Stock Option Grants to Target CEOs during Private Merger Negotiations

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Abstract

Unscheduled stock options to target CEOs are a non-trivial phenomenon during private merger negotiations. In 920 acquisition bids during 1999-2007, over 13% of targets grant them. These options substitute for golden parachutes and compensate target CEOs for benefits they forfeit because of the merger. Targets granting unscheduled options are more likely to be acquired but they earn lower premiums. Consequently, deal value drops by $62 for every dollar target CEOs receive from unscheduled options. Conversely, acquirers of targets offering these awards experience higher returns. Therefore, deals involving unscheduled grants exhibit a transfer of wealth from target shareholders to bidder shareholders.

JEL classification: G30; G34; J33; K22
Keywords: Merger negotiations, Stock options, Takeover premium

1. Introduction

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According to the merger background provided in proxy statements filed by Electronic Data Systems (EDS), on December 30, 2007, Mr. Ronald Rittenmeyer, chief executive officer (CEO) of EDS met with Mark Hurd, CEO of Hewlett Packard (HP).[1] At this meeting, Mr. Hurd informed Mr. Rittenmeyer that HP was interested in having preliminary discussions regarding a possible acquisition of EDS by HP. Following this conversation, Mr. Rittenmeyer, along with the chairpersons of each of the three standing committees of the EDS board, determined that preliminary merger discussions with HP should be pursued. Starting in late January 2008, EDS provided HP with access to certain limited non-public due diligence information to enable HP to evaluate the potential for the acquisition of EDS. On May 13, 2008, HP announced a $13.25 billion takeover of EDS. Absent from the merger background in the proxy is the following information. On February 13, 2008, while secret merger talks between EDS and HP were underway, Mr. Rittenmeyer received an unscheduled option grant consisting of 2 million shares of EDS.[2] This award, which was more than 10 times larger than any of the scheduled grants received by Mr. Rittenmeyer in earlier years, would net him a profit of over $13 million when HP acquired his firm.[3]

This anecdote raises several questions related to the objectives and effects of granting unscheduled options to target CEOs during private merger negotiations. First, do these awards complement or substitute for other acquisition-related benefits given to target CEOs such as golden parachutes? Second, is the probability of completing a deal affected when target CEOs receive these options? Third, are the wealth effects accruing to target managers, target shareholders and bidder shareholders different when target CEOs get these unscheduled grants? In this paper, we investigate these questions in a sample of 920 acquisition bids announced during 1999-2007.

[1] This case is profiled in an article titled: "Option Grants Draw Scrutiny," *Wall Street Journal*, October 12, 2009, pg. A1. That article documents several deals that occur in 2008 and 2009 in which target CEOs receive unscheduled options during merger talks with their eventual acquirers. The information for this case is from the DEFM14A proxy for EDS filed with the Securities and Exchange Commission (SEC) by that company on June 26, 2008.

[2] We classify a grant to be scheduled if it is dated within fourteen days of the one-year anniversary of a prior grant and unscheduled otherwise.

[3] We calculate the profit as follows. We first subtract the option's exercise price from the merger offer price ($25.00–$18.30). We then multiply this difference by the grant size (2 million shares) to get $13.4 million.

Approximately one in seven targets in our sample (over 13%) grant their CEOs unscheduled stock options during private deal negotiations. Consequently, this activity appears to be a non-trivial incident in acquisitions.

To understand the motivations for the option granting activity, we begin by studying its determinants. These tests reveal that unscheduled grants to target CEOs during merger negotiations are inversely related to the golden parachute payments these executives receive as part of their acquisition-related exit benefits. We estimate that a $1 million decrease in the average parachute increases the probability of granting unscheduled options by 2.31 percentage points. This finding is consistent with the hypothesis that last-minute unscheduled stock options are used as substitutes for golden parachutes during acquisitions. In addition, we find that when target CEOs expect large pay losses after the merger goes through, their firms are more likely to extend them unscheduled options during merger talks. Our estimates imply that when the expected lost income to CEOs increases by $10 million, these executives are 11 percentage points more likely to get unscheduled options during merger negotiations. This result supports the view that these grants partially make target CEOs whole for the future compensation they give up when their companies are acquired. We also estimate that the probability of issuing unscheduled grants increases by 3.4 percentage points when target CEOs have a "change-in-control" clause in their compensation contract. This clause allows option vesting periods and other restrictions to disappear as the firm ceases to exist as a stand alone entity, which, in turn, enables target CEOs to cash in their unscheduled awards once deals are completed.

Our results suggest that option awards induce target CEOs to sell their firms. We show that acquisitions are nearly 12 percentage points more likely to complete when these CEOs get unscheduled grants during merger negotiations. Given that the unconditional probability of completion for deals in our sample is 81.8%, our finding indicates that these options have a material impact on the likelihood that a merger occurs.

We find that targets granting their CEOs unscheduled stock options while confidential merger talks are underway earn acquisition premiums about 4.4 percentage points lower. As a result, these firms are

associated with an average drop of about $215 million in terms of deal value when they are sold. In contrast, target CEOs that get the unscheduled option awards realize an average profit of nearly $3.5 million from these grants.

At first glance, the diverging wealth effects we document for target CEOs and their shareholders in mergers where these executives get unscheduled grants suggest that these awards only benefit the CEOs. This perception is probably accentuated because our estimates imply a severe wealth imbalance: deal value is reduced by almost $62 for every $1 of profit target CEOs obtain from unscheduled stock options. However, alternative explanations are possible. For instance, the lower premiums we estimate might indicate low quality targets. Under this possibility, unscheduled grants may proxy for targets with low potential synergies with any of the likely acquirers. If this is the case, an unscheduled grant may benefit shareholders in low quality targets because, absent the incentive provided by the award, the acquisition may not be completed. In this scenario, the incentive to target CEOs vis-à-vis the unscheduled awards might be a small price to pay for the potential benefits to target shareholders from earning a premium. To investigate this issue in more detail, we estimate acquirer returns for targets in our sample. If acquirers of a target that issues unscheduled grants do not earn higher returns, then these buyers are paying less to get the target, but they are also getting less in the form of a lower quality target. Such findings would be consistent with the tenet that unscheduled grants unambiguously benefit target shareholders. However, we find that bidder returns involving a target that issues its CEO unscheduled stock options during private deal negotiations are about 2 percentage points higher. Together with our target premium findings, this result appears opposite to the low quality target hypothesis as it implies a transfer of wealth from shareholders of the target to shareholders of the buyer. Therefore, this evidence suggests that CEOs receiving unscheduled option grants during merger negotiations compromise the interests of their shareholders.

Our study contributes to the literature on the incentives and wealth effects of acquisition-related exit pay to target CEOs. Other papers in this area find that takeover offers are lower when target CEOs obtain a parachute increase or a special bonus prior to the merger (Hartzell, Ofek, and Yermack, 2004), or when

target CEOs are hired by the bidder (Hartzell, Ofek, and Yermack, 2004, and Wulf, 2004). We show that targets earn lower premiums when they grant their CEOs unscheduled stock options during merger negotiations.

Dann, Chalmers, and Harford (2002) argue that there are three common elements in situations where managerial opportunism appears to occur: (i) private information exists, (ii) managers have incentives to exploit their informational advantages, and (iii) disclosure is either untimely or nonexistent. The unscheduled grants we study exhibit all of these elements. Specifically, these grants occur while targets possess private information of a possible takeover. As we note, the unscheduled options become immediately exercisable when the merger is completed. This phenomenon could incentivize target managers to exploit their informational advantage related to an imminent merger and obtain large personal gains from these awards. In addition, the unscheduled granting activity we examine is probably one of the least transparent compensation events for these target firms. This happens because investors do not learn that the option grant occurs during merger negotiations until *after* the takeover is announced. Therefore, our study exposes a situation in which the disclosure of executive compensation during acquisitions is untimely.

The paper proceeds as follows. Section 2 compares the unscheduled options we study with other acquisition-related benefits, reviews the literature, and motivates our empirical analyses. Section 3 describes our data. Section 4 contains our empirical analyses. Section 5 discusses our robustness tests. Section 6 concludes.

2. Acquisition-related benefits to CEOs of target firms

For most target CEOs, payments under stock options awarded during private merger negotiations add to the acquisition-related exit benefits these executives get when their firms are sold. In this section, we describe some of these benefits and compare them with the unscheduled grants we study. We also provide a brief overview of studies in financial economics on the role of acquisition-related pay for target managers.

2.1. Golden parachutes

Perhaps the best known acquisition-related benefit given to CEOs of selling firms is the golden parachute. A golden parachute is a provision in an executive's employment agreement stipulating benefits that the employee will obtain if the company experiences a change-in-control or if the executive's employment is terminated. These benefits are often based on the regular cash components of the annual salary and bonus paid to the executive. In some respects, the unscheduled grants we study appear similar to last-minute, backdoor, or emergency parachutes. As with golden parachutes, executives in target firms that receive option grants during merger negotiations can cash in these options right away if deals materialize. This occurs because a completed takeover triggers a change-in-control clause that lifts all vesting periods and other restrictions causing option awards to become immediately exercisable. Given this similarity, it is possible that unscheduled options might be substitutes for the contractual golden parachutes common in many executive compensation agreements. However, because parachute payments are a function of the annual cash compensation paid to the executive, the value of this benefit does not depend on the takeover offer. In contrast, payments under all stock-based compensation, including options awarded during merger negotiations, increase in value with the takeover offer. In light of this difference, incentives under parachutes and stock options might not be the same and the grants we study might complement the stimulus that a parachute provides target CEOs during mergers. Rooted in these ideas, we empirically test the hypothesis that the last-minute unscheduled options granted to target CEOs are substitutes of golden parachutes.

2.1.1. Deal completion

Lambert and Larcker (1985) argue that investors view adoptions of golden parachutes as signals of possible takeovers attempts. A popular view is that firms adopt parachutes as an anti-takeover protection mechanism. Indeed, the presence of a golden parachute is one of the 24 anti-takeover provisions tracked by RiskMetrics and indexed by Gompers, Ishii, and Metrick (2003). Malatesta and Walkling (1988) state that parachute provisions may increase a firm’s ability to trump a takeover attempt. Nonetheless, the evidence related to the effect of parachutes on merger completion is mixed. Machlin, Choe, and Miles

(1993) show that golden parachutes increase the probability of a successful takeover. In contrast, Cotter and Zenner (1994) estimate that gains to managers from their equity holdings, rather than payouts from parachutes, affect the probability of completing an acquisition. Under the view that unscheduled option grants might substitute for parachutes, the existing evidence on golden parachutes suggests that these grants may affect the probability of deal completion. We investigate this issue in our empirical analysis.

2.1.2. Wealth effects

The acquisition-related rewards provided to target CEOs during mergers could help mitigate the future pay loss to the executive when the deal is completed. Hartzell, Ofek, and Yermack (2004) study 311 completed acquisitions during 1995-1997 and find that 37 targets augment the size of their CEO's parachute prior to the merger. Those authors argue that, consistent with Fama's (1980) "ex post settling up" theory, such augmentations help target CEOs overcome the future salary and benefits they lose when their firms merge. Based on this literature, we test the hypothesis that the lost compensation target CEOs expect affects the likelihood that they get unscheduled grants.

Lambert and Larcker (1985) find positive investor reactions upon the announcement of golden parachute adoptions during 1975-1982. They interpret this finding as evidence that parachutes mitigate potential conflicts of interests between managers and shareholders in target firms. Comment and Schwert (1995) argue that parachutes may enhance the target's bargaining position with the bidder. However, Lefanowicz, Robinson, and Smith (2000) analyze 306 completed acquisitions during 1980-1995 and find no association between the level of parachute payments and target gains. In addition, Hartzell, Ofek, and Yermack (2004) show that target CEOs accept lower takeover offers when their parachutes are augmented prior to the merger. Motivated by these studies, we investigate the impact of the unscheduled option grants on the wealth of both target CEOs and target shareholders.

2.2. Post-merger employment

Bargeron, Schlingemann, Stulz, and Zutter (2009) note that CEOs have a potential conflict of interest when their firms become an acquisition target since these executives can bargain to be hired by the bidder firm rather than for a higher premium for the target shareholders. The evidence related to this conflict is

mixed. In her study of mergers involving similarly sized targets and bidders, Wulf (2004) finds that targets experience lower abnormal returns upon deal announcement if the merger agreement stipulates that the target CEO will be employed in the combined firm. Likewise, Hartzell, Ofek, and Yermack (2004) show that targets exhibit lower acquisition premiums when their CEOs become executives in the acquiring firm. In contrast, in a study of cash-only acquisitions of public targets during 1994-2006, Bargeron, Schlingemann, Stulz, and Zutter (2009) find no evidence that the premium paid is lower when the target CEO is hired by the acquirer. Following these studies, we control for target CEOs receiving employment in the combined firm in our premium regressions.

2.3. Merger bonus

Some target CEOs receive a merger bonus as part of their acquisition-related benefits. In a study of bank mergers, Bliss and Rosen (2001) provide examples illustrating that merger bonuses can substantially increase the overall compensation some target CEOs get during acquisitions. Hartzell, Ofek, and Yermack (2004) report that about 27% of targets in their sample award a special merger bonus to their CEOs with an average value of $4.47 million. They note that target boards sometimes justify these payments as consulting fees or noncompetition agreements as required by the buyer. Alternatively, other target firms categorize these payments as "special service recognition," "closing," or "transition" bonus made in consideration of the cancellation of the CEO's employment contract.

A merger bonus is similar to the unscheduled option grants on at least two counts. First, both the bonus and the options mitigate future income losses target CEOs incur when their firms are acquired. Consequently, in subsequent tests, we reduce the value of the expected lost compensation to target CEOs by their merger bonus. Second, once deals are completed, target CEOs often receive payments from stock options, golden parachutes, and their merger bonus. Therefore, we also control for the size of the merger bonus when we estimate the elasticity of substitution of parachutes and the unscheduled option grants.

2.4. Pre-merger equity

Some target CEOs get equity-based benefits during acquisitions. Our goal is to examine the effects of option grants target CEOs obtain during merger negotiations. Nonetheless, our study is not the only one

that considers pre-merger equity to these executives during this period. Heitzman (2010) finds no statistical difference between the incidence of options received by target CEOs involved in negotiations with the bidder and those received by target CEOs that are not involved.

While the key point of differentiation between our paper and Heitzman's is that he explicitly considers the negotiating role of target CEOs, comparing his results to ours might be problematic as there are other important differences between the two studies. Heitzman argues that merger premiums are not related to the target CEOs' involvement in the negotiation process or to whether these executives get a "negotiation grant." To define this variable, he aggregates stock awards and options and does not differentiate whether the options are scheduled or unscheduled. In contrast, we focus exclusively on unscheduled options. This is another critical distinction between the two studies because a considerable fraction of all options granted prior to the announcement of an acquisition are scheduled.[4] Therefore, since scheduled options are periodic or programmed compensation they are unlikely to be related to the merger. Despite these differences, since he considers the interplay between pre-merger equity to target CEOs and their participation in deal negotiations as a mechanism that may affect premiums, we view the work by Heitzman as complementary to ours.

3. Data and variable definitions

3.1. Acquisition sample

We begin with 4,459 mergers and acquisitions tracked by the Securities Data Company (SDC) announced during 1999-2007 in which the target is a publicly traded U.S. company.[5] We exclude spinoffs, recapitalizations, exchange offers, repurchases, self-tenders, privatizations, acquisitions of remaining interest, partial interests or assets, and transactions for which deal value is not disclosed. From the initial sample, we retain 3,567 deals in which targets have stock market and accounting data available

[4] Some of the other important differences between the two papers are related to empirical methods. For instance, unlike Heitzman, our deal completion and target premium tests use the Heckman (1979) method to explicitly control for self-selectivity bias since the decision to issue a pre-merger grant to the target CEO has its own determinants.

[5] We require three years of previous option granting activity in order to establish each target's option granting pattern. Consequently, our sample begins in 1999 because the Thomson Financial's Insiders Filing database, our source for option grants data, starts in 1996.

from the Center for Research in Security Prices (CRSP) and from Compustat, respectively. From this group, we keep 920 transactions where corporate governance data for target firms are available from RiskMetrics and where we could obtain the deal background from the merger proxy filed by the target and/or acquirer with the SEC or from news event searches in Lexis/Nexis.

Panel A of Table 1 reports the industrial distribution of the 920 sample targets. Based on the Fama and French (1997) industrial classification, our sample appears well scattered across several industries. However, the Business Services sector exhibits some clustering with just over 14% of the target firms belonging to that industry. Panel A, Table 1 also reports the temporal distribution of our deals. Our sample spans periods of both economic expansion and contraction. The annual number of mergers announced is higher at the beginning of our sample period, which coincides with times of economic expansion. Conversely, merger activity is lower during the 2002-2003 period of economic contraction. Rhodes-Kropf and Viswanathan (2004) and Shleifer and Vishny (2003) argue that stock market health drives merger activity. The temporal distribution of our sample appears in line with this argument.

In Panel B of Table 1, we report the mode of acquisition, method of payment, attitude, and other characteristics related to the deals we examine. Transactions in our sample are completed almost 82% of the time. Officer (2003) reports a completion rate of 83% in his merger sample during 1988-2000. We note that, among the 920 deals, 491 or about 53% are cash acquisitions. This incidence is comparable to that in Bates and Lemmon (2003). They study mergers during 1989-1998 and find that 47% of the deals are paid in cash. We find that the overwhelming majority of transactions (almost 90%) consist of friendly mergers. This frequency also mirrors that in Bates and Lemmon (2003). We read the S-4, SC-TO, and 13D filings by the acquirer firms and form DEFM14A filed by the target firms with the SEC to ascertain the party that initiates the deal.[6] As the EDS-HP example in the introduction illustrates, these filings often contain a section labeled merger background which provides information detailing the transaction. Aktas,

[6] According to the SEC, form S-4 may be used for registration of securities to be issued (i) in a transaction of the type specified in paragraph (a) of Rule 145 (of the 1933 Act); (ii) in a merger in which the applicable state law would not require the solicitation of the votes or consents of all of the security holders of the company being acquired; (iii) in an exchange offer for securities of the issuer or another entity; (iv) in a public reoffering or resale of any such securities acquired pursuant to this registration statement; or (v) in more than one of the kinds of transaction listed in (i) - (iv) filed on one registration.

de Bodt, and Roll (2010) use a similar procedure and estimate that in about 42% of the cases they study target firms initiate the merger. We find that in almost 38% of our transactions, targets initiate the deal. Deals in our sample exhibit an average value of $4.667 billion. Grinstein and Hribar (2004) study acquisitions during 1993-1999 and report an average deal value of $4.7 billion for transactions in their sample. Panel B of Table 1 also reports key firm characteristics for the target firms in our sample. The average (median) target has a market capitalization of $3.359 billion ($0.991). On average, targets in our sample exhibit a market-to-book ratio of 1.715. For the same ratio, Bates and Lemmon (2003) report a mean value of 1.634 for the targets they study.

3.2. Establishing the merger negotiation period

Our goal is to identify grants that target CEOs receive during the private merger negotiation period. This period ends when the deal is publicly announced. To determine the date merger negotiations start, we read the merger background section of the SEC filings. The information from this section, which we supplement with news event searches in Lexis/Nexis, enables us to identify the date when each deal is initiated. In their study of 400 takeover offers during 1989-1999, Boone and Mulherin (2007) review similar proxy filings and use the first meeting of the target CEO and the bidder CEO as the event that marks the start of merger negotiations. To record the start of merger negotiations, we follow a more conservative approach. We identify the first mention of four distinct trigger events in the proxy's background section. These events are (i) the target and the bidder sign a confidentiality and/or standstill agreement related to their merger,[7] (ii) teams of attorneys and/or financial advisors representing the parties to the business combination, along with top managers from the target and bidder firms, meet to discuss the terms of the deal, (iii) following an unsolicited takeover bid, the target's board authorizes its CEO (or another top manager) to pursue merger negotiations with the bidder, and (iv) the target grants the bidder access to its confidential records for the purpose of due diligence (or the proxy states that the bidder conducts such due diligence). Panel A.1 of Table 2 provides the incidence of these trigger events

[7] A standstill agreement is an accord whereby the target and the acquirer each agree not to solicit or embark on acquisitions from or of other parties.

for transactions in our sample. In over 66% of all cases, merger negotiations start with the signing of a confidentiality and/or standstill agreement between the participants. For approximately 17% of deals in our sample, the beginning of merger negotiations occurs when legal and/or financial advisors representing both parties meet. Merger negotiations commence with the target's board authorizing further talks with an unsolicited bidder in about 12% of our cases. In only 6% (or 56 cases) the mention of due diligence is used to record the initiation of merger negotiations. We note that the incidence of our trigger events adds to more than 100% because, in some instances, more than one event occurs during the merger initiation day. The information in Panel A.2 of Table 2 indicates that the average (median) deal in our sample is negotiated in 123 (76) days.

3.3. Defining unscheduled option grants

Yermack (1997) and Aboody and Kasnik (2000) indicate that most CEOs of public companies in the U.S. get stock option awards once each year. Unless the annual board meeting in which options are regularly awarded occurs during merger negotiations, grants occurring during this period are likely to be unscheduled. Therefore, to verify whether an award is unscheduled, we first study the meeting scheduling practices of our target firms for at least three years prior to the takeover offer. We learn that most boards schedule their meetings at regular intervals. Some use the same calendar date to meet, such as the third day of the months they will meet, and will convene during the next business day if such day falls on a weekend or holiday. Other boards select the same day of the week to convene, such as the second Tuesday of the months they will meet. We then collect grant data from the Thomson Financial's Insider Filing database. This information together with the board meeting patterns enables us to learn how targets grant executive stock options. We classify an option grant as regular or scheduled if it is dated within 14 days of the one-year anniversary of a prior award.[8] Grants are classified as unscheduled otherwise.

[8] In 23 cases, targets with no previous use of options to compensate their CEOs grant these awards when merger negotiations are underway. We code these instances as "unscheduled awards." The business press documents the case of Mr. Isaac Perlmutter, CEO of Marvel Entertainment Inc., whose firm was recently acquired by the Walt Disney Company. Mr. Perlmutter had never received option grants from Marvel since becoming its CEO on January 1, 2005. However, he received multiple option grants for over a million shares of Marvel during merger negotiations with Disney. These unscheduled options would generate a profit of about $34 million for Mr. Perlmutter. See, "Marvel CEO Got Options Prior to Disney Deal," *Wall Street Journal*, September 25, 2009, pg. A23.

3.3.1. Characteristics of stock options granted during merger negotiations

In Panel B of Table 2, we use the classification scheme described above to identify the sample targets that issue unscheduled grants while their acquisition is being privately negotiated. We find that 238 of the 920 targets in our sample grant options while merger negotiations are ongoing. Among these, 123 (or 13.26%) grant at least one unscheduled award while 115 grant only scheduled awards. This frequency suggests that the practice of granting unscheduled awards to target CEOs during deal negotiations is somewhat common. In addition, Panel C of Table 2 reports that targets in our sample issue a total of 343 grants during the merger negotiation period. We classify 199 (or 58%) of these awards as unscheduled. According to Hall and Murphy (2000), about 94% of option grants to S&P 500 CEOs in 1998 were at-the-money grants. Over 88% of the unscheduled grants in our sample are issued at-the-money.

We perform additional checks to ensure the accuracy of our classification of options as unscheduled or scheduled awards. We read the proxy statements filed by target firms to verify that our classification does not result from (i) revisions in compensation policies, (ii) appointments of an interim chief executive, and/or (iii) renegotiations of an existing employment contract. We supplement the reported data in proxy statements with searches in Lexis/Nexis and the financial press.

The information in Panel D of Table 2 indicates that target CEOs in firms that grant unscheduled options earn an average (median) profit of $3.46 ($0.53) million from these awards. We compute the profit target CEOs realize from the unscheduled awards by subtracting the option's exercise price from the merger offer price and multiplying this difference by the number of shares in the grant.

4. Empirical analyses

4.1. Determinants of unscheduled option grants

As noted above, 123 of the 920 target firms we study grant their CEO at least one unscheduled option award while non-public merger negotiations are in progress. To investigate the characteristics of targets that engage in this practice, we run bivariate logit models where the dependent variable is "1" if the target is among these 123 firms and is "0" otherwise. We estimate three different logit regressions of the

determinants of the unscheduled grants and report our findings in Table 3. All tests control for year and industry fixed effects and for other variables which we define in the legend accompanying Table 3.

4.1.1. The substitutes hypothesis

Unscheduled grants to target CEOs could be emergency golden parachutes given to these executives during merger negotiations to substitute for a golden parachute. However, it is not ex-ante obvious that parachutes and stock options are substitutes because, unlike options, payments under golden parachutes are not a function of the takeover offer. In models (1) and (2) of Table 3, we include golden parachute as an independent variable to test whether parachutes and unscheduled options are substitutes. In these regressions, the size of the parachute variable is the natural logarithm of the payments we identify as golden parachute compensation. We obtain information on these payments from the last proxy filed by the targets prior to the merger announcement, the S-4 proxy filed by the acquirers, and/or the DEFM14A proxy filed by the targets following the merger announcement. In models (1) and (2) of Table 3, the coefficient for the parachute variable is negative and statistically significant. These results indicate that boards are more likely to issue unscheduled options when parachutes are small or not offered. In terms of the marginal effect implied by the estimates, a $1 million decrease in the mean parachute increases the probability of granting unscheduled options during merger negotiations by about 2.31 percentage points. For reference, the mean parachute value for all target CEOs in our sample is $3.93 million. This finding is consistent with the hypothesis that the unscheduled options we investigate are used as substitutes for golden parachutes during merger negotiations.

4.1.2. Lost compensation

Hartzell, Ofek, and Yermack (2004) find that some targets augment the parachute given to their CEOs before mergers. They argue that such augmentations act as a form of ex post settling up (Fama, 1980), through which target CEOs mitigate losses arising from the salary and benefits they will relinquish upon the merger. It is possible that the unscheduled stock options we study are used to ex post settle up target CEOs in our sample. To illuminate this issue, we test the hypothesis that the lost compensation target CEOs expect affects the probability that they get these awards. For this purpose, we include the present

value of the expected lost compensation by the target CEO as an independent variable in model (3) of Table 3.

To calculate the present value of the expected lost compensation, we use information on salary, bonus, other annual compensation, long-term incentive payouts, golden parachutes, and the value of restricted stock and option awards as reported in proxy statements. This approach follows the method of Fich and Shivdasani (2007) who estimate the financial magnitude of personal losses of sued directors. To estimate the present value of the expected lost compensation, we make the following assumptions. First, following Hartzell, Ofek, and Yermack (2004), we assume that all CEOs retire by age 65 and that CEOs who are at least 65 years old expect to stay in office one more year before retiring. Second, following Yermack (2004), we assume that the probability of departure increases by 4% each year due to acquisitions, delistings, or other turnover reasons. Third, we assume that salary and bonus would increase by 2% from that received during the year prior to the acquisition when firm performance is above the Fama and French (1997) median industry ROA. This assumption is consistent with the evidence in Bebchuk and Grinstein (2005), who report a 40% increase in salary and bonus for CEOs during 1993-2003. Fourth, we assume that the probability of departure increases by an additional 2% when firm performance is below the median industry performance. Fifth, we use a real rate of 3% to discount cash flows. Sixth, we standardize the present value of the expected lost compensation by the total pay received by the target CEO during his last year in office under the view that, all else equal, the same expected loss would be more severe for CEOs earning lower total pay packages.

The coefficient estimate for the expected lost compensation variable in model (3) of Table 3 is positive and statistically significant. The marginal effect implied by this estimate indicates that a $10 million increase in expected lost compensation raises the probability of receiving an unscheduled award during merger negotiations by about 11.15 percentage points. The economic magnitude of this marginal effect is notable since target CEOs in our sample expect an average present value pay loss of just over $35 million when their firms are sold. This finding suggests that unscheduled stock options are granted to

target CEOs in an effort to make these executives whole for the compensation they will lose when their companies are acquired.

4.1.3. Other determinants of unscheduled grants

The regressions in Table 3 include additional independent variables, some of which are worthy of some discussion. For instance, all tests control for a dichotomous indicator labeled "catch up grant." This variable takes the value of "1" if the size of the last scheduled option grant prior to the start of merger negotiations is at least 10% lower than the preceding scheduled grant. We also include an indicator variable to control for new CEOs. This variable equals "1" if the target CEO has been in office for a year or less before the initiation of merger talks. We use another (0,1) indicator to control for targets that issue unscheduled options during the year prior to the start of merger negotiations and a different (0,1) variable to indicate a change in control clause in the target CEO's compensation contract. We note that the new CEO (0,1) indicator exhibits positive and significant coefficients in all specifications. In addition, targets in which there is a change in control clause in their CEOs' compensation contract are 3.39 percentage points more likely to grant these executives unscheduled options. As noted earlier, these clauses call for option vesting periods and other restrictions to disappear when firms are sold. Neither the catch up grant variable nor the previous unscheduled grant indicator exhibits statistically significant coefficients.

Our determinant tests also control for the presence of busy boards, which we define as those in which at least half of the outside directors hold three or more directorships. Core, Holthausen, and Larcker (1999) find that busy boards overpay their CEOs. Our findings indicate that under busy boards, targets are about 10.38 percentage points more likely to grant their CEOs unscheduled options during the acquisition negotiation period. In addition, targets with low institutional ownership concentration appear more likely to grant their CEOs unscheduled options during private merger talks.

4.2. The elasticity of substitution of golden parachutes and unscheduled option grants

The results of the first two regressions in Table 3 indicate that targets are 2.31 percentage points more likely to issue unscheduled grants to their CEOs for a $1 million decrease in the mean parachute. Although this evidence supports the hypothesis that parachutes and unscheduled grants are compensation

substitutes during acquisitions, the evidence in Table 3 does not reveal their degree of substitutability. To investigate this issue, we estimate the following model.

$$ln \text{ (unscheduled grant value)} = \alpha + \beta_1 \, ln \text{ (golden parachute value)} + \text{control variables} + \varepsilon \quad (1)$$

This specification is comparable to those in Core and Guay (2001) and Woodbury (1983). Core and Guay (2001) empirically investigate whether firms use stock options as a substitute for cash pay to compensate non-executive employees in public firms. Woodbury (1983) examines whether hourly wages and fringe benefits are substitutes. In model (1), the dependent variable is the value of the unscheduled options when the acquisition is announced. As in Core and Guay (2001), we value these awards using the Black-Scholes (1973) methodology adjusting for dividend payments following Merton (1973). The key independent variable is the value of the parachute payment defined earlier. Model (1) controls for the merger bonus paid to the target CEO and for other variables similar to those in Core and Guay (2001). Following Woodbury (1983), model (1) uses the natural logarithm of the unscheduled options and the natural logarithm of the golden parachute. The use of the log-log specification assumes that the elasticity of substitution between the parachute and the unscheduled options is constant. This elasticity is given by the β_1 coefficient in model (1).

In Table 4 we estimate two variants of model (1).[9] The parachute variable yields negative and statistically significant coefficients in both regressions. The elasticity of substitution related to these coefficients implies that the value of the unscheduled options increases by 5.8% to 6.2% for a 10% decline in the value of the parachute. For the 123 deals we examine in Table 4, we divide the mean value of these options by the mean value of the golden parachute and multiply the resulting ratio by the elasticity of substitution. This product is 1.03 (1.11) when we use the 5.8% (6.2%) estimate for the elasticity. This result implies the following marginal rate of substitution: a $1 shortfall in the value of the golden parachute increases the value of the unscheduled option grant by approximately $1.03 to $1.11.

[9] Because the results in Table 3 indicate that granting unscheduled stock options has its own determinants, in model (2) of Table 4 we control for endogenous self-selection using the inverse Mill's ratio (Heckman, 1979). The Heckman self-selectivity correction involves a first-stage estimation of the probability of granting unscheduled options during merger negotiations as in model (3) of Table 3. In the second stage, the inverse Mill's ratio from the first stage model is included in the estimation as a variable to control for endogenous self-selection.

4.3. Unscheduled awards and deal completion

Targets might grant unscheduled options to their CEOs during secret merger deliberations to provide these executives with an incentive to go along with the acquisition. Under this alternative, these awards may affect the probability of deal completion. To explore this issue, in Table 5 we estimate two bivariate logit models in which the dependent variable is "1" if the acquisition materializes and is "0" otherwise. The key independent variable, which we define as the unscheduled options indicator, takes the value of "1" if the target firm grants its CEO unscheduled options during merger negotiations. The indicator is set to "0" otherwise. Control variables in the deal completion regressions, which we define in the legend of Table 5, are similar to those in Officer (2003) and in Bates and Lemmon (2003). These authors also study the probability of merger completion. All tests control for industry and year fixed effects. In model (2) of Table 5 we control for endogenous self-selection using the inverse Mill's ratio (Heckman, 1979).

The results in models (1) and (2) of Table 5, which we run for the entire sample of 920 acquisitions, imply that deals in which targets issue unscheduled awards to their CEOs during merger negotiations are 11.96 percentage points more likely to be completed. Shleifer and Vishny (2003) argue that target managers who are more focused on the short run should be more likely to sell their firms. It is possible that gains to a target CEO arising from an unscheduled grant facilitate transactions by shifting the CEO's orientation more toward the short run.

Other results in Table 5 are in agreement with those in previous studies. The marginal effect associated with our target termination fee variable is nearly 18 percentage points, which is close to that of 16 percentage points in Bates and Lemmon (2003). Walkling (1985), Comment and Schwert (1995) and Schwert (2000) argue that deal attitude is crucial for mergers to be completed. This is certainly true in our sample: deals characterized as hostile are 45.6 percentage points less likely to be completed.

Overall, the estimates in Table 5 indicate that unscheduled option grants materially affect the likelihood of merger completion. One possible interpretation of this result is that unscheduled options benefit both target CEOs and target shareholders. Target CEOs benefit since change in control clauses that enable these executives to immediately cash in their unscheduled options are only triggered if deals

are completed. Target shareholders might benefit because, under completed takeovers, they earn a premium. Next, to study this issue in greater detail, we examine the wealth effects associated with the unscheduled stock option grants.

4.4. Unscheduled options to target CEOs and acquisition premiums paid to target firms

To directly explore the wealth effects experienced by targets that grant their CEOs unscheduled options during merger negotiations, in Table 6, we run two regressions of the acquisition premium. The dependent variable in these tests is the premium from SDC which is calculated as the offer price divided by the target's stock price four weeks before the merger announcement date.[10] The key independent variable is the unscheduled options indicator. Other control variables are defined in the legend accompanying Table 6. Both models control for year and industry fixed effects and model (2) controls for endogenous self-selection.

Other researchers also estimate premium regressions similar to ours. Coefficient estimates in both models of Table 6 are in line with those in previous studies. For example, like Bargeron, Schlingemann, Stulz, and Zutter (2008), we estimate a negative coefficient for target firm size and positive coefficients for hostility and prior bidding. Similar to Huang and Walkling (1987) we find that premiums related to tender offers are higher. In agreement with Bates and Lemmon (2003) and Officer (2003), we find a positive estimate for the target termination fee variable. As in Bargeron, Schlingemann, Stulz, and Zutter (2009), in model (2) of Table 6 we find that target CEO's post-deal employment is unrelated to takeover premiums.

[10] Following Officer (2003) we restrict this premium measure to 2 (or 200%) to avoid extreme outliers. Results related to the target premiums in Table 6 also hold when we replace the four-week premium by the *CAR* accruing to targets beginning twenty days before the merger announcement date and ending one day after the announcement. Our results are also robust to defining target premiums using cumulated returns over the (-42, +126) window, as in Schwert (1996). We also re-estimate the target premiums using the combined premium method in Officer (2003). Following his approach, we first estimate a premium based on "component" data using the aggregate value of cash, stock, and other securities offered by the bidder to target shareholders as reported by SDC. We then estimate premiums based on "initial price" and "final price" data, respectively. These prices are also reported by SDC. All premium measures are then deflated by the target's market value forty-two trading days prior to the bid announcement. The combined premium is based on the component measure if it is greater than 0 and less than 2; otherwise the premium relies on the initial price measure (or on the final price measure if initial price data are missing). The results in Table 6 also hold when we use Officer's (2003) combined premium method.

With regards to our key independent variable, coefficients for the unscheduled options indicator are negative and statistically significant in both regressions in Table 6. The magnitude of these estimates is economically important indicating that premiums earned by targets that grant their CEOs unscheduled options are 4.4 to 4.7 percentage points lower. Based on the first estimate and the mean takeover offer in our sample, in mergers involving these targets, deal value is about $214.79 million less.[11] To put this result into context, since target CEOs obtain an average profit of $3.46 million from their unscheduled option grants, target shareholder wealth declines by about $62 for every dollar target CEOs get from these awards.

4.5. Unscheduled grants to target CEOs and bidder returns

On the surface, the results related to the lower premiums earned by targets that grant unscheduled options to their CEOs appear at odds with the idea that these awards benefit shareholders in these firms. Nonetheless, it is possible that these targets earn lower premiums because the resulting deals produce lesser synergies. Given this scenario, unscheduled options might be necessary for CEOs in these low quality firms since, without the incentive the grant provides, target shareholders would not gain from being acquired by earning a premium. Under this possibility, unscheduled stock options benefit shareholders in targets that grant these awards to their CEOs.

The above discussion suggests that unscheduled stock options to target CEOs might proxy for targets of inferior quality. This conjecture has direct wealth implications for the buyers. Specifically, if acquirers pay lower premiums but also obtain less in the form of a lesser quality target, then acquirers of these targets should not earn higher returns. If this occurs, the unscheduled grants would appear to be in the target shareholders' best interest. If this does not occur, shareholders in the bidding firms could be capturing rents from shareholders in targets that grant unscheduled options to their CEOs. To investigate this issue, we use the standard event-study methodology to estimate the three-day market-model-adjusted cumulative abnormal return (*CAR*) centered on the announcement of the acquisition and accruing to the

[11] This estimate is calculated as follows: [4,667 / (1 – 0.044)] – 4,667 = $214.79 million. In the calculation, $4,667 million is the average offer for targets in our sample.

474 publicly traded buyers in our sample. We sort bidder *CARs* by whether the target grants unscheduled options to its CEO during the merger negotiation period. Univariate results indicate that mean (median) acquirer returns related to unscheduled option grants during merger negotiations are -2.04% (-1.84%), whereas those unrelated to unscheduled grants are -3.26% (-2.40%). Even though buyers of targets that grant unscheduled stock options get less negative returns, differences between mean (median) returns across subsamples fail to attain statistical significance at conventional levels. Nevertheless, given the univariate nature of these tests and due to the complex association between the bidder returns and other variables, we turn to a multivariate analysis to examine the bidder returns.

In Table 7, we run two OLS regressions of the three-day merger announcement *CAR* accruing to the publicly traded bidders in our sample. The key independent variable in these tests is the unscheduled grant indicator. In models (1) and (2) of Table 7 we control for various deal, market, and bidder characteristics similar to those in Moeller, Schlingemann, and Stulz (2004) and Masulis, Wang, and Xie (2007). In model (2) of Table 7, we also include target characteristics similar to those in Moeller (2005) and Wang and Xie (2009) as additional control variables. In general, the control variables in Table 7 yield results in line with the existing literature. For example, as in Moeller, Schlingemann, and Stulz (2004), bidder size is negatively related to the acquirer return. Similar to Masulis, Wang, and Xie (2007), the competitive industry indicator yields positive coefficients while the bidder G-index and the relative size variable yield negative coefficients.

The estimates reported in Table 7 also indicate that acquirer returns in deals where a target grants its CEO unscheduled stock options during confidential merger negotiations are approximately 2 percentage points higher. This result, along with the lower takeover premium earned by targets that grant these unscheduled options, implies a transfer of wealth from the target shareholders to the acquiring shareholders.

One possible explanation for our results is that targets granting unscheduled stock options are of such low quality that they need to give up rents to their acquirers in order to be sold. To explore this conjecture, we compare the performance of these targets with that of other firms in their industries during

the year prior to the deal. We recognize that such comparison is not perfect because target performance is probably one of many variables related to the synergistic gains in an acquisition. At the same time, it is improbable that a company would be acquired at a discount if it is performing well.

In our sample, the 123 target firms that grant unscheduled options to their CEOs during merger negotiations operate in 31 of the 48 Fama and French (1997) industries. We use this industry classification and ROA as our metric for performance in a univariate test in which we compare the performance of these targets with that of other firms in their industries. The results reveal that the 123 firms that grant unscheduled stock options exhibit a median industry adjusted ROA of 1.7% (*p*-value = 0.001) during the year before the acquisition.[12] This finding casts doubt on the alternative that targets that issue unscheduled option grants are low quality firms and on the possibility that these grants serve the interests of the target shareholders.

5. Robustness tests

5.1. Classification of unscheduled grants

Due to our discussions with some practitioners, the classification of scheduled grants we use is not too restrictive. We use a large window of two weeks of the one year anniversary of a prior grant to classify scheduled grants. This window, which is larger than the one employed in Lie (2005), would actually work against uncovering unscheduled option awards. We replicate our analyses with a window of one week of the one year anniversary of a prior grant. Doing so increases the number of target firms that grant unscheduled options during merger negotiations from 123 to 129. The results associated with the use of this classification are qualitatively similar to those using the two week window. In the most extreme case, as in Lie (2005), we replicate our tests with a window of just one day deviation from the one year anniversary of a prior grant. This criterion increases the number of target firms that grant

[12] Seventy-five of the 123 firms that grant unscheduled stock options are targeted by one of the 474 public bidders we study in Table 7. The industry-adjusted ROA for these 75 targets in the year before the deal is 2% (*p*-value = 0.001).

unscheduled options during merger negotiations to 137. All results continue to hold under this classification scheme.

5.2. Incidence of unscheduled options

Are unscheduled stock option grants more prevalent during acquisitions? To study this issue, we follow the method of Barber and Lyon (1996) to match our 238 firms that grant options during merger talks with similar firms that are not acquisition targets. The matching non-target firms grant options one year before the merger announcement date of the sample target firms. We recall that from the 238 sample firms that grant stock options during merger talks, 123 (or 51.68%) issue at least one unscheduled grant during this period. In contrast, we find 101 matching non-targets with unscheduled grants (42.44%). When we change the granting period from one year to six months, only 67 matching non-targets (or 28.15%) issue unscheduled grants. Based on the grants occurring one year before the deal, the incidence of unscheduled options is statistically lower in non-targets than in targets. The *Z*-statistic for the difference in the proportion of unscheduled options between our targets and the matching non-targets is 2.02.

Throughout this paper, we claim that granting unscheduled options to target CEOs is a non-trivial phenomenon during the merger negotiation period. This claim implies that the incidence of these options is higher once a firm becomes a target and this period begins. While the matching sample test described in the previous paragraph suggests that this could be the case, a broader benchmark might be more appropriate to better substantiate this claim. Therefore, we study the option granting activity for 2,204 different non-merger companies during our sample period. The data requirements imposed upon these firms are similar to those required from our sample targets and described in Section 3.1. Altogether, we examine a total of 12,214 non-merger firm-year observations during 1999-2007. Following the procedure set forth in Section 3.3, we learn the board meeting scheduling and option granting patterns for each non-merger firm for at least three years prior to an option grant. With this information, we track all the options grants to each CEO during our sample period. As with our target firms, we code an option grant as scheduled if it is dated within 14 days of the one-year anniversary of a prior grant. Otherwise, we classify

options as unscheduled. In situations in which we label an option grant as unscheduled, we ensure that the coding is not the result of (i) a renegotiation of the CEO's compensation contract or (ii) a change in pay policies. We find that the incidence of unscheduled options in the non-merger sample is about 8.97%.[13] Comparing this rate with the 13.36% frequency of unscheduled options during merger negotiations accruing to our sample targets yields a *Z*-statistic for the difference in proportions of 3.26. This result indicates that unscheduled options are indeed more prevalent during merger negotiations. Moreover, this finding puts the 13.36% frequency of unscheduled options in context relative to overall (non-merger) behavior of boards with respect to these grants.

6. Summary and conclusions

Many target firms award their CEOs unscheduled options when private merger negotiations are underway. This phenomenon appears to be a non-trivial event during takeovers. In a sample of 920 acquisition bids during 1999-2007, nearly one in seven targets grants its CEO unscheduled stock options during deal negotiations. In this paper, we study the causes and consequences of this practice.

We find that the probability of issuing unscheduled options during merger negotiations is an inverse function of the golden parachute given to the target CEO. Our estimates imply that a $1 million decrease in the average parachute increases the probability of granting unscheduled options by 2.31 percentage points. This finding indicates that these eleventh hour stock options are used as substitutes for golden parachutes during acquisitions. Our tests also reveal that the probability of granting unscheduled stock options increases with the pay losses the target CEO incurs if the deal is completed. Estimates imply that when the expected lost compensation to the target CEO increases by $10 million, an unscheduled grant is about 11 percentage points more likely. This result may reflect the intent of the target's board to issue an

[13] In the sample of non-merger firms, we encounter situations in which the CEO is replaced due to retirement, illness, or other reasons. If the replacement is a corporate insider, we use that executive's history of previous options grants prior to becoming CEO to code subsequent option grants. If the replacement is an outsider, we observe the option granting activity for the first three years that executive is in office. We then code option grants as scheduled or unscheduled beginning the fourth year of the CEO's tenure.

unscheduled grant to help its CEO reduce wealth losses from the future compensation the chief executive forfeits upon the merger.

The last minute unscheduled grants we study appear to affect merger outcomes. Our results indicate that acquisitions are almost 12 percentage points more likely to be completed when the target firm grants its CEO unscheduled awards while secret merger negotiations are ongoing. This result is noteworthy given that the unconditional probability of deal completion for transactions in our sample is 81.8%. Moreover, we also find that unscheduled stock options have a material effect on the wealth of target shareholders in firms that grant them. Targets offering these benefits earn premiums about 4.4 percentage points lower.

We consider the possibility that targets that grant their CEO unscheduled options earn lower premiums because they are lower quality firms. Under this alternative, the unscheduled grant signals lower quality targets and buyers pay less because these targets are worth less. These conjectures imply that bidders of targets that grant unscheduled grants should not earn higher returns and that these grants benefit target shareholders. To shed light on these issues, we conduct a multivariate analysis of the acquisition announcement returns meeting the public bidders in our sample. The results of these tests indicate that in deals where the target grants its CEO unscheduled options during merger negotiations, bidder returns are approximately 2 percentage points higher. This finding appears inconsistent with the assertion that targets that grant their CEOs unscheduled options are of inferior quality and that the options serve the interests of the shareholders in these firms. In fact, the results of our target premium and bidder return tests suggest a transfer of wealth from the target shareholders to the acquiring shareholders.

Despite the results of our target premium and bidder return tests, we cannot decisively assess whether unscheduled options are prejudicial to target shareholders. Our sample includes bids for targets that are made public. Therefore, we cannot identify what prospective benefits other target CEOs reject in potential acquisitions in which a bid is never made public, perhaps to the disadvantage of their shareholders. Nonetheless, we note that our estimates imply a severe disparity in the wealth effects accruing to target CEOs and their shareholders in firms that grant unscheduled options. On average, CEOs in these targets

earn about $3.5 million from the awards. In contrast, targets that grant these options exhibit an average deal value shortfall of almost $215 million. Combined, these findings imply a drop of about $62 in terms of deal value for every $1 target CEOs realize from unscheduled options granted during confidential merger negotiations. Consequently, the financial cost to shareholders in targets that issue these grants appears to considerably exceed the benefits their CEOs receive from the awards.

Our paper contributes to the literature that studies the effects of the exit compensation and other benefits given to CEOs that sell their firms. In this regard, our results suggest that target CEOs who receive extraordinary benefits from unscheduled options compromise the interests of their shareholders during acquisitions. Moreover, the unscheduled granting activity we investigate might be one of the least transparent compensation events for these target companies. This occurs because, absent a dataset like ours, these compensation events are not explicitly disclosed and are, therefore, hard to detect. Hence, our results expose potential limitations in the disclosure of executive compensation during acquisitions.

Our findings also have broader implications related to the effectiveness of executive compensation. Indeed, the fact that a last-minute grant needs to be provided to target CEOs suggests that their pay structure does not deliver adequate incentives. Therefore, our results add to the debate over the efficacy of the compensation contracts to top managers in public firms.

From a public policy perspective, since target CEOs receive unscheduled grants while in possession of undisclosed information related to the merger, the timing of these awards raises issues pertaining to insider trading. Specifically, Sections 16(b) and 10(b) of the 1934 Securities Act proscribe the *sell* or *purchase* of a security by any person while in possession of material, non-public information.[14] However, because option grants do not constitute a "*purchase*" under the 1934 Securities Act (Anabtawi, 2004), by

[14] It is also possible that granting unscheduled options to target CEOs during merger negotiations breaches Rule 14d-10 of the 1934 Securities Act. This rule proscribes "bidders from making a tender offer unless the consideration paid to any security holder pursuant to the tender offer is the highest consideration paid to any other security holder during such tender offer." Courts have wrestled on how to interpret this rule in the context of a variety of compensation arrangements of top executives of target companies (who are often shareholders as well). Perhaps to ease the interpretation of the rule, on October 18, 2006, the SEC adopted amendments to Rule 14d-10(a)(2) which provide a safe harbor enabling the compensation committee of a target's board of directors to provide employment compensation, severance or other employee benefit arrangements for its executives during a tender offer negotiation. Given this amendment, it is unlikely that targets in our sample violate Rule 14d-10 of the 1934 Act.

issuing unscheduled options to their CEOs while their eventual sale is in progress, targets in our sample do not breach insider trading laws. Yermack (2009) finds that well-timed stock gifts by top managers in public firms to charitable foundations occur just before sharp share price declines. He shows that these gifts increase the executives' tax benefits. Yermack discusses that because stock gifts do not constitute a "*sale*" under the 1934 Securities Act, the phenomenon he uncovers does not infringe upon insider trading laws. Consequently, his results along with ours appear to expose potential weaknesses in existing securities laws, particularly those intended to deter insider trading.

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Table 1: Sample description

This table describes our sample which consists of 920 acquisition bids announced during 1999-2007 and tracked in the Securities Data Company's (SDC) merger and acquisition database. We require that target firms have stock market, accounting, and governance data available from the Center for Research in Security Prices (CRSP), Compustat, and RiskMetrics, respectively. In Panel A, we report the industrial and temporal distribution of the 920 targets. For the industry coding, we use the Fama French (1997) 48-industry classification. In Panel B we report deal status, mode of acquisition, method of payment, deal attitude, and deal value. All of these characteristics are obtained from SDC. Information on the sale procedure and the deal initiator is obtained from the merger background section in the proxies filed by the parties to the merger with the SEC. As in Boone and Mulherin (2007), auction refers to cases in which the selling firm contacts multiple potential buyers while negotiation focuses on a single buyer. Initiator is the firm that first contacts the other party in the sale process. Same industry deals are those in which the target and the acquirer belong to the same Fama and French (1997) industrial group. All financial variables are measured at the end of the fiscal year before the merger public announcement date. Leverage equals the book value of debt divided by the sum of book value of debt and market value of equity. Q is defined as total assets minus book equity plus market equity divided by total assets. ROA is operating income divided by the average of beginning- and ending-period book value of total assets.

Panel A: Industrial and temporal distribution for targets

	1999	2000	2001	2002	2003	2004	2005	2006	2007	Total	Pct
Agriculture	1	-	-	1	-	-	-	1	1	4	0.43
Food Products	-	12	3	-	-	1	-	-	-	16	1.74
Tobacco Products	-	1	-	-	-	-	-	-	-	1	0.11
Recreation	1	-	-	-	-	-	-	-	2	3	0.33
Entertainment	3	4	1	-	-	6	-	8	-	22	2.39
Printing and Publishing	1	3	-	-	-	-	1	5	2	12	1.30
Consumer Goods	4	-	2	1	1	-	3	2	-	13	1.41
Apparel	1	1	1	-	1	-	3	-	3	10	1.09
Healthcare	1	1	-	-	-	1	6	4	4	17	1.85
Medical Equipment	3	6	2	1	-	4	3	3	4	26	2.83
Pharmaceutical Products	10	6	3	1	4	2	4	5	8	43	4.67
Chemicals	5	2	-	1	-	2	1	3	1	15	1.63
Rubber and Plastic Products	4	1	-	-	-	-	-	1	1	7	0.76
Textiles	-	3	1	-	-	1	-	1	-	6	0.65
Construction Materials	5	6	-	-	2	2	1	3	1	20	2.17
Construction	-	1	2	-	-	-	-	-	-	3	0.33
Steel Work	5	1	-	-	-	2	-	6	4	18	1.96
Fabricated Products	1	-	-	-	-	-	-	-	-	1	0.11
Machinery	4	5	2	1	-	3	5	1	2	23	2.50
Electrical Equipment	2	3	-	-	-	-	2	1	1	9	0.98
Automobiles and Trucks	3	5	-	1	1	-	-	2	-	12	1.30
Aircraft	2	1	-	-	-	-	-	-	1	4	0.43
Shipbuilding, Railroad Equipment	6	1	2	-	-	-	-	-	-	9	0.98
Defense	-	-	-	-	-	1	-	-	-	1	0.11
Precious Metals	-	1	1	-	-	-	-	-	-	2	0.22
Non-metallic Industrial Mining	2	-	-	1	-	-	-	1	-	4	0.43
Petroleum and Natural Gas	4	7	9	3	2	7	4	7	1	44	4.78
Utilities	26	7	3	-	2	2	4	9	3	56	6.09
Communication	14	3	2	2	-	3	4	7	4	39	4.24
Personal Services	1	-	-	1	2	-	-	1	2	7	0.76
Business Services	16	14	8	6	11	13	18	21	26	133	14.46
Computer Hardware	5	4	4	1	2	-	8	6	3	33	3.59
Computer Software	6	6	5	2	2	5	4	5	7	42	4.57
Measuring and Control Equipment	2	-	1	-	-	1	-	-	5	9	0.98
Business Supplies	2	8	1	-	1	1	1	-	2	16	1.74
Shipping Containers	-	-	-	-	-	-	-	-	1	1	0.11
Transportation	4	4	3	-	1	-	2	2	4	20	2.17
Wholesale	5	3	4	2	1	5	3	5	2	30	3.26
Retail	6	3	1	2	6	2	14	8	9	51	5.54
Restaurants, Hotels, Motels	2	2	2	2	-	2	1	2	3	16	1.74
Banking	7	12	8	1	6	11	8	7	8	68	7.39
Insurance	9	4	2	1	5	2	3	1	4	31	3.37
Real Estate	-	-	-	-	-	-	-	1	-	1	0.11
Trading	-	4	1	-	2	1	4	3	6	21	2.28
Others	-	-	-	-	-	-	-	-	1	1	0.11
Total	173	145	74	31	52	80	107	132	126	920	100
Pct	18.80	15.76	8.04	3.37	5.65	8.70	11.63	14.35	13.70	100	

Panel B: Deal and target characteristics

	Proportion of sample	
Completion	0.818	
Tender offer	0.168	
Stock only	0.162	
Cash only	0.534	
Friendly attitude	0.898	
Auction	0.338	
Target initiated	0.376	
Same industry	0.539	
	Mean	**Median**
Deal value (US$ billion)	4.667	1.530
Target market value (US$ billion)	3.359	0.991
Target Q	1.715	1.401
Target leverage	0.266	0.254
Target ROA	0.082	0.072

Table 2: The merger negotiation period and characteristics of options granted during negotiations

Panel A presents key characteristics associated with the merger negotiation period for our sample deals. As in Boone and Mulherin (2007), the merger negotiation period is the time that elapses from the merger initiation date until the merger public announcement date. We use the first mention of one of four distinct trigger events to code the initiation of merger negotiations. These events are identified in the merger background section of proxies filed with the SEC by one or both parties to the deal. Panel A.1 reports the incidence of these trigger events for transactions in our sample. Panel A.2 reports the length of the merger negotiation period. The remaining Panels in this table describe key characteristics related to options granted to target CEOs during the merger negotiation period. We obtain option grant information from the Thomson Financial's Insider Filing database. We classify a grant as a scheduled option award if it is dated within fourteen days of the one-year anniversary of a prior grant and unscheduled otherwise. Panel B provides a breakdown based on the target's option granting activity during merger negotiations. Panel C shows the number of grants awarded to target CEOs during merger negotiations and the moneyness of the unscheduled grants awarded during this period. In Panel D, we report the number of shares and profit target CEOs realize from unscheduled options for the 123 targets that grant at least one of these awards during merger negotiations. We calculate this profit by subtracting the option's exercise price from the merger offer price and multiplying this difference by the grant's size.

Panel A: Merger negotiation period

Panel A.1: *Trigger events that mark the start of the merger negotiations*	Count
The target and the acquirer execute confidentiality and/or standstill agreements related to the business combination of the firms.	615
Teams of financial and/or legal advisors representing the parties to the merger, along with top managers from the target and the bidder, meet to discuss the terms of the deal.	158
After receiving an unsolicited offer, the target's board authorizes the CEO and/or other top managers to pursue further negotiations with the bidder.	114
The target grants the acquirer access to its records for the purpose of due diligence and/or the acquirer conducts due diligence on the target.	56

Panel A.2: *Length of the merger negotiation period*	Mean	1st Quartile	Median	3rd Quartile
Days from initiation date to announcement date	123	31	76	163

Panel B: Target level information

Full sample	920
Targets that grant options during the merger negotiation period	238
- Targets that grant at least one unscheduled option award during the merger negotiation period	123
- Targets that grant only scheduled option awards during the merger negotiation period	115

Panel C: Option grant level information

Number of option grants awarded during the merger negotiation period	343
Number of option grants awarded during the merger negotiation period classified as scheduled	144
Number of option grants awarded during the merger negotiation period classified as unscheduled	199
- Number of at-the-money unscheduled grants awarded during merger negotiations	176
- Number of out-of-the-money unscheduled grants awarded during merger negotiations	16
- Number of in-the-money unscheduled grants awarded during merger negotiations	7

Panel D: Unscheduled options during merger negotiations: Award information

	Mean	Median
Total number of shares	299,102	113,475
Realized profit based on the merger offer price (US$)	3,455,386	528,700

Table 3: Determinants of unscheduled option grants during merger negotiations

The sample consists of 920 merger and acquisition bids announced during 1999-2007 described in Table 1. The dependent variable in the logit models reported in this table equals one if the target firm grants unscheduled option awards to its CEO during private merger negotiations. We classify a grant as a scheduled option award if it is dated within fourteen days of the one-year anniversary of a prior grant and unscheduled otherwise. Golden parachute is the estimated payment to the target CEO resulting from the merger. This variable is calculated based on information from the target's last proxy statement filed prior to the merger announcement or from the merger proxies filed after this announcement. Lost compensation is the estimated present value of the CEO's lost compensation when his firm is sold after deducting all expected parachute payments and special bonuses. CEO duality (0,1) equals one if the CEO is also the chairman of the board. New CEO (0,1) equals one if the CEO is appointed within a year before the merger initiation date. Equity ownership is the percentage of stock and options owned by the CEO. Change in control provision (0,1) equals one if the target CEO has this provision in his compensation agreement. Prior unscheduled granting practice (0,1) equals one if there is at least one unscheduled option grant awarded during the year before the initiation date. The catch up grant (0,1) equals one if the Black-Scholes value (adjusted by dividend payouts as per Merton, 1973) of the most recent grant (prior to the start of merger negotiations) is less than 90% of the Black-Scholes value of the grant that precedes it. Size is the natural logarithm of the market value of assets. The operating cash flow variable is scaled by total assets. Prior year market adjusted return is the buy and hold abnormal return (*BHAR*) during the one year window before the initiation date, using the CRSP value-weighted return as the benchmark. Prior year return volatility is the standard deviation of returns during the year before the initiation date. Classified board (0,1) equals one if not all directors are elected in the same year. Busy board (0,1) equals one if at least 50% of outside directors hold three or more directorships. Board size is the natural logarithm of the number of directors on the board. Independent board (0,1) equals one if at least half of the board's directors are independent. A director is considered independent if s/he is not a current or former employee of the firm or a subsidiary, and is not affiliated with the company as defined by RiskMetrics. Insider ownership is the percentage of equity owned by all directors and officers of the company as reported in the most recent annual proxy before the merger. Institutional ownership concentration is the Herfindahl index of institutional ownership. Other variables are self-explanatory or defined elsewhere. All variables are measured at the end of the fiscal year before the merger public announcement date. We report White (1980) heteroskedasticity consistent *p*-values in parentheses. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	Probability of granting unscheduled options		
	(1)	(2)	(3)
Intercept	91.587	44.057	118.265
	(0.130)	(0.483)	(0.103)
Target CEO characteristics			
Golden parachute	-0.386**	-0.359**	
	(0.015)	(0.026)	
Lost compensation			0.301**
			(0.040)
CEO duality (0,1)	0.258	0.287	0.349
	(0.328)	(0.297)	(0.203)
Age	-0.474	-0.232	-0.686*
	(0.120)	(0.463)	(0.075)
Age^2	0.601	0.300	0.095*
	(0.116)	(0.450)	(0.061)
New CEO (0,1)	3.075***	3.194***	3.190***
	(0.001)	(0.001)	(0.001)

Equity ownership (% of common)	-0.001	0.015	0.014
	(0.931)	(0.343)	(0.381)
Change in control provision (0,1)	0.540*	0.478*	0.411*
	(0.078)	(0.085)	(0.093)
Prior unscheduled granting practice (0,1)	0.329	0.294	0.344
	(0.206)	(0.273)	(0.197)
Catch up grant (0,1)	0.143	0.108	0.169
	(0.562)	(0.670)	(0.503)
Target characteristics			
Size	-0.025	-0.109	-0.072
	(0.797)	(0.356)	(0.541)
Q	0.096	0.092	0.077
	(0.429)	(0.456)	(0.544)
Leverage	-0.188	-0.437	-0.596
	(0.770)	(0.519)	(0.380)
Operating cash flow	0.994	0.735	0.793
	(0.166)	(0.312)	(0.277)
Prior year market adjusted return	0.469*	0.414	0.346
	(0.074)	(0.129)	(0.210)
Prior year return volatility	0.100	0.159*	0.188**
	(0.259)	(0.100)	(0.044)
Target governance characteristics			
Board size		-0.163	-0.040
		(0.782)	(0.946)
Classified board (0,1)		0.155	0.180
		(0.547)	(0.482)
Busy board (0,1)		0.835***	0.913***
		(0.006)	(0.003)
Independent board (0,1)		-0.119	-0.138
		(0.760)	(0.718)
Insider ownership (% of common)		0.023*	0.022*
		(0.051)	(0.070)
Institutional ownership concentration		-2.560**	-2.538**
		(0.017)	(0.019)
Year and industry fixed effects	Yes	Yes	Yes
N	920	920	920
$Pr>\chi^2$	0.001	0.001	0.001

Table 4: The elasticity of substitution of golden parachutes and unscheduled grants

From the sample of 920 acquisitions announced during 1999-2007 and described in Table 1, we analyze the 123 deals in which targets grant unscheduled options to their CEO during private merger negotiations. The dependent variable is the natural logarithm of the Black-Scholes value of the unscheduled options when the deal is publicly announced. The main independent variable is the natural logarithm of the golden parachute payment the target CEO receives as a result of the acquisition. Other independent variables are similar to those in Core and Guay (2001). We estimate the value of the target CEO's equity ownership by adding the market value of common equity and the total Black-Scholes value of all options outstanding at the end of the fiscal year before the unscheduled award is granted. Prior option exercise value is the three year annual mean value of target CEO's option exercises. Prior excess option compensation is the difference between the Black-Scholes value of options granted during the prior year before the unscheduled options are granted during merger negotiations and the Black-Scholes value of the options granted during the year before. The marginal tax rate is the Graham's (1996) simulated corporate marginal tax rate. The Heckman self-selectivity correction involves a first-stage estimation of the probability of granting unscheduled options during merger negotiations as in model (3) of Table 3. In the second stage, the inverse Mill's ratio from the first stage model is included in the estimation as a variable to control for endogenous self-selection. Other variables are self-explanatory or defined elsewhere. The reported *p*-values are White (1980) heteroskedasticity consistent. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

OLS models with *ln* (Black-Scholes value of target CEO's unscheduled grant) as dependent variable	(1)		(2)	
	coefficient	*p*-value	coefficient	*p*-value
Intercept	8.299***	0.003	8.524***	0.003
Target CEO compensation variables				
ln (Golden parachute value)	-0.624**	0.043	-0.578*	0.062
ln (Merger bonus value)	0.064	0.315	0.070	0.274
ln (Equity ownership value)	0.088	0.222	0.105	0.153
ln (Prior option exercise value)	0.038	0.131	0.043*	0.092
Prior excess option compensation	0.007	0.475	0.007	0.502
Target firm variables				
Marginal tax rate	-0.042***	0.007	-0.038**	0.017
Prior year excess return	0.171	0.487	0.140	0.572
Size	0.477***	0.001	0.458***	0.002
Q	0.062	0.722	0.081	0.642
Leverage	0.963	0.425	1.127	0.353
Heckman self-selectivity			-0.335	0.250
Year and industry fixed effects	Yes		Yes	
N	123		123	
Adjusted R^2	0.341		0.344	
p-value of *F* test	0.001		0.001	

Table 5: Unscheduled grants and deal completion

The sample consists of 920 merger and acquisition bids announced during 1999-2007 described in Table 1. The dependent variable in the logit models equals one if the proposed merger is ultimately consummated. The main independent variable is an unscheduled grant indicator that is one if the target grants unscheduled options to its CEO during private merger negotiations. Other independent variables are similar to those in Bates and Lemmon (2003) and Officer (2003). Target termination fee (0,1) equals one if the target has a termination fee provision in the merger contract. Lockup (0,1) equals one if the deal includes a lockup of target or acquirer shares. Cash payment (0,1) equals one if the deal is paid entirely in cash. Tender offer (0,1) equals one if the form of the deal is tender offer. Prior bidding (0,1) equals one if the deal follows a prior bid within one year. Toehold is the ownership of target common stock by the bidder. Litigation (0,1) equals one if the deal has associated litigation as defined by SDC. Family firm (0,1) equals one if a family, group of families, firm founder, or non-founding chairman controls more than 20% of the outstanding equity of the target. We report White (1980) heteroskedasticity consistent *p*-values in parentheses. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	Dependent variable = 1 if the deal is completed	
	(1)	(2)
Intercept	-1.516	-1.976
	(0.419)	(0.288)
Unscheduled grant (0,1)	0.982**	2.365**
	(0.033)	(0.013)
Target termination fee (0,1)	1.489***	1.474***
	(0.001)	(0.001)
Lockup (0,1)	0.897	0.835
	(0.109)	(0.133)
Cash payment (0,1)	0.459	0.439
	(0.104)	(0.121)
Tender offer (0,1)	1.337***	1.374***
	(0.001)	(0.001)
Hostile deal (0,1)	-2.538***	-2.596***
	(0.001)	(0.001)
Prior bidding (0,1)	-2.194***	-2.199***
	(0.001)	(0.001)
Toehold	2.011	2.075
	(0.253)	(0.242)
Same industry (0,1)	1.134***	1.141***
	(0.001)	(0.001)
Litigation (0,1)	-1.681**	-1.864**
	(0.049)	(0.027)
Family firm (0,1)	0.505	0.503
	(0.249)	(0.257)
Heckman self-selectivity		-0.940
		(0.130)
Year and industry fixed effects	Yes	Yes
N	920	920
$Pr>\chi^2$	0.001	0.001

Table 6: Unscheduled grants and acquisition premiums

The sample consists of 920 acquisitions announced during 1999-2007 described in Table 1. We run OLS premium regressions similar to those in Bargeron, Schlingemann, Stulz, and Zutter (2008). The dependent variable is the acquisition premium as reported by SDC which is calculated as the offer price divided by the target's stock price four weeks before the merger announcement date. The main independent variable is an indicator that is one if the target grants unscheduled options to its CEO during private merger negotiations. As in Schlingemann, Stulz, and Walkling (2002), target industry liquidity is the liquidity of the market for corporate control for the target firm's industry. This variable is defined as the value of all corporate control transactions for US$1 million or more reported by SDC for each year and industry divided by the total book value of assets of all Compustat firms in the same industry and year. Prior year excess return is the cumulative abnormal return during the one year window ending four weeks prior to the merger announcement. This variable is calculated from the market model using the CRSP value-weighted return as the benchmark with an estimation period of one year prior to the above window. A CEO is near retirement age when he is at least 62 years old at the time of the acquisition. Overconfident CEO (0,1) is defined as Malmendier and Tate's (2005) long-holder measure and follows Hall and Liebman's (1998) option classification procedure. It equals one if the target firm's CEO owns options at the beginning of the last year of the options' life that are at least 40% in the money. CEO founder (0,1) equals one if the CEO is among the firm's founders. G index is the Gompers, Ishii, and Metrick (2003) governance index which adds 24 antitakeover provisions tracked by RiskMetrics. Target CEO post-deal employment (0,1) equals one if the target CEO already holds or obtains either a directorship or an executive appointment such as CEO of the acquirer or a subsidiary, chief financial officer, chief operating officer, chairman, vice-chairman, president, or vice-president in the bidder firm after deal completion. In case of withdrawn deals, it equals one if the target CEO already holds any of the positions just described or if the merger proxy states that the target CEO will be employed by the bidder upon deal completion. The parachute augmentation or special merger bonus (0,1) represents special merger-related payments awarded to target CEOs at the time of the acquisition. As in Hartzell, Ofek, and Yermack (2004), this variable equals one if such payments are made to these CEOs as a result of the acquisition. One year change in macroeconomic indicator is the difference in the industrial production index over one year period before the merger. Other variables are self-explanatory or defined elsewhere. The reported *p*-values are White (1980) heteroskedasticity consistent. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	OLS models with premium as dependent variable			
	(1)		(2)	
	coefficient	*p*-value	coefficient	*p*-value
Intercept	0.496***	0.006	0.436**	0.021
Unscheduled grant (0,1)	-0.044*	0.057	-0.047**	0.038
Target characteristics				
Size	-0.023***	0.005	-0.024***	0.006
Q	-0.005	0.672	-0.009	0.435
Leverage	0.124	0.135	0.112	0.166
Target industry liquidity	0.045	0.545	0.033	0.661
Operating cash flows	-0.038	0.630	-0.029	0.720
Prior year excess return	-0.013	0.380	-0.012	0.370
Return volatility	1.267*	0.078	1.209	0.104
Deal characteristics				
Private acquirer (0,1)	-0.073**	0.010	-0.072**	0.010
Toehold	-0.112	0.533	-0.122	0.491
Cash payment (0,1)	0.061***	0.008	0.061***	0.007
Tender offer (0,1)	0.112***	0.001	0.110***	0.001
Hostile (0,1)	0.067*	0.083	0.066*	0.088
Prior bidding (0,1)	0.076**	0.022	0.077**	0.018
Target termination fee (0,1)	0.048*	0.060	0.052**	0.039
Lockup (0,1)	-0.037	0.351	-0.032	0.418
Same industry (0,1)	-0.010	0.657	-0.003	0.904
Target initiated deal (0,1)	-0.038*	0.059	-0.038*	0.063
One year change in macroeconomic indicator	0.020*	0.055	0.020*	0.057
Target CEO and board characteristics				
CEO near retirement age (0,1)			-0.038*	0.100
Overconfident CEO (0,1)			0.010	0.564
CEO duality (0,1)			-0.019	0.348
CEO founder (0,1)			0.022	0.464
CEO post-deal employment (0,1)			0.017	0.379
Parachute augmentation or merger bonus (0,1)			-0.008	0.750
G index			-0.004	0.271
Insider ownership			0.001	0.410
Independent board (0,1)			-0.017	0.548
Busy board (0,1)			0.020	0.441
Institutional ownership			0.039	0.462
Heckman self-selectivity			0.048	0.157
Year and industry fixed effects	Yes		Yes	
N	920		920	
Adjusted R^2	0.239		0.248	
p-value of *F* test	0.001		0.001	

Table 7: Unscheduled grants and acquirer returns

From the original 920 acquisitions announced during 1999-2007 described in Table 1, we examine 474 offers made by U.S. public bidders in which data for these firms are available from CRSP, Compustat and RiskMetrics. We run OLS regressions of acquirer returns similar to those in Moeller, Schlingemann, and Stulz (2004) and Masulis, Wang, and Xie (2007). The dependent variable is the acquirer's cumulative abnormal return over the three days around the merger announcement date, calculated as the residual from the market model estimated during the (–272, –21) interval. The main independent variable is an indicator that is one if targets grant unscheduled options to their CEO during private merger negotiations. The competitive industry (0,1) equals one if the bidder's industry is in the bottom quartile of all industries sorted annually by the Herfindahl index. An industry's Herfindahl index is computed as the sum of squared market shares of all firms in the industry using data on sales (as in Masulis, Wang, and Xie, 2007). The unique industry (0,1) equals one if the bidder's industry is in the top quartile of all industries sorted annually by industry-median product uniqueness. Product uniqueness is defined as selling expenses scaled by sales (as in Masulis, Wang, and Xie, 2007). The high tech industry (0,1) equals one if bidder and target are both from high tech industries defined by Loughran and Ritter (2004). Free cash flow is operating income before depreciation minus interest expenses, income taxes and capital expenditures, scaled by book value of total assets. Other variables are self-explanatory or defined elsewhere. The reported *p*-values are White (1980) heteroskedasticity consistent. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	OLS models with acquirer's *CAR* (–1,+1) as dependent variable			
	(1)		(2)	
	coefficient	*p*-value	coefficient	*p*-value
Intercept	-2.852	0.377	-4.334	0.176
Unscheduled grant (0,1)	0.020*	0.054	0.020**	0.045
Deal characteristics				
Relative size	-0.060***	0.001	-0.043**	0.011
Stock payment (0,1)	-0.019*	0.094	-0.018	0.116
Tender offer (0,1)	0.013	0.168	0.007	0.451
Friendly deal (0,1)	0.024**	0.049	0.032***	0.007
Prior bidding (0,1)	0.010	0.392	0.008	0.510
Toehold	-0.030	0.830	-0.047	0.753
Same industry (0,1)	0.016	0.125	0.015	0.143
Market characteristics				
Competitive industry (0,1)	0.023**	0.017	0.025***	0.008
Unique industry (0,1)	-0.019*	0.071	-0.017	0.102
High tech industry (0,1)	0.008	0.565	0.006	0.648
Liquidity index	0.002	0.954	-0.003	0.941
One year macroeconomic change	-0.005	0.181	-0.004	0.252
Bidder characteristics				
Size	-0.009**	0.023	-0.015***	0.001
Q	0.001	0.391	0.001	0.593
Leverage	-0.050	0.155	-0.039	0.237
Prior year stock returns	-0.045*	0.097	-0.061**	0.032
Free cash flows	-3.833	0.791	-1.336	0.926
G index	-0.002**	0.047	-0.002*	0.080
Target characteristics				
Q			0.000	0.970
Leverage			-0.050	0.101
Prior year stock returns			0.006	0.477
Free cash flows			-1.642	0.286
G index			-0.001	0.373
CEO ownership			0.023*	0.082
CEO duality (0,1)			0.004	0.621
CEO tenure			0.005	0.571
Independent board (0,1)			0.012	0.339
Year and industry fixed effects	Yes		Yes	
N	474		474	
Adjusted R^2	0.249		0.268	
p-value of *F* test	0.001		0.001	