_LOG_CEO_COMP_POS		-0.5068[c]		0.0633			
		[0.087]		[0.186]			
XS_LOG_CEO_COMP_NEG		0.4146		-0.0241			
		[0.137]		[0.500]			
TARGET_INSIDE_OWN	0.9377[b]	0.9437[b]	0.0823	0.0799	0.0497	0.0503	0.1304
	[0.028]	[0.028]	[0.331]	[0.344]	[0.501]	[0.495]	[0.189]
SEGMENTS	-0.3686[b]	-0.3685[b]					
	[0.013]	[0.014]					
DIVERSIFY	0.1594	0.1672	-0.0621	-0.0622	-0.0388	-0.0451	-0.0224
	[0.469]	[0.450]	[0.142]	[0.142]	[0.232]	[0.168]	[0.547]
LOGMVE	0.1067	0.1112	-0.0449[b]	-0.0404[b]	-0.0397[a]	-0.0404[a]	-0.0352[b]
	[0.259]	[0.197]	[0.026]	[0.015]	[0.006]	[0.005]	[0.034]
IAQ	0.1854[c]	0.1820[c]	-0.0129	-0.0128	-0.0142	-0.0133	0.007
	[0.068]	[0.065]	[0.381]	[0.392]	[0.303]	[0.331]	[0.718]
DEBT	-0.0382	-0.0396	0.0986	0.113	0.1559[c]	0.1530[c]	0.079
	[0.942]	[0.938]	[0.407]	[0.343]	[0.082]	[0.087]	[0.458]
OCF	1.7425[a]	1.6600[a]	0.1091	0.1213	0.0137	0.0112	0.1041
	[0.005]	[0.008]	[0.445]	[0.398]	[0.910]	[0.926]	[0.456]
TARLIQ	-6.1850[a]	-6.0158[a]	-0.3042	-0.2984	-0.1374	-0.1257	-0.3908
	[0.000]	[0.001]	[0.103]	[0.111]	[0.293]	[0.343]	[0.108]
ARET_12	0.0141	-0.0105	-0.0541	-0.0516	-0.0975[a]	-0.0998[a]	-0.0946[a]
	[0.938]	[0.953]	[0.182]	[0.205]	[0.001]	[0.001]	[0.003]
STDEVAR	5.1607	6.0174	0.2353	0.1078	0.4866	0.4079	0.6826
	[0.368]	[0.296]	[0.871]	[0.941]	[0.688]	[0.734]	[0.584]
COMPETE	-1.0496[b]	-0.9730[b]	0.0154	0.0099	-0.0141	-0.0086	-0.0794
	[0.034]	[0.050]	[0.815]	[0.881]	[0.787]	[0.867]	[0.322]
INITBID	0.462	0.5424	0.0557	0.0489	0.029	0.0104	0.0745
	[0.717]	[0.677]	[0.822]	[0.846]	[0.685]	[0.882]	[0.514]
TENDER	-0.4377[c]	-0.4379[c]	0.0592	0.0575	0.0890[b]	0.0921[b]	0.0095
	[0.052]	[0.053]	[0.145]	[0.159]	[0.018]	[0.015]	[0.859]
TARTERM	-0.2511	-0.2473	0.0387	0.0385	0.0472	0.044	0.014
	[0.281]	[0.292]	[0.375]	[0.378]	[0.207]	[0.241]	[0.752]
TOEHOLD	-0.0889	-0.073	-0.0869	-0.0863	-0.1110[b]	-0.1182[b]	-0.0698
	[0.845]	[0.874]	[0.216]	[0.216]	[0.046]	[0.034]	[0.353]
BIDLOCK	0.4538	0.468	0.0331	0.0307	0.0027	-0.0041	0.0598
	[0.240]	[0.225]	[0.707]	[0.727]	[0.970]	[0.955]	[0.515]
Constant	0.0401	-3.8518[b]	0.5682[c]	0.7921[a]	0.9332[a]	0.9300[a]	1.1133[a]
	[0.987]	[0.029]	[0.098]	[0.000]	[0.000]	[0.000]	[0.000]
Observations	605	605	605	605	1,017	1,017	914
Pseudo R-Squared / Adjusted R-Squared	0.138	0.142	0.099	0.099	0.137	0.141	.