CEO Short-Horizon Incentives and Early Announcements in Mergers and Acquisitions

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Abstract

Some acquiring firms voluntarily disclose their deal information to the public before the signature of a definitive merger agreement. This paper examines how managerial incentive horizons affect the choice of such early announcements in takeovers. We find that CEOs with short incentive horizons are more likely to announce a deal early before the signature of definitive agreements. Following early announcements, short-horizon CEOs sell more shares. Furthermore, we show that early announced deals conducted by short-horizon CEOs receive lower announcement returns, and experience worse post-merger abnormal operating performance. Taken together, these results are consistent with the view that managerial short incentive horizons do not benefit long-term investment decisions.

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1. Introduction

Corporate acquisitions are one of the biggest events in the life of a company. As Graham et al. (2015) argue chief executive officer (CEO) holds more decision-making authority in mergers and acquisitions (M&As) relative to other corporate policies, CEO personal incentives play an important role in shaping the decision of corporate acquisitions. Recently, the literature argues that short-term compensation contracts are associated with managerial short-termism, which directly affects corporate investments outcomes. Using equity vesting incentives as a measure of incentive horizon, Edmans et al. (2020) find that CEO equity vesting incentives are positively related to the corporate share repurchase and M&A activities, but these decisions induced by CEO short-term incentives fail to create the long-term value for shareholders.

However, existing M&As literature mostly focuses on the CEO's decision to definitive takeover announcements which are assumed to be a purely legal response to security laws. The literature has largely ignored another type of M&A announcement that is a voluntary disclosure of potential deals at an early stage. Aktas et al. (2018) first show that some acquirer firms voluntarily disclose their deal information to the public before the signature of a definitive merger agreement. And these early announced deals are associated with higher synergies. Do CEOs incentive horizons matter for the timing of merger announcements? Additionally, do CEOs with short incentive horizons are able to create more values for merger firms? Given that the importance of corporate M&A activities, this question is worth investigating.

In this paper, we attempt to answer these questions by investigating the relation between CEOs incentive horizon and the decision to make early announcements in mergers. We focus on one type of discretionary news release in M&As: early announcements issued by acquirer firms. There are several reasons for a link between

early announcements and CEO incentive horizons. First, given that early announcements are one of the important strategies to deal with targets, CEOs from acquirers could be key decision-makers to decide whether firms should undertake this strategy. Thus, the decision to early announcements should not only be influenced by deal frictions (Aktas et al. 2018), but also dependent on CEOs' incentives. Second, managerial short-termism literature suggests that CEOs with short-term incentives are more likely to manipulate the timing of corporate announcements (e.g., earnings announcements in Gopalan et al.2014; news releases in Edmans et al. 2018). Lastly, unlike the definitive M&A agreement announcement, the voluntary early announcements issued by acquirer firms for potential targets are more discretionary without rigorous disclosure requirements by regulations. These important characteristics of early announcements provide both more flexibilities and opportunities for CEOs with short incentive horizons to engage in events. For these reasons, we believe that CEO incentives horizons could have important impacts on early announcements.

Using U.S. public firms with detailed compensation data covered by ExecuComp starting from 1992, we develop a comprehensive measure of the CEO incentive horizon as in Chi, Gupta, and Johnson (2019). This measure not only considers existing overall CEOs' compensations including restricted stock, unvested options, unrestricted stock, and vested options but also captures vesting schedules and exercising decisions on previous grants. Thus, for a given year, this proxy can measure the incentive horizon for any CEO in the ExecuComp database, which allows us to study a broad sample of U.S. public firms.

We identify 51 significant early announced deals with the available measure of CEO incentive horizons from 1,323 U.S. domestic M&A events announced between

1993 and 2017. Within our sample analysis, we document the following results. First, we find that CEOs with short incentive horizons are more likely to announce a deal early before the signature of definitive agreements. The effect of short incentive horizons is economically meaningful: short-horizon CEOs increases the probability of being early announced deals by 18%, relative to a control sample of hypothetical merger pairs that firms did not involve early announcements. The magnitude of this effect is robust after controlling for CEO, acquirer, and target characteristics. Second, we investigate whether short-horizon CEOs are incentivized to engage in early announcements because of diversification of equity holdings. Our results confirm this hypothesis. We find that CEOs with short incentive horizons are more likely to sell shares following early announcements. Using a difference-in-difference approach, we find that short-horizon CEOs sell more shares by 0.14 basis points following early announcements, compared to the long-horizon CEOs in early announced deals.

We then study the merger outcomes of early announced deals initiated by short-horizon CEOs. We find that CEOs with short incentive horizons strongly decrease the acquirer announcement return and deal synergies. Specifically, early announced deals by short-horizon CEOs reduce five-day cumulative abnormal returns surrounding the announcement date by 3.3%. We continue to find a similar relation in the analysis of the deal synergy. To ensure the robustness of our results, we address the potential self-selection bias in our sample. We employ a two-stage Heckman model (1979) to control for a firm's likelihood of the early announcement, and our results continue to hold.

We further examine the effect of incentive horizons for CEOs on post-merger outcomes. We find that early announced mergers with short-horizon CEOs significantly underperform in the long-run operating performance (approximately a 2.1% reduction in abnormal operating performance), relative to early announced mergers with long-

horizon CEOs. This result further supports that short-horizon CEOs in early announced deals create lower long-term values for shareholders.

Finally, we ask whether there is the potential cost to those short-horizon CEOs engaging in early announced deals? Thus, we examine the effect of short incentive horizons on the likelihood of post-merger CEO turnover. We find that CEOs with short incentive horizons are more likely to be replaced after mergers. This result is consistent with prior findings that CEOs who make value-destroying acquisitions are associated with a higher probability of being replaced due to internal governance (Lehn and Zhao,2006).

This paper makes several contributions to the literature. First, to our best of knowledge, this is the first paper that directly studies the relation between CEO incentive horizon and the timing of M&A events. The work of Aktas et al. (2018) is close to our study, which investigates the relation between early announcements and deals negotiation frictions. However, they focus on the effect of negotiation frictions on determining early announcements. In this paper, we employ the CEO-level variation in incentive horizons to investigate early announcements in M&As. A growing strand of literature shows that executive incentive horizons play a vital role in corporate M&A activities (Edmans et al. 2018; Li and Peng, 2020). We contribute to this literature by providing new evidence that CEOs incentive horizons are the important driver of the timing of deal announcements.

Second, this paper contributes to the literature on managerial short-term incentives and horizons. These include papers suggesting that CEOs with short-termism time the discretionary news release (Edmans et al. 2018) ; CEOs pay duration is positively related to corporate investments, long-term assets, and R&D intensity (Gopalan et al. 2014); equity vesting leads to a higher CEO turnover (Jochem et al.

2018). Chi, Gupta, and Johnson (2019) show that short-horizon CEOs are more likely to engage in earnings management and make personal trading benefits. Our study complements this literature, showing that short-horizon CEOs are incentivized to time the M&A event and sell more shares following the event.

Lastly, this paper sheds new light on a broad literature on the role of CEO incentives in M&As. This strand of literature demonstrates that the equity-based compensation structure encourages executives to make value-enhanced acquisitions (Datta, Datta, and Raman, 2001). However, this evidence is not universal, as some studies find that CEO's wealth and pay is not sensitive to poor post-merger performance (Harford and Li, 2007). CEO risk-taking incentives induced by compensations could affect M&A decisions and the deal value (Croci and Petmezas,2015). Our empirical results provide new evidence that CEO incentive horizons are negatively related to M&A quality.

The remainder of this paper is organized as follows. Section 2 reviews the literature and develops hypotheses. Section 3 discusses the sample, data, and methodology. We present empirical results in Section 4. Finally, section 5 concludes.

2. Related literature and hypothesis development

Does the short-horizon manager matter for the timing of corporate M&A announcements? Building on the theory of Stein (1988,1989), managerial myopia predicts that short-term incentives will affect manager's corporate decisions. Prior literature has recognized that short-horizon managers are subject to myopic behaviors (Dechow and Sloan, 1991). Recently, Chi, Gupta, and Johnson (2019) find that CEOs with short-horizon incentives attempt to use corporate disclosures to inflate the stock price and generate personal gains. Similarly, Edmans et al. (2018) shows that CEOs

who have more vesting stocks have incentives to release more good news. As one of important corporate news events, manager myopia could play an important role in acquisition announcements. A contemporaneous paper by Edmans et al. (2020) directly investigate the effect of CEO short-term incentives on the stock repurchase and M&A announcements. Their empirical evidence finds CEO equity vesting incentives are positively related to the corporate share repurchase and M&A activities, which induces CEOs to sell their stocks shortly after events. Thus, prior evidence suggests that CEO incentive horizon should be an important factor to influence M&A activities.

However, the existing literature mostly focuses on M&A definitive agreement announcements as in Edmans et al. (2020). Considering early announcements are one of the strategies to deal with targets, CEOs from acquirer firms could be important decision-makers to decide whether firms should adopt this strategy. Thus, the decision to early announcements should not only be influenced by deal frictions (Aktas et al. 2018), but also dependent on CEOs' incentives. As discussed early, managerial myopia is one of the important factors to shape corporate acquisitions. A plausible link between CEO short-horizon incentives and early announcements might exist because early announcements could be thought of as an ideal event to manipulate and address short-term stock price concerns. There are a couple of reasons why early announcements might be utilized by CEOs with short-horizon incentives. First, unlike M&A agreement announcements studied in Edmans et al. (2020), early announcements are more discretionary and less regulated by regulations. Traditional agreement announcements have strict disclosure requirements by the SEC to improve market transparency[1]. Thus, early announcements without mandated regulations can give CEOs more flexibilities

1. Please refer to U.S. Securities Exchange Act (Rule 10b-5, Exchange Act) for more details of M&A disclosures.

and opportunities to manipulate when CEOs know the private information of forthcoming deals in advance. Second, CEOs with short incentive horizons could utilize the early announcements to diversify their stock holdings. Aktas et al. (2018) show that early announcements can perform as a good signal to the market. Thus, early announcements may be thought as the good news to acquiring firms. Based on these two features of early announcements, CEOs with short horizon incentives are motivated to strategically time the M&A announcements and diversify equity holdings. To empirically test the effect of short-horizon CEOs on early announcements, we formulate the first hypothesis as follows:

H_1: CEOs who have short horizon incentives increase the likelihood of early announcements.

In the setting of early announcements, short-horizon CEOs are motivated to engage in early announcements of mergers because they have incentives to diversify their equity holdings. As a result, it is reasonable to test whether the short-horizon CEOs will sell more stock holdings shortly after early announcements. Thus, we further study the trading behaviors of CEOs following early announcements. If short horizon incentives encourage CEOs to undertake early announcements, it is expected to observe that the CEOs will take advantage of this event and quickly sell more equity holdings. We summarize this hypothesis as follows:

H_2: CEOs who have short horizon incentives sell more equities after early announcements.

Next, we study whether early announcements initiated by short-horizon CEOs affect the deal value. Due to the information asymmetry and deal complexity in M&As, CEOs could take the opportunity to make personal benefits rather than maximize the shareholder's value (Hartford and Li, 2007). CEOs with short incentive horizon are

motivated to use early announced deals as opportunities for their personal benefits at the expense of shareholder value. For these reasons, we expect that CEOs with short incentive horizons reduce the shareholder value in early announced deals. To test this prediction, the following hypothesis is stated as:

H_3: Early announced deals initiated by CEOs with short horizon incentives decreases the merger gains.

Prior literature provides evidence about the cost of CEO making value-destroying deals. Lehn and Zhao (2006) find that CEOs who make bad acquisitions are associated with higher CEO turnover following the merger. This indicates that if CEOs with short incentive horizon engaging in early announced deals at the expense of shareholder value, it is reasonable to expect these CEOs are more likely to be fired after mergers. We therefore formulate the following hypothesis:

H_4: CEOs who have short horizon incentives increases the likelihood of CEO turnover following early announced deals.

3. Data and methods

3.1. Sample selection

To construct the data, we draw the initial sample of all NYSE, Amex, and Nasdaq firms over the period from 1992 to 2019 to compute 1992-2016 CEO incentive horizons from the ExecuComp database. Then, we merge this CEO-level dataset with the sample for acquisitions, insider trading, and stock returns.

We start retrieving all announced U.S. domestic M&A deals between 1993 and 2017 from the Thomson Financial SDC Mergers and Acquisitions Database. The sample ends in 2017 due to the available estimation of CEO incentive horizons. We require the deal type is not classified as the spinoff, repurchase, self-tenders, recapitalizations, going privatizations, liquidations, exchange offers, and acquisitions

of partial interests or assets. To be included in the sample, the deal value must exceed $10 million and acuqirer firms must control at least 50% of the target shares after transactions. To obtain detailed accounting data and stock returns, we further require both acquirers and targets are publicly traded firms. After satisfying the above requirements, we have 3,758 deals from 1993 to 2017. Furthermore, we require that each acquirer firm has the data required to construct measures of CEO incentives on the ExecuComp database. Both acquirer and target have required control variables. Finally, this procedure yields 1,323 acquisitions.

It is important to properly identify early announcements by acuqirer firms in this study. Therefore, we mainly depend on hand-collected definitive announcement dates from the SEC filings and recorded dates from the SDC. We identify an early announcement as the SDC reported deal announcement date is prior to the definitive agreement date reported in SEC filings. Based on this method, we identify 92 deals which are announced before the date of definitive announcements from the SEC fillings in a total of 1,323 deals. As we focus on the voluntary early announcements by CEOs rather than disclosures by market rumours or regulations, we follow the method of Aktas et al. (2018) to further filter deals with early announcements. First, we require the gap between the early announcement date and the definitive agreement announcement date to be over three days. This criterion aims to avoid any early announcement which is announced at the weekend or public holidays while the definitive agreement is signed on the next working day. We exclude 12 cases that are not satisfied with required intervals. Second, we exclude 22 case which are reported as rumour cases from the SDC and news search on Factiva. We further exclude 6 cases as early announcements is used by targets for seeking buyers. Lastly, we exclude 1 case due to misreports that the initial public announcement has reached the definitive merger

agreement between acquirers and targets. After these procedures, we identify 51 early announced deals in our deal sample.

Table 1 presents the information of the sample of 1,323 deals over the period from 1993 to 2017. Panel A of Table 1 reports industry distributions of the sample merger deals by using acquirer firm's SIC codes based on the classification of Fama-French 12 industry. We have early announced deals in every industry of our deal sample. The business and equipment industry has the largest number of early announced deals (11 cases). Panel B reports the annual distribution of sample deals. The year 1998 is the most active year with respect to corporate acquisitions with 105 cases, while the year 1994 and 1995 have the largest number of early announced deals with 5 cases. 51 early announced deals account for nearly 3.85% of total deals over the sample period. Panel C provides the difference of mean (median) days between early announcements and late agreement announcements is 78 (49) days.

*****insert table 1 here*****

To build our analytical sample for the likelihood of early announcements, we generate a control sample of hypothetical early announced merger pairs (pseudo early announced acquirers and pseudo targets). As in Bena and Li (2014), we create two different control samples: industry and size matched sample and industry, size and market-to-book (*M/B*) ratio matched sample. To build the first control sample, for each actual early announced merger pair firms in every year, we find up to five matching acquiring firms (target firms) by the same 2-digit SIC industry and by the firm size from Compustat in year t-1. Candidates for hypothetical merger pairs are neither an acquirer nor a target in the three years before the deal.

To construct the second control sample, for each actual early announced merger pair firms in every year, we find up to five matching acquiring firms (target firms) by

the same 2-digit SIC industry, then by estimated propensity scores using the firm size and market-to-book ratio from Compustat in year t-1. Candidates for hypothetical merger pairs are neither an acquirer nor a target in the three years before the deal. The matching criteria for constructing the control sample are used to control for time, industry, firm size, growth opportunities, and overvaluation, which are important drivers for corporate M&A decisions shown in prior literature (e.g., Andrade, Mitchell, and Stafford, 2001; Hartford, 2005; Shleifer and Vishny, 2003; Rhodes-Kropf and Viswanathan, 2004).

3.2. Measuring CEO incentive horizons

Early studies on managerial myopia or short-termism employ horizons of CEO age (Dechow and Sloan, 1991) and holdings of restricted stocks (Johnson et al. 2009). Recently, Chi, Gupta, and Johnson (2019) develop a comprehensive measure of CEO incentive horizon to capture horizons of overall CEO's holdings including restricted stock, unvested options, unrestricted stock, and vested options. The authors argue manager's incentive horizon should not only be determined by both new grants and existing grants but also vesting schedules and exercising decisions on previous grants. Thus, this comprehensive measure of manager's incentive horizon considers information about new and existing grants, as well as previous sale decisions. Another advantage of this measure is easily accessible for a broad sample of U.S. firms since it is derived from the ExecuComp database which covers top five executives for firms in the S&P 500, S&P Midcap 400, and S&P Smallcap 600, starting from 1992. Following the method of Chi, Gupta, and Johnson (2019), we use the CEO incentive horizon as the measure of CEO short-termism and describe more details of the construction next.

First, we derive the vesting period for restricted stocks. We use the annual data of each CEO from the ExecuComp to calculate the number of restricted shares that vest

in the next three years. The number of restricted shares which vest in year t ($Vrstk$)is calculated as follows:

$$Vrstk_t = Rstk_{t-1} + GrantRstk_t - Rstk_t \quad (1)$$

where $Rstk_t$ indicates the number of restricted shares at the end of year t, $Rstk_{t-1}$ is the number of restricted shares at the end of year t-1, and $GrantRstk_y$

is the number of newly granted restricted shares in the year t.

Then, we calculate the vesting horizon of restricted shares by using a time-weighted average across three years. Specifically, the proportion of shares vested in year one is multiplied by one; the proportion of shares vested in year two is multiplied by two; and the proportion of shares vested in year three is multiplied by three. Following Chi, Gupta, and Johnson (2019), we assume that the rest shares not vested in year three will vest in year four. If there are no shares vested within three years, we assume its vesting horizon is four years. Stock dividends and stock split are adjusted in the calculation. Thus, the vesting horizon of restricted shares ($Hrstk$) is computed as follows:

$$Hrstk = Vesting\ proportion * 1 + Vesting\ proportion * 2$$

$$+Vesting\ proportion * 3 \quad (2)$$

As in Chi, Gupta, and Johnson (2019), we provide a numerical example to show the measure capturing the difference in manager's incentive horizons. In year 0, both CEO A and CEO B have 300 restricted shares. CEO A will vest each 100 shares at the end of the next three years, while CEO B will vest all 300 shares at once at the end of year three. Thus, the estimated horizon for CEO A is 2 years (=1*100/300+2*100/300+3*100/300), and for CEO B is 3 years (=1*0/300+2*0/300+3*300/300). Although both CEO A and CEO B will vest all shares in 3 years, the effective incentive horizon for CEO A is shorter. Likewise, we use the same procedures to compute the vesting horizon of unvested stock options ($Hunvopt$).

For unrestricted shares and vested options, they technically have zero incentive horizon. However, Chi, Gupta, and Johnson (2019) suggest that CEOs may not be allowed to sell all vested shares or options at the CEO's discretion as board directors will have some restrictions. Thus, following the authors, we use observed minimum incentives over a CEO sample period as an estimate of a minimum level of CEO required holdings during the tenure, which are assumed to have a horizon of 4 years. The rest of vested shares and options above this minimum level are assumed to have a horizon of 0 year, which means CEOs can freely sell these holdings.

Lastly, we derive a weighted incentive horizon for each CEO by taking into account the CEO delta, which is calculated as follows:

$$Weighted\ Incentive\ Horizon\ (WIH) = \frac{Hrstk * Delta_{rstk} + Hunvopt * Delta_{unvopt} + 4 * Delta_{min} + 0 * Delta_{free}}{Total\ Delta} \quad (3)$$

where *Total Delta* is defined as the change in dollar value of CEO stock and stock option for a 1% change in the stock price, which is calculated as procedures of Chi, Gupta, and Johnson (2019)[2] . $Delta_{rstk}$ is the delta derived from restricted stocks. $Delta_{unvopt}$ represents the delta from unvested stock options. $Delta_{min}$ is the delta from minimum required holdings for CEOs. $Delta_{free}$ indicates the delta from vested stock and options above the minimum level. WIH is a summary measure of the annual incentive horizon for CEOs, which captures the overall vesting horizon length for the CEO in a given year. Finally, we define the incentive horizon as the short horizon based on the sample median value of WIH. We create a dummy variable (*Short Horizon*)

[2] See Chi, Gupta, and Johnson (2019) for a detailed description of the calculation of delta.

which equals to one if the CEO's weighted incentive horizon is lower than median values of WIH, and zero otherwise.

3.3. Dependent variables

Our empirical tests are mainly from three parts: the likelihood of early announcements, CEOs' trading behaviors following early announcements, and stock market reactions to early announcements. For tests on the likelihood of early announcements, we construct our key outcome variable (Early) as a dummy variable which takes the value of one for the actual early announced merger deals, and zero for the matched control deals. For the analysis of merger samples, we define *Early Deal* as a dummy variable which takes the value of one for the early announced merger deals, and zero for late agreement announced deals.

For tests on CEOs' trading activities surrounding early announcements, we obtain data on equity sales from the Thomson Reuters Insider Filing (TFN) database. Following Agrawal and Nasser (2012), we exclude transactions are marked as "S" and "A" to exclude inaccurate records in the database. We compute the aggregate number of equity sales by CEOs on the same trading day. Thus, our measure of CEO' equity sales (*EquitySold*) following early announcements is calculated as the number of shares sold by CEOs scaled by the number of shares outstanding at the end of fiscal quarter prior to early announcements, reported in basis points. To capture the CEO's trading behaviors, we calculate the *EquitySold* over the window [0, def day] where 0 indicates the early announcement date and def day is the late agreement announcement date. We perform a parallel computation for matched acquirer CEOs to estimate CEO's equity sales in control group. We also define a dummy variable for the CEO sale (Sell) that takes value of one if CEOs sells any share from the early announcement date to late agreement announcement date, and zero otherwise.

Lastly, to evaluate the value implication of early announced deals, we compute cumulative abnormal returns (CAR) around event announcements. We use the market model to estimate five-day cumulative abnormal returns with the parameters estimated over the [-300, -46] event window relative to the event date that is the early announcement day for early announced deals or the agreement announcement day for late announced deals. The value-weighted CRSP index returns are the proxy for the benchmark returns. For early announced deals, we additionally measure the abnormal returns over the period from the early announcement date to late agreement announcement date, which is defined as CAR (early, late). To evaluate the merger synergy, we use the variable, Combined CAR (-2,2), which is computed as the value weighted average of five-day CAR of acquirer and target. The weights are based on the market value of equity of acquirer and target ten days prior to the announcement day.

3.4. Other controls and summary statistics

In empirical analyses, we first include a set of CEO-level characteristics that are common practice of CEO literature. Specifically, we include CEO age (*Age*) and tenure (*Tenure*) to capture CEOs' career concerns. Yim (2013) finds that CEO age is negatively related to corporate acquisitions. Pang, Wang, and Weisbach (2016) show that CEO tenure affects corporate investment decisions. To control for risk-taking incentives induced compensation structure, we include CEO vega (*Vega*). In addition, to control for incentives provided by cash compensations, we include salary and bonus for CEOs. These CEO-level variables are measured at the end of fiscal year t-1.

Our second level of controls is a set of observable firm characteristics for both acquirers and targets. Hartford (1999) shows that large firms are more likely to make acquisitions. We measure the firm size as the natural logarithm of total assets. Uysal (2011) finds that corporate leverage is a main driver of M&A decisions. We measure

the firm leverage ratio (*Leverage*) as the long-term debt plus short-term debt divided by the book value of total assets. We control for firm's sales growth (*Sale Growth*) which is defined as sales in year t minus sales in year t-1 scaled by sales in year t-1. Additionally, we include the market-to-book ratio (*M/B*) and return-on-assets ratio *(ROA*). Shleifer and Vishny (2003) argue that overvalued firms are more likely to engage in M&As. Hartford (1999) also shows that prior firm abnormal returns are associated with a higher likelihood of acquisitions. We control for prior stock returns (*PastRet*) which is calculated as the buy-and-hold abnormal returns for firms' stock over the past 12 months where the benchmark return is the CRSP value-weighted index. Further, we include firm's stock volatility (*Vol*) which is defined as standard deviation of the firm's daily stock returns from the past one year. Prior studies find corporate cash holdings are positively related to M&A activities (Harford,1999). We define the firm cash ratio (*Cash Ratio)* as the firm cash equivalents divided by total book assets. All firm characteristics, except for prior stock returns and volatility, are measured at the end of fiscal year t-1.

Prior literature finds that news coverage affects the firm's stock pricing (e.g., Barber and Odean, 2008; Tetlock, 2010). Recent evidence suggests that CEOs with short-termism engage in discretionary news disclosures to manipulate stock price and corporate acquisitions (Edmans et al.2018; Ahern and Sosyura (2014)). To control for news disclosures, We hand collected the number of articles in English language for each acquirer firm included in Factiva database. Following Ahern and Sosyura (2014), we focus on the media sources of Factiva in the category of major news and business publications, which includes a large number of publications, such as USA Today, The Wall Street Journal, and many others. To be sure that the article is substantial, we exclude articles with fewer than 50 words and articles identified by Factiva as recurring

pricing and market data. We define the news coverage (*News*) as the number of news articles for acquirer firms in the year prior to the deal announcement.

For analyses of merger gains, we also control for a set of deal characteristics including whether the deal is a diversified transaction (*Diversify*) or classified as a tender offer (*Tender*), methods of payment (*StockDeal*), and the deal size (*DealSize*).

Table 2 presents the summary statistics for actual early announced deals, industry-size matched sample, and industry-size-M/B matched sample. Acquirer CEOs in actual early announced deals have significantly shorter incentive horizons than their matched acquirer CEOs, as measured by *WIH*. The univariate tests indicate that CEOs with short incentive horizons are more likely to engage in early announcements. *Short Horizon* dummy variable indicates similar results. We also find that, in general, CEOs from actual early announced deals have higher vega, higher bonus and salary compensation, longer tenure period, and higher age than the CEOs from the matched control deals. Related to firm characteristics in actual early announced deals, acquiring firms are substantially larger than target firms, have higher M/B ratio, sales growth, and profitability (ROA), and present lower leverage ratio and stock volatility than target firms. Overall, our samples are similar to previous studies in M&As (e.g., Aktas et al, 2018; Bena and Li, 2014).

*****insert table 2 here*****

3.5. Empirical methods

Our empirical tests are conducted in three steps. First, we examine the relation between the CEO incentive horizon and the likelihood of early announcements. To conduct this analysis, we estimate the following logit model in the similar spirit of Bena and Li (2014):

$$Early_{i,t} = \beta_1 Short\ Horizon_{i,t-1} + \beta_2 CEO\ characteristics_{i,t-1}$$

$$+\beta_3 Acquirer\ charateristics_{i,t-1} + \beta_4\ Target\ characteristics_{i,t-1} + \varepsilon_{i,t} \quad (4)$$

where i and t indicates firm and year, respectively. $Early_{i,t}$ is the binary variable that equals one if the acquirer firm (target firm) is from the actual early announced merger pairs, and zero otherwise. *Short Horizon* is our main variable of interest that captures the effect of CEOs with short incentive horizons on early announcements. We include a set of CEO-level characteristics: *Age, Tenure, Salary, Bonus , and Vega*. Additionally, we control for acquirer and target firm-level characteristics including *News, Size, ROA, Leverage, M/B, Cash Ratio, Sale Growth, PastRet, and Vol*. Year fixed effects are included to account for time-invariant industry characteristics. Robust standard errors are clustered at the deal level. All variables' definitions can be found in Appendix 1.

Our second set of empirical tests investigates whether CEOs with short incentive horizons sell more stocks shortly after the voluntary early announcements. Following method of Agrawal and Nasser (2012), we use a difference-in-difference (DiD) approach. We compare the level of CEO equity sales in actual early announced deals (treatment firms) and their matched control deals (matched firms) during the after-early period to the levels during the control period. Specifically, the after-early period is trading days from the early announcement date to the late agreement announcement date, while the control period is exactly same days as in the after-early period but in the one year before that. By comparing the CEO equity sales in treatment firms and matched firms during two periods (after-early period and control period), our main interest of CEO equity sales equals the abnormal sales of CEOs in treatment firms minus the abnormal sales of CEOs in matched firms. This DiD approach controls both firm characteristics and time periods, which gives us a clean treatment effect.

To examine the effect of CEOs with short horizons on equity sales, we expand the sample for the fiscal year end prior to the early announcement date and the control period. As a result, we require two observations are available for all explanatory variable for both treatment firms and matched firms. This step reduces 15 early announced deals due to the data availability. Then we estimate the following DiD regression model:

$$EquitySold_{i,t} = \beta_1 Early_{i,t} + \beta_2 Post_t$$

$$+\beta_3 Early_{i,t} * Post_t + \beta_4 CEO\ characteristics_{i,t-1}$$

$$+\beta_5 Acquirer\ charateristics_{i,t-1} + \beta_6 Target\ characteristics_{i,t-1} + \varepsilon_{i,t} \quad (5)$$

where the dependent variable is the measure of CEO's equity sales ($EquitySold$), which is defined as in section 3.4. Our interest of variable is the interaction term (*Early*$*$ $Post$) that captures the magnitude of CEOs' equity sales following the early announcements. All other variables are defined analogously to model 4.

Our third set of analyses focuses on the merger gains of early announced deals by using the actual 1,323 merger deals. Specifically, we estimate the following regression model:

$$CAR_{i,t} = \beta_1 Early_{i,t} + \beta_2\ Short\ Horizon_{i,t-1}$$

$$+\beta_3 (Early_{i,t} * Short\ Horizon_{i,t-1}) + \beta_4\ CEO\ characteristics_{i,t-1}$$

$$+\beta_5\ Acquirer\ characteristics_{i,t-1} + \beta_6\ Target\ characteristics_{i,t}$$

$$+\beta_7\ Deal\ characteristics_{i,t} + \varepsilon_{i,t} \quad (6)$$

where the dependent variable is the acquirer's five-day CAR, as defined in Section3.3. We control for a set of deal characteristics: *Diversify*, *Tender*, *StockDeal*, and *DealSize*. All other variables are defined analogously to model 4. All regressions include year and industry fixed effects.

4. Empirical results

4.1. Incentive horizon and the likelihood of early announcements

We first examine the effect of short incentive horizon for CEOs on the likelihood of early announced mergers (H1). If short-horizon CEOs are concerned about the short-term stock performance, we expect that acquiring firms with short-horizon CEOs are more likely to engage in early announcements. To conduct this test, we estimate the Equation (4) using our sample of actual early announced merger pairs and the matched control samples.

Table 3 presents the results of logit regression of Equation (4). Column 1 to 4 report results where the matched control sample is based on matching by industry and size. First, in a bivariate estimation of Equation (4) in column 1, we find the coefficient estimates of *WIH* are negative and statistically significant at the 1% level. Recall that *WIH* is the raw measure of incentive horizon, which indicates the higher value of *WIH* is the longer incentive horizon for CEOs. Column 1 suggests that CEOs who have longer incentive horizons are negatively associated with the likelihood of engaging in early announcements of mergers, relative to a control sample of CEOs who did not issue early announcements. In column 2, the negative relation between incentive horizons and likelihood of early announcements continues to hold, after controlling for acquirer CEO's characteristics and firm characteristics for both acquirers and targets. To better gauge the effect of short incentive horizon on the probability of early announcements, we use a dummy variable, *Short Horizon*, that equals to one if CEOs' *WIH* is lower than sample median value of WIH, and zero otherwise. Column 3 shows the coefficient estimates of *Short Horizon* are positive and statistically significant at the 1% level. The economic significance is also meaningful: the CEO with short incentive horizon increases the probability of being early announced deals by 18%. In column 4, the

magnitude of *Short Horizon* is similar, and results are robust to including control variables.

We also test whether results are sensitive to the matched control sample by reestimating the analysis in a control sample based on matching by Industry, Size, and M/B ratio. These results are present in column 5 to 8 of Table 3. As expected, the estimation results of *Short Horizon* are consistent with results reported in previous columns. The positive relation between the CEO short incentive horizon and the probability of issuing early announcements stays positive and economically meaningful. Thus, the effect of *Short Horizon* on the likelihood of engaging in early announcements is robust to alternative matching techniques and methods. Our tests by using raw measures of CEO incentive horizons, indicating that results are not sensitive to the definition of *Short Horizon*. Taken together, results from Table 3 indicate that CEOs are more likely to make early announcements when CEOs have shorter incentive horizons.

*****insert table 3 here*****

4.2. Incentive horizon, CEO sales, and early announcements

Next, we test the hypothesis for CEOs' equity sales. Before conducting DiD estimations, we first examine whether CEOs with short incentive horizons are more likely to sell stocks after early announcements.

Table 4 reports results from a logit model regression of the likelihood of CEOs' equity sales following early announcements[3]. Column 1 and 2 report results based on the industry and size matched sample, while column 3 and 4 show results based on the industry, size, M/B ratio matched sample. In column 1, we find that the coefficient

[3] As we include year dummies, the logit model requires within-year variations of dependent variable (Sell), otherwise deals and matched deals in that year are dropped. This results in lower observations than the whole sample.

onEarly is significantly negative, suggesting that CEOs who engage in early announced deals are less likely to sell shares. However, the coefficient on interaction term (Early*Short horizon) is significantly positive, revealing that short-horizon CEOs (Short Horizon=1) mitigate the negative effect of Early on the likelihood of CEO sales. A similar story emerges in column 2 to 4: the likelihood of equity sales and Early is increasing in Short Horizon. This evidence supports the prediction that CEOs with short incentive horizons are more likely to sell stocks.

*****insert table 4 here*****

We then examine the magnitude of CEOs' equity sales following early announcements by conducting the DiD analysis. Before discussing DiD regressions, we first study a univariate DiD test for the difference in CEOs' equity sales between actual early announced deals (treatment firms) and matched control deals (matched firms) during the event period and control period.

Panel A of Table 5 reports the univariate analysis of DiD estimator. we find that significant difference in CEOs' equity sales exists in between treatment firms and matched firms after early announcements. We also examine the DiD estimator. For example, on average, a CEO with treatment firm sells more stocks by 0.06 basis points relative to a CEO with match firm, as shown in the industry and size matched sample. The difference is statistically significantly at 5% level. Similar results are found in industry, size, and M/B ratio matched sample. Overall, these results provide initial support for the H2 that CEOs who strategically issue early announcements sell more equities shortly after early announcements.

Panel B of Table 5 reports regression results for Equation (5). Column 1 and 4 show results based on the full sample, and the coefficient oninteraction term (Early*Post) are positive and statistically significant at the conventional level. This

evidence confirms the previous univariate results that CEOs sell more shares following early announcements. Further, we estimate the same model but split the sample based on the CEO incentive horizon (short horizon versus long horizon). As shown in column 2 and 3, we find that the coefficient oninteraction term (Early*Post) is only positive and statistically significant for the subsample of short- horizon CEOs. These results suggest that short-horizon CEOs are associated with 0.14 basis points increase in equity sales, whereas there is no similar trend of equity sales for the subsample of long-horizon CEOs. The difference in coefficient onEarly*Post between short-horizon CEOs and long-horizon CEOs are significantly different from 0 (p-value<0.06; see x^2 test). These results are not sensitive to the matching sample and can continue to hold in in column 5 and 6. Together, this evidence confirms hypothesis 2 that CEOs with short incentive horizons sell more shares following early announcements. It also indicates incentive horizon for CEOs matter for their trading decisions.

To summarize the findings so far, short-horizon CEOs are more likely to initiate early announcements of mergers, and short-horizon CEOs are incentivized to sell more equites following early announcements.

*****insert table 5 here*****

4.3. Incentive horizon, early announcements, and merger gains

In this section, we study how the stock market react to early announcements issued by short-horizon CEOs. Hypothesis 3 predicts that early announced deals initiated by CEOs with short horizon incentives decreases the merger gains. To test this hypothesis, we perform both the univariate analysis and regressions by using a sample consists of 1,323 US mergers announced between 1993 and 2017.

4.3.1. Univariate analysis

Table 6 reports the univariate comparison of CARs for acquirers with short-horizon CEOs and long-horizon CEOs. In Panel A, it shows that both short-horizon and long-horizon CEOs in the late agreement announced deals have an average negative five-day CAR, -1.3% and -1.1% respectively. This is consistent with findings in earlier studies that acquirers involving in public targets experience negative returns (Travlos,1987; Fuller et al.2002). However, in the subsample of early announced deals, we find that long-horizon CEOs have an average (median) five-day CAR of 2.2% (2.7%), insignificant different from zero. In contrast, the average (median) CARs for short-horizon CEOs in early announced deals are -0.8% (-1.2%) and statistically insignificant. The differences in the mean and the median of the short-horizon and long-horizon CEOs are -3% and -3.9%, respectively, and both of these differences are statistically significant at the traditional level. This evidence suggests that CEOs with short incentive horizons reduce merger gains in early announced deals.

In Panel B of Table 6, it reports a comparison of combined CAR (-2,2) for the merger sample. Similarly, in the subsample of early announced deals, we find that deals by short-horizon CEOs are associated with lower CARs relative to the deals by long-horizon CEOs: the difference in mean is -0.37% and statistically significant at 5% level. Again, from the perspective of deal synergy, our results show that short-horizon CEOs create the lower value for shareholders than long-horizon CEOs in early announced deals.

Panel C of Table 6 compares the difference in CAR (early, late) for early announced deals between two subsamples of CEOs. We find that mean (median) of CAR (early, def) for the subsample of short-horizon CEOs is -4.3% (-3.8%). These CARs are all lower than the subsample of long-horizon CEOs. The differences in the

mean and the median of these two subsamples are -11.7% and -9.7%, respectively, and both of these differences are statistically significant. This evidence supports early findings that short-horizon CEOs sell more shares shortly after early announcements.

*****insert table 6 here*****

4.3.2. Multivariate analysis

We extend the CARs analysis to a multivariate framework by estimating Equation (6). Results are reported in Table 7. Column 1 to 4 report on announcement CARs for acquirers, and column 5 to 8 on the deal synergy.

The first two columns in Table 7 show that the coefficients on Early are positive and significant. These results confirm early findings in Aktas et al. (2018) that early announced deals are generally associated with higher returns and deal quality. However, column 3 and 4 show that coefficients on interaction term (Early*Short Horizon) are both negative and statistically significant at the 5% level. Using results reported in column 4, the effect of Early on five-day announcement CAR when Short Horizon=0 is positive, increasing CAR (2,2) by 3.9%. In contrast, the effect of Early on CAR (-2,2) when Short Horizon=1 becomes negative, reducing the CAR by 3.3%. This result shows that the positive value created by early announced deals is largely diminished when short-horizon CEOs engage in early announced mergers. The control variable estimations are generally consistent with prior literature. By testing the deal synergy using the Combined CAR (-2,2), the similar story emerges as reported in column 5 to 8. We continue to find that the coefficient onEarly Deal *Short Horizon is negative and statistically significant across all models (5% in column 7 and 10% in column 8).

*****insert table 7 here*****

As we can only observe acquirer's CARs when firms involve mergers, the Equation (6) is subject to potential self-selection bias. Consequently, we address this

issue by using a two-stage Heckman model (1979). Consistent with the spirit of Golubov *et al.* (2012), we use the acquirer's past experience of announcing a deal early before signing the definitive agreements as the instrument variable, which directly affect the early announcement decision at date *t* but not the merger outcomes at date *t*. The variable *PastEarly* equals to 1 if the acquirer firms have early announcement(s) prior to early announcement at date *t*, and 0 otherwise.

Table 8 reports the estimation results of CARs by using the Heckman two-stage model. At stage 1, we also include the control variables as Table 7 and show the result in column 1. The coefficient on *PastEaly* is positive and significant at 1% level, suggesting that acquirer firms that have previous experience of early announcements are more likely to voluntarily announce the takeover before the definitive agreement is signed. In the second stage, we include the inverse Mills ratio and show the results in columns 2 and 3.

We find that the coefficients on Early * Short Horizon are both positive and statistically significant (1% in column 2 and 5% in column 3). This confirms our results in Table 7 and also suggest that early announced deals initiated by short-horizon CEOs are value-destroying. Therefore, our findings are not sensitive to the correction of self-selection bias in the Heckman model.

*****insert table 8 here*****

4.4. Post-merger outcomes

In this section, we examine how the post-merge outcomes for early announced merger firms initiated by short-horizon CEOs changes and whether this change is related to CEO's incentive horizon. If short-horizon CEOs who manipulate the timing of acquisition announcements for personal benefits decreases the value of early

announced deals, we should expect a significant reduction in post-merger operating performance for these combined firms.

4.4.1. Operating performance

To further evaluate the quality of short-horizon CEOs' merger decisions, we examine whether short-horizon CEOs of acquirer firms influence the post-merger operating performance. Following the method of Healy, Palepu, and Ruback (1992), we measure the operating performance as the operating income before depreciation divided by market value of assets at the beginning of the fiscal year (ROA). We compute operating performance for the combined firm over 3 fiscal years (t+ 1 to t+ 3) surrounding the merger completion year (year t). For the pre-merger years, the operating performance is the value-weighted average of acquirer's and target's operating performance, using the market value of assets at the beginning of fiscal year as weights. We then calculated abnormal operating performance as the difference between operating performance for merged firms and each year's median operating performance in the corresponding Fama-French 48 industry categories. For the pre-merger years, the industry median operating performance is the value-weighted average of acquirer's and target's industry median operating performance, using the market value of assets at the beginning of fiscal year as weights.

Panel A of Table 9 reports cross-sectional results of abnormal changes in operating performance. The setup of regressions in those columns is as in Healy, Palepu, and Ruback (1992). The constant variable measures the average change in industry-adjusted abnormal operating performance due to the merger, which is our main variable of interest. Column 1 shows that early announced deals are associated with -1.1% abnormal reduction in post-merger industry-adjusted operating performance. The last two columns further address the issue of whether short-horizon CEOs in early

announced deals drive the abnormal reduction in post-merger operating performance. As expected, results show that early announced mergers initiated by short-horizon CEOs decrease by -2.1% in post-merger industry-adjusted operating performance (column 2), whereas there is not a similar change in performance for early announced mergers by long-horizon CEOs. Again, this evidence supports hypothesis 3 that short-horizon CEOs in early announced deals create the lower synergy for shareholders.

We then examine results using the sample of all mergers and including main interest of interaction term (Early Deal*Short Horizn). This method is similar to Harford, Humphery-Jenner, and Powell (2012). Panel B of Table 9 report results for all merger deals. In Column 1 and 2, we find that the coefficient on Early Deal is negative but insignificant. However, column 3 shows that the coefficient on Early Deal*Short Horizon is negative (-0.03) and significant at 5% level, confirming that short-horizon CEOs in early announced mergers are associated with lower abnormal post-merger operating performance. When controlling for other CEO characteristics and deal characteristics, column 4 presents the similar coefficient on Early Deal*Short Horizon (0.035), significantly at 1% level. Together, results reported in Table 9 suggest that CEOs with short incentive horizons conduct early announced deals which significantly underperform in long-term operating performance, while CEOs with long incentive horizons conduct early announced deals which do not significantly underperform in the long run.

*****insert table 9 here*****

4.4.2. CEO turnover

In this subsection, we examine the effect of short-horizon CEOs on the potential costs due to the underperformance of mergers. Prior literature finds that CEO turnover is negatively related to the amount of value created in mergers (Lehn and Zhao, 2006).

Thus, CEOs who make value-reducing acquisitions are more likely to be replaced following mergers. If short-horizon CEOs who conduct early announced deals create lower value for combined firms after mergers, it expects that these CEOs are more likely to be fired. We identify CEO turnover for each year as reported in ExecuComp databases. Following Parrino, Sias, and Starks (2003), we search on the Factiva and classify whether a CEO turnover is forced or voluntary. Specifically, a forced CEO turnover is identified if news report that a CEO is fired, retires, or reigns due to policy changes. All other departures for CEOs over and including age 60 are classified as voluntary. For remaining case, the departure is classified as forced (1) if news does not report the reason for departure is related to death, poor health, or accepting another position or (2) news reports that CEO is retiring but no announcement of retirement at least 6 months prior to the succession. Finally, we define a dummy variable for the CEO turnover (Turnover) that takes value of one if acquirer CEOs is replaced within 3 years following the merger completion, and zero otherwise. Additionally, we define Forced Turnover as a dummy variable that takes value of one if there is a forced CEO turnover event for the firm with 3 years following the merger completion, and zero otherwise.

Table 10 reports the results of regression analysis on the likelihood of the CEO turnover. Panel A of Table 10 reports the estimation of Early Deal. The coefficient on Early Deal is not significant in all columns, indicating that early announced deals have no impact on the probability of CEO turnover.

Panel B of Table 10 reports the estimation of interaction term (Early Deal *Short Horizon). Column 1 to 3 report results for the CEO turnover, while column 4 to 6 report results for the forced CEO turnover. In column 1, we find that coefficient on Early Deal is negative (coefficient= -0.616) and significant at the 1% level. When looking at the coefficient on interaction term (Early Deal*Short Horizon), they are both positive and

significant at the 1% level (coefficient=0.633). This evidence suggests that the negative influence of Early Deal on the probability of CEO turnover is completely wiped out when acquirer CEOs have short incentive horizons. Column 2 and 3 show results are robust to CEO and deal characteristics, year, and industry fixed effects. Column 3 to 6 report similar results when examining the effect of Early Deal*Short Horizon on forced CEO turnover. We find that the coefficient on interaction term remains positive and highly significant at 1% level in all estimations, even if the coefficients are smaller (0.179 in column 4, 0.287 in column 5, and 0.361 in column 6). Consequently, results in Table 10 provide further evidence that the cost to short-horizon CEOs in early announced deals is severe due to creating lower values in mergers.

*****insert table 10 here*****

4.5. Additional robustness checks

In this section, we examine whether several alternative explanations could explain our empirical findings. Prior literature shows that corporate governance issue and CEO overconfidence influence corporate acquisitiveness and make value-destroying deals (Masulis et al. 2007; Malmendier and Tate, 2008). To rule out alternative explanations for our results, we conduct a battery of additional tests and robustness checks.

Firstly, our results could reflect the effect of corporate governance and CEO overconfidence on mergers. To address this concern, we control for measures of corporate governance including an acquirer's institutional ownership defined as total fraction of common shares outstanding owned by institutional investors (*Acquirer InstiOwn*) and number of blockholders with at least 5% ownership presents in the firm (*Acquirer Blockholders*), and measures of *CEO overconfidence* which is an indicator variable that takes the value of one for all years after the CEO's option exceed 67%

moneyness, and zero otherwise, following Hirshleifer et al. (2012) and Islam and Zein (2020). Results are reported in Panel A of Table 11, indicating that our main results do not change.

Second, the negative merger synergies could be driven by acquiring firms with agency problem and CEO overconfidence. To exclude this alternative interpretation of our results, we reestimate regressions of Column 4 and 8 in Table 8 controlling for Acquirer *InstiOwn* , *Acquirer Blockholders*, and *CEO overconfidence.* Panel B of Table 11 reports regression results. We find that coefficient estimates on interaction term (*Early*Short Horizon*) remain negative and significant.

Finally, we implement an alternative sample to test effect of CEO short incentive horizon on the likelihood of early announcements. We reestimate regressions of Table 3 for a cross-sectional deal sample of 1,323 mergers announced between 1993 and 2017. We report results in Panel C of Table 11. In Panel C, columns 1 to 4 show that coefficient estimates of *WIH* are negative, while columns 5 and 8 show coefficient estimate of *Short Horizon* are positive. All coefficients are statistically significant at 1% level. Generally, these results are similar to prior findings in Table 3, suggesting that our results continue to hold in the deal sample analysis.

*****insert table 11 here*****

5. Conclusion

In this paper, we study whether the incentive horizon for CEOs affects the timing of merger announcements and acquisition performance. Using a comprehensive measure of CEO compensation horizons, we find that CEOs with short incentive horizons are more likely to announce a deal early before signing the definitive

agreements. By doing this, CEOs with short incentive horizons are incentivized to sell more equities shortly following early announcements.

However, these early announced deals initiated by short-horizon CEOs receives significantly lower stock market reactions. This negative relation between incentive horizon for CEOs and merger gains is robust to the correction of self-selection bias. In the long run, early announced deals by short-horizon CEOs also significantly underperform in industry-adjusted operating performance. We further find that the costs to short-horizon CEOs are considerable that CEOs with short incentive horizon in early announced deals are more likely to be replaced due to the poor merger decisions.

Overall, our findings broadly highlight that executive compensation horizons are important in M&As and suggest that corporate boards need to carefully consider the length of compensation structure before making acquisitions.

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Appendix 1

Variable	Definition	Source
Age	It is the age of the CEO at the end of year t-1.	ExecuComp
Acquirer InstiOwn	The total fraction of common shares outstanding owned by institutional investors at the most recent report date before the announcement.	Institutional Holding 13F
Acquirer Blockholders	The number of blockholders with at least 5% ownership presents in the firm at the most recent report date before the announcement.	Institutional Holding 13F
Bonus	The CEO's cash bonus at the end of fiscal year t-1.	ExecuComp
CAR (-2,+2)	Five-day cumulative abnormal returns with the parameters estimated in the market model over the [-300,-46] event window relative to the event day that is the early announcement day for early announced deals or the agreement announcement day for late announced deals. The value-weighted CRSP index returns are the proxy for the market returns.	CRSP
CAR (early,late)	The cumulative abnormal returns over the period from the early announcement date to late agreement announcement date.	CRSP
Cash Ratio	The ratio of cash equivalents divided by total book assets at the end of fiscal year t-1.	Compustat
CEO overconfidence	An indicator variable that takes the value of one for all years after the CEO's option exceed 67% moneyness, and zero otherwise.	ExecuComp
Combined CAR (-2,2)	Combined CARs are value weighted average of CAR(-2,+2) of acquirer and target. The weights are based on the market value of equity of acquirer and target ten days prior to the event announcement day.	CRSP
Diversify	A dummy variable sets to 1 if the acquirer and target are not from the same group of Fama-French 48 industry, and zero otherwise	SDC
Early	A dummy variable which takes the value of one for the actual early announced merger deals, and zero otherwise.	EDGAR; SDC
Early Deal	A dummy variable which takes the value of one for the early announced merger deals, and zero for late agreement announced deals.	EDGAR; SDC
EquitySold	The number of shares sold by CEOs scaled by the number of shares outstanding, measured in basis points.	TFN
Leverage	The ratio of long-term debt plus short-term debt divided by the book value of total assets at the end of fiscal year t-1.	Compustat
M/B	The ratio of market value of assets divided by book value of assets, where the market value of assets is estimated as the book value of assets plus the difference between market and book value of equity, measured at the end of fiscal year t-1.	Compustat
News	The number of news articles for acquirer firms in the year prior to the first deal announcement.	Factiva

PastEarly	A dummy variable equals to one if the firms have any past early announcements prior to the date of early announcements, and zero otherwise.	EDGAR; SDC
PastRet	The buy-and-hold abnormal returns for firms' stock over the past 12 months where the benchmark return is the CRSP value-weighted index	CRSP
Post	A dummy variable that equals to one (zero) if the CEO equity sales occur during the event period (control period).	TFN
Relative Size	The ratio of deal size reported from SDC to the acquirer firms' total assets at the end of fiscal year t-1.	SDC
Salary	The CEO's salary at the end of fiscal year t-1.	ExecuComp
Sale Growth	Firm sales in year t minus sales in year t-1 scaled by sales in year t-1.	Compustat
Sell	A dummy variable takes value of one if CEOs sells any share from the early announcement date to late agreement announcement date, and zero otherwise	TFN
Short Horizon	A dummy variable equals to one if the CEO's weighted incentive horizon is lower than median values of weighted incentive horizons, and zero otherwise.	ExecuComp
Size	The natural logarithm of total assets at the end of fiscal year t-1.	Compustat
Stock Deal	A dummy variable sets to 1 if the deal is fully paid in stock, and zero otherwise.	SDC
Tender	A dummy variable sets to 1 if the deal is the tender offer, and zero otherwise	SDC
Tenure	It is the difference between year t and the year in which the CEO is appointed from ExecuComp.	ExecuComp
Turnover	It takes value of one if acquirer CEOs is replaced within 3 years following the merger completion, and zero otherwise.	ExecuComp
Forced Turnover	It takes value of one if there is a forced CEO turnover event for the firm with 3 years following the merger completion, and zero otherwise.	Factiva
Vega	Vega is the change in dollar value of CEO stock option for a 1% change in the annualized standard deviation of stock returns at the end of fiscal year t-1.	ExecuComp
Vol	The standard deviation of the firm's daily stock returns from the past one year	CRSP
WIH	WIH is the weighted incentive horizon calculated as sum of restricted stock horizon times delta of restricted stock scaled by total delta; unvested stock option horizon times delta of unvested stock option scaled by total delta; 4 years times delta of minimum required unrestricted holdings scaled by total delta, and 0 year times the delta of above minimum level of required holdings scaled by total delta.	ExecuComp

Appendix 2

Summary statistics of deal sample

The sample consists of 1,323 US mergers announced between 1993 and 2017. Panel A reports summary statistics for all deals. In Panel B, firms are divided into early announced deals and late agreement announced deals based on whether acquirer firms engage in early announcements. In Panel C, early announced deals are divided into the CEO short horizon and long horizon group according to the sample median value of WIH. The five-day cumulative abnormal returns (CARs) are measured using the market model where the model parameters are estimated over a 255 trading days of return data ending 46 days before the event date. The CRSP value-weighted return is used as the proxy for the market return. Event day 0 indicates the event announcement day that is the early announcement day for early announced deals and agreement announcement day for late announced deals. Adjusted CARs are calculated as the sum of CARs on the early announcement date and CARs on the agreement announcement date for the group of early announced deals, and the CARs on the agreement announcement for the group of late announced deals. Combined CARs are value weighted average of CARs of acquirer and target. The weights are based on the market value of equity of acquirer and target ten days prior to the event announcement day. Other variable definitions can be found in Appendix 1. All continuous variables are winsorized at 1st and 99th percentiles. *, **, and *** indicate significance at the 10%, 5% and 1% level, respectively.

Panel A: Summary statistics

	Early		Late		Difference
	N	Mean	N	Mean	(Early-Late)
CEO Characteristics					
WIH	51	1.614	1,272	1.853	-0.239*
Short Horizon	51	0.627	1,272	0.495	0.132*
Vega (USD Million)	51	0.420	1,272	0.233	0.187***
Age	51	57.20	1,272	54.43	2.763***
Tenure	51	9.549	1,272	7.392	2.158**
Salary (USD Million)	51	0.842	1,272	0.779	0.063
Bonus (USD Million)	51	1.014	1,272	0.849	0.164
Acquirer Characteristics					
Assets (USD Million)	51	8,651	1,272	23,322	-1,4671**
Leverage	51	0.228	1,272	0.217	0.011
M/B	51	1.955	1,272	2.001	-0.047
ROA	51	0.150	1,272	0.124	0.025**
Cash Ratio	51	0.127	1,272	0.118	0.010
Sales Growth	51	0.152	1,272	0.207	-0.055
PastRet	51	0.119	1,272	0.102	0.016
Vol	51	0.024	1,272	0.022	0.002
News Coverage	51	224.5	1,272	405.8	-181.333*
Target Characteristics					
Assets (USD Million)	51	1583	1,272	2996	-1,413
Leverage	51	0.277	1,272	0.194	0.082***
M/B	51	1.481	1,272	1.845	-0.364*
ROA	51	0.107	1,272	0.066	0.042*
Cash Ratio	51	0.153	1,272	0.174	-0.021
Sales Growth	51	0.134	1,272	0.186	-0.052
PastRet	51	0.049	1,272	0.016	0.033
Vol	51	0.033	1,272	0.032	0.001
Deal Characteristics					
Stock Deal	51	0.275	1,272	0.353	-0.078
Diversify	51	0.804	1,272	0.749	0.055
High Tech	51	0.137	1,272	0.092	0.204***
Tender	51	0.373	1,272	0.169	0.045
Relative Size	51	0.379	1,272	0.370	0.009

Table 1
The industry and year distribution of deal sample

This table reports the distribution of total deals and early announced deals. The sample covers 1323 acquisitions announced during the period 1993-2017 with 51 deals issuing early announcements. Panel A reports the distribution of deal sample by industry using the Fama-French 12-industry classification. Panel B reports the year distribution of deal sample. Panel C reports the days gap between early announcements and definitive announcements.

Panel A: Deals across Fama-French 12 industries

Industry	Total deals	No. of early announced deals	% of early announced deals
Consumer Nondurables	42	4	9.52%
Consumer Durables	14	1	7.14%
Manufacturing	100	5	5.00%
Oil, Gas, and Coal	51	2	3.92%
Chemicals	27	3	11.11%
Business Equipment	265	11	4.15%
Communications	57	3	5.26%
Utilities	46	3	6.52%
Wholesale and Retail	75	3	4.00%
Healthcare	159	3	1.89%
Finance	380	6	1.58%
Other	107	7	6.54%
Total	1,323	51	3.85%

Panel B: Deals across years

Year	Total deals	No. of early announced deals	% of early announced deals
1993	15	3	20.00%
1994	58	5	8.62%
1995	88	5	5.68%
1996	77	3	3.90%
1997	95	4	4.21%
1998	105	1	0.95%
1999	97	3	3.09%
2000	83	3	3.61%
2001	75	1	1.33%
2002	46	1	2.17%
2003	47	3	6.38%
2004	56	3	5.36%
2005	50	0	0.00%
2006	50	2	4.00%
2007	53	2	3.77%
2008	41	2	4.88%
2009	38	4	10.53%
2010	38	1	2.63%
2011	21	1	4.76%
2012	33	1	3.03%
2013	29	0	0.00%
2014	33	0	0.00%
2015	43	2	4.65%
2016	31	0	0.00%
2017	21	1	4.76%
Total	1,323	51	3.85%

Panel C: Days between early announcements and definitive agreement announcements

Mean	78 days	Median	49 days

Table 2
Summary statistics of matched sample

This table provides summary statistics of acquirers and targets in both the actual early announced deals and hypothetical deals. Following Bena and Li (2014), we use two different control samples as the hypothetical deals. Specifically, we first construct the industry-size matched control sample. For each actual early announced merger pair firms in every year, we find up to five matching acquiring firms (target firms) by the same 2-digit SIC industry and by the firm size from Compustat in year t-1. Candidates for hypothetical merger pairs are neither an acquirer nor a target in the three years before the deal. Second, we construct the industry-size-M/B matched control sample. For each actual early announced merger pair firms in every year, we find up to five matching acquiring firms (target firms) first by the same 2-digit SIC industry, then by propensity scores using firm size, and market-to-book ratio from Compustat in year t-1. Candidates for hypothetical merger pairs are neither an acquirer nor a target in the three years before the deal. All continuous variables are winsorized at 1st and 99th percentiles. The detailed variable definition can be found in Appendix 1. The table reports results of difference in means using t-test. *, **, and *** indicate significance at the 10%, 5% and 1% level, respectively.

	Actual Early Announced Deals(A)			Industry-Size Matched (B)			Industry-Size-M/B Matched (C)			Difference (A-B)		Difference (A-C)	
	N	Mean	Median	N	Mean	Median	N	Mean	Median	Mean	Median	Mean	Median
CEO Characteristics													
WIH	50	1.578***	1.444***	231	2.028	2.124	228	2.032	2.122	-0.450***	-0.680***	-0.454***	-0.678***
Short Horizon	50	0.700***	1.000***	231	0.459	0.000	228	0.456	0.000	0.241***	1.000***	0.244***	1.000***
Vega (USD Million)	50	0.400***	0.061***	231	0.135	0.044	228	0.133	0.042	0.265***	0.017**	0.275***	0.019**
Age	50	57.300***	57.500***	231	54.896	56.000	228	54.539	55.000	2.404**	1.500*	2.761***	2.500**
Tenure	50	9.980***	7.000***	231	6.576	4.000	228	6.417	4.000	3.404***	3.000***	3.563***	3.000***
Salary (USD Million)	50	0.880***	0.647***	231	0.671	0.611	228	0.662	0.610	0.209***	0.036	0.218***	0.037
Bonus (USD Million)	50	1.448***	0.439***	231	0.491	0.265	228	0.479	0.268	0.957***	0.174**	0.970***	0.171**
Acquirer Characteristics													
Assets (USD Million)	50	8,570	3,457	231	6,483	2,575	228	5,512	2,451	2,087	882	3,058**	1,005
Leverage	50	0.229	0.225	231	0.242	0.230	228	0.238	0.220	-0.013	-0.005	-0.009	0.005
M/B	50	1.944	1.553	231	1.823	1.426	228	1.853	1.506	0.121	0.127	0.091	0.047

ROA	50	0.151	0.133	231	0.136	0.132	228	0.140	0.138	0.015	0.001	0.011	-0.005
Cash Ratio	50	0.130	0.079	231	0.110	0.058	228	0.109	0.055	0.020	0.021	0.020	0.024
Sales Growth	50	0.153	0.111	231	0.140	0.091	228	0.116	0.081	0.013	0.020	0.037	0.030
PastRet	50	0.129	0.045	231	0.007	-0.012	228	0.014	-0.019	0.122*	0.057*	0.115*	0.064*
Vol	50	0.024	0.021	231	0.024	0.021	228	0.023	0.020	0.000	0.000	0.001	0.001
News Coverage	50	228.580	81.500	231	175.087	54.000	228	158.5	55.500	53.493	27.500	-70.11	26.000**
Target Characteristics													
Assets (USD Million)	50	1,612	598	231	1,441	588	228	1,873	372	171	9.950	-261	225
Leverage	50	0.281	0.273	231	0.243	0.200	228	0.246	0.210	0.038	0.073	0.035	0.063
M/B	50	1.484	1.280	231	1.650	1.390	228	1.385	1.221	-0.166	-0.110	0.099	0.059
ROA	50	0.107	0.117	231	0.105	0.105	228	0.076	0.097	0.002	0.012	0.030*	0.020
Cash Ratio	50	0.156	0.062	231	0.166	0.092	228	0.147	0.081	-0.010	-0.030	0.009	-0.019
Sales Growth	50	0.137	0.071	231	0.225	0.098	228	0.155	0.054	-0.088	-0.027	-0.018	0.017
PastRet	50	0.055	-0.063	231	0.062	-0.029	228	-0.015	-0.039	-0.007	-0.034	0.070	-0.024
Vol	50	0.034	0.029	231	0.034	0.030	228	0.038	0.032	0.000	-0.001	-0.004	-0.003

Table 3
CEO Incentive horizon and the likelihood of early announcements

This table reports estimation results for a logit model. The sample includes actual early announced merger firm pairs (acquirer and target) announced between 1993 and 2017 and matched control firm pairs. Following Bena and Li (2014), the sample contains, for each actual early announced merger pair firms, formed by matching up to 5 acquiring firms (target firms) based on the same 2-digit SIC industry and firm size from Compustat in year t-1, and by matching up to 5 acquiring firms (target firms) based on the same 2-digit SIC industry and propensity scores using firm size, and market-to-book ratio from Compustat in year t-1. The dependent variable in all columns is, Early, a dummy variable that takes the value of one for the actual early announced merger deals, and zero otherwise. WIH is the raw value of weighted incentive horizon for CEOs defined as in Section 3.2. Short horizon is the indicator variable that equals to one if the CEO's weighted incentive horizon is lower than the sample median, and zero otherwise. Column 1 ,2 ,5, and 6 report results for the effects of WIH on the likelihood of early announcements when the key explanatory is the WIH, and Column 3,4,7, and 8 report corresponding results when the main explanatory variable is the short horizon. Other variable definitions can be found in Appendix 1. All continuous variables are winsorized at 1st and 99th percentiles. All regressions control for year fixed effects. Coefficients of marginal effects are reported. The t statistics from robust standard errors clustered at the deal group level are reported in the parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% level, respectively.

	Industry-Size match				Industry-Size-M/B match			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
WIH	-0.097***	-0.099***			-0.105***	-0.080***		
	(-3.621)	(-3.201)			(-3.852)	(-3.064)		
Short Horizon			0.183***	0.177***			0.192***	0.163***
			(3.386)	(3.080)			(3.669)	(3.054)
CEO Characteristics								
Log (Age)		0.261		0.277		0.261		0.286
		(1.439)		(1.611)		(1.342)		(1.459)
Log (1+Tenure)		0.057**		0.059**		0.057**		0.060**
		(2.161)		(2.324)		(2.115)		(2.261)
Log (1+Salary)		0.120*		0.093		0.079		0.053
		(1.931)		(1.534)		(1.194)		(0.867)
Log (1+Bonus)		0.011*		0.012*		0.016**		0.016**
		(1.692)		(1.772)		(2.020)		(2.059)
Log (1+Vega)		0.025		0.025		0.022		0.023

	(1.342)	(1.420)	(1.242)	(1.418)
Acquirer Characteristics				
Log (1+News)	0.049**	0.049**	0.033*	0.035**
	(2.394)	(2.513)	(1.934)	(2.226)
Log (Assets)	-0.020	-0.012	-0.010	-0.008
	(-0.815)	(-0.496)	(-0.328)	(-0.290)
Leverage	-0.195	-0.157	-0.134	-0.136
	(-1.314)	(-1.047)	(-0.908)	(-0.890)
M/B	0.008	0.008	-0.009	-0.013
	(0.241)	(0.227)	(-0.195)	(-0.300)
ROA	0.333	0.388	0.104	0.131
	(0.896)	(1.081)	(0.244)	(0.335)
Cash Ratio	-0.037	-0.043	0.066	0.072
	(-0.204)	(-0.230)	(0.357)	(0.385)
Sales Growth	-0.009	0.009	0.106	0.129
	(-0.099)	(0.095)	(0.872)	(1.102)
PastRet	0.105*	0.119*	0.086	0.094
	(1.716)	(1.921)	(1.441)	(1.590)
Vol	4.736	3.722	2.948	2.052
	(1.592)	(1.342)	(0.950)	(0.752)
Target Characteristics				
Log (Assets)	-0.021	-0.026*	0.008	0.004
	(-1.426)	(-1.814)	(0.459)	(0.262)
Leverage	0.175*	0.139	0.109	0.099
	(1.741)	(1.372)	(1.115)	(1.028)
M/B	-0.098***	-0.102***	0.017	0.028
	(-2.729)	(-2.729)	(0.447)	(0.685)
ROA	0.076	0.113	0.285	0.290
	(0.304)	(0.471)	(1.187)	(1.195)
Cash Ratio	0.098	0.116	0.239	0.214

		(0.773)		(0.946)		(1.638)		(1.478)
Sales Growth		-0.118**		-0.099*		-0.083		-0.089
		(-2.178)		(-1.890)		(-1.488)		(-1.544)
PastRet		0.011		0.005		-0.010		-0.015
		(0.264)		(0.136)		(-0.166)		(-0.259)
Vol		-0.076		-0.428		-0.468		-0.505
		(-0.053)		(-0.316)		(-0.217)		(-0.264)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo- R^2	0.056	0.244	0.055	0.243	0.062	0.222	0.059	0.229
N	281	281	281	281	278	278	278	278

Table 4
CEO incentive horizon and the likelihood of equity sales

This table reports estimation results for a logit model. The sample includes actual early announced merger firm pairs (acquirer and target) announced between 1993 and 2017 and matched control firm pairs. The dependent variable is a dummy variable that takes the value of one if CEOs sell stocks between the early announcement date and definitive agreement announcement date, and zero otherwise. Early is a dummy variable that takes the value of one for the actual early announced merger deals, and zero otherwise. Short horizon is the indicator variable that equals to one if the CEO's weighted incentive horizon is lower than the sample median, and zero otherwise. The key explanatory variable is the interaction term Early*Short Horizon. Other variable definitions can be found in Appendix 1. Coefficients of marginal effects are reported. The t statistics from robust standard errors clustered at the deal group level are reported in the parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% level, respectively.

	Industry-Size match		Industry-Size-M/B match	
	(1)	(2)	(3)	(4)
Early	-0.562***	-0.620*	-0.712***	-0.710***
	(-3.578)	(-1.895)	(-4.299)	(-3.045)
Short Horizon	0.059	0.117	0.054	0.070
	(1.223)	(1.059)	(1.301)	(1.036)
Early*Short Horizon	0.568***	0.516*	0.694***	0.685***
	(3.848)	(1.798)	(4.184)	(3.174)
CEO Characteristics				
Log (Age)	-0.322***	-0.330	-0.303**	-0.393
	(-3.246)	(-0.734)	(-2.550)	(-1.347)
Log (1+Tenure)	0.056***	0.118*	0.059**	0.099*
	(3.649)	(1.732)	(2.219)	(1.850)
Log (1+Salary)	-0.009	0.020	-0.003	-0.101
	(-0.320)	(0.274)	(-0.122)	(-0.679)
Log (1+Bonus)	-0.008***	-0.007	-0.013***	-0.033**
	(-3.502)	(-0.666)	(-3.645)	(-2.160)
Log (1+Vega)	-0.003	0.019	0.011	0.024
	(-0.282)	(0.615)	(1.224)	(1.100)
Acquirer Characteristics				
Log (1+News)	-0.005	-0.003	-0.011	-0.013
	(-0.716)	(-0.221)	(-1.411)	(-0.910)
Log (Assets)	0.038**	0.063**	0.024	0.073
	(2.277)	(2.526)	(1.377)	(1.462)
Leverage	0.034	0.276	0.078	0.164
	(0.469)	(1.584)	(0.781)	(1.443)
M/B	0.036***	0.070***	0.034**	0.059**
	(3.853)	(2.593)	(2.423)	(2.383)
ROA	-0.175	0.256	-0.126	-0.087
	(-1.088)	(0.820)	(-0.602)	(-0.320)
Cash Ratio	-0.027	0.086	0.128	0.230
	(-0.226)	(0.333)	(1.471)	(1.490)
Sales Growth	0.003	0.215	0.167**	0.153
	(0.065)	(0.708)	(2.571)	(0.801)
PastRet	-0.010	0.009	0.029	0.084
	(-0.282)	(0.092)	(0.946)	(0.746)
Vol	3.517***	10.884***	2.296	13.221***

	(3.374)	(2.867)	(1.482)	(4.403)
Target Characteristics				
Log (Assets)	-0.005	0.003	-0.002	-0.007
	(-0.371)	(0.078)	(-0.071)	(-0.147)
Leverage	-0.135*	-0.249*	-0.279*	-0.404**
	(-1.666)	(-1.660)	(-1.817)	(-2.042)
M/B	-0.000	-0.013	0.021	-0.013
	(-0.019)	(-0.459)	(0.943)	(-0.216)
ROA	0.257*	0.768**	0.274	0.216
	(1.814)	(2.502)	(1.321)	(0.639)
Cash Ratio	0.225***	0.354***	-0.019	-0.233
	(5.968)	(4.895)	(-0.209)	(-1.023)
Sales Growth	-0.025	0.037	-0.039*	-0.008
	(-0.439)	(0.500)	(-1.650)	(-0.140)
PastRet	-0.052**	-0.169**	-0.047	0.058
	(-2.117)	(-2.232)	(-1.543)	(1.466)
Vol	-2.464*	-4.333	0.049	0.667
	(-1.910)	(-1.474)	(0.063)	(0.212)
Year FE	No	Yes	No	Yes
Pseudo- R^2	0.496	0.573	0.414	0.514
N	281	142	278	172

Table 5

CEO incentive horizon and equity sales

This table reports results from difference-in-difference (DID) tests examining the effect of early announcements on CEO equity sales. The sample includes actual early announced merger firm pairs (acquirer and target) announced between 1993 and 2017 and matched control firm pairs. There are two observations for each firm: one measures CEO equity sales between the early announcement date and definitive agreement announcement date (after-early period), and another measures CEO equity sales using the same days as in the after-early period but in the one year before that (control period). The dependent variable is the EquitySold that is the number of shares sold by CEOs scaled by the number of shares outstanding in basis points. Panel A reports the mean difference of CEO equity sales for actual early announced acquirer firms (Treated firms) and hypothetical acquirer firms (Matched firms), and t-test is used for whether the two samples have equal means, where DiD estimators are highlighted in bold. Panel B reports coefficients from the DiD regressions. Early is a dummy variable that takes the value of one for the actual early announced merger deals, and zero otherwise. After is a dummy variable that equals to one (zero) if the CEO equity sales occur during the after-early (control) period. Early *After is the interaction between these two variables. In Panel B, Column 1 and 4 report estimation results for the full sample, while Column 2,3, 5, and 6 report results based on the value of Short Horizon. Short horizon is the indicator variable that equals to one if the CEO's weighted incentive horizon is lower than the sample median, and zero otherwise. Other variable definitions can be found in Appendix 1. All continuous variables are winsorized at 1st and 99th percentiles. All regressions control for year fixed effects. The t statistics using robust standard errors are reported in the parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% level, respectively.

Panel A: DiD estimator- CEO equity sales

	Industry-Size match			Industry-Size-M/B match		
	Control period	After-early period	DiD	Control period	After-early period	DiD
	(1)	(2)	(2-1)	(3)	(4)	(4-3)
Treated firms (T)	0.011	0.059	0.048	0.011	0.059	0.048
N	50	50		50	50	
Matched firms (M)	0.020	0.008	-0.012	0.026	0.016	-0.010
N	229	229		228	228	
Difference (T-M)	-0.009	0.051***	**0.060****	-0.015	0.043**	**0.058***

Panel B: DiD regressions

	Industry-Size match			Industry-Size-M/B match		
	Full sample	Short Horizon	Long Horizon	Full sample	Short Horizon	Long Horizon
	(1)	(2)	(3)	(4)	(5)	(6)
Early	-0.039	-0.068	0.015	-0.031	-0.068	0.031
	(-1.585)	(-1.163)	(0.522)	(-1.257)	(-1.186)	(0.970)
Post	-0.042	-0.093*	-0.037**	-0.035	-0.081*	-0.012
	(-1.575)	(-1.968)	(-2.464)	(-1.324)	(-1.778)	(-0.736)

Early*Post	0.092*	0.142**	0.001	0.086*	0.134*	-0.006
	(1.925)	(1.975)	(0.023)	(1.740)	(1.876)	(-0.125)
CEO Characteristics						
Log (Age)	0.057	0.109	0.030	-0.005	-0.025	-0.009
	(0.856)	(0.667)	(0.574)	(-0.097)	(-0.153)	(-0.145)
Log (1+Tenure)	-0.004	-0.028	-0.001	0.000	-0.022	0.002
	(-0.303)	(-1.116)	(-0.150)	(0.039)	(-0.847)	(0.185)
Log (1+Salary)	-0.085*	-0.093**	-0.058***	-0.091*	-0.089*	-0.068**
	(-1.760)	(-2.133)	(-2.768)	(-1.702)	(-1.912)	(-2.516)
Log (1+Bonus)	-0.010***	-0.018**	-0.009***	-0.013***	-0.014*	-0.013***
	(-2.671)	(-2.275)	(-2.723)	(-2.976)	(-1.871)	(-3.494)
Log (1+Vega)	0.008	0.014	-0.007	0.013**	0.015	-0.001
	(1.304)	(1.220)	(-1.630)	(2.122)	(1.341)	(-0.213)
Acquirer Characteristics						
Log (1+News)	0.005	0.019	0.004	0.003	0.012	0.003
	(0.601)	(1.263)	(0.611)	(0.377)	(0.816)	(0.437)
Log (Assets)	0.028**	0.023	0.022**	0.024*	0.027	0.011
	(2.054)	(1.008)	(2.389)	(1.660)	(1.188)	(1.098)
Leverage	0.069	-0.075	0.110***	0.077	0.037	0.113**
	(1.214)	(-0.484)	(2.753)	(1.386)	(0.267)	(2.493)
M/B	0.016	-0.012	0.025**	0.007	-0.020	0.024**
	(1.094)	(-0.545)	(2.606)	(0.509)	(-0.974)	(2.087)
ROA	0.147	0.470	-0.110	0.057	0.369	-0.180
	(0.790)	(1.620)	(-0.916)	(0.296)	(1.220)	(-1.324)
Cash Ratio	0.075	0.012	0.157**	0.020	0.032	0.078
	(0.959)	(0.067)	(2.364)	(0.276)	(0.197)	(1.196)
Sales Growth	-0.034	0.078	-0.039	-0.011	0.023	-0.014
	(-0.688)	(0.852)	(-1.033)	(-0.239)	(0.225)	(-0.319)
PastRet	0.000	0.008	0.002	0.010	0.010	0.011
	(0.014)	(0.201)	(0.117)	(0.574)	(0.231)	(0.619)

Vol	1.448	1.671	0.146	1.055	2.353	-0.421
	(1.197)	(0.667)	(0.159)	(0.956)	(0.985)	(-0.416)
Target Characteristics						
Log (Assets)	0.004	-0.002	-0.001	0.012*	0.018	0.008
	(1.008)	(-0.119)	(-0.095)	(1.965)	(1.177)	(1.596)
Leverage	-0.019	0.096	-0.040	-0.093**	-0.120	-0.037
	(-0.617)	(0.993)	(-1.239)	(-2.431)	(-1.088)	(-0.829)
M/B	-0.017*	-0.020	-0.019**	-0.014	-0.026	-0.003
	(-1.874)	(-0.891)	(-1.991)	(-1.279)	(-0.907)	(-0.235)
ROA	0.196**	0.733**	0.077	0.122*	0.171	0.024
	(1.984)	(2.462)	(1.001)	(1.911)	(0.943)	(0.262)
Cash Ratio	0.065	0.116	0.059	0.069	0.161	-0.013
	(1.030)	(0.933)	(1.403)	(1.007)	(1.325)	(-0.258)
Sales Growth	-0.012	0.006	-0.006	-0.009	-0.017	-0.009
	(-0.912)	(0.116)	(-0.358)	(-1.028)	(-0.577)	(-0.568)
PastRet	0.005	-0.069	0.019*	0.006	0.010	0.005
	(0.548)	(-1.583)	(1.732)	(0.781)	(0.334)	(0.358)
Vol	0.075	0.895	0.358	0.050	0.006	0.320
	(0.170)	(0.552)	(0.826)	(0.134)	(0.005)	(0.638)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted- R2	0.131	0.087	0.348	0.154	0.078	0.317
p-value (x^2 test)			0.058			0.056
N	360	180	180	363	182	181

Table 6

Cumulative abnormal returns (CARs) for early and late announced deals

This table reports cumulative abnormal returns (CARs) around the early announcement date and late definitive agreement announcement date, using a sample consists of 1,323 US mergers announced between 1993 and 2017. Firms are divided into early announced deals (Early) and late agreement announced deals (Late) based on whether acquirer firms engage in early announcements. The two subsamples are further sorted into the CEO short horizon and long horizon groups according to the sample median value of WIH. Panel A reports the average announcement CAR, Panel B reports the average Combined CAR, and Panel C reports the average CAR from early announcement date to late agreement announcement date for only early announced deals. The five-day cumulative abnormal returns (CARs) are measured using the market model where the model parameters are estimated over a 255 trading days of return data ending 46 days before the event date. The CRSP value-weighted return is used as the proxy for the market return. Event day 0 indicates the event announcement day that is the early announcement day for early announced deals and agreement announcement day for late announced deals. Combined CARs are value weighted average of CARs of acquirer and target. The weights are based on the market value of equity of acquirer and target ten days prior to the event announcement day. CAR (early, late) is cumulative abnormal returns over the period from the early announcement date to late agreement announcement date. The difference tests are based on t-tests for difference in means and a Wilcoxon-test for difference in medians. p-values are reported in parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% level, respectively.

Panel A: Announcement CAR (-2,2): early announced deals versus late agreement announced deals

	Early		Late		difference	
	Short Horizon (1)	Long Horizon (2)	Short Horizon (3)	Long Horizon (4)	(1)-(2)	(3)-(4)
Mean	-0.008	0.022	-0.013***	-0.011***	-0.030*	-0.002
	(0.201)	(0.128)	(0.000)	(0.000)	(0.059)	(0.575)
Median	-0.012	0.027	-0.009***	-0.008***	-0.039**	-0.001
	(0.178)	(0.137)	(0.000)	(0.000)	(0.041)	(0.932)
N	32	19	629	637		

Panel B: Combined CAR (-2,2): early announced deals versus late agreement announced deals

	Early		Late		difference	
	Short Horizon (1)	Long Horizon (2)	Short Horizon (3)	Long Horizon (4)	(1)-(2)	(3)-(4)
Mean	0.019**	0.056***	0.012***	0.015***	-0.037**	-0.003
	(0.018)	(0.001)	(0.000)	(0.000)	(0.048)	(0.503)
Median	0.018**	0.052**	0.008***	0.009***	-0.033	-0.001
	(0.024)	(0.016)	(0.000)	(0.000)	(0.1396)	(0.6912)
N	30	19	608	620		

Panel C: CAR (early, late) for early announced deals

	Early	Early	difference
	Short Horizon (1)	Long Horizon (2)	(1)-(2)
Mean	-0.043	0.074 **	-0.117**
	(0.298)	(0.015)	(0.021)
Median	-0.038**	0.059***	-0.097***
	(0.049)	(0.001)	(0.001)
N	32	19	

Table 7
The effect of CEO incentive horizon on the gains from the early announced deals

This table reports OLS regressions of cumulative abnormal returns (CARs), using a sample consists of 1,323 US mergers announced between 1993 and 2017. The dependent variable for Column 1 to 4 is five-day cumulative abnormal returns, while the dependent variable for Column 5 and 6 is five-day combined CARs. All CARs are measured using the market model where the model parameters are estimated over a 255 trading days of return data ending 46 days before the event date. The CRSP value-weighted return is used as the proxy for the market return. Event day 0 indicates the event announcement day that is the early announcement day for early announced deals and agreement announcement day for late announced deals. Combined CARs are value weighted average of CARs of acquirer and target. The weights are based on the market value of equity of acquirer and target ten days prior to the event announcement day. Early deal takes the value of one for the early announced merger deals, and zero for late agreement announced deals. Short horizon is the indicator variable that equals to one if the CEO's weighted incentive horizon is lower than the sample median, and zero otherwise. The key explanatory variable is the interaction term Early Deal*Short Horizon. Other variable definitions can be found in Appendix 1. All continuous variables are winsorized at 1st and 99th percentiles. All regressions control for year fixed effects and Fama-French 48 industry fixed effects. The t statistics from robust standard errors clustered at the acquirer firm level are reported in the parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% level, respectively.

	CAR (-2, +2)				Combined CAR (-2, +2)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Early Deal	0.019**	0.016*	0.042***	0.039***	0.021**	0.015*	0.048***	0.039**
	(2.522)	(1.958)	(3.168)	(2.712)	(2.387)	(1.752)	(2.899)	(2.533)
Short Horizon			-0.005	-0.007*			-0.007*	-0.006*
			(-1.208)	(-1.770)			(-1.826)	(-1.772)
Early Deal *Short Horizon			-0.033**	-0.033**			-0.039**	-0.035*
			(-2.081)	(-1.979)			(-2.052)	(-1.955)
CEO Characteristics								
Log (Age)		0.008		0.010		0.007		0.008
		(0.448)		(0.520)		(0.374)		(0.470)
Log (1+Tenure)		0.003		0.003		-0.000		0.001
		(1.036)		(1.378)		(-0.025)		(0.319)
Log (1+Salary)		-0.003		-0.003		-0.001		-0.001
		(-0.911)		(-0.932)		(-0.368)		(-0.409)
Log (1+Bonus)		0.000		0.000		0.000		0.000
		(0.387)		(0.347)		(0.327)		(0.300)
Log (1+Vega)		-0.001		-0.001		-0.002*		-0.002
		(-0.806)		(-0.636)		(-1.696)		(-1.509)
Acquirer Characteristics								

Log (1+News)	0.001	0.001	0.000	0.000
	(0.759)	(0.720)	(0.129)	(0.078)
Log (Assets)	0.001	0.002	-0.005**	-0.004*
	(0.612)	(0.690)	(-2.037)	(-1.961)
Leverage	0.013	0.013	0.007	0.007
	(0.873)	(0.876)	(0.477)	(0.491)
M/B	0.003	0.002	-0.002	-0.002
	(1.263)	(1.202)	(-0.990)	(-1.024)
ROA	0.042	0.040	0.012	0.010
	(1.027)	(0.975)	(0.337)	(0.280)
Cash Ratio	-0.037*	-0.037*	-0.029	-0.028
	(-1.829)	(-1.816)	(-1.484)	(-1.439)
Sales Growth	-0.006**	-0.006**	-0.005**	-0.005**
	(-2.076)	(-2.084)	(-2.067)	(-2.084)
PastRet	0.002	0.002	0.003	0.003
	(0.399)	(0.415)	(0.734)	(0.732)
Vol	0.173	0.182	0.524	0.535
	(0.482)	(0.514)	(1.577)	(1.626)
Target Characteristics				
Log (Assets)	-0.005***	-0.005**	0.003*	0.003*
	(-2.653)	(-2.576)	(1.715)	(1.770)
Leverage	0.001	0.000	-0.009	-0.010
	(0.092)	(0.033)	(-0.964)	(-1.017)
M/B	-0.001	-0.001	-0.001	-0.001
	(-0.455)	(-0.463)	(-0.467)	(-0.449)
ROA	0.006	0.006	0.015	0.015
	(0.600)	(0.599)	(1.093)	(1.108)
Cash Ratio	-0.007	-0.008	0.006	0.005
	(-0.532)	(-0.635)	(0.487)	(0.384)
Sales Growth	-0.001	-0.001	0.001	0.001
	(-1.395)	(-1.290)	(0.229)	(0.273)
PastRet	-0.005	-0.004	-0.003	-0.003
	(-1.469)	(-1.437)	(-0.942)	(-0.897)
Vol	0.014	0.008	-0.202	-0.219
	(0.107)	(0.061)	(-1.457)	(-1.580)
Deal Characteristics				

Stock Deal		-0.004		-0.004		-0.010**		-0.009**
		(-0.943)		(-0.863)		(-2.263)		(-2.181)
Diversify		0.003		0.003		0.004		0.004
		(0.500)		(0.502)		(0.762)		(0.784)
Tender		0.005		0.006		0.010**		0.011**
		(1.082)		(1.202)		(2.007)		(2.139)
Relative Size		-0.012**		-0.012**		0.002		0.001
		(-2.065)		(-2.163)		(0.388)		(0.267)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted- R^2	0.034	0.070	0.036	0.074	0.087	0.112	0.093	0.116
N	1,317	1,317	1,317	1,317	1,277	1,277	1,277	1,277

Table 8
Heckman two-stage model for CARs

This table reports results of Heckman two-stage model for CARs to allow for the possibility of the early announcements being endogenous determined. The first-stage selection model (Column 1) is estimated by the probit regression, where the dependent variable is, Early Deal, a dummy variable that takes the value of one for the early announced merger deals, and zero for late agreement announced deals. Column 2 and 3 are the second-stage equation, where the dependent variable is the CAR (-2,+2) and Combined CAR (-2, +2), respectively. The inverse Mills ratio is included in the outcome regressions. The Past Early is a dummy variable that equals to one if the firms have any past early announcements prior to the date of early announcements, and zero otherwise. Other variable definitions can be found in Appendix 1. All regressions include control variables in Table 7. All regressions control for year fixed effects and Fama-French 48 industry fixed effects. The t statistics from robust standard errors clustered at the acquirer firm level are reported in the parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% level, respectively.

	Selection (Early=1)	CAR (-2, +2)	Combined CAR (-2, +2)
	(1)	(2)	(3)
Past Early	1.957***		
	(5.517)		
Early Deal		0.036**	0.037**
		(2.457)	(2.415)
Short Horizon		-0.009**	-0.009**
		(-2.112)	(-2.225)
Early Deal *Short Horizon		-0.030*	-0.034*
		(-1.786)	(-1.874)
Inverse Mills Ratio		0.003	0.010
		(0.246)	(0.934)
CEO, firm, and deal controls	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Pseudo- R^2 /Adjusted- R^2	0.278	0.075	0.118
N	1,180	1,159	1,128

Table 9

Post-merger operating performance

This table reports the results of OLS regressions explaining post-merger abnormal changes in operating performance, following Healey, Palepu, and Ruback (1992). The sample consists of 1,323 US mergers announced between 1993 and 2017. Specifically, the operating performance is calculated as return on assets (ROA), defined as operating income before depreciation divided by market value of assets at the beginning of the fiscal year. The abnormal operating performance is calculated as the difference between operating performance for merged firms and each year's median operating performance in the corresponding Fama-French 48 industry categories. For the pre-merger years, the operating performance is the value-weighted average of acquirer's and target's abnormal operating performance, using the market value of assets at the beginning of fiscal year as weights. We then run a cross-section regression where the dependent variable is the median post-merger abnormal performance over the 3 post-merger years (t+1 to t+3 relative to the merger completion year t), controlling for the abnormal operating performance in the year before the merger (t-1 where t is the early announcement year for early announced deals and agreement announcement year for late announced deals). The regression intercept indicates an estimate of the operating gains to mergers. Panel A reports estimation results for all early announced mergers according to the sample median value of WIH. Panel B reports estimation results for all merger deals including early announced deals and late agreement announced deals. The key explanatory variable is the interaction term Early Deal*Short Horizon. Additional control variables including CEO characteristics (Log(1+Age), Log (1+Tenure), Log(1+Salary), Log(1+Bonus), Log (1+Vega)) and deal characteristics (Stock deal, Diversify, Tender, Relative Size). The t statistics using robust standard errors are reported in the parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% level, respectively.

Panel A: Healey, Palepu, and Ruback (1992) models for early announced deals

	All	Short Horizon	Long Horizon
	(1)	(2)	(3)
Abnormal ROAt-1	0.756***	0.710***	0.780***
	(6.555)	(4.203)	(5.153)
Constant	-0.011*	-0.021**	0.004
	(-1.752)	(-2.317)	(0.441)
Adjusted- R2	0.457	0.373	0.615
p-value (x^2 test)		0.041	
N	46	29	17

Panel B: Healey, Palepu, and Ruback (1992) models for all deals

	(1)	(2)	(3)	(4)
Abnormal ROAt-1	0.491***	0.491***	0.490***	0.490***
	(10.634)	(10.362)	(10.607)	(10.331)
Early Deal	-0.008	-0.009	0.011	0.013
	(-1.133)	(-1.244)	(1.183)	(1.334)
Short Horizon			0.003	0.004
			(1.208)	(1.383)
Early Deal *Short Horizon			-0.030**	-0.035***
			(-2.350)	(-2.639)
CEO Characteristics				
Log (Age)		-0.005		-0.005
		(-0.356)		(-0.391)
Log (1+Tenure)		0.002		0.002

		(1.361)		(1.365)
Log (1+Salary)		-0.001		-0.001
		(-0.353)		(-0.384)
Log (1+Bonus)		0.000		0.000
		(0.622)		(0.898)
Log (1+Vega)		-0.000		-0.000
		(-0.469)		(-0.515)
Deal Characteristics				
Stock Deal		0.005		0.006*
		(1.608)		(1.892)
Diversify		-0.002		-0.002
		(-0.662)		(-0.701)
Tender		0.007		0.007
		(1.504)		(1.585)
Relative Size		-0.010***		-0.010***
		(-2.745)		(-2.755)
Constant	-0.003**	0.019	-0.005**	0.018
	(-2.493)	(0.337)	(-2.428)	(0.327)
Adjusted- R2	0.338	0.350	0.340	0.353
N	1,107	1,107	1,107	1,107

Table 10
Post-merger CEO turnover

This table reports estimation results for a logit model on the likelihood of CEO turnover after mergers, using a sample consists of 1,323 US mergers announced between 1993 and 2017. Turnover is a dummy variable that takes value of one if acquirer CEOs is replaced within 3 years following the merger completion, and zero otherwise. Forced Turnover is a dummy variable that takes value of one if there is a forced CEO turnover event for the firm with 3 years following the merger completion, and zero otherwise. Panel A reports coefficient estimates of Early Deal for the full sample period. Panel B shows coefficient estimates of Early Deal*Short Horizon in same regressions. Control variables are CEO characteristics (Log(1+Age), Log (1+Tenure), Log(1+Salary), Log(1+Bonus), Log (1+Vega)) and deal characteristics (Stock deal, Diversify, Tender, Relative Size). All regressions control for year fixed effects and Fama-French 48 industry fixed effects. Coefficients of marginal effects are reported. The t statistics from robust standard errors clustered at the acquirer firm level are reported in the parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% level, respectively.

Panel A: CEO turnover and early announced deals

	Turnover	Turnover	Turnover	Forced Turnover	Forced Turnover	Forced Turnover
	(1)	(2)	(3)	(4)	(5)	(6)
Early Deal	-0.011	-0.027	-0.050	0.005	0.031	0.033
	(-0.330)	(-0.661)	(-1.055)	(0.318)	(1.351)	(0.777)
CEO Characteristics						
Log (Age)		0.194***	0.225**		-0.117**	-0.246**
		(2.688)	(2.405)		(-2.300)	(-2.523)
Log (1+Tenure)		-0.003	0.002		-0.003	-0.000
		(-0.395)	(0.231)		(-0.291)	(-0.034)
Log (1+Salary)		0.032	0.023		0.012	-0.003
		(0.753)	(0.447)		(0.217)	(-0.037)
Log (1+Bonus)		-0.042	-0.031		-0.017	0.006
		(-1.557)	(-1.000)		(-0.462)	(0.133)
Log (1+Vega)		0.010**	0.013**		0.004	0.006

		(2.034)	(2.229)		(1.179)	(1.261)
Deal Characteristics						
Stock Deal		0.023	0.030*		0.016	0.018
		(1.482)	(1.754)		(1.528)	(0.969)
Diversify		-0.008	-0.016		-0.009	-0.015
		(-0.545)	(-0.821)		(-0.978)	(-0.956)
Tender		-0.013	-0.026		-0.009	-0.019
		(-0.636)	(-1.044)		(-0.606)	(-0.598)
High Tech		0.016	0.009		0.009	0.013
		(0.696)	(0.278)		(0.893)	(0.671)
Relative Size		0.020***	0.021**		0.006*	0.008
		(2.709)	(2.231)		(1.894)	(1.329)
Industry FE	No	No	Yes	No	No	Yes
Year FE	No	Yes	Yes	No	Yes	Yes
Pseudo- R^2	0.033	0.087	0.151	0.015	0.136	0.280
N	1,323	1,221	1,039	1,323	715	487

Panel B: CEO turnover, early announced deals, and short horizon

	Turnover	Turnover	Turnover	Forced Turnover	Forced Turnover	Forced Turnover
	(1)	(2)	(3)	(4)	(5)	(6)
Early Deal	-0.616***	-0.609***	-0.675***	-0.166***	-0.251***	-0.332***
	(-7.311)	(-7.642)	(-7.537)	(-3.854)	(-3.908)	(-3.957)
Short Horizon	-0.010	-0.004	-0.007	-0.003	0.002	0.009
	(-0.753)	(-0.298)	(-0.378)	(-0.406)	(0.097)	(0.378)
Early Deal *Short Horizon	0.633***	0.606***	0.648***	0.179***	0.287***	0.361***
	(6.867)	(6.606)	(6.340)	(3.695)	(3.961)	(3.707)
CEO Characteristics						
Log (Age)		0.192***	0.224**		-0.117**	-0.246**

		(2.656)	(2.370)		(-2.302)	(-2.557)
Log (1+Tenure)		-0.003	0.002		-0.003	-0.001
		(-0.427)	(0.205)		(-0.283)	(-0.043)
Log (1+Salary)		0.032	0.025		0.010	-0.006
		(0.765)	(0.483)		(0.187)	(-0.081)
Log (1+Bonus)		-0.041	-0.031		-0.017	0.006
		(-1.549)	(-0.993)		(-0.455)	(0.148)
Log (1+Vega)		0.010*	0.013**		0.005	0.006
		(1.923)	(2.095)		(1.214)	(1.236)
Deal Characteristics						
Stock Deal		0.021	0.029*		0.017	0.036
		(1.411)	(1.691)		(0.959)	(1.464)
Diversify		-0.009	-0.015		-0.015	-0.036
		(-0.551)	(-0.800)		(-0.859)	(-1.278)
Tender		-0.014	-0.026		-0.019	-0.031
		(-0.679)	(-1.051)		(-0.576)	(-0.647)
High Tech		0.015	0.009		0.012	-0.000
		(0.656)	(0.283)		(0.642)	(-0.012)
Relative Size		0.020***	0.021**		0.008	0.004
		(2.700)	(2.221)		(1.362)	(0.372)
Industry FE	No	No	Yes	No	No	Yes
Year FE	No	Yes	Yes	No	Yes	Yes
Pseudo- R^2	0.025	0.090	0.154	0.018	0.138	0.281
N	1,323	1,221	1,039	1,323	715	487

Table 11
Robustness tests on the likelihood of early announcements and merger gains

This table reports estimation results from models similar to those in Table 3 (for the likelihood of early announcements) and in Table 7 (for the merger gains from early announced deals). Panel A examines the effect of CEO short incentive horizon on the likelihood of early announcements, analogous to tests in Table 3. Panel B examines the effect of CEO short incentive horizon on merger synergies, analogous to tests in Table 7.
Panel C examines the likelihood of early announcements using an alternative sample which is the cross-sectional deal sample of 1,323 US mergers announced between 1993 and 2017. We further control for corporate governance variables and CEO overconfidence as in Hirshleifer et al. (2012). We include two corporate governance variables: *Acquirer InstiOwn* and *Acquirer Blockholders*. *Acquirer InstiOwn* is defined as total fraction of common shares outstanding owned by institutional investors at the most recent report date before the announcement. *Acquirer Blockholders* is defined as the number of blockholders with at least 5% ownership presents in the firm at the most recent report date before the announcement. *CEO overconfidence* is an indicator variable that takes the value of one for all years after the CEO's option exceed 67% moneyness, and zero otherwise. For all panels, control variables for the likelihood of early announcements and merger gains are identical to those in Table 3 and Table 7, respectively. Other variable definitions can be found in Appendix 1. Coefficients of marginal effects are reported in Panel A and Panel C. The t statistics from robust standard errors clustered at the deal level are reported in the parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% level, respectively.

Panel A: Robustness tests on the likelihood of early announcements

	Industry-Size match				Industry-Size-M/B match			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
WIH	-0.091***	-0.111***			-0.081***	-0.095***		
	(-3.043)	(-3.406)			(-3.005)	(-2.586)		
Short Horizon			0.158***	0.198***			0.163***	0.191***
			(2.881)	(3.081)			(2.884)	(2.786)
Acquirer InstiOwn	-0.101	-0.184	-0.053	-0.089	-0.163	-0.143	-0.135	-0.086
	(-0.540)	(-0.818)	(-0.278)	(-0.423)	(-0.898)	(-0.685)	(-0.713)	(-0.419)
Acquirer Blockholders	-0.033	-0.046	-0.040	-0.054*	-0.036	-0.052	-0.039	-0.062**
	(-1.222)	(-1.494)	(-1.461)	(-1.723)	(-1.310)	(-1.613)	(-1.436)	(-2.037)
CEO overconfidence		0.072		0.077		0.088		0.079
		(0.843)		(0.822)		(0.830)		(0.763)
CEO and firm controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo- R2	0.258	0.344	0.259	0.349	0.241	0.309	0.246	0.320
N	276	224	276	224	271	221	271	271

Panel B: Robustness tests on the merger gains

	CAR (-2, +2)		Combined CAR (-2, +2)	
	(1)	(2)	(3)	(4)
Early	0.040***	0.049***	0.041***	0.049***
	(2.792)	(3.173)	(2.692)	(2.892)
Short Horizon	-0.006	-0.004	-0.006*	-0.003
	(-1.625)	(-0.937)	(-1.715)	(-0.769)
Early*Short Horizon	-0.034**	-0.045**	-0.037**	-0.047**
	(-2.035)	(-2.439)	(-2.032)	(-2.337)
Acquirer InstiOwn	-0.002	-0.004	-0.000	-0.006
	(-0.176)	(-0.274)	(-0.031)	(-0.379)
Acquirer Blockholders	0.002	0.002	0.003	0.003
	(0.995)	(1.092)	(1.584)	(1.622)
CEO overconfidence		0.016**		0.010
		(2.178)		(1.404)
CEO, firm, and deal controls				
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adjusted- R2	0.075	0.094	0.118	0.128
N	1,311	1,099	1,271	1,067

Panel C: Cross-section analysis of the likelihood of early announcements

WIH	-0.026***	-0.024***	-0.026***	-0.033***				
	(-3.261)	(-3.337)	(-3.535)	(-3.817)				
Short Horizon					0.053***	0.054***	0.059***	0.068***
					(3.417)	(3.474)	(3.777)	(3.796)

Acquirer InstiOwn			-0.078	-0.115*			-0.091*	-0.116**
			(-1.621)	(-1.953)			(-1.886)	(-2.022)
Acquirer Blockholders			-0.010	-0.022*			-0.009	-0.021*
			(-1.218)	(-1.875)			(-1.087)	(-1.852)
CEO overconfidence				0.026				0.030
				(0.987)				(1.134)
CEO and firm controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo- R2	0.201	0.311	0.335	0.440	0.202	0.318	0.344	0.446
N	996	996	993	717	996	996	993	717