CEO Pay Disparity, Takeover Premiums and Bidder Performance in Australia: Efficient Contracting or Managerial Power?

Luong, H. and Duong, T.H.L. and Evans, J.

Abstract

We compare acquiring firms' CEO pay with that of the highest-paid non-CEO director and investigate the influence of CEO pay disparity on takeover premiums and bidder performance. Based on a takeover sample of Australian listed targets and bidders during the 2002–2015 period, we find that takeover premiums are significantly higher if the deals are processed by acquiring firms with higher CEO pay disparity. Although these firms do not receive favourable immediate market responses to their takeover announcements, they outperform in the long run. We find no evidence that offering a large takeover premium harms shareholders' wealth. Overall, our findings largely support efficient contracting theory in the Australian M&A context.

1. Introduction

Mergers and acquisitions (M&As) are among the most significant investment strategies of corporations, not only because they reallocate resources in the economy and re-define firms' boundaries, but also because they have direct and profound implications for both managers and shareholders. Although M&As are approved by a firm's entire board of directors, they are usually initiated by the chief executive officers (CEOs), and overseeing takeover progress is often considered to be one of a CEO's major responsibilities. At the same time, CEOs receive a substantial pay disparity to other managers, which has fuelled an intense debate on the underlying reasons and the effectiveness of the enormous CEO pay package (Financial Review, 2018; The Age, 2018). In the M&A context, whether CEOs exert their skills and efforts to meet the stakeholders' expectations in conducting takeover deals continues to remain puzzling in many respects. This paper contributes to resolving those puzzles by examining the impact of pay disparity on takeover premiums and the post-takeover performance of the acquiring firms in the Australian M&A market with reference to two prominent theories: managerial power theory and efficient contracting theory.

Managerial power theory claims that higher CEO pay disparity reflects the power and prestige enjoyed by a CEO, which causes a failure to implement value-enhancing decisions (Bebchuk *et al.,* 2002; Hambrick and Cannella, 1993). This theory holds that a greater disparity of a CEO's pay from that of his/her peers is a reflection of a CEO's ability to influence the board and to capture the pay process (Bebchuk *et al.,* 2002; Hambrick and Cannella, 1993). Such a large disparity exposes CEOs to the exaggerated belief in their own abilities, leading to their entrenched behaviour (Hambrick and Cannella, 1993). According to managerial power theory, CEO power may be misused in the form of CEOs' rent-extracting behaviour, which increases a firms' agency cost (Bebchuk *et al.,* 2002; Jensen and Meckling, 1976). It should be noted that corporate decisions involve not only the CEO but also other executives, and firm resources for manager compensation are limited. It may be that if CEOs earn a higher pay compared with other directors, then the other executives do not have a proper incentive to carry out their tasks. It is also possible that the firms are unable to attract talented executives, which results in inefficient decision making and subsequent underperformance (Bugeja *et al.,* 2017). Overall, when the interests of agents and principals do not perfectly align, such CEO power

provides an opportunity for CEOs to pursue self-interests at the expense of shareholders' wealth (Bebchuk *et al.,* 2002).

In contrast, efficient contracting theory argues that CEO pay disparity is traditionally driven by the supply and demand in the labour market. It reflects a rational allocation of decision authority, thus being set at the optimal level which yields benefits to the shareholders (Grossman and Hart, 1983; Murphy and Zábojník, 2004; Smith and Watts, 1992). Under efficient contracting theory, the optimal pay package is designed to attract talented directors, to motivate directors to exert their best efforts to maximise shareholder wealth and to reduce overall costs (Harris and Raviv, 1979). In particular, CEOs are required to possess specific or superior capacities to successfully manage the organisations, which involves integrating human and material resources at the large scale, setting strategic plans and making corporate decisions (Himmelberg and Hubbard, 2000). In exchange, companies motivate managers to execute their best capacities to generate wealth for the principals by providing them with sufficient incentives that meet their earnings expectation (Mirrlees, 1976; Murphy and Zábojník, 2004). Overall, a departure of a CEO's remuneration from that of her/his peers creates a mechanism that better aligns principal-agent interests, thereby enhancing the wealth of shareholders while appropriately rewarding the CEO (Kale *et al.,* 2009; Lee *et al.,* 2008).

Although CEOs believe that they are acting in the shareholders' best interests, their decisions may be suboptimal as a consequence of, for example, a lack of independent advice from the board or a shortage of highly efficient board members (Bugeja *et al.,* 2017). Similarly, because CEOs tend to be awarded power for good performance, the prospect of gaining power may provide CEOs with better incentives to make value-enhancing decisions (Hermalin and Weisbach, 1998; Williamson, 2008). Therefore, whether CEO pay disparity is detrimental or beneficial to shareholders' wealth remains an empirical question in which critical contingency factors such as regulation and corporate governance practice need to be taken into consideration.

There are several reasons why Australia provides an interesting research setting to examine the association between CEO pay disparity and corporate takeovers. Australian firms, on average, have smaller boards, a lower proportion of board insiders and less CEO duality compared with US companies (Chandrakumara *et al.,* 2018; Schultz *et al.,* 2013). Australia also differs from the US regarding CEO employment contracts and compensation. While the

proportion of equity compensation is larger for CEOs in the US, Australian CEOs receive a higher base salary composition with tighter regulations on shares and derivatives hedging (Hill *et al.,* 2011).[1] In addition, Australia's stricter takeover regulations[2] and provisions for minority protection[3] may create a better mechanism for monitoring managers' actions, thus creating a lower possibility for value-destructive transactions to occur.

Using a takeover sample of Australian listed targets and bidders during the 2002–2015 period, we examine the impact of CEO pay disparity on takeover premiums and the performance of bidding firms, with reference to efficient contracting theory and managerial power theory. To separate the effect of the monitoring and advising roles of executive and non-executive directors, we measure CEO pay disparity in acquiring firms by comparing CEO pay with that of the highest-paid non-CEO directors in three samples of (i) executive directors, (ii) non-executive directors and (iii) directors that include both executive and non-executive directors. We find takeover premiums are positively related to CEO pay disparity in all three categories. However, the negative relationship between CEO pay disparity and announcement returns is only evident in the non-executive subsample. Although bidders that offer their CEOs sizeable pay disparity do not receive favourable immediate market responses to their takeover announcements, they earn higher returns in the long run than their counterparts within one year after takeovers in all three groups of pay disparity. The positive association of CEO pay disparity and acquiring firms' stock performance remains in the two years following takeovers, except for the non-executive subsample. We find no evidence that offering large premiums harms shareholder wealth. Overall, efficient contracting theory has more explanatory power in our Australian M&A sample.

This study makes several contributions to the literature. Firstly, we take into account the specific feature of Australian boards with a low proportion of executive directors to create

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[1] The short-term component of Australian CEO compensation packages ranges from 66.5% to 78% (Qu *et al.,* 2018; Schultz *et al.,* 2013), whereas the long-term pay category of American CEOs accounts for approximately 51.6% (Song and Wan, 2019).

[2] In a comparative analysis of the takeover regulations across 50 countries, Nenova (2006) reports that Australia has the highest takeover index which comprises 12 components of takeover legislation. Unlike the US, anti-takeover provisions which may facilitate entrenchment and value-destroying behaviour (Bebchuk *et al.,* 2008) are completely forbidden in Australia.

[3] The resolution of takeover disputes in Australia has been assigned to the Takeovers Panel since 2000. Unlike the courts, the Takeovers Panel examines the effects rather than the purposes of the directors' actions. This system has triggered a major shift in the balance of power between the management board and shareholders during the takeover process (Armson, 2017; Hill, 2010).

three measures of pay disparity. We confirm the results of Bugeja *et al.* (2017) on the pay disparity between CEO and non-executives. We then cover the pay disparity between CEO and executive directors which has been largely unsearched in Australia. Our study thereby provides fresh insights into the issues surrounding CEO pay disparity with the comparison of CEO pay separately to executive and non-executive directors in order to take into account their different roles in monitoring and advising.

Secondly, we add to the literature on the impact of CEO pay disparity on the returns that acquiring firms generate to shareholders. Previous studies in Australia have analysed shorter periods and have examined disparities between CEO compensation and total assets (Brown and Sarma, 2007), between CEOs and non-executive directors (Bugeja *et al.,* 2017) or between non-executive chairs and CEOs (Ghannam *et al.,* 2019). Although short-term event studies have been by far the most prevalent method to evaluate takeovers, doubt has been raised on the degree to which the announcement returns accurately predicts an acquirer's performance in the long run (Renneboog and Vansteenkiste, 2019). We contribute to the literature by investigating the association between CEO pay disparity and long-run returns of the acquiring firm as a method of distinguishing the implications of managerial power theory and efficient contracting theory.

Finally, our analysis may be valuable for regulatory bodies to review executive compensation and corporate governance regulations in the context of restructuring management pay towards greater efficiency. For Australian firms, the evidence found in this study concerning the positive impact of CEO pay disparity on bidder long-term performance may serve as a reference for acquirers in setting out their managerial recruitment and compensation policies. For investors, analysing takeover deals processed by CEOs with high pay disparity may provide evidence relevant to their investment decisions. This analysis indicates that although such transactions may receive unfavourable reactions from the market when they are announced, they may still prove to outperform in the long term.

The remainder of this study is structured as follows. Section 2 provides a review of the literature, together with development of the hypotheses. Section 3 explains the research methodology. Sample selection and descriptive statistics are presented in Section 4. Section 5 discusses the key findings and implications. Section 6 addresses endogeneity issues. Section 7 reports the sensitivity tests, and Section 8 concludes the study.

2. Literature review and hypotheses development

Although pay disparity and corporate takeovers are the two research areas that have been intensively investigated in the literature, there are fewer studies that examine the impact of CEO pay disparity on takeover decisions. In the US, Hayward and Hambrick (1997) report that differentials in pay between the CEO and the highest-paid executives are indicators of CEO hubris. They find a positive association between CEO relative pay with takeover premiums and value-destroying takeovers, as evidenced in the one-year post-takeover period. Bebchuk *et al.* (2011) find that CEO compensation, as a slice of the compensation paid to the top five executives, is negatively related to bidder returns in the 11 days surrounding takeover announcements. Dutta *et al.* (2011) find that Canadian firms with higher CEO pay disparity conduct more M&A transactions which consequently increase their firm size and allow the CEOs to demand higher compensation. They find no relationship between CEO pay disparity and bidder returns surrounding announcements.

Prior studies also pay special attention to the different role of executive and non-executive directors and its impact on board governance and report that a higher fraction of executive directors makes for less effective monitoring (Rediker and Seth, 1995). This is because internal directors are more loyal to management and more prone to the influence of the CEO, and the CEO can exercise more power over the board with more executive directors. In contrast, external (non-executive) directors potentially conspire less with the CEO and thus lessen CEO dominance. Some studies show that firms with more executive directors are linked with weak governance practices and high CEO compensation (Core *et al.,* 1999; Hallock, 1997; Lambert *et al.,* 1993). However, other studies cast doubt on the ability of non-executive directors to objectively govern the board since non-executive directors may not act for shareholders (Borokhovich *et al.,* 1996; Main *et al.,* 1995). Because CEOs usually control the management nomination process, they may nominate non-executive directors who are more likely to support their decisions. Additionally, outside directors who have their expertise in a narrow field may be not willing to challenge the CEO on decisions outside that field of expertise. Main *et al.* (1995) suggest that many outside directors are CEOs in other firms, so they understand CEO incentives and behaviours, and they may feel a reciprocal obligation to not judge the CEO.

In the Australian market, Brown and Sarma (2007) find that a high ratio of CEO compensation to total assets indicates managerial power, which captures the ability of the CEO to impose his/her views on a firm's decisions. They also find that such disparity is positively related to the likelihood of the firm deciding to conduct a takeover deal, especially in the case of diversifying acquisitions in which personal incentive is more likely to be present. *Bugeja et al.* (2017) highlight the importance of non-executive characteristics and attributes with a higher outsider ratio among firms in Australia compared with other markets. They find that the ratio of non-executive compensation to that of CEOs in the bidding firms is negatively associated with takeover premiums and positively related to their firms' announcement returns. Their findings suggest that higher non-executive directors' relative compensation leads to better board monitoring and advising. Ghannam *et al.* (2019) analyse the pay ratios between the non-executive chairs and CEOs of the acquiring firms as a component of CEO power. They find that firms with a powerful non-executive chair pay lower bid premiums and receive more favourable market reactions around announcements. Although Australian boards have a lower ratio of insiders, the relative power between the CEO and the executive directors still exists but has been largely unsearched. We attempt to fill this gap in the Australian literature.

2.1 The impact of CEO pay disparity on takeover premiums

According to managerial power theory, managers make M&A decisions to achieve their own objectives or because they are affected by hubris or herd behaviour (Hayward and Hambrick, 1997; Jensen, 1986; Roll, 1986; Scharfstein and Stein, 1990). Managers' self-interests can be a desire for empire building, enhancing reputation, increasing compensation or ensuring a favourable career path. These incentives induce managers to overbid in order to secure the deals (Jensen, 1986, 1988). From the perspective of managerial power theory, CEO pay disparity is an indicator of agency issues in which CEOs pursue their own interests and use their powers to influence their pay packages (Bebchuk *et al.,* 2011; Hayward and Hambrick, 1997). Therefore, it is expected that higher CEO pay disparity is associated with a large premium paid by the acquiring firm.

In contrast, efficient contracting theory contends that CEO pay disparity is linked to the CEO's talent and contribution to the value of the firm (Chang *et al.,* 2010; Lazear and Rosen, 1981; Murphy and Zábojník, 2004), suggesting that the CEO with high pay disparity would

evaluate an M&A deal carefully and pay an appropriate price for it. As CEOs with high compensation disparity are assumed to utilise their superior skills to act in the interests of their shareholders, they may decide to pay a high or a low bid premium, depending on their analysis of the potential synergies.

Prior literature shows that the monitoring and advising role of the board can influence the CEO decision on the takeover offer. Hayward and Hambrick (1997) find that the hubristic CEO with high relative compensation compared with other executives pays a higher premium when board vigilance is lacking, when there is a high proportion of inside directors and when the CEO is also the chairman. Bugeja *et al.* (2017) find that CEOs who are paid a higher compensation relative to non-executive directors pay a higher bid premium.[4] They find that lower financial rewards for non-executive directors reduce their incentives to monitor the CEO or indicate a shortage of quality independent directors. Building on the varied perceptions of the two theories and the mixed results of the previous analyses, we postulate the following non-directional hypothesis:

H₁: CEO pay disparity is associated with takeover premiums.

Because executive and non-executive directors play different roles in monitoring and advising, we investigate the CEO pay disparity separately for these two groups. A positive relationship between CEO pay disparity and takeover premiums would support managerial power theory. In contrast, efficient contracting theory can be applied regardless of the sign of this correlation, and further analysis of bidder long-term performance is required before reaching a conclusion.

2.2 The impact of CEO pay disparity on bidder performance

Managerial power theory predicts a negative correlation between CEO pay disparity and acquiring firms' performance (Bebchuk *et al.,* 2011; Hayward and Hambrick, 1997). When comparing CEOs with executive directors, CEO pay disparity may represent CEO hubris or a CEO power-agency conflict when irrational CEOs have greater motives and opportunities to dominate the board while pursuing their own interests at the expense of shareholders (Bebchuk

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[4] Bugeja *et al.* (2017) compare the compensation of non-executive directors with that of CEOs and find a negative relationship with the takeover premium.

et al., 2011; Hayward and Hambrick, 1997). Meanwhile, because firms' resources for manager compensation are limited, a high pay disparity between CEOs and non-executive directors implies that non-executive directors may not have enough compensation incentive to spend their limited time and energy to properly carry out their tasks (Bugeja *et al.,* 2017; Stein and Zhao, 2019). Consequently, the board's ability to effectively advise and monitor the CEO may be impaired, which would tend to reduce bidder performance (Bugeja *et al.,* 2017).

On the other hand, the proponents of efficient contracting theory argue that a discrepancy between a CEO's remuneration and that of his or her peers creates a mechanism that helps to align principal-agent interests and motivates the CEO to make value-creating decisions (Edmans *et al.,* 2017). High CEO pay disparity is a reward to the CEO for superior managerial talent relative to that of other managers (Graham *et al.,* 2012; Song and Wan, 2019), and such pay disparity minimises monitoring costs for stakeholders and the board (Edmans and Gabaix, 2009). As a result, high CEO pay disparity is perceived as an indication of better-quality management, which positively relates to firms' returns (Chang *et al.,* 2010; Kale *et al.,* 2009; Lee *et al.,* 2008) and does not necessarily lead to value-destroying acquisitions (Dutta *et al.,* 2011).

The existing literature finds that a number of factors can explain bidders' returns, such as the method of payment (Shleifer and Vishny, 2003), deal attitude (Officer, 2003), the public status of the target firm (Shams *et al.,* 2013), agency conflicts (Jensen and Meckling, 1976), managerial hubris (Roll, 1986) managerial overconfidence (Malmendier and Tate, 2005), poor corporate governance (Masulis *et al.,* 2007) and excessive free cash flows (Jensen, 1986). However, the influence of CEO pay disparity on acquiring firm performance is less established. Prior US literature finds that the CEO pay slice between CEOs and top executives is negatively associated with bidder announcement returns (Bebchuk *et al.,* 2011). It is documented in Australia that acquiring firms with high non-executive-director relative compensation or with a powerful non-executive chair receive more favourable market reaction around takeover announcements (Bugeja *et al.,* 2017; Ghannam *et al.,* 2019). To the best of our knowledge, there is no Australian study to date that examines the impact of CEO pay disparity on the long-term performance of acquiring firms, and we attempt to fill this gap in the literature. We also distinguish the implication of CEO pay disparity on acquirers' post-takeover performance

separately for executive directors and non-executive directors to reflect their different roles in monitoring and advising the firm's CEO.

Based on the mixed theoretical views, the following non-directional hypotheses are proposed concerning the impact of CEO pay disparity on both announcement returns and the long-term performance of acquiring firms:

H₂: CEO pay disparity is related to announcement returns for bidders.

H_2: CEO pay disparity is related to announcement returns for bidders.

H_3: CEO pay disparity is related to long-term post-takeover returns for bidders.

It is expected that a negative relationship between CEO pay disparity and bidder performance would support managerial power theory. Otherwise, a positive effect of CEO pay disparity on bidder performance is consistent with efficient contracting theory.

3. Methodology

The following regression is estimated using the final sample of takeover deals for the period 2002–2015 to test the hypotheses on the impact of CEO pay disparity on takeover premiums and bidder performance.

$$Dependent.Vars = \beta_0 + \beta_1 RelPay(CPS) + \beta_i[Financial\ Characteristics] + \beta_j[Deal\ Characteristics] + \beta_k[Corporate\ Governance] + [IndustryDummies] + [YearDummies] + \varepsilon \qquad [1]$$

The dependent variables of equation [1] are takeover premium, bidder announcement and long-term return. Takeover premium (*Premium60d*) is the percentage difference between the offer price and the target share price 60 days prior to the announcement, expressed in percentage terms.[5] The three-day cumulative abnormal returns (*CAR[-1,1]*), the excess return over the All Ordinaries Index of acquiring firms, measures the market's reaction to a takeover announcement.[6] We use buy-and-hold abnormal returns (BHARs) in one year (*BHAR1y*) and two years (*BHAR2y*) after the takeover announcements to measure the long-run performance of the acquiring firms.[7] Following Barber and Lyon (1997) and Lyon *et al.* (1999), we compare

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[5] The share price 60 days prior to the announcement is chosen to minimise the effect of share price volatility near announcement dates. In a later sensitivity test, we use the target's share price 30 days before the announcement to calculate the takeover premium.

[6] We use a five-day event window to calculate abnormal returns (*CAR[-2;2]* in sensitivity tests.

[7] We use Tobin's Q and change in ROA in one year and two years after the announcement year in sensitivity tests.

the BHARs of acquiring firms with the returns of other firms, controlling for survival, size and book-to-market ratio. We match a sample firm to a control firm of similar size with market capitalisation ranging from 70% to 130% and the closest book-to-market ratio at the beginning of the month prior to announcement.

Following Hayward and Hambrick (1997), our main variable of interest – CEO pay disparity – is firstly measured as the ratio of CEO compensation[8] divided by the compensation of the highest-paid non-CEO director who is an executive (*RelPayExe*).[9] Secondly, as Bugeja *et al.* (2017) find Australian non-executive directors have an influence on the takeover premium and announcement returns of bidding firms, we calculate a similar ratio in a sample that consists of non-CEO directors who are non-executives (*RelPayNonExe*). Thirdly, CEO pay disparity is further computed in a combination sample that includes both executive and non-executive directors (*RelPay*). While CEO pay disparity relative to executives can be an indicator of CEOs' decision authority, pay disparity relative to non-executives can be referred to the monitoring role of non-executive directors (Bugeja *et al.,* 2017). We categorise high and low CEO pay disparity against the industry-year median[10] and create the respective dichotomous variables (*DRelPayExe*, *DRelPayNonExe*, *DRelPayNonExe*).[11] Under managerial power theory's perspectives, CEOs with high pay disparity conduct takeover deals at unreasonably high prices and harm their firms' value. In contrast, efficient contract theory applies if CEOs who earn larger pay disparity make fair offers to target shareholders and generate wealth for the acquiring firms.

Following prior literature, we control for three sets of variables that potentially influence takeover premiums and bidder performance. In the first group of 'firm financial specifics', the ratio of deal value to market value of acquirers (*RelSize)* accounts for the estimation risk and liquidity risk associated with the information asymmetry of small-size deals and the complexity of incorporating large-size businesses (Anderson *et al.,* 1994; Moeller *et*

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[8] Compensation is measured at the financial year prior to the announcement year which is the combination of two components: (1) the short-term compensation consisting of salary, bonus, superannuation and non-pecuniary benefits; (2) the long-term compensation, including shares and stock options. The final payout, which is the amount paid to a CEO when the employment contract is terminated, is excluded from calculation.

[9] Definitions of variables are provided in the Appendix.

[10] We use the two-digit codes of the Standard & Poor's Global Industry Classification Standard (GICS) to categorise the bidder's industry.

[11] In our sensitivity test, the alternative proxy for CEO pay disparity is CEO pay gap, calculated as the difference between total CEO pay and the highest-paid executive director (*PayGapExe*), non-executive director (*PayGapNonExe*) and directors (*PayGap*). Details are in a later section (Section 7).

al., 2004). *BidderROA* and *TargetROA* reflect the recent performance of the acquirers and targets, respectively, in the financial year prior to takeovers, and these variables are used to control for management ability and the promising synergies of bidder and target (Lang *et al.,* 1989; Morck *et al.,* 1990). Bidding firms' leverage (*BidderLEV*) indicates the difficulty in arranging funds to finance the deals, which requires managers to carefully consider the cost of the deals (Maloney *et al.,* 1993).

The second group consists of 'deal characteristics' variables. *Toehold* indicates the possibility of termination and the negotiation power of bidders (Betton *et al.,* 2009). *Completion* is the number of days to complete the deal that signifies the acquisition efficiency.[12] *Diversification* captures the potential for synergy and the intention of the CEOs to conduct the deals (Shleifer and Vishny, 2003). *HostileBid* reflects an acquiring firm's strategy in response to potential or actual target defence (Schwert, 2000). *CashPayment* indicates the bidder and target strategy regarding processing time, the threat of competition and the market valuation (Andrade *et al.,* 2001; Shleifer and Vishny, 2003). *CompetingBid* is an indicator of the bargaining strength of the buyer (Bhagat *et al.,* 2005). Offer price revision (*RevisedBid*) represents the bidder's reconsideration of the takeover offer, which may happen if the target's share price movements reflect private information about other bidders during the negotiations or if they reflect the threat of potential rivals (De *et al.,* 1996; Schwert, 1996).

The third group represents the 'corporate governance and CEO characteristics' of the bidding firms. *BoardSize* indicates management capability, agency issues and monitoring mechanisms (Jensen, 1993). *InsiderRatio* accounts for the board structure and the level of board independence (Masulis *et al.,* 2007; Roberts *et al.,* 2005). *BoardOwnership* signifies the relative power between the CEO and the board. *CEOduality* denotes the CEOs' ability to formally and informally influence the board, and the way that information is transferred to other directors (Hayward and Hambrick, 1997). *CEOtenure* indicates the CEOs' levels of power (Teti *et al.,* 2017) or their experiences and skills (Walters *et al.,* 2007). *CEOownership* accounts for the alignment of interests between the agent and the principal (Chang *et al.,* 2010). In the analysis of long-term takeover performance, we include *CEOturnover* as one additional

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[12] *Completion* is only included in the long-term performance analyses, as the time to complete a takeover cannot influence takeover premiums and announcement returns.

variable to control for any change in CEOs after takeover. Definitions of all control variables are provided in the Appendix.

4. Data and sample selection

4.1 Sample construction

Our sample covers all takeover announcements of targets and bidders listed on the Australian Securities Exchange (ASX) over the period 2002–2015. We initially collect takeover information from Connect4, then verify with the Zephyr, DatAnalysis and SDC Platinum Mergers and Acquisitions databases. We then collect financial data from Datastream and DatAnalysis. Corporate governance data are obtained from SIRCA and Connect4 Boardroom. Company annual reports, takeover documents and scheme documents lodged with the ASX are also manually checked to fill in missing information. To be included in our sample, a takeover deal is required to satisfy the following criteria:

- The offer price, share price, CEO compensation, corporate governance and other financial data of bidders and targets must be available.

- There is no change in CEO of the bidding firm in the year prior to announcement and the year of announcement.

- For the one-year and two-year post-takeover analyses, the takeover transactions need to be completed and bidding firms are not delisted within two years after announcement.

Although Section 300A of the Corporations Law requires listed companies to disclose the compensation of their executives, the availability of information from annual reports and the SIRCA and Connect4 Boardroom databases is very limited for the early years of implementing this requirement.[13] Data from these two databases are initially combined, and the company annual reports are cross-checked to increase the data accuracy and reduce missing

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[13] Executive compensation data for all ASX-listed firms are provided by the SIRCA database from 2001, and the Connect4 Boardroom database has such information from 2004.

observations. All of the financial information on bidders and targets is obtained from SIRCA, DatAnalysis and Datastream. The original M&A sample consists of 858 observations, of which 513 deals satisfy our criteria to be included in the sample[14] for analysing takeover premiums and acquiring firms' announcement returns. We further exclude unsuccessful takeovers to have 352 deals in the one-year and two-year post-takeover sample.[15]

Table 1 presents the year and industry distribution of the sample. It reports an increase in the number of M&A deals at the time of the global financial crisis. When classifying bidders and targets based on the two-digit codes of the Standard & Poor's Global Industry Classification Standard (GICS),[16] it is revealed that M&A activities are most frequent in the Materials sector and least frequent in the Utilities sector.

[Insert Table 1 here]

4.2 Descriptive statistics

The summary statistics of variables used in this study are presented in Table 2. As shown in Panel A, a typical CEO is paid 2.81 times higher than the highest-paid non-CEO director. This ratio is lower (1.69 times) when compared with executive directors and is considerably higher (6.05 times) when compared with non-executive directors. Panel B shows that the bidders, on average, hold 11.57% of the target's shares at announcement and it takes 97 days to complete a deal.[17] It is not common for bidders to acquire firms in a different industry (21.64%), and the majority of takeover deals are friendly, with only 28.85% being hostile. In our sample, more than half of the deals (51.27%) are financed with cash,[18] 19.30% of deals attract multiple bidders and 21.64% of the offers are subsequently revised.

[Insert Table 2 here]

Turning to financial and corporate governance characteristics in Panel C, the average (median) size of the deal value relative to the market value of the acquiring firm is 85.83%

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[14] This sample includes both successful and unsuccessful takeovers.
[15] Successful deals account for 69.03% of our sample.
[16] GICS is used to categorise every bidder and target industry. For missing information, the annual reports are checked to assign each firm to a GICS code by using the ASX's remapping guidance.
[17] The completion time (days) reported in Table 2, Panel B, is in natural logarithm.
[18] In Australia, cash-financed takeovers account for 55% to 61.25% of the total bids (Duong and Izan, 2012; da Silva Rosa *et al.*, 2000)

(31.93%). The acquiring firms have an average ROA of 0.1%, and the targets report an average ROA of −15.68%. Debt accounts for a smaller proportion in the acquiring firms' capital structure, with their leverage ratio being 17.78%. An average Australian acquiring firm has seven directors on its board, with 29.01% of the board being insiders. On average, the boards of bidding firms own 15.25% of the outstanding shares, and only 9.16% of the CEOs are also chairs of their boards. The CEOs of bidding firms have been in their positions, on average, for about six years and hold 4.15% of their companies' shares. Australian CEO ownership is much lower than that of UK firms (reported at 15% by Lasfer (2006)), but higher than that of US firms (reported at 2.61% by Dah and Frye (2017)). On average, 12.5% of acquiring firms' CEOs resign within two years after the takeover announcement.

Panel D shows that the acquirers in our sample offer a 26.70% premium and generate an abnormal return of 0.54% during the three-day announcement period. The buy-and-hold-abnormal returns in one year and two years post takeover are -1.45% and -3.05%, respectively. The figures of the takeover premium, announcement and long-term returns of firms in our sample are quite similar to those reported in previous literature (Aspris *et al.,* 2014; Bugeja *et al.,* 2017; Chan and Emanuel, 2011; Duong and Izan, 2012; Humphery-Jenner and Powell, 2011).

The Pearson correlation matrix of variables used in our main models is presented in Table 3. It can be seen that the correlations among all variables are in the small to medium magnitude, with the highest and statistically significant correlation of 0.30 between *RelPay* and *InsiderRatio.* This is probably due to the fact that executive directors are paid significantly higher than their outside counterparts; hence, CEO pay disparity should be correlated with the percentage of executive directors. We address this correlation by creating the other two proxies of CEO pay disparity, *RelPayExe* and *RelPayNonExe*, in the separated samples. In general, the coefficient correlation among variables is in the small to medium range, signifying that multicollinearity is not a main issue of the models (Gujarati and Porter, 2009).

[Insert Table 3 here]

5. Results

5.1 CEO pay disparity and takeover premiums

Table 4 presents the multiple regression results of takeover premiums against CEO pay disparity. In Columns (1)–(3), the coefficients generated by the continuous pay disparity variables (*RelPayExe, RelPayNonExe* and *RelPayExe*) are positive and significant at the 10% lever or higher. In Columns (4)–(6), we use dummy variables of pay disparity (*DRelPayExe, DRelPayNonExe* and *DRelPayExe*) which classify CEO pay disparity into high and low categories, compared with the year and industry median value. It is found that CEOs who receive high pay, compared with the highest-paid executive director, non-executive director and director in general, pay higher takeover premiums by 7.30% (p<0.10), 11.80% (p<0.05) and 8.41% (p<0.01), respectively, compared with those of their counterparts. The results for CEO pay disparity to non-executive directors are consistent with the prior Australian study of Bugeja (2017), namely, that lower compensation for non-executives is associated with higher takeover premium, implying the monitoring role of non-executive directors for reducing the probability of over-payment.

[Insert Table 4 here]

Our multivariate analysis supports H_1 that there is a positive association between CEO pay disparity and takeover premiums. According to managerial power theory, managers tend to reflect their arrogance and self-interest in their organisations' strategies when setting their prices for takeover deals (Hayward and Hambrick, 1997; Roll, 1986). In addition, CEO pay disparity indicates the CEOs' abilities to impose their dominance, to pursue their interests and to capture higher pay packages (Bebchuk *et al.,* 2011; Hayward and Hambrick, 1997), and higher CEO pay disparity is related to higher bidding prices. In contrast, efficient contracting theory argues that CEOs of acquiring firms who are paid relatively higher tend to have superior skills in analysing their transactions (Murphy and Zábojník, 2004). Therefore, these CEOs offer appropriate premiums, which if necessary may be higher than the premiums offered by CEOs with low pay disparity.[19] To this point, there is insufficient evidence to determine whether the

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[19] In our sample, the mean values of *RelPayExe/ RelPayNonExe/ RelPay* in the high CEO pay disparity group are 1.34%/6.80%/3.51% higher than that in the low CEO pay disparity group. The respective difference in premiums offered by CEOs in the two groups is 10.95%/12.48%/9.58%, and significant at the 10% level or higher.

managerial power or the efficient contracting hypothesis is supported in our sample. Further analyses regarding the performance of the bidding firms are required before reaching a conclusion.

For the control variables, *Diversify* is significantly and positively associated with bid premiums. It may be that managers conduct unrelated deals for personal incentive at the cost of shareholders, and thus may be willing to overpay for the deals or they may want to diversify the firms' business to indirectly diversify their personal portfolio (Morck *et al.,* 1990). Furthermore, *RevisedBid* has a significantly positive influence on bid premiums, indicating that higher premiums are likely to be higher when bidders reconsider their offers. This can be the result of potential rivals or private information reflected in target share price movements or the extra direct and indirect cost associated with a revised bid (De *et al.,* 1996; Schwert, 1996).

5.2 CEO pay disparity and bidder performance

5.2.1 Announcement returns

Table 5 reports the results of equation [1] in which bidder announcement return is the dependent variable. We find that compensation discrepancies between CEO and the highest-paid non-executive have a significantly negative impact on bidder returns surrounding announcements. It is true for both the continuous variable of pay disparity (*RelPayNonExe)* at $p < 0.10$ and its binary variable (*DRelPayNonExe)* at $p < 0.01$. Our finding is consistent with Bugeja *et al.* (2017), who suggest that non-executive directors with higher compensation exercise a greater monitoring role and have a positive influence on the market reaction to a takeover announcement. The possible explanations can be either the lack of effort of directors, or the hiring of directors with lower quality and expertise (Bugeja *et al.* (2017). However, we find that there is no evidence of lower announcement returns in the executive sample (*RelPayExe* and *DRelPayExe*) and the full sample (*RelPay* and *DRelPay*).[20] Hence, H$_2$ is partially supported. So far, our results do not find enough evidence to support managerial power theory, which proposes that CEO pay disparity is an indicator of the agency problem,

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[20] The mean *CAR[-1;1]* in the high *RelPayExe*/*RelPayNonExe*/*RelPay* disparity group are 1.48%/-4.08%/-1.65% compared with that in the low CEO pay disparity group, and their difference is significant at the 1% level for the non-executive sample.

and that CEOs who earn high pay disparity are likely to exercise their power to undertake value-decreasing takeovers, which result in lower returns to shareholders (Bebchuk *et al.,* 2011; Hayward and Hambrick, 1997). Our analyses on takeover premium and announcement returns also do not support efficient contracting theory, which holds that higher CEO pay is associated with CEO skills and contributions to firm value (Kale *et al.,* 2009; Lee *et al.,* 2008).

[Insert Table 5 here]

Table 5 also reports the statistical significance of several control variables. *TargetROA* is found to have a significantly negative influence on bidder returns around the announcement. The negative coefficients of *HostileBid* suggest that the attitude of the bid may be associated with certain biases that lead to a worse market reaction. The positive coefficients of *CompetingBid* indicate that takeover deals that attract multiple bidders are more profitable, and that the presence of rivals may increase the short-term returns of the winner (Bradley *et al.,* 1988). The positive relationship between *CEOownership* and announcement returns implies that firms with higher CEO ownership experience better market reaction around announcements, indicating a convergence of managers' and shareholders' interests (Jensen and Meckling, 1976; Lewellen *et al.,* 1985). We find that the effect of *Premium60d* are insignificant in all models considered, which indicates that takeover premiums are not a determinant of bidder announcement returns.

5.2.2 Long-term returns

Table 6 presents the regression results of one-year BHARs in Panel A and two-year BHARs of acquiring firms in Panel B. It is reported in Panel A that the coefficients of both the continuous and dummy CEO pay disparity variables are significantly positive at the 10% level or above. In Columns (1)–(3), the estimated coefficients of *RelPayExe*, *RelPayNonExe* and *RelPay* are 3.51 ($p<0.05$), 0.95 ($p<0.10$) and 1.05 ($p<0.01$), respectively. Columns (4)–(6) show that takeovers conducted by the CEOs of acquiring firms who earn high relative pay significantly increase their firms' stock returns, by 4.18% (*DRelPayExe)*, 1.46% (*DRelPayNonExe)* and 3.52% (*DRelPay)* in one year following their announcements.

[Insert Table 6 here]

Panel B shows similar results for two-year BHARs, except that the coefficients of the CEO pay disparity variables in the non-executive sample (*RelPayNonExe* and *DRelPayNonExe)* are all insignificant. Columns (10) and (12) reveal that acquiring firms experience 3.73% and 4.51% excess returns in the two years after announcement if their CEOs receive a relative pay classified as in the high category.[21] Our findings suggest that higher CEO pay disparity is associated with a significant increase in BHARs post takeover. This finding is more pronounced in the executive subsample and the full sample. However, the positive impact in the non-executive category seems to diminish in the two years post takeover, implying that CEO pay disparity in the non-executive category does not significantly impact the stock performance of acquiring firms in the second year after takeovers.

Overall, the findings presented in this section support H_3 that there is a positive association between CEO pay disparity and bidder long-term performance. Our findings also support efficient contracting theory in that CEO compensation reflects the supply and demand of the labour market and that compensation is structured to minimise the agency cost and to reward CEOs for their skills and performance (Harris and Raviv, 1979; Mirrlees, 1976). Consequently, managers of the acquiring firms who earn high pay disparity tend to make value-enhancing takeover decisions.

For the control variables, *TargetROA* is found to have a negative influence on bidder performance in the one-year and two-year post-announcement periods. It is likely that bidding firms have a better chance to efficiently use the target firms' resources to implement value-enhancing changes when acquiring small-size and underperforming targets (Servaes, 1991). Acquiring firms with high financial leverage (*BidderLEV*) can experience higher stock performance in two years post takeovers. *Diversify* is significantly and negatively associated with long-term performance, suggesting that the market recognises diversification as an indicator of agency problems (Morck *et al.,* 1990; Shleifer and Vishny, 2003) and management complexity when managers of the acquiring firms may not have expertise in the target industry to run the business efficiently post takeovers (Jensen, 1986). *BoardOwnership* is positively

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[21] The mean *BHAR1y* and *BHAR2y* in the high *RelPayExe/RelPayNonExe/RelPay* disparity group are 8.50%/13.31%/10.99% and 11.58%/12.12%/ 13.31%, respectively, compared with that in the low CEO pay disparity group, significant at the 10% level or higher.

related to one-year post-takeover performance, which can be explained by the closer monitoring responsibility associated with a higher ownership (Bhagat and Bolton, 2008).

Interestingly, the insignificant impact of premiums (*Premium60d*) on bidder performance suggests that the higher premiums paid by acquiring firms with CEOs who earn high pay disparities do not harm shareholder wealth. Hence, this finding does not support managerial power theory, which suggests that managers are affected by psychological bias or motivated by self-interest, and they tend to use their power to offer high premiums, leading to value-destroying takeover transactions (Hayward and Hambrick, 1997; Jensen, 1986; Roll, 1986; Scharfstein and Stein, 1990). Instead, our findings in the premium and bidder performance analyses support efficient contracting theory, which proposes that CEOs who earn high pay disparities have superior skills in analysing transactions (Grossman and Hart, 1983; Harris and Raviv, 1979; Murphy and Zábojník, 2004). On the basis of their high-quality analyses, such CEOs try to lock in their deals by offering appropriate premiums, which may, if necessary, be higher than the premiums offered by CEOs with low pay disparity.

6. Robustness test[22] - two-stage least squares analysis

In this section, we follow the instrument variable approach to address the issue that our findings may be subject to the endogenous nature of CEO pay disparity (Wooldridge, 2010). Industry median CEO pay disparity has been used to reflect the managerial labour market and benchmarking practice. This reference point is critical not only to firms because they must compete to hire managers, but also to managers because they are continuously being judged in the labour market (Grossman and Hart, 1983; Harris and Raviv, 1979; Holmström, 1979; Jensen and Meckling, 1976; Mirrlees, 1976; Murphy and Zábojník, 2004). Hence, how CEO pay disparity deviates from the industry median shows the external labour market's perception of managerial ability, performance and reputation (Chang *et al.,* 2010). Likewise, geographical peer effects have been shown to influence corporate governance and actions (Alam *et al.,* 2014; Dougal *et al.,* 2015; Knyazeva *et al.,* 2013). Therefore, we use the yearly industry and state-

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[22] We also performed an additional analysis using the Heckman (1979) two-stage approach to address the potential selection bias that acquiring firms are not randomly chosen and the issue of potentially omitted variables. It is found that our main results in Tables 4, 5 and 6 remain robust after controlling for sample selection bias. For brevity, we do not report the regression results of the Heckman two-stage approach. Details will be available upon request.

based averages of CEO pay disparity as instrumental variables. For these instruments to be strong and valid, each should have a significant relationship with the endogenous regressor while having insignificant effects on the error terms in our models. It is reasonable to interpret that firm-level CEO pay disparity is associated with industry and state-based level CEO pay disparity (Coles *et al.,* 2018; Kubick and Masli, 2016). At the same time, there is no direct link between the offer price and bidder performance and the industry and state-based CEO pay disparity except through the CEO compensation of the bidders.

The results of two-stage least squares (2SLS) regressions are presented in Table 7. In Panel A of the first-stage regression output, we obtain consistent results on the positive association between CEO pay disparity and the instrumental variables.[23] The coefficients of the year, industry and state average CEO pay disparity variables (*Instrumented RelPayExe*, *Instrumented RelPayNonExe* and *Instrumented RelPay*) are positive and significant at the 10% level or higher. The findings are consistent with our prediction that firm-level CEO pay disparity is significantly affected by the yearly industry and state-based level CEO pay disparity. The regression diagnostics report robust evidence on the strength and validity of the instrument. Therefore, the instrumental variables are valid and a weak instrument is not a concern of the models.

[Insert Table 7 here]

The second-stage regression result in Panel B reinforces the earlier findings. In Panel B1, the coefficients estimated for CEO pay disparity against takeover premiums remain positive and significant in all columns. In Panel B2 of announcement returns, the negative and significant coefficients of the instrumented CEO pay disparity variables are only reported in the non-executive subsample. Five out of the six coefficients generated for the one-year and two-year post-takeover BHARs (Panels B3 and B4) are positive and statistically significant in the executive sample and the full sample. Finally, the Durbin-Wu-Hausman tests are significant at p<0.10, signifying that our results remain robust with the 2SLS regressions.

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[23] We exclude deal characteristics from the first-stage regression because it is unlikely that the managers' pay contracts of acquirers are affected by the deals that will be conducted by them in the future.

7. Sensitivity analysis

We perform additional tests[24] using different measures of CEO pay disparity, takeover premium, announcement and long-term returns. We firstly rerun equation [1] with a different proxy for CEO pay disparity as the difference (in thousands of dollars) between CEO compensation and the compensation of the highest-paid non-CEO director who is an executive (*PayGapExe*), a non-executive (*PayGapNonExe*) and a director in general (*PayGap*). We obtained similar results when using an alternative measure of CEO pay disparity.

Our second sensitivity analysis is to adopt alternative measures of dependent variables in equation [1]. We calculate takeover premiums based on the target share price 30 days prior to announcement (*Premium30d*), use a five-day event window to calculate abnormal returns (*CAR[-2;2]*) and measure the long-term returns of bidders by Tobin's Q and change in ROA in one year and two years after the announcement year. Tobin' Q is calculated as the market value of acquiring firms in one year (or two years) after the takeover announcement over the replacement costs of their assets. Change in ROA is computed as the difference between the ROA of acquiring firms in one year (or two years) following takeovers and that in the announcement year. It is found that our main results reported in Tables 4, 5 and 6 are robust to different measures of takeover premium, announcement returns and long-term performance.

8. Conclusion

This study investigates the effects of CEO pay disparity on takeover premiums and bidder performance. We compare acquiring firms' CEO pay with that of the highest-paid non-CEO director who is an executive director, a non-executive director or a director in general. We find that CEOs with high pay disparity tend to offer higher takeover premiums to target shareholders. Takeovers conducted by CEOs with high pay disparity reduce shareholder wealth in the days surrounding announcements only when CEO pay disparity is measured against the highest-paid non-executive director. However, CEO pay disparity is positively associated with the acquirers' long-term performance. Our findings support the efficient contracting theory, which suggests that CEO pay disparity reflects the supply and demand of the labour market. CEOs of acquiring firms who are paid relatively higher than their firms' other directors may

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[24] The results of additional tests will be available upon request.

have superior skills for analysing transactions and managing the synergies of merged firms. These higher-paid CEOs offer appropriate premiums, which may, if necessary, be higher than the premiums offered by CEOs with low pay discrepancy. Their takeover decisions may not be responded to favourably by the market surrounding the announcement date, but they will outperform in the long term. The contrast between our findings and those of US studies can be explained by the differences in board structures, CEO pay packages, corporate governance practices and takeover regulations between the two countries. Our findings also indicate that regulations have a crucial impact in governing managers' actions and in protecting shareholders. It is evident that stronger corporate governance structures and stricter takeover regulations typically lead to better alignment between managers and shareholders via the pay contract.

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Appendix: Definitions of variables

Variable	Definition
CEO pay disparity variables	
RelPayExe	The ratio of CEO compensation divided by the compensation of the highest-paid non-CEO director who is an executive.
RelPayNonExe	The ratio of CEO compensation divided by the compensation of the highest-paid non-CEO director who is a non-executive.
RelPay	The ratio of CEO compensation divided by the compensation of the highest-paid non-CEO director.
DRelPayExe	A dummy variable that takes the value of one if RelPayExe is above the industry and year median value, and zero otherwise.
DRelPayNonExe	A dummy variable that takes the value of one if RelPayNonExe is above the industry and year median value, and zero otherwise.
DRelPay	A dummy variable that takes the value of one if RelPay is above the industry and year median value, and zero otherwise.
Dependent variables	
Premium60d	The percentage difference of offer price and target share price 60 days prior to the announcement, expressed in percentage.
CAR[−1, 1]	Three-day cumulative abnormal returns to acquiring firms.
BHAR1y	One-year buy-and-hold abnormal returns of acquiring firms.
BHAR2y	Two-year buy-and-hold abnormal returns of acquiring firms.
Control variables	
TargetROA/ BidderROA	Target/bidder ROA, calculated as earnings before interest, depreciation, and amortisation, divided by total book assets of the target/bidding firms.
BidderLEV	Leverage of acquiring firms, calculated as total debt divided by total assets.
RelSize	The ratio of deal value to the market value of acquiring firm one month prior to announcement.
Toehold	The percentage share ownership of the acquiring firm at the date of the announcement of the acquisition.
Completion	Log value of number of days to complete the deal.
Diversify	A dummy variable that equals to one if bidder and target are from different industries, zero otherwise.
HostileBid	A dummy variable that takes the value of one if the bid attitude is hostile, zero otherwise.
CashPayment	A dummy variable that equals to one if the deal is financed in cash, zero otherwise.
CompetingBid	A dummy variable that takes the value of one if there are at least two acquirers making an offer to a target, zero otherwise.
RevisedBid	A dummy variable that takes the value of one if the offer price has been revised, zero otherwise.
BoardSize	The number of directors on the board of acquiring firms.
InsiderRatio	The proportion of the number of executive directors on the board.
BoardOwnership	The percentage of acquiring firms' board stock ownership.
CEOduality	A dummy variable that takes the value of one if the CEO also acts as the chair, and zero otherwise.
CEOtenure	The number of years since the CEO has been in the position.
CEOownership	The percentage of acquiring firms' CEO stock ownership.
CEOturnover	A dummy variable that takes the value of one if the CEO of the acquiring firm resigns within two years after the year of announcement.

Table 1: Sample distribution

Year	No. Deals	%	GICS Industry Sector	Bidder		Target	
				No. Deals	%	No. Deals	%
2002	37	7.21	Energy	63	12.28	67	13.06
2003	27	5.26	Materials	170	33.14	169	32.94
2004	27	5.26	Industrials	37	7.21	40	7.80
2005	38	7.41	Consumer Discretionary	56	10.92	56	10.92
2006	40	7.80	Consumer Staples	33	6.43	28	5.46
2007	56	10.92	Healthcare	21	4.09	23	4.48
2008	53	10.33	Financials	90	17.54	82	15.98
2009	45	8.77	Information Technology	19	3.70	24	4.68
2010	44	8.58	Telecommunication Services	19	3.70	16	3.12
2011	36	7.02	Utilities	5	0.97	8	1.56
2012	30	5.85					
2013	26	5.07					
2014	26	5.07					
2015	28	5.46					
	513	**100**		**513**	**100**	**513**	**100**

This table shows the number and proportion of takeover deals by year and by industry between bidders and targets listed on the ASX from 2002 to 2015.

Table 2: Descriptive statistics

	N	Mean	Std. Dev.	1st Quartile	Median	3rd Quartile
Panel A: CEO pay disparity measures						
RelPayExe	360	1.6861	1.1907	1.0000	1.4240	2.0873
RelPayNonExe	153	6.0539	4.7674	2.1704	4.7054	8.7289
RelPay	513	2.8079	2.8468	1.0967	1.7047	3.1445
Panel B: Deal characteristics						
Toehold	513	11.5727	14.7175	0.0000	4.9436	19.8995
Completion	513	4.5770	0.7457	4.3567	4.6634	4.9416
Diversify	513	0.2164	0.4122	0.0000	0.0000	0.0000
HostileBid	513	0.2885	0.4535	0.0000	0.0000	1.0000
CashPayment	513	0.5127	0.5003	0.0000	1.0000	1.0000
CompetingBid	513	0.1930	0.3950	0.0000	0.0000	0.0000
RevisedBid	513	0.2164	0.4122	0.0000	0.0000	0.0000
Panel C: Financial and corporate governance						
RelSize	513	0.8583	2.3920	0.1030	0.3193	0.7550
TargetROA	513	-0.1568	5.4545	-0.1003	0.0167	0.0678
BidderROA	513	0.0010	0.5455	-0.0086	0.0553	0.0845
BidderLEV	513	0.1778	0.0854	0.1152	0.1612	0.2142
BoardSize	513	7.1579	2.8077	5.0000	7.0000	9.0000
InsiderRatio	513	0.2901	0.1672	0.1667	0.2500	0.4000
BoardOwnership	513	15.2497	18.0400	0.8868	7.6300	24.7500
CEOduality	513	0.0916	0.2888	0.0000	0.0000	0.0000
CEOtenure	513	6.0994	5.7275	1.9068	4.3014	7.8247
CEOownership	513	4.1547	7.9569	0.0304	0.3620	3.1640
CEOturnover	352	0.1250	0.3312	0.0000	0.0000	0.0000
Panel D: Takeover premium and bidder returns						
Premium60d	513	26.6955	31.6229	8.3333	22.4490	40.7407
CAR[-1,1]	513	0.5356	6.5788	-3.3293	-0.0218	3.4588
BHAR1y	352	-1.4484	13.0267	-8.5615	-0.7881	7.8128
BHAR2y	352	-3.0541	13.1516	-10.8925	-1.1236	6.6800

This table presents the descriptive statistics of variables which include pay disparity, deal characteristics, financial and corporate governance characteristics. Variables are defined in the Appendix.

Table 3: Correlation matrix

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
RelPay	(1)	1											
CAR[-1,1]	(2)	-0.125***	1										
BHAR1y	(3)	0.174***	0.0499	1									
BHAR2y	(4)	0.155***	-0.00991	0.544***	1								
Premium60d	(5)	0.102**	-0.0564	0.00875	0.0858*	1							
RelSize	(6)	0.00214	-0.0334	0.0616	0.0438	-0.0649	1						
TargetROA	(7)	-0.0369	-0.144***	-0.0354	-0.0634	-0.00237	-0.0419	1					
BidderROA	(8)	-0.00735	-0.063	-0.0254	0.0164	0.0299	-0.0403	0.0358	1				
BidderLEV	(9)	-0.00412	0.0269	-0.0462	-0.0472	-0.0344	-0.0768*	0.0427	0.0626	1			
Toehold	(10)	-0.0762*	0.0307	0.00681	0.0018	0.061	-0.107**	-0.0033	0.0324	0.0437	1		
Completion	(11)	0.064	0.0672	-0.00332	0.0374	-0.0634	0.00074	0.00683	-0.0879**	0.0508	-0.0881**	1	
Diversify	(12)	-0.0115	0.0357	-0.0105	-0.057	-0.0723	0.0689	0.0189	-0.00817	0.0878**	0.0322	-0.0334	1

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
HostileBid	(13)	0.0447	0.0368	-0.00119	-0.0184	-0.0342	0.134***	-0.0603	-0.0504	-0.0553	-0.0342	0.0699	0.0618
CashPayment	(14)	0.0585	-0.016	0.0272	0.0376	0.0307	-0.034	0.0687	0.180***	0.112**	0.223***	-0.0484	-0.00965
CompetingBid	(15)	0.00391	0.0943**	-0.0107	-0.000931	-0.0137	0.00842	-0.0762*	0.0499	-0.0389	0.00349	-0.0451	-0.114**
RevisedBid	(16)	0.0406	0.0106	0.0132	0.0229	0.037	0.0108	0.0135	-0.0562	0.0853*	0.0211	0.189***	0.0453
BoardSize	(17)	0.0578	-0.0287	0.00198	-0.0316	-0.0178	-0.137***	-0.01	0.123***	0.157***	0.129***	-0.0203	-0.0169
InsiderRatio	(18)	-0.299***	0.104**	-0.012	-0.0819*	-0.0719	0.130***	0.0184	0.0654	0.014	0.0602	-0.0582	0.0281
BoardOwnership	(19)	-0.05	0.0457	0.0364	0.0142	-0.0814*	0.0907**	0.0212	-0.0448	0.0134	0.048	0.0478	0.0709
CEOduality	(20)	-0.0882**	0.0992**	0.0000852	-0.0448	0.00997	0.0392	-0.034	-0.124***	-0.00896	0.0507	0.0584	0.0502
CEOtenure	(21)	0.0549	-0.0466	-0.000913	-0.0342	0.112**	-0.140***	0.0342	0.0725	0.0664	0.0929**	-0.011	0.0576
CEOownership	(22)	-0.0982**	0.113**	0.00982	0.0359	-0.0603	0.0325	-0.00533	-0.0934**	-0.0393	-0.0121	0.0195	0.153***
CEOturnover	(23)	0.0714	0.0517	0.0319	0.0182	0.000828	0.0615	-0.00471	-0.0794*	-0.0517	0.000698	0.0444	0.0146

		(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
HostileBid	(13)	1										
CashPayment	(14)	0.0257	1									
CompetingBid	(15)	0.179***	0.150***	1								
RevisedBid	(16)	0.302***	0.171***	0.198***	1							
BoardSize	(17)	-0.0507	0.314***	0.106**	0.0304	1						
InsiderRatio	(18)	0.135***	-0.0672	-0.00817	0.0439	-0.223***	1					
BoardOwnership	(19)	0.0655	0.027	-0.0515	0.0920**	-0.114***	0.254***	1				
CEOduality	(20)	0.131***	0.0597	0.0191	0.0336	-0.0474	0.119***	0.133***	1			
CEOtenure	(21)	-0.0556	0.145***	-0.00906	-0.00884	0.114***	-0.0668	-0.0324	0.0361	1		
CEOownership	(22)	0.142***	-0.00719	-0.0123	-0.0018	-0.173***	0.220***	0.422***	0.266***	0.0611	1	
CEOturnover	(23)	-0.018	-0.0707	-0.04	-0.0885**	-0.0622	0.0241	-0.0438	-0.00829	-0.113**	0.00752	1

All variables are defined in the Appendix. The asterisk *, ** or *** denotes statistical significance at 10%, 5% or 1%, respectively.

Table 4: CEO pay disparity and takeover premium (60 days prior to announcement)

	(1)	(2)	(3)	(4)	(5)	(6)
RelPayExe	3.2602*					
	(1.94)					
RelPayNonExe		1.2564***				
		(3.14)				
RelPay			1.0599***			
			(2.88)			
DRelPayExe				7.3025*		
				(1.78)		
DRelPayNonExe					11.8013**	
					(2.14)	
DRelPay						8.4182***
						(2.74)
RelSize	-0.3974	-0.7081	-0.3355	-0.4673	-0.6291	-0.4872
	(-0.50)	(-0.67)	(-0.54)	(-0.59)	(-0.58)	(-0.78)
TargetROA	0.4885	-0.3053	0.0674	0.3419	-0.2166	0.0839
	(0.51)	(-1.19)	(0.26)	(0.36)	(-0.80)	(0.32)
BidderROA	2.1392	-1.7919	2.9003	1.6767	-4.9313	2.6843
	(0.70)	(-0.14)	(1.06)	(0.55)	(-0.38)	(0.98)
BidderLEV	-1.4869	-2.1999	-1.2195	-1.8235	-1.5865	-1.5140
	(-0.63)	(-0.77)	(-0.69)	(-0.78)	(-0.20)	(-0.86)
Toehold	0.1499	0.0649	0.1266	0.1431	0.0672	0.1015
	(1.43)	(0.39)	(1.51)	(1.36)	(0.39)	(1.21)
Diversify	4.6148	9.1410*	4.8129	3.4852	2.1064*	4.4005
	(0.95)	(1.69)	(1.28)	(0.71)	(1.93)	(1.17)
HostileBid	-2.9539	1.8413	-1.7423	-2.5496	2.4857	-1.2149
	(-0.65)	(0.32)	(-0.51)	(-0.56)	(0.42)	(-0.35)
CashPayment	3.7746	-1.7339	1.6952	3.9891	-2.0925	2.3080
	(0.89)	(-0.29)	(0.51)	(0.94)	(-0.34)	(0.69)
CompetingBid	-6.5436	-1.5612	-3.3594	-5.8626	0.9887	-2.9010
	(-1.36)	(-0.23)	(-0.88)	(-1.22)	(0.14)	(-0.76)
RevisedBid	4.6148	9.1410	4.8129	3.4852	2.1064*	4.4005
	(0.95)	(1.49)	(1.28)	(0.71)	(1.93)	(1.17)
BoardSize	-0.0648	-1.6041	-0.1310	-0.0581	-0.7676	-0.1473
	(-0.09)	(-1.25)	(-0.23)	(-0.08)	(-0.58)	(-0.25)
InsiderRatio	-0.5662	-4.7030	0.4259	0.3822	-5.2232	-1.0957
	(-0.05)	(-0.23)	(0.04)	(0.03)	(-0.25)	(-0.11)
BoardOwnership	-0.0790	-0.0595	-0.0920	-0.0735	0.0001	-0.0531
	(-0.72)	(-0.38)	(-1.08)	(-0.66)	(0.00)	(-0.62)
CEOduality	3.0844	7.5684	2.7112	2.6160	8.2815	3.0314
	(0.46)	(0.80)	(0.51)	(0.39)	(0.85)	(0.57)
CEOtenure	0.2920	0.5807	0.3920	0.2831	0.6490	0.3509
	(0.89)	(1.19)	(1.51)	(0.86)	(1.30)	(1.34)
CEOownership	0.0822	-0.0211	0.0539	0.0700	-0.0742	0.0079
	(0.42)	(-0.08)	(0.36)	(0.36)	(-0.28)	(0.05)
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Yr. & Ind. effects	Yes	Yes	Yes	Yes	Yes	Yes
N	360	153	513	360	153	513
R^2	0.1478	0.3740	0.1354	0.1462	0.3459	0.1339

This table reports regression outputs for equation [1] with dependent variable as the takeover premium 60 days prior to announcement. The main explanatory variable is CEO pay disparity represented by the ratio of CEO compensation at one year prior to the announcement year divided by the compensation of the highest-paid non-CEO director who is (i) an executive (*RelPayExe*), (ii) a non-executive (*RelPayNonExe*) and (iii) either an executive or a non-executive (*RelPay*). The respective dummy variables (*DRelPayExe, DRelPayNonExe* and *DRelPay*) are created by comparing CEO pay disparity with the industry and year median value. All other variables are defined in the Appendix. The t-statistics are reported in parentheses. The asterisk *, ** or *** denotes statistical significance at 10%, 5% or 1%, respectively.

Table 5: CEO pay disparity and CAR [–1, 1]

	(1)	(2)	(3)	(4)	(5)	(6)
RelPayExe	-0.0897					
	(-0.21)					
RelPayNonExe		-0.2350*				
		(-1.79)				
RelPay			-0.1646			
			(-1.61)			
DRelPayExe				-0.7052		
				(-0.66)		
DRelPayNonExe					-4.8589***	
					(-2.87)	
DRelPay						-1.1310
						(-1.33)
BidPremium	-0.0093	0.0146	-0.0076	-0.0087	0.0156	-0.0082
	(-0.64)	(0.49)	(-0.60)	(-0.60)	(0.55)	(-0.65)
RelSize	-0.3022	0.2564	-0.1923	-0.2924	0.2566	-0.1723
	(-1.48)	(0.77)	(-1.13)	(-1.43)	(0.79)	(-1.00)
TargetROA	-0.1930	-0.2373***	-0.2198***	-0.2048	-0.2857***	-0.2210***
	(-0.78)	(-2.94)	(-3.05)	(-0.84)	(-3.52)	(-3.06)
BidderROA	-1.0624	2.9003	-0.9029	-1.0176	2.9577	-0.8700
	(-1.35)	(0.73)	(-1.20)	(-1.29)	(0.76)	(-1.16)
BidderLEV	2.0589	0.5558	2.7849	2.2396	-4.5600	3.1890
	(0.34)	(0.06)	(0.58)	(0.37)	(-0.52)	(0.66)
Toehold	0.0185	0.0543	0.0178	0.0194	0.0402	0.0216
	(0.68)	(1.04)	(0.77)	(0.71)	(0.78)	(0.94)
Diversify	-0.4741	1.2425	0.4629	-0.4913	1.3930	0.4593
	(-0.39)	(0.66)	(0.47)	(-0.40)	(0.76)	(0.47)
HostileBid	1.2812	-3.7861**	-0.1986	1.2426	-3.3736*	-0.2862
	(1.09)	(-2.10)	(-0.21)	(1.06)	(-1.91)	(-0.30)
CashPayment	-0.2103	-0.7708	-0.2403	-0.2611	-0.2159	-0.3267
	(-0.19)	(-0.41)	(-0.26)	(-0.24)	(-0.12)	(-0.36)
CompetingBid	1.0416	3.9175*	2.0011*	0.9907	3.0085	1.9374*
	(0.84)	(1.82)	(1.90)	(0.79)	(1.42)	(1.84)
RevisedBid	0.2017	0.5453	-0.1099	0.3321	-0.1361	-0.0581
	(0.16)	(0.28)	(-0.11)	(0.26)	(-0.07)	(-0.06)
BoardSize	-0.0977	0.4816	-0.0594	-0.1005	0.1988	-0.0546
	(-0.52)	(1.19)	(-0.37)	(-0.54)	(0.49)	(-0.34)
InsiderRatio	4.6593	9.1593	3.5137	4.3623	6.2691	3.8831
	(1.47)	(1.45)	(1.32)	(1.37)	(0.99)	(1.47)
BoardOwnership	0.0031	-0.0327	-0.0006	0.0010	-0.0504	-0.0061
	(0.11)	(-0.67)	(-0.03)	(0.04)	(-1.05)	(-0.26)
CEOduality	1.4785	4.6179	1.7359	1.4695	3.9980	1.7056
	(0.85)	(1.55)	(1.20)	(0.84)	(1.37)	(1.18)
CEOtenure	-0.1086	0.1309	-0.0538	-0.1045	0.1207	-0.0491
	(-1.28)	(0.85)	(-0.75)	(-1.23)	(0.80)	(-0.68)
CEOownership	0.1071**	-0.0807	0.0459	0.1072**	-0.0649	0.0528
	(2.13)	(-0.99)	(1.12)	(2.13)	(-0.81)	(1.29)
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Yr. & Ind. effects	Yes	Yes	Yes	Yes	Yes	Yes
N	360	153	513	360	153	513
R2	0.1471	0.3751	0.1126	0.1481	0.4013	0.1111

This table reports regression outputs for equation [1] with the dependent variable being the bidder returns three days around the announcement (*CAR[-1;1]*). The main explanatory variable is CEO pay disparity represented by the ratio of CEO compensation at one year prior to the announcement year divided by the compensation of the highest paid director who is (i) an executive (*RelPayExe*), (ii) a non-executive (*RelPayNonExe*) and (iii) either an executive or a non-executive (*RelPay*). The respective dummy variables (*DRelPayExe, DRelPayNonExe* and *DRelPay*) are created by comparing CEO pay disparity with the industry and year median value. All other variables are defined in the Appendix. The t-statistics are reported in parentheses. The asterisk *, ** or *** denotes statistical significance at 10%, 5% or 1%, respectively.

Table 6: CEO pay disparity and one-year and two-year post-takeover BHAR

	Panel A: One-year BHAR						Panel B: Two-year BHAR					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
RelPayExe	3.5087**						3.8250**					
	(2.04)						(2.09)					
RelPayNonExe		0.9480*						0.4053				
		(1.88)						(0.95)				
RelPay			1.0535***						0.9332**			
			(2.95)						(2.57)			
DRelPayExe				4.1778**						3.7268***		
				(2.13)						(3.32)		
DRelPayNonExe					1.4625**						0.8172	
					(2.10)						(1.33)	
DRelPay						3.5181***						4.5137***
						(3.73)						(3.73)
BidPremium	0.0151	-0.1231	0.0056	0.0158	-0.1192	0.0008	0.0404	-0.1195	0.0251	0.0337	-0.1240	0.0180
	(0.27)	(-1.01)	(0.12)	(0.28)	(-0.99)	(0.02)	(0.68)	(-1.15)	(0.53)	(0.58)	(-1.22)	(0.39)
RelSize	0.2110	1.5928	1.2667	-0.1718	0.7640	1.0522	1.6533	0.6743	1.5773	1.0446	0.1979	1.3243
	(0.10)	(0.64)	(0.90)	(-0.08)	(0.30)	(0.75)	(0.73)	(0.32)	(1.10)	(0.46)	(0.09)	(0.93)
TargetROA	-1.7016**	0.2815	-0.5177	-1.8304**	0.4203	-0.4347	-1.8704**	-0.3626	-0.7288*	-1.8546**	-0.2906	-0.6368
	(-2.17)	(0.43)	(-1.20)	(-2.38)	(0.64)	(-1.01)	(-2.24)	(-0.65)	(-1.66)	(-2.30)	(-0.53)	(-1.46)
BidderROA	-0.4203	-2.1982	0.3461	-0.9707	-1.7439	0.3546	0.6781	-1.6367	1.9168	-0.2697	-1.3887	1.9408
	(-0.12)	(-1.05)	(0.10)	(-0.27)	(-0.84)	(0.11)	(0.18)	(-0.93)	(0.56)	(-0.07)	(-0.79)	(0.57)
BidderLEV	-3.1771	2.8197	-1.4031	-3.1551	4.2355	-1.5971	-2.6141	4.2098	-1.1426	-2.5409	4.8712*	-1.3301
	(-1.29)	(0.83)	(-0.78)	(-1.28)	(1.26)	(-0.90)	(-1.00)	(1.46)	(-0.63)	(-0.99)	(1.71)	(-0.74)
Toehold	-0.0291	0.1895	0.0157	-0.0330	0.2058	-0.0022	-0.0440	0.2216	0.0398	-0.0512	0.2359	0.0233
	(-0.31)	(0.95)	(0.20)	(-0.35)	(1.03)	(-0.03)	(-0.44)	(1.31)	(0.51)	(-0.52)	(1.40)	(0.30)
Completion	0.1943	-3.3314	0.1377	0.4927	-3.3681	0.0726	2.3741	-0.2952	2.3422	3.0083	-0.3779	2.2763
	(0.06)	(-0.67)	(0.06)	(0.16)	(-0.69)	(0.03)	(0.72)	(-0.07)	(0.99)	(0.93)	(-0.09)	(0.98)
Diversify	-1.4767	-1.7825**	-2.8950	-1.3735	-1.7686**	-3.4624	1.2330	-1.2577*	-2.0820	1.6570	-1.2366*	-2.6134
	(-0.31)	(-2.12)	(-0.79)	(-0.29)	(-2.12)	(-0.95)	(0.25)	(-1.77)	(-0.56)	(0.33)	(-1.75)	(-0.71)
HostileBid	1.2576	0.7373	-1.2236	2.5311	-1.4400	-0.6352	1.2591	-4.1190	-3.4184	3.3285	-5.2721	-2.8377
	(0.20)	(0.07)	(-0.25)	(0.40)	(-0.14)	(-0.13)	(0.19)	(-0.49)	(-0.68)	(0.50)	(-0.63)	(-0.57)
CashPayment	0.1067	-7.1953	0.6717	0.2953	-8.5731	0.8089	3.0190	-2.8771	3.2083	3.4829	-3.8022	3.3636
	(0.02)	(-0.97)	(0.19)	(0.07)	(-1.15)	(0.23)	(0.64)	(-0.46)	(0.89)	(0.75)	(-0.60)	(0.95)
CompetingBid	1.2710	-1.5349	-4.1586	2.1656	-1.1041	-3.3019	-2.8180	-2.6448	-6.0472	-1.5374	-0.7308	-5.2253
	(0.24)	(-1.44)	(-0.94)	(0.41)	(-1.06)	(-0.76)	(-0.50)	(-0.29)	(-1.35)	(-0.28)	(-0.08)	(-1.18)

RevisedBid	3.2763	5.0376	2.2654	1.0231	8.5837	1.8264	1.0381	5.8657	1.0715	-2.6228	7.4790	0.4597
	(0.62)	(0.56)	(0.54)	(0.19)	(0.98)	(0.44)	(0.18)	(0.77)	(0.25)	(-0.46)	(1.00)	(0.11)
BoardSize	0.4965	2.2096	0.4272	0.4838	2.4618	0.4751	-0.1355	0.7503	-0.3607	-0.1458	0.8640	-0.3006
	(0.73)	(1.33)	(0.75)	(0.71)	(1.49)	(0.84)	(-0.19)	(0.53)	(-0.63)	(-0.20)	(0.62)	(-0.53)
InsiderRatio	2.8930	-12.7112	-2.7635	4.3071	-1.2093	-3.3866	5.7279	-1.7602	-2.0109	8.5396	-1.5876	-1.7214
	(0.23)	(-0.42)	(-0.27)	(0.34)	(-0.40)	(-0.33)	(0.43)	(-0.68)	(-0.19)	(0.64)	(-0.62)	(-0.17)
BoardOwnership	0.0924	-0.0867	0.1278*	0.1025	0.0747	0.1715*	0.0203	-0.1143	0.0138	0.0479	-0.0344	0.0571
	(0.84)	(-0.40)	(1.74)	(0.93)	(0.34)	(1.94)	(0.17)	(-0.62)	(0.15)	(0.41)	(-0.18)	(0.64)
CEOduality	1.6433	-13.3814	0.7293	1.6079	-11.3706	1.8493	1.7717	-2.1719	4.8142	2.1092	-0.9556	5.9398
	(0.22)	(-1.17)	(0.13)	(0.21)	(-0.99)	(0.32)	(0.22)	(-0.22)	(0.82)	(0.26)	(-0.10)	(1.02)
CEOtenure	-0.0664	0.8338	0.0756	-0.0917	0.8474	0.0138	-0.3789	0.3292	-0.2716	-0.4405	0.3245	-0.3431
	(-0.22)	(1.45)	(0.30)	(-0.30)	(1.48)	(0.06)	(-1.18)	(0.67)	(-1.08)	(-1.38)	(0.67)	(-1.37)
CEOownership	-0.0442	0.8832	0.0540	-0.0250	0.5870	0.0166	0.0763	0.4357	0.0883	0.1182	0.2886	0.0564
	(-0.21)	(1.49)	(0.32)	(-0.12)	(1.32)	(0.10)	(0.35)	(1.16)	(0.51)	(0.55)	(0.76)	(0.33)
CEOturnover	0.4539	5.9445	2.3388	0.5656	9.2386	3.4050	-0.6160	8.2237	2.3393	-0.1898	9.5335	3.2437
	(0.08)	(0.61)	(0.51)	(0.10)	(0.98)	(0.76)	(-0.10)	(1.00)	(0.51)	(-0.03)	(1.20)	(0.71)
Constant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yr. & Ind. effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	247	105	352	247	105	352	247	105	352	247	105	352
R^2	0.1381	0.4179	0.1214	0.1398	0.4257	0.1357	0.1631	0.3543	0.1119	0.1890	0.3630	0.1321

This table reports regression outputs for equation [1] with the dependent variable being the bidder returns in one year (*BHAR1y*) and two years (*BHAR2y*) after the announcement. The main explanatory variable is CEO pay disparity represented by the ratio of CEO compensation at one year prior to the announcement year divided by the compensation of the highest-paid non-CEO director who is (i) an executive (*RelPayExe*), (ii) a non-executive (*RelPayNonExe*) and (iii) either an executive or a non-executive (*RelPay*). The respective dummy variables (*DRelPayExe, DRelPayNonExe* and *DRelPay*) are created by comparing CEO pay disparity with the industry and year median value. All other variables are defined in the Appendix. The asterisk *, ** or *** denotes statistical significance at 10%, 5% or 1%, respectively.

Table 7: Two-stage least squares regressions (2SLS)

	(1)	(2)	(3)
Panel A: First-stage regressions			
Year, industry & state average RelPayExe	0.5162***	-	-
	(4.09)		
Year, industry & state average RelPayNonExe	-	0.0804*	-
		(1.86)	
Year, industry & state average RelPay	-	-	0.1140***
			(2.82)
Unreported control variables included in regression	Yes	Yes	Yes
Financial & corporate governance characteristics	Yes	Yes	Yes
Deal characteristics	No	No	No
Year & industry effects	Yes	Yes	Yes
N	360	153	513
Panel B: Second-stage regressions, validity and endogeneity tests			
Panel B1: Takeover Premium			
Instrumented RelPayExe	3.0379*		
	(1.83)		
Instrumented RelPayNonExe		1.2877***	
		(3.24)	
Instrumented RelPay			1.0821***
			(2.91)
Unreported control variables included in regression			
Financial, corporate governance & deal characteristics	Yes	Yes	Yes
Year & industry effects	Yes	Yes	Yes
Weak identification test			
Kleibergen-Paap rk Wald *F* statistic	27.70	12.31	30.72
p-value	(0.0343)	(0.0850)	(0.0146)
Test of endogeneity: Durbin–Wu–Hausman test			
F statistics	3.33	10.49	8.48
p-value	(0.0689)	(0.0016)	(0.0038)
N	360	153	513
Panel B2: CAR [−1, 1]			
Instrumented RelPayExe	0.1289		
	(0.30)		
Instrumented RelPayNonExe		-0.2295*	
		(-1.75)	
Instrumented RelPay			-0.1557
			(-1.51)
Weak identification test			
Kleibergen-Paap rk Wald *F* statistic	25.32	46.12	28.48
p-value	(0.0878)	(0.0001)	(0.0396)
Unreported control variables included in regression			
Financial, corporate governance & deal characteristics	Yes	Yes	Yes
Year & industry effects	Yes	Yes	Yes
Test of endogeneity: Durbin–Wu–Hausman test			
F statistics	1.90	3.07	2.29
p-value	(0.0766)	(0.0823)	(0.0131)
N	360	153	513

Panel B3: One-year post-takeover BHARs	(1)	(2)	(3)
Instrumented RelPayExe	3.2072*		
	(1.93)		
Instrumented RelPayNonExe		0.9662*	
		(1.91)	
Instrumented RelPay			1.0438***
			(2.89)
Unreported control variables included in regression			
Financial, corporate governance & deal characteristics	Yes	Yes	Yes
Year & industry effects	Yes	Yes	Yes
Weak identification test			
Kleibergen-Paap rk Wald *F* statistic	10.62	17.59	8.80
p-value	(0.0935)	(0.0549)	(0.0976)
Test of endogeneity: Durbin–Wu–Hausman test			
F statistics	3.72	3.63	8.33
p-value	(0.0550)	(0.0613)	(0.0042)
N	247	105	352
Panel B4: Two-year post-takeover BHARs			
Instrumented RelPayExe	3.5829**		
	(2.03)		
Instrumented RelPayNonExe		0.4130	
		(0.96)	
Instrumented RelPay			0.9187**
			(2.50)
Weak identification test			
Kleibergen-Paap rk Wald *F* statistic	14.25	15.32	16.07
p-value	(0.0768)	(0.0701)	(0.0652)
Unreported control variables included in regression			
Financial, corporate governance & deal characteristics	Yes	Yes	Yes
Year & industry effects	Yes	Yes	Yes
Test of endogeneity: Durbin–Wu–Hausman test			
F statistics	4.10	1.92	6.23
p-value	(0.0442)	(0.3402)	(0.0131)
N	247	105	352

This table reports the endogeneity-corrected regression results by employing the 2SLS regressions approach using the year, industry and state CEO pay disparity as the instrumental variables. Panel A reports first-stage regression output and Panel B reports second-stage regression output together with validity test statistics and endogeneity test statistics. The asterisk *, ** or *** denotes statistical significance at 10%, 5% or 1%, respectively.