

Paid Generously to Destroy Value? New Evidence from Corporate Acquisitions

Dimitris Andriosopoulos^a, David Hillier^a, Patrick McColgan^a, Athanasios Tsekeris^{b,*}

ABSTRACT

We investigate the impact of CEO power on the selection of the target firm in corporate acquisitions and the subsequent deal performance. We show that acquisitions of publicly listed targets, being larger-scale investments, are more likely to be initiated by more powerful CEOs who are more generously compensated relative to the top management team compared to their counterparts who acquire private or subsidiary firms. We further find that higher CEO power is negatively associated with acquisition announcement returns in public deals but not in private or subsidiary deals. Our findings support the *managerial power* hypothesis for public target acquisitions but lend support to the *efficient contracting* hypothesis for private target acquisitions.

JEL classification: M12, G30, G34, J33

Keywords: Managerial Power, Optimal Contracting, Executive Compensation, Acquisition Performance, Target Listing Status.

^aDepartment of Accounting and Finance, University of Strathclyde, Glasgow, G4 0QU, UK.

^dDepartment of Accounting and Finance, Nottingham Trent University, Nottingham, NG1 4BU, UK, Tel: 44-115-848-2619, Email: athanasios.tsekeris@ntu.ac.uk *corresponding author.

1. Introduction

CEOs with more power over their boards receive larger compensations and engage in larger Mergers and Acquisitions (M&As) relative to the size of their own firms (Grinstein and Hribar, 2004). M&As, which have an aggregate value of \$1.34 trillion per year (Bonaimé et al., 2018), often depend on the transactions' benefits for top managers, among other factors (Hartzell et al., 2004). Therefore, we use M&As as an empirical setup to test the *efficient contracting* and *managerial power* hypotheses. Using the CEO Pay Slice measure, developed by Bebchuk et al. (2011), as a proxy for CEO power and excess compensation we provide new evidence on the outcomes of corporate acquisitions conditional on the listing status of the target firm.

The literature on the determinants of executive compensation can be partitioned into two main camps: *efficient contracting* (optimal selection) and *managerial power* (Frydman and Jenter, 2010). The former posits that executive pay is set at optimal levels to reflect the executives' skills and contributions to the firm based on the market for managerial talent (Brookman and Thistle, 2013; Custodio et al., 2013). The latter posits that powerful managers are likely to extract rents by influencing their own compensation and setting it above optimal levels (Bebchuk and Fried, 2003). Yermack (1995) argues that managerial power can explain patterns in CEO compensation better than the efficient contracting hypothesis. This can include rigging incentive pay by shifting the weight on performance measures towards the better performing ones (Morse et al., 2011) or obscuring components of pay so that to avoid the impact of regulatory reforms (Abernethy et al., 2015). Such actions can increase substantially CEO total compensation but affect adversely firm performance (Brick et al., 2006).

Managerial decisions made by powerful CEOs are more consistent with the target of increasing corporate control and extracting personal benefits rather than maximizing shareholder value (Bebchuk et al., 2011). Similarly, powerful CEOs tend to engage in empire

building by making large scale investments in order to increase the size of assets under their control (Baldenius et al., 2014). This can positively affect their compensation which is expected to increase with firm size (Khorana and Zenner, 1998; Bliss and Rosen, 2001). Given that acquisitions of publicly listed firm are larger-scale investments relative to acquisitions of private or subsidiary firms¹, the former seem a more desirable target for empire-building managers who aim to increase the size of their corporate control and compensation².

However, an important condition under which powerful CEOs can engage in empire building is the absence of efficient monitoring (Baldenius et al., 2014). Therefore, such managers are likely to try to avoid the increased concentration of control that can arise from the acquisition of privately held firms (Chang, 1998). Acquisitions of unlisted firms are also associated with relatively higher levels of information asymmetry (Officer, 2007) and lower liquidity (Fuller et al., 2002) which makes such deals riskier. Although well-incentivised managers can overcome such concerns (Makadok and Barney, 2001; Boulton et al., 2014), there is extended evidence that powerful CEOs are excessively compensated and sub-optimally incentivised (Morse et al., 2011; Bebchuk et al., 2011). We therefore propose that sub-optimally compensated, powerful CEOs are more likely to acquire public firms in order to increase their corporate control, avoid monitoring and extract personal benefits.

Prioritizing their own interests over those of shareholders, the actions of powerful managers can have an important detrimental impact on the wealth of the latter. Bebchuk et al. (2011) show that a number of corporate actions initiated by powerful managers have an adverse effect on firm value and performance. In the area of corporate acquisitions, it is well documented that acquiring shareholders experience significant losses in public deals (or, at

¹ The average value of public deals in our sample is \$2.2 billion compared to \$181 million for private deals and \$445 million for subsidiary deals with all differences being significant at the 1 percent level (untabulated results). All dollar values in our analysis are adjusted for consumer price inflation and expressed in 2010 prices.

² Harford and Li (2007) show that acquiring CEO compensation rises substantially following corporate acquisitions regardless of the quality of the deal. In addition, the impact of the transaction on executive compensation increases with the deal size.

best, they break-even) relative to the positive gains experienced by acquirers of unlisted targets (Conn et al., 2005; Fuller et al., 2002; Draper and Paudyal, 2006; Faccio et al., 2006). Although a number of different explanations³ have been provided for this stylized fact, the role of managerial power has, so far, been ignored. If public deals are initiated by powerful managers, it is likely that such decisions are not taken on the basis of shareholder value maximisation but in order to increase CEOs' private benefits. Given that CEO corporate control and compensation can increase substantially following such deals irrespectively of the impact of the transaction on shareholder value (Bliss and Rosen, 2001, Harford and Li, 2007), an important number of public acquisitions may be sub-optimal deals initiated by powerful CEOs.

We propose that managerial power can be an important source of value destruction in corporate acquisitions of publicly listed targets. Should the compensation contracts of powerful CEOs be reflective of underlying agency problems, we expect a negative market reaction to acquisitions initiated by such type of executives whose actions are driven by personal benefits. In contrast, we expect a neutral or positive market reaction to acquisitions initiated by less powerful managers who are more aligned with their shareholders due to their optimally designed compensation. .

Following Bebchuk et al. (2011) we use CEO pay slice (CPS) as a measure of CEO power and the subsequent excessive compensation powerful CEOs can receive by influencing their compensation contracts⁴. We offer two novel findings to the literature. First, we show that acquisitions of large, publicly listed firms are more likely to be initiated by dominant CEOs who are able to extract rents through their compensation contracts. Our findings are robust both to the conditional and unconditional probability of making an acquisition and to endogeneity

³ See for example Hansen and Lott (1996), Chang (1998), Fuller et al. (2002), Officer (2007), Officer et al., (2009) and Alexandridis et al. (2010).

⁴ A number of studies use CPS as a proxy for managerial power (Liu and Jiraporn, 2010; Chen et al., 2013; Jiraporn and Chintrakarn, 2013; Choe et al., 2014). For a discussion of the advantages of CPS relative to other traditional proxies of CEO power see Liu and Jiraporn (2010) and Bebchuck et al. (2011).

concerns. The latter is quite important given that the level and structure of CEO compensation can be endogenous to the decision to acquire.

Second, we contribute to the debate of the determinants of acquirers' underperformance in public deals (e.g., Officer et al., 2009) showing that acquisitions of publicly listed firms, initiated by powerful CEOs, trigger a negative reaction by the market. We document a statistically and economically important average value loss of \$237 million over a two-day announcement window to acquirers of publicly listed firms with CPS higher than their industry median in the given year. This loss increases to about \$269 million when we refine high CPS acquirers to those with CPS in the top tercile of their industry distribution in the same year, after controlling for a number of firm and deal factors that previous literature has identified as important determinants of deal performance. Our findings explain the documented negative relation between CEO excessive compensation and acquisition announcement returns (Bebchuk et al., 2011; Feito-Ruiz and Renneboog, 2017). We find that this value destruction is conditional on the listing status of the target and it is concentrated in acquisitions of publicly listed firms only. Overall, the managerial power hypothesis holds for public targets, whereas, the optimal selection hypothesis holds for private target or subsidiary acquisitions.

2. Data and Summary Statistics

2.1 Sample Selection

We collect all completed domestic US⁵ mergers and acquisitions with an announcement and effective date between January 1, 1993 and December 31, 2016 using the SDC Platinum database. Following Aktas et al. (2013), the selected transactions are those that have been classified as mergers, acquisitions, acquisitions of majority interest, acquisitions of assets, acquisitions of certain assets, acquisitions of remaining interest, and exchange offers. In

⁵ Both the bidder and the target are US firms.

addition, the disclosed deal value of the transaction should be at least \$1 million⁶, the acquirer⁷ should be a publicly listed company owning less than 50 percent of the target's shares six months prior to the acquisition announcement and hold at least 50 percent after the transaction so that an explicit change of control can be ensured. We finally remove any transactions where the target firm is not characterized by SDC as public, private or subsidiary firm. The number of transactions that meet these criteria is 33,601.

We match these transactions to firms in the Standard and Poor's ExecuComp database for executive compensation data. ExecuComp provides compensation data on the top five⁸ highest compensated officers for firms in the S&P 1500 Index. The acquiring firm should have executive compensation data available in ExecuComp for the year preceding the acquisition announcement to control for the possibility that executive compensation has been affected by the transaction. Since ExecuComp does not provide compensation data prior to 1992, the starting year of our M&A sample is 1993. Following Bebchuk et al. (2011), we also require the CEO to have remained in the office for the entire year preceding the acquisition announcement so that to avoid observations with artificially high or low CEO compensation in case a departing CEO has received high severance pay or a newly appointed CEO has received compensation only for part of the year. The final sample selection criterion is the availability of stock price and accounting data for the bidding firm at the time of the acquisition announcement in the merged CRSP/Compustat database. These criteria result in a final sample size of 8,030 transactions made by 2,451 firms.

⁶ The inclusion of the deal value criterion is important for the analysis as SDC Platinum does not report method of payment for those transactions without a disclosed deal value.

⁷ Since all transactions in our sample are completed acquisitions, the terms acquirer and bidder or acquiring and bidding firm are used interchangeably.

⁸ For some firm-years ExecuComp reports compensation data for more than five executives while for some other firm-years it reports compensation data for less than five executives. To ensure comparability across firms in our sample, we drop firm-years with less than five executives and we use only the top-five paid executives, including the CEO, for firm-years with more than five executives.

2.2 Summary Statistics

Panel A of Table 1 presents summary statistics for the merged sample of 8,030 transactions. The average CPS⁹ in our sample is 39% with a standard deviation of 12% which is comparable to the statistics reported by Bebchuk et al. (2011) (35% and 11.4% respectively) given that our sample contains only acquiring firms. Moreover, the industry-median CPS (*Industry-Med_CPS*) is approximately 2% lower than that of the sample firms with a standard deviation of 3.2%. *Industry-Med_CPS* is the industry median each year based on the Fama and French (1997) classification of 48 industries¹⁰.

Given that we examine the relation between CPS and acquisition performance conditional on the listing status of the target firm, it is important to classify the deals in our sample according to this criterion. We set *Public* equal to one if the target is a publicly listed firm, and zero otherwise; . Likewise, *Private* is dummy variable that takes the value of one if the target is a privately held firm, and zero otherwise; and *Subsidiary* equal to one if the target is a subsidiary firm, and zero otherwise. Table 1 shows that 23% of the deals in our sample are acquisitions of publicly listed firms, with 44% of the transactions being acquisitions of privately held firms and the remaining ones acquisitions of subsidiary firms.

Panel A also provides summary statistics for a number of deal and firm characteristics that previous studies have shown that they can affect acquisition returns. The method of payment is found to be an important determinant of deal performance with the acquiring shareholders experiencing positive announcement abnormal returns when the deal is financed by cash, especially in the case of public acquisitions (Travlos, 1987, Datta et al., 2001; Golubov et al., 2012). To control for this factor, we use the dummy variable *Payment_Cash* which takes the value of one if the deal is financed only with cash and zero otherwise. 57% of the

⁹ Following Bebchuk et al. (2011) CPS is defined as the ratio of CEO's total compensation to the total compensation of the top-five executives in the year preceding the acquisition announcement.

¹⁰ The results remain robust to the definition of industry groups based on the two-digit standard industrial classification (SIC).

transactions in our sample are financed only with cash based on the information provided by SDC Platinum. *Diversifying* is a dummy variable that takes the value of one if the acquirer and the target operate in different industries and zero otherwise. Morck et al. (1990) and Cornett et al. (2003) show that diversifying deals are associated with negative abnormal returns around the announcement date. 40% of the acquiring managers in our sample opt to diversify when they acquire. For comparison, the proportion of diversifying deals in the samples of Morck et al. (1990) and Cornett et al. (2003) are 28% and 50% respectively.

Moreover, we include a number of factors¹¹ that are commonly shown in the literature to affect the decision to acquire a target. In particular, we include *Runup*¹² to control for past stock-price performance (Rosen, 2006); *Relative_Size* to control for the size of the deal (Asquith et al. 1983; Travlos, 1987); *No_Bidders* to control for competitive bidding (Alexandridis et al., 2010); acquirer *Size* (Moeller et al., 2004); acquirer *Cash* (Harford, 1999); *M/B* (Rau and Vermaelen, 1998; Conn et al., 2005; Dong et al., 2006) and *Sales Growth* (Harford, 1999) to control for acquirer growth opportunities; *ROA* to control for profitability (Harford, 1999); *Leverage* (Harford, 1999); *Price-Earnings ratio* (Harford, 1999); and *Non-Cash Working Capital* (Harford, 1999). We further control for a number of corporate governance characteristics as the quality of corporate governance can have an important impact on firm performance as well as on the degree of managerial power and the subsequent level of executive compensation (Core et al., 1999; Dicks, 2012; Masulis et al., 2007). In particular we include *Co-opted_Independent* (Coles et al., 2014)¹³; *CEO/Chairman* to capture CEO duality (Yermack, 1995; Adams et al., 2005; Liu and Jiraporn, 2010); *Tenure* to control for managerial

¹¹ All variables used in the paper are defined in the Appendix.

¹² Each acquiring firm is matched to a non-acquiring firm (not involved in any acquisition activity for a period of three years surrounding the deal) with the closest propensity score from the same industry. The estimation of propensity scores is based on Harford's (1999) model to predict bidders. If a matched firm is delisted before the completion of the estimation period, it is replaced with the next closest match on the delisting date.

¹³ We are grateful to Coles et al. (2014) for making their data available. Because this dataset covers only the period 1996-2010 there is a significant drop in observations in our sample when we include this variable.

entrenchment (Hermalin and Weisbach, 1998); and *CEO_Ownership* to control for CEO alignment with shareholders.

The majority of acquirers in our sample enjoy a positive average (median) buy-and-hold abnormal return (BHAR) of 4% (3%)¹⁴ in the period preceding the acquisition announcement. However, *Runup*'s standard deviation of 74% indicates a high deviation of pre-announcement returns among corporate acquirers which is comparable with the standard deviation of 70% reported by (Rosen, 2006) for a 12-month pre-announcement BHAR on the bidder's stock. The *Relative_Size* statistics for our sample are comparable to those reported by other studies (Travlos, 1987; Croci and Petmezas, 2015). Moreover, the mean and median of the variable *No_Bidders* is consistent with the evidence provided by previous studies (Alexandridis et al., 2010).¹⁵ Similarly, acquirer-specific financial characteristics such as *Size*, *Cash*, and *M/B* of our sample have similar properties to those reported in related studies (e.g., Croci and Petmezas 2015, Golubov et al., 2016).

Regarding the corporate governance controls, we find that the roles of CEO and Chairman are combined in 61% of the firm-years in our sample, something quite common in US firms (Jensen, 1993)¹⁶. Moreover, the average (median) *Tenure* in our sample is 8.69 (6.67) years without any CEO making an acquisition announcement before they complete one year in the office¹⁷. The latter is in line with our requirement that the CEO should have served in the office the entire year preceding the acquisition announcement to avoid bias in the estimation of CEO compensation.

¹⁴ Both significant at the 1 percent level (untabulated results).

¹⁵ Alexandridis et al. (2010) show that 3.03% of the deals in their sample are subject to competitive bidding (more than one bidders) but their sample consists of public deals only. If we also refine our sample to acquisitions of public firms only, the percentage of transactions with more than one bidders rises to 3.75%.

¹⁶ For instance, using a sample of US firms from Execucomp over the period 1992-1996, Goyal and Park (2002) report an average CEO/Chairman duality of 77%.

¹⁷ The highest *Tenure* value in our sample (59.92) refers to Walter J. Zable, founder, chairman and CEO of Cubic Corporation who, according to the information provided by ExecuComp, became CEO on January 1st, 1951 and was the oldest serving public company CEO at the time of the acquisition announcement. The second highest *Tenure* value (52.67) also refers to the same executive.

Panel B of Table 1 presents summary statistics for the extended ExecuComp (unbalanced) sample of 40,194 observations over the period 1992-1995 used to determine the propensity of powerful CEOs to acquire. This sample contains both acquiring and non-acquiring firms with executive compensation data available in ExecuComp and it is subject to less restrictive criteria (for instance, no minimum deal value is required) so that to avoid selection bias when determining the propensity to acquire. Following Bebchuk et al (2011), *Industry-Median_CPS*, *Number_of_PVs* and *CEO_Only_Director* are used as instrumental variables for the endogenously determined CPS. *Number_of_PVs* is the number of vice presidents among the top five executives and *CEO_Only_Director* is a dummy variable that takes the value of one if the CEO is the only director among the top five executives in the year preceding the acquisition announcement.

3. Empirical Results

3.1 CPS and Target Status

We turn to our main hypothesis that differences in performance between public and non-public deals can stem from differences in managerial power. We first examine whether acquiring managers of public firms extract more rent via their compensation contracts relative to their counterparts who acquire unlisted firms. Panel A of Table 2 shows that acquiring CEOs of public targets have a significantly higher CPS compared to CEOs who acquire unlisted targets. The average (median) difference is 1.40% (1.36%) and significant at the 1 percent level. The average total compensation of the top five executives in our sample is \$18,179,070. Therefore, a difference of 1.40% translates into \$254,507 of CEO compensation (in 2010 values).

Panel B repeats the analysis using the industry-adjusted CPS to ensure that the observed differences in Panel A are not due to industry-specific characteristics. For instance, Ittner et al. (2003) and Murphy (2003) show that executive compensation characteristics differ

significantly between new and old economy firms¹⁸. Furthermore, Bebchuk et al. (2011) argue that industry-adjusted CPS can help mitigate endogeneity concerns as it provides a control for firm-specific factors that can affect CPS. The industry median CPS can also serve as a proxy for the optimal CPS which is largely unobservable¹⁹. *Industry-Adj_CPS* is defined as the CPS of the acquiring firm minus the median CPS of the bidder's industry in the same year. The results in Panel B confirm that the difference in CPS (significant at the 1 percent level for both mean and median values) remain robust to industry-specific factors.

Figure 1 presents average CPS by target listing status over our sample period providing an illustration of the findings in Table 2. Panel A shows that acquirers of public firms have a higher CPS than acquirers of unlisted firms in almost every year of the sample period indicating that the significant difference in CPS documented in Table 2 cannot be attributed to a specific sub-period only. The CPS of both type of bidders experience an important drop at the beginning of the financial crisis in 2007²⁰ but they recover immediately in the next year to their pre-crisis levels. Panel B of Figure decomposes non-public deals into private and subsidiary deals showing that the CPS of the latter is somehow in between that of public and private deals which is according to expectations given that such firms may be subsidiaries of either public or private firms.

3.2 CPS and Propensity to Acquire

The results of the previous section provide initial support to our predictions that powerful CEOs are more likely to prefer acquisitions of publicly listed firms so that to increase the size of assets under their control and, subsequently, their personal benefits. In this section we test these predictions in a multivariate setting controlling for those factor that previous

¹⁸ New economy firms are defined as those operating in the computer, software, internet, telecommunications or networking sectors with the remaining ones being characterized as old economy firms (Murphy, 2003).

¹⁹ "We use the Industry Median CPS, as the optimal CPS is likely to be different across industries and the choice of industry is to a large extent exogenous." (Bebchuk et al., 2011, p. 209)

²⁰ CEOs are likely to be subject to greater scrutiny during periods of financial turbulence which decreases their power to influence their own pay.

studies have identified as important determinants of the propensity to acquire (Harford, 1999; Duchin and Schmidt, 2013).

Table 3 presents probit regressions based on Harford's (1999) model. All explanatory variables are defined at the year-end preceding the acquisition announcement. Models 1-4 examine the unconditional probability of making an acquisition while models 5-7 examine the probability of acquiring a public, private and subsidiary firm respectively conditional on making an acquisition. The dependent variable in the first model, *Acquisition*, takes the value of one if a firm makes an acquisition announcement in a given year and zero otherwise. The dependent variable in models 2 and 5, *Public*, takes the value of one if a publicly listed firm is acquired in a given year and zero otherwise. The dependent variable in models 3 and 6, *Private*, takes the value of one if a privately held firm is acquired in a given year and zero otherwise. The dependent variable in models 4 and 7, *Subsidiary*, takes the value of one if a subsidiary firm is acquired in a given year and zero otherwise²¹. Z-statistics are based on robust standard errors clustered at the firm level.

Model 1 shows that powerful managers, with higher level of CPS than their industry peers (*High_CPS*), are more acquisitive in line with the view that such type of managers are likely to engage in empire building (Grinstein and Hribar, 2004; Baldenius et al., 2014). The coefficients of the remaining control variables are according to expectations. Large firms with more available non-cash working capital are more likely to acquire (Harford, 1999). Good past performers (*Past_ABHR* and *ROA*) are also more likely to acquire (Crocì and Petmezas, 2015) confirming the predictions of Jensen (1986) that corporate acquisition activity may be driven by managerial hubris. High book-to-market ratio, being reflective of lower growth

²¹ The reported results are based on the first acquisition announced by the bidder each year. Following Boulton et al. (2014) and repeating the analysis using the largest acquisition announced by the bidder each year, we obtain identical results (untabulated, available upon request by the authors).

opportunities, is negatively associated with acquisition activity while highly leveraged firms tend to avoid the increased risk associated with corporate acquisitions.

Partitioning the sample into acquisitions of public, private and subsidiary firms in Models 2-4 respectively, we observe that the acquisition activity of powerful managers is concentrated in publicly listed targets. The coefficient of *High_CPS* in Model 2 is positive and significant at the 1 percent level. In contrast, no such relation is documented when examining the propensity to acquire privately held or subsidiary targets (Models 3-4). Repeating the analysis conditional on the probability that a decision to acquire has been made first (Models 5-7) reveals similar results. Collectively, these findings provide strong support to our predictions that powerful managers are more likely to initiate acquisitions of publicly listed firms for a number of reasons including higher post-deal compensation and corporate control due to size considerations and lower monitoring (avoidance of concentration of control of private firms).

3.3 *CPS and Announcement Returns*

Having shown that acquisitions of public firms are initiated by powerful CEOs, we now turn to the examination of deal performance conditional on the listing status of the target firm. Panel A of Table 4 compares cumulative abnormal announcement returns between acquirers of public and unlisted firms. $CARs(0,1)$ is the bidder's cumulative abnormal returns over a two-day event window (0, +1) where 0 is the acquisition announcement date using the market model. The estimation period is from 200 days to 60 days preceding the acquisition announcement date. The CRSP value-weighted index is used for the calculation of market returns in line with previous studies²². As noted in Section 2.1, we use lagged compensation variables in our analysis to mitigate concerns that executive compensation has been affected by deal performance. However, our results may still be affected by multiple similar CPS values

²² See for example, Antoniou et al. (2008), Golubov et al. (2012), Alexandridis et al. (2010).

when a bidder has made more than one acquisition announcements in a single year. To mitigate the effect of such potential bias, we estimate $CARs(0,1)$ of bidder i with multiple deal announcements in the same year t as the weighted-average of all bidders' $CARs(0,1)$ weighted by the deal value of each deal made by the same acquirer i in year t . Following this method, each firm-year CPS appears only once in our sample resulting in a drop of observations from 8,030 to 5,629²³.

In line with previous research (Fuller et al., 2002; Draper and Paudyal, 2006; Officer et al., 2007), Panel A of Table 4 shows that the market reacts more positively to acquisition announcements of unlisted targets. Acquirers of public targets experience significantly lower mean (median) abnormal announcement returns by 1.79 percent (0.94 percent) relative to acquirers of unlisted targets. In addition, acquirers' $CARs$ in public deals are significantly negative whereas acquirers in non-public deals earn significantly positive abnormal announcement returns. All results are significant at the 1 percent level. The size of the announcement returns is comparable to that reported by other studies that use a two-day acquisition announcement window²⁴.

Panel B partitions the sample into High and Low CPS acquirers to test whether CEO power (as captured by CPS) is associated with acquisition announcement returns. Our results confirm the findings of Bebchuk et al. (2011) that acquisition announcement returns are negatively related to CPS. Low CPS acquirers experience a positive and significant (at the 1 percent level) two-day average CAR of 0.61% while high CPS acquirers earn a lower announcement return of 0.20%, significant only at the 10 percent level. This difference of 0.42% is both statistically (at the 1 percent level) and economically significant. Given that the average market capitalization of the bidders in our sample is \$16,175 million, a lower return

²³ Our results are robust to the conventional $CARs$ estimation method allowing multiple same-year observations by each bidder.

²⁴ See for instance Datta et al., (2001).

by 0.42% is equal to a loss of about \$68 million in market value over just two days. These findings are consistent with the view that high levels of CPS can reflect agency problems with powerful CEOs extracting rents via their compensation contracts.

Panels C and D compare announcement returns between acquirers of public and unlisted targets across different levels of CPS. All differences in means and medians are significant at the 1 percent level revealing an important underperformance of public deals across the entire CPS spectrum. However, Panel E indicates that acquirers with high CPS lose more in public deals relative to non-public deals. High CPS bidders experience a lower average CAR by 0.85% relative to low CPS bidders in public deals with the difference being significant at the 5 percent level. In contrast, there is no significant difference between the announcement returns of high and low CPS bidders in no-public deals. We supplement these findings by a difference-in-difference analysis using the following model:

$$CAR(0,1)_{it} = CPS_{it} + Public_{it} + CPS_{it} \times Public_{it} + \varepsilon_{it}$$

where it denotes firm-year observations and ε is the error term. The coefficient of the interaction term ($CPS_{it} \times Public_{it}$) is equal to -0.67 (Panel E) and significant at the 10% level indicating that the difference in announcement returns between high and low CPS bidders is higher among public deals relative to non-public deals.

Our results so far provide preliminary evidence that CEO power can be a possible source of explanation of acquirer's underperformance in public deals. However, the validity of these findings need to be tested in a multivariate setting so that to control for the impact of other factors that have been identified in the literature as important determinants of corporate acquisition returns. We do this in Table 5. Similar to the approach followed for the extended ExecuComp sample (probit models), all multivariate models hereupon use heteroskedasticity-robust standard errors clustered at firm-level to account for the fact that our merged sample contains a number of multiple acquirers. Model 1 shows that after controlling for a number of

firm and deal characteristics, the *High_CPS* dummy maintains its negative and significant (at the 5 percent level) relation to announcement returns confirming the results of our univariate analysis and the findings of Bebchuk et al. (2011).

The remaining control variables have the expected signs based on the extant literature. Large firms destroy value when they acquire (Moeller et al., 2004) and the market appears to react more positively to acquisitions financed by cash (Travlos, 1987, Datta et al., 2001; Golubov et al., 2012). Consistent with the evidence provided by Morck et al. (1990) and Cornett et al. (2003), we find that diversifying deals are associated with negative announcement abnormal returns. In addition, good past performers and firms with high cash balance experience negative announcement returns in line with empirical results of Rosen (2006) and the predictions of Jensen (1986) and Harford (1999) that corporate acquisitions can be driven by managerial hubris. According to expectations, high competition for a target also appears to have a negative impact on acquirer's announcement returns but the relation is not statistically significant mainly due to the very small number of competitive deals in our sample.

In Model 2 we introduce interaction terms²⁵ between the CPS and the listing status of the target firm in order to examine whether the negative impact of CPS on announcement returns is conditional on the type of the firm being acquired. The results confirm our predictions and earlier findings that high CPS, stemming from increased CEO power, is a source of value destruction in acquisitions of publicly listed firms. The explanatory power of the *High_CPS* dummy in Model 1 is absorbed by the interaction term of *High_CPS* and *Public* deals which is significant at the 5 percent level. Moreover, the interaction term of *High_CPS* and *Private* deals is not statistically significant. These findings, support our earlier findings suggesting that the value destruction of powerful, highly compensated CEOs is pronounced in public deals only. The coefficient of the *Public* dummy, although reduced in size relative to Model 1, that does

²⁵ Subsidiary deals is our reference (omitted) group.

not include interaction terms, remains negative and significant at the 1 percent level. This indicates that although CPS has an additional explanatory power over other firm and deal characteristics, it can only partly explain the documented underperformance of public deals. Albeit, a substantial part remains unexplained. The signs and significance of the remaining control variables remain the same as in Model 1.

Models 3-5 partition our sample into public, private and subsidiary deals respectively confirming our previous findings. The coefficient of *High_CPS* is statistically significant, at the 5 percent level, only in the case of public deals having no important effect in private and subsidiary transactions. The impact of CEO power on the outcome of public deals is also significant in economic terms. Acquirers of listed targets with CPS higher than their industry median experience 0.84% lower announcement returns over a two-day window relative to their counterparts with CPS equal to or lower than the industry median²⁶. With an average bidder's market value of \$24,436 million in public deals in our sample, this represents a loss of about \$205 million in just two days over the announcement of the deal. With regard to the rest of the explanatory variables, it is interesting that the positive impact of cash payment on acquirer returns is pronounced in public deals only. This is in line with the studies of Travlos (1987) and Datta et al. (2001) who document a positive relation between cash, as a method of payment, and acquirer's announcement returns based on a sample of public deals only. However, the *High_CPS* dummy retains its explanatory power over and above this factor.

3.4 CPS and Corporate Governance

So far we have shown that bidders who acquire publicly listed firms have higher CPS than their counterparts who acquire private or subsidiary firms and that this higher CPS, resulting from increased CEO power, is negatively associated with acquisition announcement returns. Given that powerful CEOs with high CPS destroy shareholder value in public deals, it

²⁶ As noted by Bebchuk et al. (2011), industry median can reflect optimal CPS at industry level.

is likely that such CEO compensation levels are reflective of agency problems in this type of firms. In line with the agency hypothesis (Bebchuk et al., 2011), CEOs that acquire public firms might use their power and relative importance to the firm to extract rents and receive a higher proportion of the top executives' aggregate compensation. In contrast, since high levels of CPS are not found to be negatively related to announcement returns in private and subsidiary deals, such acquirers are likely to set CEO compensation at optimal levels without excess CEO influence as predicted by the optimal selection hypothesis. According to Bebchuk et al. (2011, p. 204) in an “*optimal selection scenario, by definition, no firm would be able to increase its value by changing its CPS level*” which is consistent with what our results have shown for acquirers of private and subsidiary deals. In this type of bidders, high CPS can be reflective of a richer set of skills and experience of the CEO.

Table 6 compares corporate governance characteristics between bidders of public and unlisted targets to examine whether there is evidence of lower governance quality in acquirers of listed targets. Panel A shows that the average proportion (to the board size) of independent directors hired after the CEO assumed office is 35.44% in acquirers of public targets relative to 37.18% in acquirers of unlisted targets with the difference being significant at the 5 percent level²⁷. Since a higher proportion of independent directors can result in more efficient monitoring and lower CEO power (Coles et al., 2014), this result is consistent with the view that CEOs can have a higher influence on their compensation in acquiring firms of public targets. Similarly, Panel B shows that 67% of bidders in public deals have the roles of CEO and chairman combined which is significantly higher (at the 1 percent level) than the 59% of bidders in non-public deals. Given that the combined roles of CEO and Chairman can be reflective of increased power and importance (Adams et al., 2005), this result also provides

²⁷ We don't find any difference in medians which is likely to be due to the loss of an important number of observations when constructing this variable. As noted in Section 2.2 data for this variable were taken from Coles et al. (2014) and cover only a sub-period (1996-2010) of our sample (1992-2015: we use lagged compensation and governance variables).

support to the prediction that CEOs who acquire public firms are powerful managers able to extract rents via their compensation contracts. Panel C shows that CEO tenure, which can be associated with increased managerial entrenchment (Hermalin and Weisbach, 1998), is also higher in bidders that acquire public firms but the difference is not significant at conventional levels.

Collectively, the findings of Table 6 provide supportive evidence to the view that acquirers of public firms are likely to face higher agency costs relative to acquirers of unlisted firms which, in turn, are reflected to higher CPS and the subsequent value destruction documented in Tables 4 and 5. Table 7 examines the robustness of our findings to the governance characteristics presented in Table 6 in a multivariate setting. The negative relation between CPS and announcement returns in public deals remains significant even after controlling for these governance factors. Although the *High_CPS* variable has lost its significance in Model 1, the interaction term of *High_CPS* and *Public* in Model 2 remains statistically important (at the 10 percent level). Furthermore, *High_CPS* has retained its statistical significance at the 5 percent level in Model 3 (public deals only) while its economic significance has increased. Now, acquirers of public deals with CPS higher than their industry median experience a 0.97% lower announcement returns relative to their counterparts with CPS equal to or lower than their industry median. This indicates an important economic loss of about \$237 million ($\$24,436 \text{ million}^{28} \times 0.0097$) over the two-day announcement window. In contrast, no such relation is documented in the case of private or subsidiary deals. These findings are also supportive to the views of Liu and Jiraporn (2010) and Bebchuk et al. (2011) that CPS can capture CEO power more effectively than traditional measures such as the CEO duality.

²⁸ The average market value of bidders that acquire public firms in our sample.

3.5 Robustness Tests

When investigating the relation between CEO compensation (as a proxy for managerial power) and acquisition decisions, it is important to recognize that both of these variables may be endogenously determined. That is, CEO compensation is likely to be set at such levels so that to induce the CEO to follow a specific course of action (e.g. expansion through acquisitions) but at the same time the completion of a deal can also affect the compensation of the CEO. So far in our analysis, we have tried to account for this using lagged compensation variables and the industry-median as a cut-off point to define high levels of CPS. According to Bebchuk et al. (2011), the selection of industry is to a large extent exogenous and, as a result, the use of industry-median as a cut-off point can alleviate, to some extent, concerns of endogenously determined CPS. In addition, the construction of CPS per se should mitigate some concerns about the determinants of executive compensation at the firm level as it uses compensation information for executives that are all at the same firm (Liu and Jiraporn, 2010).

However, these steps may not fully address concerns that CPS is endogenous to the decision to acquire. Therefore, this section tests further the robustness of our results using an ExecuComp sample of acquirers²⁹ and a two-stage system of equations with instrumental variables. Model 1 in Table 8 presents the first-stage regression. Following Bebchuk et al (2011), the instrumental variables used in the analysis are *Industry-Med_CPS*, *Number_of_PVs* and *CEO_Only_Director* as they are expected to be important determinants of CPS and only affect the decision to acquire and, subsequently, deal performance indirectly through CPS. The dependent variable is now *Industry-Adj_CPS* as the model requires continuous endogenous regressor in the second-stage equation. This also tests the validity of our results against the use of continuous, instead of dummy, variable to define CEO power. The outcome of the first-stage

²⁹ We use all firms in the ExecuComp database over the period 1992-2015 that have made at least one acquisition announcement in the year following the year when compensation data is defined. This results in a total sample of 10,931 firm-year observations.

regression (Model 1) confirms that all three instrumental variables are important determinants of CPS (significant at the 1 percent level) after controlling for all the remaining factors that can affect the decision to acquire. In particular, the CEO power increases if she is the only executive on the board which results in a higher CPS as confirmed by the positive coefficient of *CEO_Only_Director*. The presence of more vice presidents on the board gives rise to tournament incentives (Kale et al., 2009) which can lead powerful CEOs to take a larger pay slice so that to differentiate themselves more clearly (positive sign of *Number_of_PVs*). Finally, a relatively high CPS does not necessarily imply a powerful CEO if the level of CPS in the given industry is generally high (negative sign of *Industry-Med_CPS*).

Models 2-4 report second-stage probit regressions with *Industry-Adj_CPS* being endogenously determined. Confirming our earlier findings, Model 2 shows that powerful CEOs are more likely to acquire publicly listed firms with the coefficient of *Industry-Adj_CPS* being significant at the 1 percent level. In contrast, no important relation is found between the endogenously determined, industry-adjusted CPS and the propensity to acquire privately held firms (Model 3). In addition, powerful CEOs appear even less inclined to acquire subsidiary firms after controlling for reverse causality between CPS and the decision to acquire. Overall, the results from table 8 provide additional empirical support to our predictions and show that our earlier findings remain robust to endogeneity issues.

We re-estimate our results using alternative definitions of *High_CPS* to ensure that our findings are not sensitive to our High/Low CPS classification. Firstly, we categorise bidders as *High_CPS* only if their CPS is in the top tercile of their industry distribution for the given year and as *Low_CPS* if their CPS is in the bottom tercile of their industry distribution for the given year. Following this method, we avoid categorizing as High or Low CPS bidders around the industry median which may not provide always a clear cut-off point. Panel A of Table 9 presents the results using the model specification of Table 7 that includes corporate governance

controls. The results remain unchanged despite losing about 1/3 of the observations by the new way *High_CPS* is defined (middle tercile is omitted). Both the interception coefficient of *High_CPS* \times *Public* in Model 2 and the coefficient of *High_CPS* in Model 3 have retained their level of statistical significance and have also increased in terms of economic importance³⁰.

In order to retain the same number of observations as in Table 7, Panel B of Table 9 repeats the analysis using a categorical *High_CPS* variable that takes the value of one if the CPS of the bidder is in the bottom tercile, the value of two if it is in the middle tercile and the value of three if it is in the top tercile of the industry distribution for the given year. The results remain robust to this alternative definition of *High_CPS*. Similar to Panel A, the interception coefficient of *High_CPS* \times *Public* in Model 7 and the coefficient of *High_CPS* in Model 8 have retained their statistical significance indicating that CEO power and the subsequent CEO excess compensation is an important source of value destruction in corporate acquisitions of listed firms.

4. Conclusion

Examining an extended sample of completed US mergers and acquisitions over the period 1993 – 2016, we provide new evidence on the relation between managerial power and firm performance in the area of corporate acquisitions. Following Bebchuk et al., (2011) we use the CEO Pay Slice (the proportion of top-five executives' total compensation captured by the CEO) as a measure of CEO power and we show that powerful CEOs are more likely to acquire large, publicly listed firms relative to less powerful CEOs. We further find that acquisitions of public firms by powerful CEOs are negatively perceived by the market resulting in a statistically and economically significant value destruction even after controlling for a

³⁰ Public deals made by powerful CEOs (high CPS) now result in an average loss of about \$269 million ($\$24,436 \times 0.0110$) over a two-day announcement window relative to those initiated by bidders with CPS at the bottom 1/3 of their industry distribution for the given year.

number of firm and deal characteristics. In contrast, no such relation is documented in private or subsidiary deals.

Our results indicate that CEO compensation in acquirers of public firms is likely to be reflective of agency problems with powerful CEOs having an important influence on their pay driving it above optimal levels. On the other hand, acquiring firms of unlisted targets are likely to set CEO compensation according to the predictions of the optimal selection hypothesis. This is further supported by the findings of Bebchuk et al. (2011) regarding the determinants of CPS as well as by our empirical findings that acquirers in public deals have corporate governance characteristics of lower quality relative to their counterparts in non-public deals. Our results are further robust to controls for endogeneity surrounding the relation between CPS and the decision to acquire.

These findings add to the debate of the determinants of acquirers' underperformance in public deals revealing another important source of value destruction for acquiring shareholders. They can thus be of particular interest to compensation committees, especially in firms whose strategic choice is to expand through acquisitions of other publicly listed firms. Such firms should reconsider their mechanism of executive pay determination and CEO monitoring in the setting of their investment choices. Subsequent changes towards more optimal contracting can be beneficial both to the firm and its shareholders.

References

- Abernethy, M.A., Kuang, Y.F., and Qin, B., (2015) 'The influence of CEO Power on Compensation Contract Design' *The Accounting Review*, 90 (4), pp. 1265-1306.
- Adams, R., Almeida, H., and Ferreira, D., (2005) 'Powerful CEOs and their Impact on Corporate Performance' *Review of Financial Studies*, 18 (4), pp. 1403-1432.
- Aktas, N., de Bodt, E., and Roll, R., (2013) 'Learning from Repetitive Acquisitions: Evidence from the Time between Deals' *Journal of Financial Economics*, 108 (1), pp. 99-117.
- Alexandridis, G., Petmezas, D., and Travlos, N.G., (2010) 'Gains from Mergers and Acquisition around the World: New Evidence' *Financial Management*, 39 (4), 1671-1695.
- Antoniou, A., Arbour, P., and Zhao, H., (2008) 'How Much Is Too Much? Are Merger Premiums Too High?' *European Financial Management*, 14 (2), pp. 268-297.
- Asquith, P., Bruner, R.F., and Mullins, D.W.Jr., (1983) 'The Gains to Bidding Firms from Merger' *Journal of Financial Economics*, 11 (1-4), pp. 121-139.
- Baldenius, T., Melumad, N., and Meng, X., (2014) 'Board Composition and CEO Power' *Journal of Financial Economics*, 112 (1), pp. 53-68.
- Bebchuk, L.A., Cremers, K.J. M., and Peyer U.C., (2011) 'The CEO Pay Slice' *Journal of Financial Economics*, 102 (1), pp.199-221.
- Bebchuk, L. A., and Fried, J.M., (2003) 'Executive Compensation as an Agency Problem' *Journal of Economic Perspectives*, 17 (3), pp. 71-92.
- Bliss, R.T., and Rosen, R.J., (2001) 'CEO Compensation and Bank Mergers' *Journal of Financial Economics*, 61 (1), pp. 107-138.
- Boulton, J.T., Braga-Alves, M.V., and Schlingemann, F.D., (2014) 'Does Equity-Based Compensation Make CEOs More Acquisitive?' *Journal of Financial Research*, 37 (3), pp. 267-294.
- Brick, I.E., Palmon, O., and Wald, J.K., (2006) 'CEO Compensation, Director Compensation, and Firm Performance: Evidence of Cronyism?' *Journal of Corporate Finance*, 12 (3), pp. 403-423.
- Brookman, J.T., and Thistle, P.D., (2013) 'Managerial Compensation: Luck, Skill or Labor Markets?' *Journal of Corporate Finance*, 21 (1), pp. 252-268.
- Chang, S., (1998) 'Takeovers of Privately Held Targets, Methods of Payment, and Bidder Returns' *Journal of Finance*, 53 (2), pp. 773-784.
- Chen, Z., Huang, Y., and Wei, K.C.J., (2013) 'Executive Pay Disparity and the Cost of Equity Capital, *Journal of Financial and Quantitative Analysis*, 48 (3), pp. 849-885.
- Choe, C., Tian, G.Y., and Yin, X., (2014) 'CEO Power and the Structure of CEO Pay' *International Review of Financial Analysis*, 35 (1), 237-248.
- Coles, J. L., Daniel, N.D., and Naveen, L. (2014) 'Co-opted Boards' *Review of Financial Studies*, 27 (6), pp. 1751-1796.
- Conn, R.L., Cosh, A., Guest, P.M., and Hughes, A., (2005) 'The Impact on UK Acquirers of Domestic, Cross-border, Private and Public Acquisitions' *Journal of Business Finance and Accounting*, 32 (5-6), pp. 815-870.
- Core, J.E., Holthausen, R.W., and Larcker, D.F., (1999) 'Corporate Governance, Chief Executive Officer Compensation, and Firm Performance' *Journal of Financial Economics*, 51 (3), pp. 371-406.
- Cornett, M.M., Hovakimian, G., Palia, D., and Tehranian, H., (2003) 'The Impact of Manager-Shareholder Conflict on Acquiring Bank Returns' *Journal of Banking and Finance*, 27 (1), pp. 103-131.

- Croci, E., and Petmezas, N., (2015) 'Do Risk-Taking Incentives Induce CEO to Invest? Evidence from Acquisitions' *Journal of Corporate Finance*, 32 (1), pp. 1-23.
- Custodio, C., and Metzger, D., (2013) 'How Do CEOs Matter? The Effect of Industry Expertise on Acquisition Returns' *Review of Financial Studies*, 26 (8), pp. 2007-2047.
- Datta, S., Iskander-Datta, M., and Raman, K., (2001) 'Executive Compensation and Corporate Acquisition Decisions' *Journal of Finance*, 56 (6), pp. 2299-2336.
- Dicks, D.L., (2012) 'Executive Compensation and the Role for Corporate Governance Regulation' *Review of Financial Studies*, 25 (6), pp. 1971-2004.
- Dong, M., Hirshleifer, D., Richardson, S., and Teoh, S.H., (2006) 'Does Investor Manipulation Drive the Takeover Market?' *Journal of Finance*, 61 (2), pp. 725-762.
- Draper, P., and Paudyal, K., (2006) 'Acquisitions: Private versus Public' *European Financial Management*, 12 (1), pp. 57-80.
- Duchin, R., and Schmidt, B., (2013) 'Riding the Merger Wave: Uncertainty, Reduced Monitoring, and Bad Acquisitions' *Journal of Financial Economics*, 107 (1), pp. 69-88.
- Faccio, M., McConnell, J.J., and Stolin, D., (2006) 'Returns of Acquirers of Listed and Unlisted Targets' *Journal of Financial and Quantitative Analysis*, 41 (1), pp. 197-220.
- Fama, E.F., and French, K.R. (1997) 'Industry Costs of Equity' *Journal of Financial Economics*, 43 (2), pp. 153-193.
- Feito-Ruiz, I., and Renneboog, L., (2017) 'Takeovers and (Excess) CEO Compensation' *Journal of International Financial Markets, Institutions and Money*, 50 (1), pp. 156-181.
- Frydman, C., and Jenter, D., (2010) 'CEO Compensation' *Annual Review of Financial Economics*, 2 (1), pp. 75-102.
- Fuller, K., Netter, J., and Stegemoller, M., (2002) 'What do Returns on Acquiring Firms Tell Us? Evidence from Firms That Make Many Acquisitions' *Journal of Finance*, 57 (4), pp. 1763-1793.
- Golubov, A., Petmezas, D., and Travlos, N.G., (2012) 'When It Pays to Pay Your Investment Banker: New Evidence on the Role of Financial Advisors in M&As' *Journal of Finance*, 67 (1), pp. 271-311.
- Golubov, A., Petmezas, D., and Travlos, N.G., (2016) 'Do Stock-Financed Acquisitions Destroy Value? New Methods and Evidence' *Journal of Finance*, 20 (1), pp. 161-200.
- Goyal, V.K., and Park, C.W., (2002) 'Board Leadership Structure and CEO Turnover' *Journal of Corporate Finance*, 8 (1): pp. 49-66.
- Grinstein, Y., and Hribar, P., (2004) 'CEO Compensation and Incentives: Evidence from M&A Bonuses' *Journal of Financial Economics*, 73 (1), pp. 119-143.
- Hansen, R.G., and Lott, J.R.Jr., (1996) 'Externalities and Corporate Objectives in a World with Diversified Shareholder/Consumers' *Journal of Financial and Quantitative Analysis*, 31 (1), pp. 43-68.
- Harford, J., (1999) 'Corporate Cash Reserves and Acquisitions' *Journal of Finance*, 62 (2), pp. 1969-1997.
- Harford, J., and Li, K., (2007) 'Decoupling CEO Wealth and Firm Performance: The Case of Acquiring CEOs' *Journal of Finance*, 62 (2), pp. 917-949.
- Hartzell, J.C., Ofek, E., and Yermack, D., (2004) 'What's In It for Me? CEOs Whose Firms Are Acquired' *Review of Financial Studies*, 17 (1), pp. 37-61.
- Hermalin, B.E., and Weisbach, M.S., (1998) 'Endogenously Chosen Boards of Directors and Their Monitoring of the CEO' *The American Economic Review*, 88 (1), pp. 96-118.

- Ittner, C.D., Lambert, R.A., and Larcker, D.F., (2003) 'The Structure and Performance Consequences of Equity Grants to Employees of New Economy Firms' *Journal of Accounting and Economics*, 34 (1-3), pp. 89-127.
- Jensen, M.C. (1986) 'Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers' *The American Economic Review*, 76 (2), pp. 323-329.
- Jensen, M.C. (1993) 'The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems' *Journal of Finance*, 48 (3), pp. 831-1145.
- Jiraporn, P., and Chintrakarn, P., (2013) 'How do Powerful CEOs View Corporate Social Responsibility (CSR)? An Empirical Note' *Economics Note*, 119 (3), pp. 344-347.
- Kale, J., Reis, E., and Venkateswaran, A. (2009) 'Rank order tournament and incentive alignment: the effect on firm performance' *Journal of Finance* 64 (3), pp. 1479-1512.
- Khorana, A., and Zenner, M., (1998) 'Executive Compensation of Large Acquisitions in the 1980s' *Journal of Corporate Finance*, 4 (3), pp. 209-240.
- Liu, Y., and Jiraporn, P., (2010) 'The Effect of CEO Power on Bond Ratings and Yields' *Journal of Empirical Finance*, 17 (4), pp. 744-762.
- Makadok, R., and Barney, J.B., (2001) 'Strategic Factor Market Intelligence: An Application of Information Economics to Strategy Formulation and Competitor Intelligence' *Management Science*, 47 (12), pp. 1621-1638.
- Masulis, R.W., Wang, C., and Xie, F. (2007) 'Corporate Governance and Acquirer Returns' *Journal of Finance*, 62 (4), pp. 1851-1889.
- Moeller, S.B., Schlingemann, F.P., and Stulz, R.M., (2004) 'Firm Size and the Gains from Acquisitions' *Journal of Financial Economics*, 73 (2), pp. 201-228.
- Morck, R., Shleifer, A., and Vishny, R.W., (1990) 'Do Managerial Objectives Drive Bad Acquisitions?' *Journal of Finance*, 45 (1) 31-48.
- Morse, A., Nanda, V., and Seru, A., (2011) 'Are Incentive Contracts Rigged by Powerful CEOs?' *Journal of Finance*, 66 (5), pp. 1779-1821.
- Murphy, K. J., (2003) 'Stock-Based Pay in New Economy Firms' *Journal of Accounting and Economics*, 34 (1-3), pp. 129-147.
- Officer, M.S., (2007) 'The Price of Corporate Liquidity: Acquisition Discount for Unlisted Targets' *Journal of Financial Economics*, 83 (3), pp. 571-598.
- Officer, M.S., Poulsen, A.B., and Stegemoller, M., (2009) 'Target-Firm Information Asymmetry and Acquirer Returns' *Review of Finance*, 13 (3), pp. 467-493.
- Rau, P.R., and Vermaelen, T., (1998) 'Glamour, Value and the Post-Acquisition Performance of Acquiring Firms' *Journal of Financial Economics*, 49 (2), pp. 223-253.
- Rosen, R.T., (2006) 'Merger Momentum and Investor Sentiment: The Stock Market Reaction to Merger Announcements' *Journal of Business*, 79 (2), pp. 987-1017.
- Travlos, N.G., (1987) 'Corporate Takeover Bids, Methods of Payment, and Bidding Firms' Stock Returns' *Journal of Finance*, 42 (4), pp. 943-963.
- Yermack, D., (1995) 'Do Corporations Award CEO Stock Options Effectively?' *Journal of Financial Economics*, 39 (2-3), pp. 237-269.

Table 1: Summary statistics

Panel A presents summary statistics for the sample of 8,030 completed U.S. acquisitions from SDC Platinum over the period January 1, 1993, to December 31, 2016 that meet the sample selection criteria. Data on executive compensation are from ExecuComp, stock price data from CRSP and accounting data from Compustat. Panel B presents summary statistics for the extended ExecuComp sample of 40,194 observations over the period 1992-1995 used to determine the propensity to acquire. Definitions of all variables are as described in the Appendix.

Variable	Mean	Median	Standard Deviation	Minimum	Maximum	Number of Observations
<i>Panel A: merged sample</i>						
<i>Compensation Variables</i>						
CPS	0.39	0.39	0.12	0.00	0.95	8,030
Industry-Med_CPS	0.37	0.37	0.03	0.26	0.52	8,030
<i>Deal Characteristics</i>						
Public	0.23	0.00	0.42	0.00	1.00	8,030
Private	0.44	0.00	0.50	0.00	1.00	8,030
Subsidiary	0.34	0.00	0.47	0.00	1.00	8,030
Payment_Cash	0.57	1.00	0.50	0.00	1.00	8,030
Diversifying	0.40	0.00	0.49	0.00	1.00	8,012
Runup	0.04	0.03	0.74	-25.76	7.43	7,683
Relative_Size	0.13	0.04	0.30	0.00	8.30	7,756
No_Bidders	1.01	1.00	0.13	1.00	4.00	8,030
<i>Firm Characteristics</i>						
Size	3.48	3.42	0.78	1.12	6.31	8,006
Cash/Assets	0.15	0.08	0.17	0.00	0.94	7,978
B/M	0.61	0.60	0.28	0.01	3.65	7,957
Co-Opted_Independent	0.37	0.33	0.26	0.00	0.94	4,605
CEO/Chairman	0.61	1.00	0.49	0.00	1.00	7,481
Tenure	8.69	6.67	6.92	1.01	59.92	8,030
<i>Panel B: extended ExecuComp</i>						
<i>Compensation Variables</i>						
CPS	0.38	0.38	0.12	0.00	2.02	40,194
Industry-Med_CPS	0.38	0.38	0.03	0.21	0.55	40,136
<i>Firm Characteristics</i>						
Number_of_PVs	2.59	3.00	1.36	0.00	5.00	40,194
CEO_Only_Director	0.35	0.00	0.48	0.00	1.00	40,194
Size	3.36	3.31	0.76	0.65	6.40	37,043
Past_ABHR	0.07	0.00	0.61	-1.24	25.94	36,470
Cash/Assets	0.14	0.07	0.17	0.00	0.96	37,042
B/M	0.57	0.45	0.83	0.00	64.63	36,468
ROA	0.12	0.12	0.12	-2.67	1.71	36,978
Sales_Growth	0.03	0.02	0.11	-2.30	2.52	36,274
Leverage	0.22	0.20	0.19	0.00	3.02	37,043
P/E	0.20	0.17	1.61	-55.00	83.75	36,759
NC_Working_Cap	0.10	0.08	0.17	-2.31	0.90	32,013
CEO_Ownership	0.01	0.00	0.05	0.00	0.99	39,823

Table 2: Difference in CPS between Acquirers of Public and Unlisted Targets

The table presents differences in acquiring CEO Pay Slice (CPS) between public and non-public deals. The sample is 8,030 completed U.S. acquisitions from SDC Platinum over the period January 1, 1993, to December 31, 2016 that meet the sample selection criteria. Data on executive compensation are from ExecuComp. *CPS* is the ratio of CEO's total compensation to the total compensation of the top-five paid executives. *Industry-Adj_CPS* is the CPS of the bidder minus the median CPS of the bidder's industry in the same year. Transactions are classified as public deals when a publicly-listed firm is acquired, otherwise they are characterised as non-public deals. t-statistics are from the t-test for difference in means and z-statistics are from the Wilcoxon rank sum test for difference between the respective distributions. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels respectively.

Panel A: CPS By Target Status					
	All Deals	Public Deals	Non-Public Deals	Difference (Public vs Non-Public)	t/z statistic
CPS(%)					
Mean	38.93	40.01	38.61	1.40***	4.45
Median	38.70	39.66	38.30	1.36***	4.97
Observations	8,030	1,814	6,216		
Panel B: Industry-Adjusted CPS By Target Status					
	All Deals	Public Deals	Non-Public Deals	Difference (Public vs Non-Public)	t/z statistic
Industry-Adj_CPS(%)					
Mean	1.59	2.99	1.18	1.81***	5.81
Median	0.80	2.23	0.43	1.81***	6.61
Observations	8,030	1,814	6,216		

Table 3: CPS and the propensity to acquire

The table presents the outcome of probit regressions for an extended ExecuComp sample of 40,194 firm-year observations over the period 1992-2015. Executive compensation data are from ExecuComp, stock price data from CRSP and accounting data from Compustat. *High_CPS* is a dummy variable that takes the value of one if the CPS of the bidder is higher than its industry median in the given year and zero otherwise. The dependent variable in the first model, *Acquisition*, takes the value of one if a firm makes an acquisition announcement in a given year and zero otherwise. The dependent variable in models 2 and 5, *Public*, takes the value of one if a publicly listed firm is acquired in a given year and zero otherwise. The dependent variable in models 3 and 6, *Private*, takes the value of one if a privately held firm is acquired in a given year and zero otherwise. The dependent variable in models 4 and 7, *Subsidiary*, takes the value of one if a subsidiary firm is acquired in a given year and zero otherwise. Models 1-4 examine the unconditional probability of making an acquisition. Models 5-7 examine the probability of acquiring a public, private and subsidiary firm respectively conditional on making an acquisition. Definitions of the control variables are described in the Appendix. z-statistics, based on robust standard errors clustered at the firm level, are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5% and 10% level respectively.

Variable	Unconditional				Conditional		
	Model 1 Acquisition	Model 2 Public	Model 3 Private	Model 4 Subsidiary	Model 5 Public	Model 6 Private	Model 7 Subsidiary
Intercept	-1.3395*** (-14.33)	-3.0997*** (-23.06)	-1.4202*** (-14.36)	-1.6825*** (-21.01)	-2.3046*** (-14.79)	0.5653*** (4.78)	-0.2377** (-1.98)
High_CPS	0.0379* (1.85)	0.0811*** (2.77)	0.0317 (1.40)	0.0012 (0.05)	0.0826** (2.21)	0.0004 (0.01)	-0.0422 (-1.40)
Size	0.2368*** (9.65)	0.3371*** (10.84)	0.1428*** (5.62)	0.1163*** (5.69)	0.2778*** (7.67)	-0.0933*** (-3.32)	-0.0546* (-1.91)
Past_ABHR	0.0445*** (3.54)	0.0319 (1.57)	0.0367*** (2.79)	0.0138 (0.98)	0.0149 (0.53)	0.0000 (0.00)	-0.0220 (-0.91)
Cash/Assets	0.0502 (0.57)	0.3902*** (3.42)	0.1835** (2.03)	-0.4507*** (-5.18)	0.4118*** (2.93)	0.3885*** (3.43)	-0.7198*** (-6.14)
B/M	-0.1490*** (-3.99)	-0.0402 (-0.78)	-0.1780*** (-4.03)	-0.0642*** (-2.87)	0.0536 (1.49)	-0.1661*** (-3.49)	0.0822* (1.66)
ROA	0.5398*** (4.40)	0.3450* (1.87)	0.3993*** (3.36)	0.3679*** (2.89)	0.0603 (0.24)	-0.1314 (-0.66)	-0.0088 (-0.04)
Sales_Growth	0.0502 (0.57)	0.3902*** (3.42)	0.1835** (2.03)	-0.4507*** (-5.18)	0.4118*** (2.93)	0.3885*** (3.43)	-0.7198*** (-6.14)
Leverage	-0.3692*** (-4.74)	-0.2957*** (-2.64)	-0.5488*** (-6.30)	0.1139 (1.49)	-0.1259 (-0.90)	-0.5550*** (-4.92)	0.6380*** (5.70)
P/E	0.0008 (0.19)	-0.0035 (-0.39)	0.0028 (0.53)	-0.0015 (-0.30)	-0.0051 (-0.50)	0.0047 (0.65)	-0.0027 (-0.39)
NC_Working_Cap	0.3671*** (4.24)	0.3294*** (3.08)	0.2937*** (3.24)	0.1789** (2.09)	0.1610 (1.18)	0.0882 (0.74)	-0.1910 (-1.53)
CEO_Ownership	-0.3565 (-1.33)	-1.2801** (-2.17)	0.1561 (0.61)	-0.6779** (-2.02)	-1.4966** (-2.07)	1.3574*** (3.17)	-0.8555* (-1.91)

Table 9 (continued)

Number of Observations	30,814	30,814	30,814	30,814	8,942	8,942	8,942
Wald Chi-Square	287.62***	195.75***	208.29***	125.56***	95.34***	139.93***	151.99***
Pseudo R-Square	0.022	0.036	0.019	0.011	0.022	0.018	0.020

Table 4: Announcement Returns, Target Status and CPS

The table presents differences in deal announcement returns between acquirers of public and unlisted targets as well as between high and low CPS acquirers. The sample is 8,030 completed U.S. acquisitions from SDC Platinum over the period January 1, 1993, to December 31, 2016 that meet the sample selection criteria. Data on executive compensation are from ExecuComp. Stock price data are from CRSP. $CARs(0,1)$ is the bidder's cumulative abnormal return over a two-day event window (0, +1) where 0 is the announcement date using the market model. The estimation period is from 200 days to 60 days before the acquisition announcement. CPS is the ratio of CEO's total compensation to the total compensation of the top-five paid executives. Bidders with CPS higher than the industry-median for the given year are characterized as *High_CPS* acquirers, otherwise they are characterized as *Low_CPS* acquirers. Transactions are classified as public deals when a publicly-listed firm is acquired, otherwise they are characterised as non-public deals. t-statistics are from the t-test for difference in means and z-statistics are from the Wilcoxon rank sum test for difference between the respective distributions. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels respectively.

Panel A: Announcement Returns by Target Status					
	All Deals	Public Deals	Non-Public Deals	Difference (Public vs Non-Public)	t/z statistic
CARs(0.1) %					
Mean	0.39***	-0.99***	0.80***	-1.79***	-9.73
Median	0.16***	-0.57***	0.37***	-0.94***	-11.36
Observations	5,629	1,284	4,345		

Panel B: Announcement Returns by CPS					
	All Acquirers	High_CPS Acquirers	Low_CPS Acquirers	Difference (High vs Low_CPS)	t/z statistic
CARs(0.1) %					
Mean	0.39***	0.20*	0.61***	-0.42***	-2.80
Median	0.16***	0.12***	0.24***	-0.12**	-2.29
Observations	5,629	2,981	2,648		

Panel C: Announcement Returns by Target Status if High_CPS = 1					
	All Deals	Public Deals	Non-Public Deals	Difference (Public vs Non-Public)	t/z statistic
CARs(0.1) %					
Mean	0.20*	-1.34***	0.71***	-2.06***	-8.90
Median	0.12***	-0.66***	0.33***	-1.00***	-9.33
Observations	2,981	752	2,229		

Panel D: Announcement Returns by Target Status if High_CPS = 0					
	All Deals	Public Deals	Non-Public Deals	Difference (Public vs Non-Public)	t/z statistic
CARs(0.1) %					
Mean	0.61***	-0.49*	0.89***	-1.38***	-4.60
Median	0.24***	-0.49***	0.40***	-0.88***	-6.43
Observations	2,648	532	2,116		

Panel E: Announcement Returns by Target Status & CPS (Panel C - Panel D)					
	All Deals High vs Low_CPS	Public Deals High vs Low_CPS	Non-Public Deals High vs Low_CPS	Difference-In-Difference	t/z statistic
CARs(0.1) %					
Mean	-0.42***	-0.85**	-0.18	-0.67*	-1.90
Median	-0.12**	-0.18	-0.06		

Table 5: Announcement Returns, CPS, Firm and Deal Characteristics.

The table presents multivariate regression estimates of bidder's two-day CARs (0, +1) on CPS and other firm and deal characteristics. The sample is 8,030 completed U.S. acquisitions from SDC Platinum over the period January 1, 1993, to December 31, 2016 that meet the sample selection criteria. Data on executive compensation are from ExecuComp. Stock price and accounting data are from CRSP/Compustat. $CARs(0,1)$ is the bidder's cumulative abnormal return over a two-day event window (0, +1) where 0 is the announcement date using the market model. The estimation period is from 200 days to 60 days before the acquisition announcement. CPS is the ratio of CEO's total compensation to the total compensation of the top-five paid executives. $High_CPS$ is a dummy variable that takes the value of one if the CPS of the bidder is higher than its industry median in the given year and zero otherwise. Transactions are classified as public deals when a publicly-listed firm is acquired, as private deals when a privately-held firm is acquired and as subsidiary deals when a subsidiary firm is acquired. Definitions of the remaining control variables are as described in the Appendix. t-statistics based on heteroskedasticity-robust, clustered at firm-level standard errors are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels respectively.

Variable	Model 1 All Deals	Model 2 All Deals	Model 3 Public Deals	Model 4 Private Deals	Model 5 Subsidiary Deals
Intercept	2.5814*** (2.74)	2.3584** (2.49)	0.7254 (0.50)	2.3992*** (2.78)	0.7319 (0.45)
High_CPS	-0.3184** (-2.06)	0.0555 (0.22)	-0.8445** (-2.50)	-0.3089 (-1.42)	0.0826 (0.33)
High_CPS * Public		-0.8660** (-2.02)			
High_CPS * Private		-0.4201 (-1.28)			
Public	-1.6451*** (-6.66)	-1.1636*** (-3.19)			
Private	-0.2603 (-1.50)	-0.0454 (-0.18)			
Size	-0.4088*** (-3.35)	-0.4120*** (-3.35)	-0.2396 (-0.87)	-0.4230** (-2.38)	-0.4729** (-2.43)
Payment_Cash	0.5739*** (3.45)	0.5743*** (3.45)	1.9540*** (5.72)	0.3598 (1.51)	-0.0238 (-0.07)
Diversifying	-0.2563* (-1.66)	-0.2553* (-1.66)	0.2434 (0.69)	-0.4045* (-1.84)	-0.3916 (-1.57)
Runup	-0.3987*** (-3.12)	-0.4008*** (-3.12)	-0.8029*** (-2.60)	-0.2579* (-1.88)	-0.4969 (-1.46)
Cash/Assets	-1.9690*** (-2.94)	-1.9637*** (-2.95)	-5.1297*** (-3.35)	-1.3626* (-1.73)	-1.4245 (-1.04)
Relative_Size	0.1000 (0.22)	0.0908 (0.20)	-1.1645* (-1.85)	2.1638 (1.07)	0.5470 (0.65)
B/M	0.3471 (1.07)	0.3474 (1.07)	0.4330 (0.52)	0.2393 (0.51)	0.2382 (0.40)
No_Bidders	-0.3024 (-0.38)	-0.2617 (-0.33)	-0.3313 (-0.41)	-0.3664 (-0.45)	2.0079 (1.39)
Number of Observations	5,548	5,548	1,274	2,350	1,924
F-Statistic	14.39***	12.51***	6.29***	2.70***	1.69*
R-Squared	0.032	0.032	0.062	0.021	0.011

Table 6: Corporate Governance Characteristics and Target Status

The table presents differences in corporate governance characteristics between acquirers of public and unlisted firms. The sample is 8,030 completed U.S. acquisitions from SDC Platinum over the period January 1, 1993, to December 31, 2016 that meet the sample selection criteria. *Co-Opted_Independent* is the number of independent directors who joined the board after the CEO assumed office divided by the board size from Coles et al. (2014). *CEO/Chairman* is dummy variable that takes that value of one if the roles of CEO and Chairman in the acquiring firm are combined in the year preceding the acquisition announcement and zero otherwise from ExecuComp. *Tenure* is number of years the CEO has served in the office at the time of the acquisition announcement from ExecuComp. Transactions are classified as public deals when a publicly-listed firm is acquired, otherwise they are characterised as non-public deals. t-statistics are from the t-test for difference in means and z-statistics are from the Wilcoxon rank sum test for difference between the respective distributions. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels respectively.

Panel A: Percentage of Co-Opted Independent Directors by Target Status					
	All Deals	Public Deals	Non-Public Deals	Difference (Public vs Non-Public)	t/z statistic
Co_Opted_Independent (%)					
Mean	36.75	35.44	37.18	-1.73**	-2.02
Median	33.33	33.33	33.33	0.00	-1.63
Observations	4,605	1,132	3,473		
Panel B: CEO-Chairman Duality by Target Status					
	All Deals	Public Deals	Non-Public Deals	Difference (Public vs Non-Public)	t/z statistic
CEO/Chairman (Years)					
Mean	0.61	0.67	0.59	0.09***	6.54
Median	1.00	1.00	1.00	0.00***	6.35
Observations	7,481	1,698	5,783		
Panel C: CEO Tenure by Target Status					
	All Deals	Public Deals	Non-Public Deals	Difference (Public vs Non-Public)	t/z statistic
Tenure					
Mean	8.69	8.73	8.68	0.05	0.29
Median	6.67	6.83	6.60	0.23	0.91
Observations	8,030	1,814	6,216		

Table 7: Announcement Returns, CPS and Corporate Governance

The table presents multivariate regression estimates of bidder's two-day CARs (0, +1) on CPS and other firm and deal characteristics. The sample is 8,030 completed U.S. acquisitions from SDC Platinum over the period January 1, 1993, to December 31, 2016 that meet the sample selection criteria. Data on executive compensation are from ExecuComp. Stock price and accounting data are from CRSP/Compustat. $CARs(0,1)$ is the bidder's cumulative abnormal return over a two-day event window (0, +1) where 0 is the announcement date using the market model. The estimation period is from 200 days to 60 days before the acquisition announcement. CPS is the ratio of CEO's total compensation to the total compensation of the top-five paid executives. $High_CPS$ is a dummy variable that takes the value of one if the CPS of the bidder is higher than its industry median in the given year and zero otherwise. $Co_Opted_Independent$ is the number of independent directors who joined the board after the CEO assumed office divided by the board size from Coles et al. (2014). $CEO/Chairman$ is dummy variable that takes that value of one if the roles of CEO and Chairman in the acquiring firm are combined in the year preceding the acquisition announcement and zero otherwise from ExecuComp. $Tenure$ is number of years the CEO has served in the office at the time of the acquisition announcement from ExecuComp. Transactions are classified as public deals when a publicly-listed firm is acquired, as private deals when a privately-held firm is acquired and as subsidiary deals when a subsidiary firm is acquired. Definitions of the remaining control variables are as described in the Appendix. t-statistics based on heteroskedasticity-robust, clustered at firm-level standard errors are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels respectively.

Variable	Model 1 All Deals	Model 2 All Deals	Model 3 Public Deals	Model 4 Private Deals	Model 5 Subsidiary Deals
Intercept	2.6568** (2.23)	2.4154** (2.02)	2.0357 (1.18)	1.3932 (0.75)	0.6846 (0.35)
High_CPS	-0.2925 (-1.63)	0.0416 (0.14)	-0.9734** (-2.51)	-0.1836 (-0.67)	0.0323 (0.11)
High_CPS * Public		-0.9668* (-1.91)			
High_CPS * Private		-0.2485 (-0.60)			
Public	-1.4017*** (-5.06)	-0.8478** (-2.01)			
Private	-0.3735* (-1.83)	-0.2459 (-0.78)			
Size	-0.3892*** (-2.86)	-0.3900*** (-2.85)	-0.4305 (-1.50)	-0.0962 (-0.50)	-0.3588 (-1.47)
Payment_Cash	0.5582*** (2.72)	0.5578*** (2.73)	1.8401*** (4.47)	0.4680 (1.59)	-0.1261 (-0.31)
Diversifying	-0.2408 (-1.30)	-0.2346 (-1.27)	0.2601 (0.60)	-0.5641** (-1.97)	-0.2642 (-0.94)
Runup	-0.1634 (-1.27)	-0.1693 (-1.32)	-0.5615 (-1.34)	-0.2611** (-2.19)	0.2977 (1.01)
Cash/Assets	-0.6961 (-0.97)	-0.6888 (-0.96)	-3.6062** (-2.33)	-1.1031 (-1.15)	1.9468 (1.35)
Relative_Size	0.2512 (0.45)	0.2483 (0.44)	-0.7336 (-1.03)	5.1977** (2.19)	1.7068 (1.60)
B/M	0.4972 (1.13)	0.4990 (1.14)	-0.0171 (-0.02)	0.5733 (0.92)	0.1140 (0.14)
No_Bidders	-0.7440 (-0.75)	-0.6806 (-0.69)	-0.9125 (-0.88)	-1.2273 (-0.73)	1.6876 (1.03)
Co_Opted_Independent	0.0352 (0.08)	0.0350 (0.08)	-0.4299 (-0.50)	0.4836 (0.77)	-0.0844 (-0.12)
CEO/Chairman	-0.1864 (-0.93)	-0.1934 (-0.96)	-0.3650 (-0.90)	-0.0688 (-0.22)	-0.1922 (-0.56)
Tenure	0.0224 (1.49)	0.0234 (1.55)	0.0838*** (2.75)	0.0182 (0.89)	-0.0212 (-0.81)
Number of Observations	3,351	3,351	824	1,382	1,145
F-Statistic	6.14***	5.69***	3.30***	2.20**	1.18
R-Squared	0.027	0.029	0.062	0.032	0.020

Table 8: Endogenously determined CPS and the propensity to acquire.

The table presents a two-stage system of equations with endogenous regressors. The sample is 10,931 firm-year observations over the period 1992-2015 from ExecuComp and includes firms that have made at least one acquisition announcement in the following year. Executive compensation data are from ExecuComp, stock price data from CRSP and accounting data from Compustat. Model 1 corresponds to the first-stage regression with *Industry-Med_CPS*, *Number_of_PVs* and *CEO_Only_Director* being the instrumental variables. *Industry-Med_CPS* is the median CPS of the acquirer's industry following the Fama and French (1997) classification of 48 industries. *Number_of_PVs* is the number of vice presidents among the acquirer's top five executives. *CEO_Only_Director* is a dummy variable that takes the value of one if the CEO is the only director among the top five executives. All instrumental variables are defined at the year preceding the acquisition announcement. *Ind_Adj_CPS* is endogenously determined and is defined as the CPS of the bidder minus the median CPS of the bidder's industry in the same year. Models 2-4 present the results of the second-stage probit equation. The dependent variable in Model 2, *Public*, takes the value of one if a publicly listed firm is acquired in a given year and zero otherwise. The dependent variable in Model 3, *Private*, takes the value of one if a privately held firm is acquired in a given year and zero otherwise. The dependent variable in Model 4, *Subsidiary*, takes the value of one if a subsidiary firm is acquired in a given year and zero otherwise. Definitions of the remaining control variables are described in the Appendix. z-statistics, based on robust standard errors clustered at the firm level, are reported in parentheses. ***, **, and * indicate statistical significance at the 1%, 5% and 10% level respectively.

Variable	Model 1 First Stage - Ind_Adj_CPS	Model 2 Second Stage - Public	Model 3 Second Stage - Private	Model 4 Second Stage - Subsidiary
Intercept	0.0795*** (3.60)	-2.2578*** (-15.39)	0.5674*** (4.30)	-0.2595* (-1.88)
Ind_Adj_CPS (<i>endogenous</i>)		2.1847*** (3.03)	0.8182 (1.26)	-2.1250*** (-2.94)
Industry-Med_CPS	-0.3280*** (-6.79)			
Number_of_PVs	0.0087*** (7.02)			
CEO_Only_Director	0.0297*** (8.71)			
Size	0.0073 (1.64)	0.2686*** (6.80)	-0.0978*** (-2.89)	-0.0453 (-1.41)
Past_ABHR	0.0099*** (3.00)	-0.0056 (-0.16)	-0.0082 (-0.28)	-0.0016 (-0.06)
Cash/Assets	-0.0462*** (-2.77)	0.4694*** (3.99)	0.4160*** (3.68)	-0.7881*** (-6.75)
B/M	-0.0052 (-1.44)	0.0627 (1.60)	-0.1606*** (-3.26)	0.0714 (1.26)
ROA	0.0010 (0.04)	0.0875 (0.36)	-0.1216 (-0.59)	-0.0335 (-0.18)
Sales_Growth	-0.0472*** (-2.91)	0.6109*** (3.85)	0.1162 (0.85)	-0.4846*** (-2.76)
Leverage	0.0215* (1.81)	-0.1567 (-1.13)	-0.5681*** (-5.18)	0.6715*** (5.23)
P/E	0.0027*** (2.76)	-0.0107 (-0.95)	0.0024 (0.29)	0.0029 (0.42)
NC_Working_Cap	0.0015 (0.11)	0.1544 (1.15)	0.0839 (0.58)	-0.1808 (-1.58)
CEO_Ownership	-0.2449*** (-4.94)	-0.8865 (-1.32)	1.5964*** (3.73)	-1.4432*** (-2.65)
Number of Observations	8,942	8,942	8,942	8,942
F-Statistic	22.88***	-	-	-
Wald Chi-Square	-	160.04***	209.37***	187.40***

Table 9: Announcement Returns and Alternative Definitions of CPS

The table presents multivariate regression estimates of bidder's two-day CARs (0, +1) on CPS and other firm and deal characteristics. The sample is 8,030 completed U.S. acquisitions from SDC Platinum over the period January 1, 1993, to December 31, 2016 that meet the sample selection criteria. Data on executive compensation are from ExecuComp. Stock price and accounting data are from CRSP/Compustat. $CARS(0,1)$ is the bidder's cumulative abnormal return over a two-day event window (0, +1) where 0 is the announcement date using the market model. The estimation period is from 200 days to 60 days before the acquisition announcement. CPS is the ratio of CEO's total compensation to the total compensation of the top-five paid executives. In Panel A, $High_CPS$ is a dummy variable that take the value of one if the CPS of the bidder is in the top 1/3 of the industry distribution for the given year and zero if it is in the bottom 1/3 of the industry distribution for the same year. In Panel B, $High_CPS$ is a categorical variable that takes the value of one if the CPS of the bidder is in the bottom 1/3 of the industry distribution for the given year, the value of two if the CPS of the bidder is in the middle tercile of the industry distribution, and the value of three if the CPS of the bidder is in the top 1/3 of the industry distribution for the same year. Transactions are classified as public deals when a publicly-listed firm is acquired, as private deals when a privately-held firm is acquired and as subsidiary deals when a subsidiary firm is acquired. Definitions of the remaining explanatory variables are as described in the Appendix. t-statistics based on heteroskedasticity-robust, clustered at firm-level standard errors are in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels respectively.

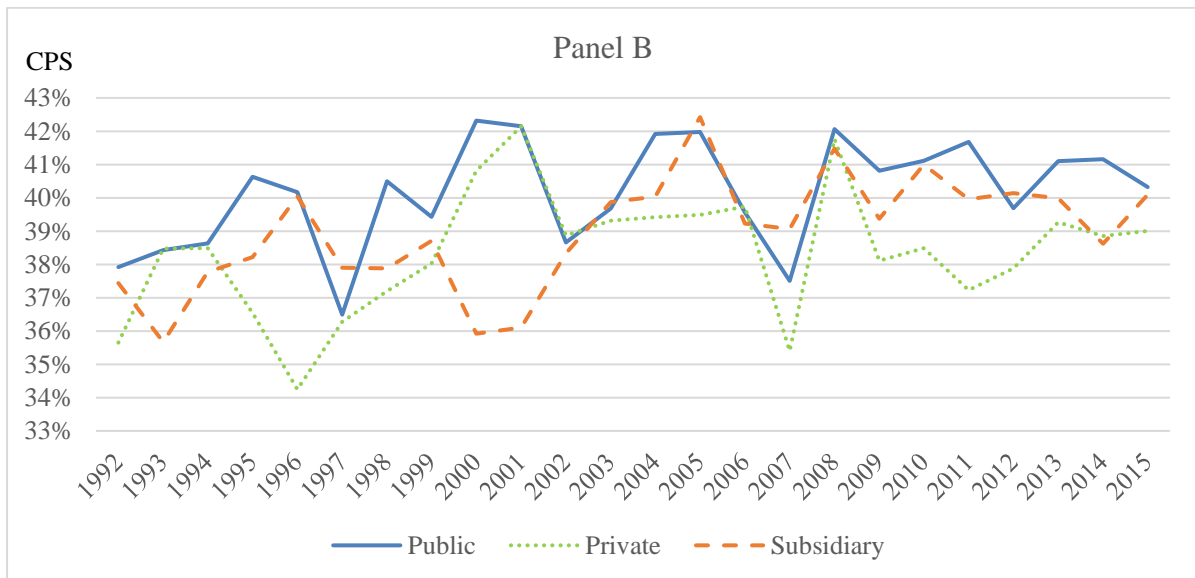
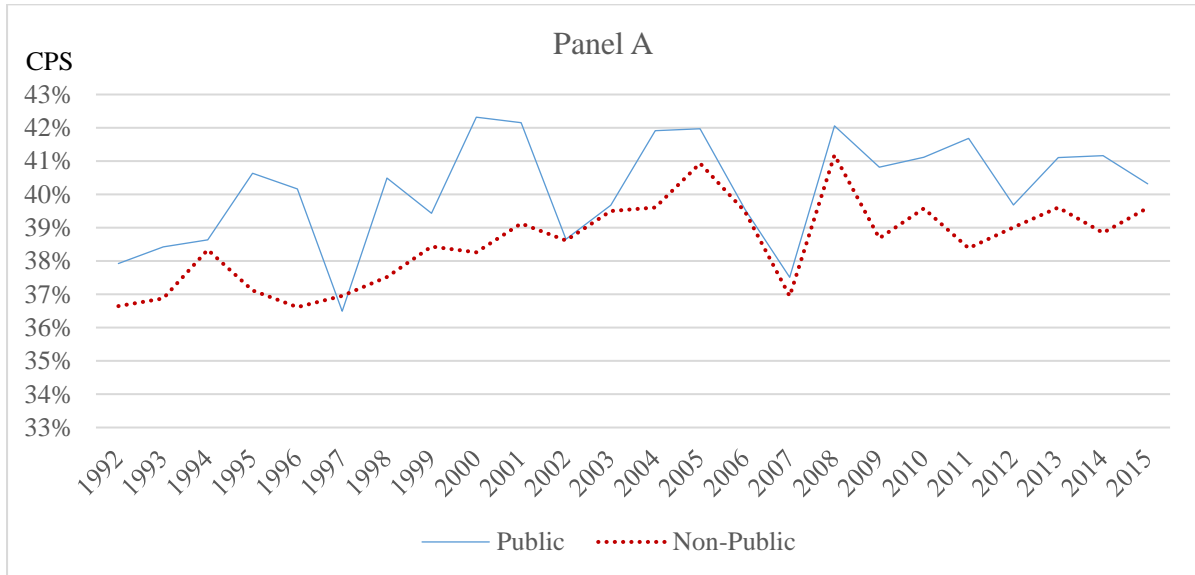
Variable	Panel A: Terciles Dummy					Panel B: Terciles Categorical				
	Model 1 All Deals	Model 2 All Deals	Model 3 Public Deals	Model 4 Private Deals	Model 5 Subsidiary Deals	Model 6 All Deals	Model 7 All Deals	Model 8 Public Deals	Model 9 Private Deals	Model 10 Subsidiary Deals
Intercept	2.8201** (2.05)	2.5988* (1.89)	1.2868 (0.61)	-0.0056 (-0.00)	1.4722 (0.85)	2.7120** (2.22)	2.2630* (1.81)	2.6841 (1.45)	1.3782 (0.71)	0.4942 (0.25)
High_CPS	-0.2050 (-0.92)	0.1174 (0.33)	-1.1014** (-2.05)	-0.1773 (-0.50)	0.1608 (0.46)	-0.0940 (-0.85)	0.0962 (0.54)	-0.5504** (-2.15)	-0.0311 (-0.18)	0.1059 (0.60)
High_CPS * Public		-1.1315* (-1.69)					-0.6240* (-1.92)			
High_CPS * Private		-0.1750 (-0.35)					-0.1165 (-0.46)			
Public	-1.6590*** (-4.65)	-0.9483 (-1.62)				-1.4123*** (-5.09)	-0.0609 (-0.08)			
Private	-0.5455** (-2.25)	-0.4511 (-1.13)				-0.3730* (-1.83)	-0.1324 (-0.22)			
Size	-0.2690 (-1.60)	-0.2728 (-1.62)	-0.2304 (-0.59)	0.1431 (0.62)	-0.3306 (-1.08)	-0.3923*** (-2.88)	-0.3940*** (-2.87)	-0.4378 (-1.53)	-0.1004 (-0.52)	-0.3614 (-1.48)
Payment_Cash	0.4507* (1.84)	0.4401* (1.81)	1.7231*** (3.31)	0.4557 (1.24)	-0.1387 (-0.29)	0.5578*** (2.72)	0.5506*** (2.69)	1.8178*** (4.42)	0.4697 (1.59)	-0.1260 (-0.31)
Diversifying	-0.2013 (-0.89)	-0.1863 (-0.82)	0.0602 (0.11)	-0.3838 (-1.07)	-0.2458 (-0.76)	-0.2417 (-1.30)	-0.2287 (-1.23)	0.2809 (0.65)	-0.5635** (-1.97)	-0.2609 (-0.93)
Runup	-0.2011* (-1.81)	-0.2067* (-1.85)	-0.5391 (-1.02)	-0.2081* (-1.94)	-0.0082 (-0.02)	-0.1652 (-1.28)	-0.1693 (-1.31)	-0.5514 (-1.31)	-0.2625** (-2.18)	0.2993 (1.02)

Table 9 (continued)

Cash/Assets	-0.1791 (-0.21)	-0.1871 (-0.22)	-4.2615** (-2.33)	-0.3682 (-0.30)	2.9219* (1.73)	-0.6833 (-0.95)	-0.6868 (-0.96)	-3.6509** (-2.36)	-1.0772 (-1.13)	1.9473 (1.35)
Relative_Size	0.0009 (0.00)	-0.0059 (-0.01)	-0.9697 (-1.10)	6.5449* (1.92)	2.1762 (1.64)	0.2500 (0.44)	0.2487 (0.44)	-0.7440 (-1.04)	5.2175** (2.19)	1.7058 (1.60)
B/M	-0.0704 (-0.14)	-0.0472 (-0.09)	-0.1734 (-0.13)	-0.6108 (-0.85)	-0.4274 (-0.52)	0.5213 (1.19)	0.5360 (1.22)	0.0537 (0.05)	0.5999 (0.96)	0.1343 (0.17)
No_Bidders	-1.0343 (-0.92)	-0.9902 (-0.89)	-0.9312 (-0.80)	-0.1806 (-0.20)	0.8353 (0.80)	-0.7547 (-0.76)	-0.7058 (-0.72)	-0.9367 (-0.91)	-1.2467 (-0.73)	1.6837 (1.03)
Co_Opted_Independent	0.0287 (1.54)	0.0300 (1.60)	0.1015** (2.58)	0.0067 (0.28)	0.0051 (0.15)	0.0234 (1.55)	0.0244 (1.61)	0.0837*** (2.75)	0.0199 (0.96)	-0.0206 (-0.79)
CEO/Chairman	0.0934 (0.39)	0.0846 (0.35)	-0.1265 (-0.23)	0.6243* (1.72)	-0.3216 (-0.83)	-0.1946 (-0.97)	-0.1990 (-1.00)	-0.3427 (-0.84)	-0.0822 (-0.27)	-0.2068 (-0.61)
Tenure	-0.2625 (-0.50)	-0.2670 (-0.51)	-0.2483 (-0.22)	-0.4909 (-0.64)	-0.0592 (-0.06)	0.0101 (0.02)	0.0038 (0.01)	-0.4640 (-0.54)	0.4536 (0.72)	-0.1088 (-0.15)
Number of Observations	2,225	2,225	525	922	778	3,351	3,351	824	1,382	1,145
F-Statistic	4.32***	4.08***	2.12**	1.16	1.09	6.01***	5.52***	3.18***	2.18**	1.25
R-Squared	0.029	0.031	0.069	0.026	0.029	0.027	0.028	0.060	0.032	0.020

Figure 1: CEO Pay Slice and Target Status

The figures shows average CPS of the acquiring firms over the sample period by target status. The sample is 8,030 completed U.S. acquisitions from SDC Platinum over the period January 1, 1993, to December 31, 2016 that meet the sample selection criteria. Data on executive compensation are from ExecuComp. *CPS* is the ratio of CEO's total compensation to the total compensation of the top-five paid executives at the end of the year preceding the acquisition announcement. Panel A: Transactions are classified as public deals when a publicly-listed firm is acquired, otherwise they are characterised as non-public deals. Panel B: Transactions are classified as public deals when a publicly-listed firm is acquired, as private deals when a privately-held firm is acquired and as subsidiary deals when a subsidiary firm is acquired.



Appendix: Variable definitions

<i>Compensation Variables</i>	
<i>CPS</i>	The ratio of CEO's total compensation to the total compensation of top-five executives, in the year preceding the acquisition announcement, from ExecuComp.
<i>Industry-Med_CPS</i>	The median CPS of the acquirer's industry in the year preceding the acquisition announcement following the Fama and French (1997) classification of 48 industries.
<i>Industry-Adj_CPS</i>	The CPS of the bidder minus the median CPS of the bidder's industry in the same year.
<i>High_CPS</i>	A binary variable that takes the value of one if the CPS of the bidder is higher than its industry median in the given year and zero otherwise.
<i>Firm Characteristics</i>	
<i>Size</i>	The natural logarithm of book value of total assets at the end of the year preceding the acquisition announcement from Compustat.
<i>Runup</i>	The acquirer's buy-and-hold daily returns between 205 days and 6 days before the acquisition announcement date minus the buy-and-hold daily returns of the propensity-score matched firm for the same time period from CRSP.
<i>Cash/Assets</i>	Cash and cash equivalents to book value of total assets from Compustat.
<i>B/M</i>	The book value of equity from Compustat divided by its market value from CRSP.
<i>ROA</i>	The operating income before depreciation divided by book value of total assets from Compustat.
<i>Sales_Growth</i>	The natural logarithm of the ratio of sales in year t to sales in the previous year (t-1) from Compustat.
<i>Leverage</i>	Total debt to total assets from Compustat.
<i>P/E</i>	The ratio of the stock price to earnings per share from CRSP/Compustat.
<i>NC_Working_Cap</i>	Current assets minus current liabilities minus cash and cash equivalents standardized by book value of total assets from Compustat.
<i>Tenure</i>	The number of years the CEO has served in the office at the time of the acquisition announcement from ExecuComp.
<i>CEO/Chairman</i>	A binary variable that takes that value of one if the roles of CEO and Chairman in the acquiring firm are combined in the year preceding the acquisition announcement and zero otherwise from ExecuComp.
<i>Co-Opted_Independent</i>	The number of independent directors who joined the board after the CEO assumed office divided by the board size from Coles et al. (2014).
<i>Number_of_PVs</i>	The number of vice presidents among the top five executives in the year preceding the acquisition announcement from ExecuComp.
<i>CEO_Only_Director</i>	A binary variable that takes the value of one if the CEO is the only director among the top five executives in the year preceding the acquisition announcement from ExecuComp.
<i>CEO_Ownership</i>	The percentage of shares held by the CEO to the total number of shares outstanding at the end of the year preceding the acquisition announcement from ExecuComp.
<i>Deal Performance Measures</i>	
<i>CARs(0,1)</i>	The bidder's cumulative abnormal returns over a two-day event window (0, +1) where 0 is the acquisition announcement date using the market model. The estimation period is from 200 days to 60 days before the acquisition announcement. Market returns are based on the CRSP value-weighted index. When a bidder has made more than one acquisition announcements in a given year, CARs(0,1) is the weighted-average of all CARs(0,1) in the given year with the weights being the value of each deal to the total value of all deals made by the bidder in the same year.
<i>Deal Characteristics</i>	
<i>Public</i>	A binary variable that takes the value of one if the target is a publicly listed firm and zero otherwise.
<i>Non-Public</i>	A binary variable that takes the value of one if the target is an unlisted firm and zero otherwise.
<i>Private</i>	A binary variable that takes the value of one if the target is a privately held firm and zero otherwise.
<i>Subsidiary</i>	A binary variable that takes the value of one if the target is a subsidiary firm and zero otherwise.
<i>Payment_Cash</i>	A binary variable that takes the value of one if the transaction is financed only with cash and zero otherwise.

<i>Diversifying</i>	A binary variable that takes the value of one if the acquiring firm and the target operate in different industries and zero otherwise based on the Fama and French (1997) classification of 48 industries.
<i>Relative_Size</i>	The ratio of the deal value reported by SDC Platinum to the market value of the acquiring firm 4 weeks before the acquisition announcement date from CRSP.
<i>No_Bidders</i>	The number of firms bidding for a target during a deal from SDC Platinum.
