Director Compensation and Related Party Transactions

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Abstract

This paper examines whether independent directors' compensation is associated with related party transactions (RPTs). We focus both on directors' total compensation and on their equity-based compensation. Employing hand-collected data for S&P 1500 firms, we find that independent directors' compensation is significantly associated with RPTs. Specifically, we predict and find that level of compensation is positively related to RPTs, but we do not find equity-based compensation to be associated with RPTs. Next, we decompose the compensation measures into "market" (i.e., predicted) level and "excessive" components and find that the results are driven by the excessive components. This association between RPTs and director compensation is moderated by corporate governance mechanisms, suggesting that the association between director compensation and RPTs reflects a conflict of interest between insiders and shareholders. We also find some evidence that the effects of director compensation on RPTs are stronger for RPTs with directors compared with RPTs with non-directors, for non-business RPTs compared with business RPTs, and for ex post RPTs compared to ex ante RPTs.

Director Compensation and Related Party Transactions

1. Introduction

Related party transactions (hereafter RPTs) involve transfer of resources, services, or obligations between a reporting entity and a related party (SFAS 57; IAS 24). Clearly, not all RPTs are "bad" but instead represent efficient contracting (discussed later). However, research has documented that some RPTs reflect insider opportunism and are harmful to shareholders (e.g., Kohlbeck and Mayhew 2010, 2017; Ryngaert and Thomas 2012). Some of the highest profile accounting scandals such as Enron and Adelphia have involved RPTs. The Financial Accounting Standards Board (FASB) considers RPTs as non-arm's length transactions by their very nature and expresses concern about some RPTs for potentially creating agency problems and hampering board monitoring efficacy, providing corporate insiders with the potential means to extract wealth from outside shareholders via self-dealing. A firm's board of directors is responsible for protecting shareholders' interests and mitigating agency conflicts between shareholders and management. Given that one important way to motivate directors to fulfill their board responsibility is through appropriate director compensation design, a natural question is whether independent directors' compensation is associated with related party transactions.

Directors are usually compensated by a combination of cash, stock, and options. We focus on two dimensions of compensation: (1) Director Compensation Level (*DCL*), and (2) Director Equity-Based Compensation (*DEC*). *DCL* represents directors' total compensation and is the summation of cash and equity. *DEC* represents directors' equity-based compensation and is measured as the proportion of equity-based compensation to total compensation.

Our study builds on two theories. On one hand, the conflict-of-interest theory predicts that higher compensation level is associated with more RPTs, because high compensation may impair the independence of directors, making them more subject to managers' influences. In this case, highly compensated directors may not provide optimal oversight on managers. In addition, high levels of compensation are conducive to self-dealing. Therefore, highly compensated directors who seek private benefits are more likely to use RPTs to enrich themselves than to protect shareholders' interests. On the other hand, the efficient contracting theory suggests that higher compensation levels can attract more capable directors, providing more effective monitoring and thus leading to fewer RPTs. The results from prior studies for both U.S. and non-U.S. firms are more consistent with the conflict-of-interest theory.

Our primary argument is that although a competitive and fair compensation level and equity-based structure can attract high-caliber independent directors who can provide better monitoring, an excessive compensation level can impair outside directors' independence, which in turn would compromise their objectivity in monitoring firm activities. First, we focus on directors' total compensation level (*DCL*) and expect a positive relation between independent directors' compensation and RPTs. Next, we turn our attention to directors' equity-based compensation (*DEC*). Because equity-based compensation ties the directors' benefits to the performance of the firm (Jensen 1993; Sengupta and Zhang 2015), directors receiving a larger fraction of their compensation in the form of equity are expected to exert better monitoring on firm activities. Consistent with this argument, prior research finds that directors' equity-based compensation is correlated with greater investment opportunities, higher price-to-book ratio, lower implied cost of capital, and better performance (e.g., Perry 2000; Yermack 2004; Fich and Shivdasani 2005; Sengupta and Zhang 2015). Building on

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these findings, we expect a negative relation between directors' equity-based compensation and RPTs.

SFAS 57 requires disclosure of material RPTs that include: (1) the nature of the relationship(s) involved, (2) a description of the transactions and all information deemed necessary to an understanding of the effects of the transactions on the financial statements, (3) the dollar amounts of the transactions for each of the periods for which income statements are presented, and (4) the amounts due to or from related parties as of the date of each balance sheet presented (FASB 1982, p. 2). The SEC imposes similar disclosure requirements via Regulation S-X. The majority of companies disclose their RPTs in their annual proxy statements. We hand-collect our RPT data from proxy statements. We gather director compensation data from ExecuComp and directors' personal characteristics from Institutional Shareholder Services (ISS). Governance data are obtained from Bloomberg. After matching with financial data from Compustat, our final sample includes 2,184 firm-year observations. We conduct our analyses using firm-level observations, where the firm-level director compensation is measured using the average compensation of all independent directors for each firm.

The results are consistent with our first prediction that higher levels of *DCL* is associated with higher RPTs. Specifically, we find that *DCL* is positively related to RPTs, suggesting that when directors' pay levels are high, they are more likely to be influenced by managers and become less independent (Yermack 2004; Brick, Palmon, and Wald 2006; Sengupta and Zhang 2015), leading to more RPTs. However, we do not find a strong empirical support for our second prediction that a higher portion of equity-based compensation (*DEC*) is associated with lower usage of RPTs.

The above findings provide preliminary support for the conflict-of-interest theory on average. However, director compensation should be high enough to attract qualified candidates and provide sufficient incentives for directors to fulfill their board responsibility. As a result, there should exist an "optimal" level or mix of compensation. In an attempt to shed some light on this, we decompose directors' compensation into "market" (i.e., predicted) and "excessive" compensation components. Consistent with the conflict-of-interest theory, we find that only the excessive component of director compensation is related to RPTs, and not the market-level component. Specifically, consistent with the previous results, we document that while the excessive *DCL* is associated with more RPTs, the excessive *DEC* is not associated with fewer RPTs.

Next, building on prior studies that show that *not all RPTs are prone to insider opportunism* (e.g., Kohlbeck and Mayhew 2010, 2017; Ryngaert and Thomas 2012; Lu 2018), we conduct several examinations in which we consider subgroups that we expect to be more versus less affected by opportunism. Specifically, we group RPTs based on counterparties (Director RPTs vs. Non-Director RPTs), transaction types (Business RPTs vs. Non-Business RPTs), and ex ante RPTs vs. ex post RPTs, and examine whether director compensation is associated differently with these RPT groups.

First, we partition the RPT sample into two subsamples based on counterparties: (1) RPTs with independent directors, and (2) RPTs with other parties such as executives or primary shareholders. Consistent with our predictions, we find some evidence that our above on-average results are driven by RPTs with independent directors.

Second, following Kohlbeck and Mayhew (2017), we partition the RPT sample into two subsamples based on RPT types: (1) Business RPTs (e.g., selling, buying, leasing, and

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M&A activities transactions), which are closer to the firm's core business operation, and (2) Non-Business RPTs (e.g., transactions involving loans, donations to related charities, and consulting and legal services). We find evidence (no evidence) of opportunism for the Non-Business RPT (Business) subsample.

Third, following Ryngaert and Thomas (2012), we partition the RPT sample into: (1) ex ante RPTs (i.e., transactions that originate before the counterparty becomes a related party or before the IPO), and (2) ex post RPTs (transactions that occur after the counterparty obtains related party status). Consistent with prior research, we find some (but not strong) evidence that opportunism dominates (does not dominate) in ex post RPT (ex ante) subsample.

We also examine whether a firm's external and internal monitoring quality have a moderating effect on the association between the director compensation and RPTs. We find some empirical evidence that both external and internal monitoring quality have significant moderating effects, suggesting that the association between director compensation and RPTs reflects a conflict of interest between insiders and shareholders.[1]

This study contributes to two streams of literature. First, it contributes to the literature investigating economic consequences of variations in director compensation. Prior studies find that director compensation is correlated with firm value, R&D, institutional following, and financial disclosure quality (e.g., Perry 2000; Vafeas 1999; Bryan et al. 2000; Yermack 2004; Ryan and Wiggins 2004; Fich and Shivdasani 2005; Archambeault, DeZoort, and Hermanson

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[1] To comply with listing requirements from the SEC and stock exchanges, U.S. public firms generally designate the board of directors or a specific committee of the board to review and approve RPTs. Consequently, we expect that the effect of directors' compensation on RPTs should be more pronounced for directors who have the authority to approve RPTs than for directors who do not have such authority. We find some empirical support for our prediction that when firms designate the audit committee to approve RPTs, the compensation of audit committee members impacts RPTs (but not so for non-committee members).

2008; Engel, Hayes, and Wang 2010). Our study contributes to this literature by showing that director compensation is associated with RPTs.

Second, our paper contributes to the literature exploring the determinants of RPTs. Berkman, Cole, and Fu (2009) find that firm characteristics such as size, ROA, and growth opportunities affect the propensity of RPTs. Nekhili and Cherif (2011) find that the size of the board and the presence of independent directors affect different types of RPTs. In this paper, we focus on directors' compensation as their most direct incentive to reduce agency conflicts (Sengupta and Zhang 2015) and document a link between director compensation and RPTs. Our results suggest that director compensation has a significant association with RPTs.

2. Literature Review and Hypotheses Development

Our paper is related to two streams of literature: (1) the literature examining the determinants and consequences of RPTs; and (2) research examining the consequences of directors' compensation. In the following, we briefly describe these two relevant research streams and use their insights to develop our hypotheses.

Prior literature provides two conflicting theories on RPTs (e.g., Gordon, Henry, and Palia 2004; Ryngaert and Thomas 2012; Kohlbeck and Mayhew 2010, 2017; Lu 2018). The conflict-of-interest theory maintains that the non-arm's length nature of RPTs exacerbates agency problems (Jensen and Meckling 1976) and adversely affects the efficacy of board monitoring. Consequently, the theory predicts that RPTs can be used by directors and corporate insiders for self-dealing and for expropriating wealth from shareholders. In addition, it predicts that significant and lucrative RPTs could serve as a means of bribing directors and

major shareholders who in turn may not provide optimal oversight on managers. Overall, the conflict-of-interest theory views RPTs as value destroying.

In contrast, the efficient contracting theory maintains that due to incomplete information, RPTs facilitate contracting as parties in related transactions have private information about the firm and have incentives to use this information in return for the additional compensation they earn by becoming a counterparty to RPTs. Thus, the theory predicts that RPTs are efficient transactions and are value enhancing.[2]

There is relatively scant research on RPTs for U.S. firms, most likely because RPT data are not readily available for U.S. firms. Consistent with the FASB's concerns about some RPTs giving rise to self-dealing by corporate insiders, the limited empirical evidence that exists primarily supports the conflict-of-interest theory. Gordon, Henry, and Palia (2004) study 112 U.S. firms in 2000 and 2001 to investigate whether corporate governance mechanisms, such as CEO compensation, board composition, and large shareholder concentration, are associated with RPTs. They find that weaker corporate governance mechanisms are correlated with higher numbers of RPTs but call for more-in-depth analysis. They also find a negative association between industry-adjusted returns and RPTs. Kohlbeck and Mayhew (2010) complement these findings by classifying RPTs into simple and complex types and by documenting that only firms with relatively simple RPTs (e.g., loans) are valued negatively, whereas firms with complex RPTs are not valued negatively.[3]

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[2] These two views are consistent with the SEC and FASB's views on RPTs. Specifically, the regulators are concerned that the non-arm's length nature of RPTs has the potential for insiders to extract firm wealth at the expense of other stakeholders (e.g., Kohlbeck and Mayhew 2017). The FASB and SEC mitigate this concern by setting RPT disclosure requirements. The fact that RPTs are not banned, however, implies that despite this concern, the FASB and the SEC recognize that not all RPTs are illegitimate and prone to insider opportunism.

[3] Kohlbeck and Mayhew (2010) define simple transactions as "straight-forward transactions that involve relatively few financial statement accounts and related parties; and are typically avoidable in the sense that

Ryngaert and Thomas (2012) decompose RPTs into "ex ante" and "ex post" RPTs and find that ex post RPTs are associated with lower operating profitability and higher likelihood of financial distress. [4] In a similar vein, Kohlbeck and Mayhew (2017) decompose RPTs into business RPTs and "tone-based" RPTs (i.e., non-business RPTs) and document that non-business RPTs are correlated with higher likelihood of future restatements and that non-business RPT firms pay higher audit fees subsequent to restatements. The latter result is consistent with prior studies documenting that executives obtain loans at below market rates (Kahle and Shastri 2004), and that firms with executive loans are associated with higher likelihood of financial misstatements (Cullinan, Du, and Wright 2006). Last, Balsam, Gifford, and Puthenpurackal (2017) examine the association between RPTs and CEO compensation between 2001 and 2012. They report that while the number of CEO-related RPTs decreases over their sample period, the number of independent director-related RPTs increases. They also find little empirical evidence on the association between CEO compensation and RPTs. Their results provide additional motivation for our study. Our paper differs from Balsam et al. (2017) in several ways. First and most obvious, our article focuses on *director* compensation while their paper focuses on CEO compensation. Recognizing their findings, we control for CEO compensation in our regression models. Second, we use a much broader sample. Specifically, our sample consists of S&P 1500 composite firms, while Balsam et al. (2017) randomly select 500 firms.

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a third-party could replace the RP transactions." They define complex transactions as those that "involve a number of financial statement accounts and related parties, often include a number of conditions, and impact the financial statements in less obvious ways. Complex transactions include related business, unrelated business, overhead, and stock transactions."

[4] Ryngaert and Thomas (2012) define ex ante RPTs as transactions that are initiated before a firm goes public or before the counterparty becomes a related party. They define ex post RPTs as transactions that are originated after a firm goes public and after the counterparty becomes a related party. They view the former consistent with the efficient contracting theory, and the latter consistent with the conflict-of-interest theory.

There is a larger body of empirical research on RPTs for non-U.S. firms, especially for firms in emerging markets (e.g., Cheung, Rau, and Stouraitis 2006; Djankov, La Porta, Lopez-de-Silanes, and Shleifer 2008; Berkman, Cole, and Fu 2009; Jian and Wong 2010; Chen, Cheng, and Xiao 2011; Nekhilli and Cherif 2011; Xu, Chen, Xu, and Chan 2016; Hope, Li, Liu, and Wu 2019; Hope, Rao, Xu, and Yue 2019). Collectively, the results of these studies show that RPT firms exhibit weaker corporate governance and that they have lower profitability and valuation than other firms.

Taken together, the results of prior studies are more consistent with the conflict-of-interest theory. That is, some types of RPTs create agency problems and hamper board monitoring effectiveness, giving corporate insiders the potential means to extract wealth from outside shareholders via self-dealing. The board of directors is responsible for protecting shareholders' interests and curbing agency conflicts between shareholders and management. Director compensation provides the most direct incentive for directors to achieve these goals (e.g., Sengupta and Zhang 2015). Building on these arguments and findings, we examine whether independent directors' compensation, as a corporate governance mechanism, enhances board monitoring efficacy and mitigates the agency problems related to some RPTs (Gordon et al. 2004; Yermack 2004; Adams and Ferreira 2008; Ye 2014; Sengupta and Zhang 2015).

Typically, directors receive remuneration in the form of cash and equity. We first focus on their total compensation level (*DCL*), and then on the equity portion of their compensation (*DEC*). Our primary premise is that while a competitive and fair compensation level and equity-based compensation can attract high-quality independent directors who can exert

effective monitoring, an excessive compensation level could impair outside directors' independence, which in turn would compromise their objectivity in monitoring firm activities.

High levels of compensation may impair outside directors' independence as these directors reciprocate by exerting less oversight on corporate insiders, and thus compromising shareholders' interests (e.g., Brick, Palmon, and Wald 2006; Ye 2014; Sengupta and Zhang 2015). Brick et al. (2006) find that high compensation for CEOs and directors is associated with firm underperformance. They conclude that their finding is consistent with cronyism (Jensen 1993).[5] Ye (2014) finds that independent directors' level of cash compensation is positively correlated with earnings management. In light of these findings, we posit that high levels of compensation are conducive to self-dealing. Therefore, highly compensated directors who seek private benefits are more likely to use RPTs to enrich themselves than to protect shareholders' interests. Accordingly, we state our first hypothesis in the alternative form, as follows:

H1: *There is a positive relation between the independent directors' compensation level and related party transactions.*

However, tension exists regarding the predicted relation in H1. Adam and Ferreira (2008) and Ye (2014) posit that high levels of compensation potentially provide the independent directors with monetary incentives to effectively monitor management and mitigate agency conflicts. For example, Adams and Ferreira (2008) find a positive relation

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[5] Cronyism refers to the association between excessive compensation and weak monitoring. The press sometimes refers to this as "mutual back scratching" (Brick et al. 2006).

between outside directors' attendance in board meetings and board meeting fees. In the RPT context, this could suggest that high compensation attracts high-caliber independent directors who are more diligent in their monitoring duties, resulting in a negative relation between outside directors' compensation level and RPTs.

In addition, H1 assumes that *all* RPTs reflect insider opportunism. However, prior studies find that not all RPTs are harmful (e.g., Kohlbeck and Mayhew 2010, 2017; Ryngaert and Thomas 2012). Accordingly, in additional analyses we classify RPTs based on counterparties (Director RPTs vs. Non-Director RPTs), types (Business RPTs vs. Non-Business RPTs), and ex ante vs. ex post to examine the differential impact of directors' compensation on different forms of RPTs.

Next, we focus on directors' equity-based compensation. Sengupta and Zhang (2015) discuss how equity-based compensation incentivizes directors to monitor management more effectively. Jensen (1993) argues that outside directors who receive direct stock or stock options can better appreciate how their decisions affect the wealth of shareholders. Hermalin and Weisbach (1998) show that the intensity with which directors monitor the CEO of a firm is positively associated with the benefits accruing to them from the company's profits. Because equity-based compensation ties the directors' benefits to the performance of the firm, directors who receive a larger fraction of their compensation in the form of equity are expected to be more diligent in their monitoring duties. Consistent with this argument, the National Association of Corporate Directors and shareholder activist groups (e.g., CALPERS) have encouraged firms to pay directors more in the form of equity (Blue Ribbon Report 1999).

Consistent with such increased monitoring incentives, prior research finds that directors' equity-based compensation is correlated with greater investment opportunities,

higher price-to-book ratio, lower implied cost of capital, and better performance (e.g., Perry 2000; Yermack 2004; Fich and Shivdasani 2005; Linn and Park 2005; Feng, Ghosh, and Sirmans 2007; Cordeiro, Veliyath, and Romal 2007; Sengupta and Zhang 2015).

Building on these findings, we predict that directors' equity-based compensation is negatively associated with RPTs. Accordingly, we state our second hypothesis in the alternative form, as follows:

H2: *There is a negative relation between the independent directors' equity-based compensation and related party transactions.*

There is also tension to the prediction of H2. In particular, as directors' equity stakes increase, they may care more about maximizing their personal wealth (i.e., self-dealing) rather than protecting shareholders' interests (Sengupta and Zhang 2015). Boumosleh (2009) finds that director stock-option grants are positively related to accruals and concludes that stock-option compensation adversely affects directors' monitoring duties. Archambeault, Dezoort, and Hermanson (2008) find a positive relation between audit committee stock-option compensation and the likelihood of restatements. Further, in their study on corporate insiders (both executives and board members), McConnell and Servaes (1990) find a curvilinear relation between Tobin's Q and the fraction of common stock owned by corporate insiders (defined to be both executives and board members). Specifically, they show that the curve slopes upward until insider ownership reaches approximately 40% to 50% and then slopes slightly downward. Consequently, these findings could imply a positive relation between

equity-based compensation and RPTs. In other words, it is ultimately an empirical question which line of arguments will dominate.

3. Sample Selection and Research Design

3.1 Sample Collection

We hand-collect RPT data for S&P 1500 non-financial firms from annual proxy statements for 2007, 2010, and 2013.[6] For each company, we identify the total number of RPTs each year. For each transaction, we collect information regarding the transaction type and transaction parties. We categorize RPTs into Business RPTs and Non-Business RPTs in terms of RPT type. Business RPTs include RPTs involving selling, buying, leasing, and M&A. Non-Business RPTs include all other RPTs such as hiring, donation, and consulting. We also group RPTs into Director RPTs and Non-Director RPTs in terms of related party identity. Director RPTs are transactions with independent directors. Non-Director RPTs are transactions with other parties such as CEOs, other executives, shareholders, etc. Last, we group RPTs into ex ante and ex post. Ex ante RPTs are those RPTs that originate before the counterparty becomes a related party, while the ex post RPTs are those initiated after a counterparty becomes a related party. We extract director compensation data from ExecuComp and directors' personal characteristics data (e.g., committee membership and age) from Institutional Shareholder Services (ISS). Governance data such as the CGQ index and percentage of independent directors are obtained from Bloomberg. We exclude observations

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[6] Consistent with prior studies (e.g., Kohlbeck and Mayhew 2017), we focus on S&P 1500 firms and collect data for every three years due to high cost of hand-collecting detailed RPT data. Our sample starts in 2007 because the Institutional Shareholder Services (ISS) database we use to obtain directors' age and their committee membership starts from 2007.

with missing data. After matching with financial data from Compustat, the final sample includes 2,184 firm-year observations.

3.2 Research Design

We are interested in whether director compensation level (H1) and director equity-based compensation (H2) are associated with RPTs. Therefore, in our base model we regress measures of *RPT* on the measures of director compensation level (*DCL*) and director equity-based compensation (*DEC*) in the same fiscal year:

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\begin{aligned}
RPT \quad = \quad & \beta_1 DCL + \beta_2 DEC + \beta_3 Size + \beta_4 Leverage + \beta_5 Tobin's\ Q + \beta_6 ROA \\
& + \beta_7 CGQ + \beta_8 Inst\_Holdings\% + \ + \beta_9 Analyst\_Follow + \beta_{10} CEO\_Pay \\
& + \beta_{11} Ind\_Director\% + \beta_{12} CEO\_Ownership + \beta_{13} Director\_Ownership \quad (1) \\
& + \beta_{14} Director\_Ownership^2 + Industry\ FE + Year\ FE + \varepsilon
\end{aligned}
$$

We measure *RPT* for each firm in any given year in two ways: (1) indicator variable on the existence of RPTs (*ERPT*), and (2) dollar amount of RPTs (*$RPT*). Director Compensation Level *(DCL)* is the average compensation of all independent directors for each firm in any given year. Director Equity-Based Compensation (*DEC)* is measured as the ratio of equity-based compensation to total compensation for all independent directors for each firm in any given year. H1 predicts a positive coefficient on β_1 *($\beta_1 > 0$)*, while H2 predicts a negative coefficient on β_2 *($\beta_2 < 0$)*.

Motivated by prior research, we include a set of control variables that serve two purposes. First, they are potential explanatory variables for variations in RPTs and thus control for possible correlated omitted variables. Second, to the extent that director compensation is a function of firm characteristics, we control for such characteristics to mitigate possible

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concerns about factors that relate to compensation potentially driving the relation we test for between RPT and director compensation.[7]

Specifically, we include several firm characteristics such as firm performance, leverage, and corporate governance. ROA is used as a proxy for firm performance and is defined as net income divided by total assets (Becher et al. 2005). Leverage is defined as total debt to total assets, as a proxy for agency costs of debt (Bryan et al. 2000; Brick et al. 2006). Prior research shows that corporate governance affects RPTs (e.g., Gordon et al. 2004; Balsam et al. 2017). Consequently, we control for corporate governance quality using the percentage of independent directors on the Board (*Ind_Director%)* and the Corporate Governance Quotient index (*CGQ). CGQ* is developed by Institutional Shareholder Services (ISS) and rates publicly traded companies in terms of the overall quality of their corporate governance. A higher *CGQ* implies stronger corporate governance.[8]

To control for external monitoring factors affecting opportunistic behaviors, we include institutional ownership (*Inst_Holdings%),* measured as the percentage of shares owned by institutional investors. Balsam et al. (2017) find that CEO compensation is associated with RPTs. Therefore, we control for CEO total annual compensation (*CEO_PAY*).

Prior studies identify firm size as an important determinant of director compensation (Bryan et al. 2000; Ryan and Wiggins 2004; Brick et al. 2006). These studies find that director compensation is higher in larger and more complex firms as monitoring is more difficult for these firms. Following prior literature (e.g., Farrell et al. 2008), we control for firm size using log of total assets. Linn and Park (2005) find that the structure of director compensation

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[7] As explained below, we additionally employ a two-stage approach and explicitly model the expected portion of compensation in the first stage.
[8] No inferences are affected if we exclude *CGQ* from the regression analyses.

depends on the growth opportunities of the firm. Directors of firms with greater growth opportunities receive greater levels of total director compensation and derive a significantly greater proportion of equity-based compensation than directors of low-growth firms. As a result, we control for growth opportunities using Tobin's Q, which is measured as the sum of market value of equity, liquidating value of preferred stock, and total debt divided by the book value of total asset (Chung and Pruitt 1994). Prior research document that corporate value is a function of equity ownership by corporate insiders (e.g., McConnell and Servaes 1990). Therefore, we control for both CEO and director ownership (and the square of director ownership). Finally, we include industry and year fixed effects. Standard errors are clustered at the firm-level.

Next, we develop a director compensation determinant model to *decompose* the two compensation measures (*DCL* and *DEC)* into "market" (i.e., predicted) and "excessive" compensation components. Prior research finds that overcompensated directors are associated with higher agency problems, lower CEO turnover, and lower CEO pay-for-performance sensitivity (e.g., Dah and Frye 2017). Building on Dah and Frye's (2017) model, we estimate the determinants of director compensation based on a number of firm characteristics in our first-stage model. The residual in this regression represents excess compensation:

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\begin{aligned}
\textit{Director Pay} \quad = \; & \beta_1 \textit{Tobin's Q} + \beta_2 \textit{R\&D} + \beta_3 \textit{Advertising\_Cost} + \beta_4 \textit{Working\_Capital} \quad (2) \\
& + \beta_5 \textit{Size} + \beta_6 \textit{\#Employees} + \beta_7 \textit{\#Board\_Meeting} + \beta_8 \textit{Segment} \\
& + \beta_9 \textit{Leverage} + \beta_{10} \textit{PP\&E} + \beta_{11} \textit{Capex} + \beta_{12} \textit{ROA} + \beta_{13} \textit{Cash\_Flow} \\
& + \beta_{14} \textit{Volatility} + \beta_{15} \textit{CEO\_Ownership} + \beta_{16} \textit{Director\_Age} \\
& + \beta_{17} \textit{Diretcor\_Ownership} + \beta_{18} \textit{Director\_Ownership}^2 \\
& + \textit{Industry FE} + \textit{Year FE} + \varepsilon
\end{aligned}
$$

Specifically, Dah and Frye (2017) suggest that director compensation is affected by firm investment and growth opportunities, firm complexity, firm performance and risk, and the need for monitoring. For investment opportunities, we include Tobin's Q, research and development costs, advertising costs, and liquidity. For firm complexity, we employ size, the number of employees, the number of board meetings, and the number of business segments. For the need for monitoring, we add leverage, fixed assets, capital expenditure, and CEO ownership. For firm performance and risk, we control for ROA, operating cash flow, and the standard deviation of daily stock returns.

We also include director age in our model because we expect director age to be an important determinant for compensation. From a *DCL* perspective, more experienced directors are more likely to receive a higher level of compensation. From a *DEC* perspective, as directors become older, they likely become more conservative and thus may prefer cash-based compensation over equity-based compensation.

In the second stage, we regress our RPT measures (*ERPT* and *$RPT*) on excessive pay *(Excessive DCL* and *Excessive DEC)* and predicted pay *(Market DCL* and *Market DEC)* components controlling for all other factors, as follows:

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\begin{aligned}
RPT \quad = \quad & \beta_1 Excessive\ DCL + \beta_2 Excessive\ DEC + \beta_3 Market\ DCL + \beta_4 Market\ DEC \\
& + \beta_5 Size + \beta_6 Leverage + \beta_7 Tobin's\ Q + \beta_8 ROA + \beta_9 CGQ \\
& + \beta_{10} Inst\_Holdings\% + \beta_{11} Anayst\_Follow + \beta_{12} CEO\_Pay \\
& + \beta_{13} Ind\_Director\% + \beta_{14} CEO\_Ownership + \beta_{15} Director\_Ownership \\
& + \beta_{16} Director\_Ownership^2 + Industry\ FE + Year\ FE + \varepsilon
\end{aligned} \tag{3}
$$

4. Empirical Results

4.1 Descriptive Statistics

Table 1 provides descriptive statistics. On average, each firm-year observation reports related party transactions with a dollar value of $1,112,000 (*$RPT*). The average director compensation level (*DCL)* is $197,000 and equity-based compensation (*DEC*) is 39% of total director compensation. Therefore, in our sample, director compensation is comprised of more cash than equity.

Independent directors represent 81% of total directors, while institutional investors hold 79% of shares outstanding, suggesting that both internal and external monitoring are relatively strong in our sample firms.

Table 2 reports Pearson correlation. Consistent with H1, this table shows a positive and statistically significant correlation between *DCL* and *ERPT*, and positive but insignificant correlation between *DCL* and *$RPT*. Consistent with H2, the correlation between *DEC* and *ERPT* is negative and significant, while the correlation between *DEC* and *$RPT* is negative but insignificant. *Size*, *Analyst_Follow*, *CEO_Pay, #Board_Meeting,* and *Segment* have a stronger positive correlation with *DCL* than with *DEC*, while *Leverage*, *CGQ,* and *Ind_Directors%* have a stronger positive correlation with *DEC* than with *DCL. Tobin's Q*, *ROA*, *R&D*, *Cash_Flow*, and *Director_Age* are positively (negatively) correlated with *DCL* (*DEC*). In addition, we do not find high correlations among the explanatory variables, suggesting that multicollinearity is not a serious concern in the empirical analyses.

4.2 Main Analyses

In Table 3, we test our two hypotheses by estimating equation (1) to examine the association between director compensation and RPTs. Columns 1 and 2 report the results for the existence of RPTs (*ERPT*) and dollar amount of RPTs (*$RPT*), respectively.

Consistent with H1, the coefficient on *DCL* is positive and significant in Column 1 (0.551, $t = 1.72$) and Column 2 (2.619, $t = 1.84$). These findings suggest that a higher director compensation level (*DCL*) is associated with more RPTs

As for the H2, consistent with our prediction, we find that the coefficient on *DEC* is negative but insignificant in both Column 1 (-0.022, $t = -0.14$) and Column 2 (-0.419, $t = -0.88$). As a result, these findings do not provide empirical support for H2.

In Table 4, we provide results for the determinants of director compensation (equation 2). As discussed, we use this approach to decompose director compensation into "market" (i.e., predicted) and "excessive" compensation components.[9] In Column 1, where we examine variations in *DCL*, the coefficient on *Director_Age* is positive and significant (at the 1% level, using a two-sided test), suggesting that more experienced directors receive higher total compensation. In Column 2, where we explore determinants of *DEC*, the coefficient on *Director_Age* is negative but insignificant, providing some evidence that as directors get older, they become more conservative and prefer to receive relatively more of their remuneration in the form of cash.

Table 5 reports the results for regressing the RPT measures on excessive and market components of *DCL* and *DEC* (equation 3). Columns 1 and 2 document the results for *ERPT*

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[9] Although our approach is motivated by prior research, we acknowledge that there is no perfect way of estimating the "market" level of compensation. Our results should be interpreted with this caveat in mind.

and *$RPT*, respectively. Consistent with H1, the coefficient on *Excessive DCL* is positive and significant in both Column 1 (1.073, $t = 1.91$) and Column 2 (2.967, $t = 2.10$). The coefficient on *Market DCL* is negative but insignificant in both Columns 1 and 2. These findings suggest that only the excessive component of director compensation (*Excessive DCL*) is related to RPTs, and not the market-level component (*Market DCL*).

Consistent with H2, the coefficient on *Excessive DEC* and *Market DEC* are negative but insignificant for both *ERPT* and *$RPT*. Similar to the results in Table 3, the results in Table 5 provide empirical support for H1 but not H2.[10]

4.3 Additional Analyses and Robustness Tests

4.3.1. Analyses of RPT Groups

In the primary analyses, we implicitly assume that all RPTs are the same. However, we know from prior studies that not all RPTs are prone to insider opportunism (e.g., Kohlbeck and Mayhew 2010, 2017; Ryngaert and Thomas 2012). Building on these insights, we group RPTs based on transaction types and counterparties and explore whether director compensation is associated differently with these RPT groups. The overall idea behind these tests is that we do not expect all RPTs to be "bad," rather we expect the degree of opportunism associated with RPTs to be contextual. We examine several such important contexts.

First, we partition the RPT sample into two subsamples based on counterparties: (1) RPTs with independent directors (*DIR_RPT*), and (2) RPTs with other parties (*Non-DIR_RPT*) such as executives or shareholders. Panel A of Table 6 presents the results for the two RPT

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[10] In untabulated results, we reach consistent conclusions when we use the *number* of RPTs as our outcome variable.

measures (*ERPT* and *$RPT*). The results are somewhat stronger for the subsample of RPTs relating to directors (*DIR_RPT*). Specifically, for the subsample of *DIR_RPT*, the coefficients on *Excessive DCL* in Columns 1 and 3 are positive and significant, and the coefficients on *Excessive DEC* in Columns 1 and 3 are negative but insignificant. However, for the *Non-DIR_RPT* subsample, the coefficients on *Excessive DCL* in Columns 2 and 4 are positive but insignificant, while the coefficients on *Excessive DEC* are negative and insignificant in Column 2 and positive and insignificant in Column 4.[11] Thus, findings in Panel A of Table 6 provide some empirical evidence that RPTs with directors may be more likely to reflect the conflict of interest instead of efficient contracting.

Second, following Kohlbeck and Mayhew (2017), we partition the RPT sample into two subsamples based on RPT types: (1) Business RPTs (*Bus_RPT*) that include selling, buying, leasing, and M&A activities transactions, which are closer to the firm's core business operations, and (2) Non-Business RPTs (*Non-Bus_RPT*) that include transactions with relatives, donations to related charities, and consulting and legal services. Panel B of Table 6 presents the results for *ERPT* and *$RPT*. The results are much stronger for the *Non-Business_RPT* subsample across the two specifications. Specifically, for the *Non-Bus_RPT* subsample, the coefficients on *Excessive DCL* in Columns 1 and 3 are positive and significant, while the coefficients on *Excessive DEC* in Columns 1 and 3 are negative but insignificant. However, for the *Bus_RPT* subsample, the coefficients on both *Excessive DCL* and *Excessive DEC* in Columns 2 and 4 are positive but insignificant.[12] These findings are consistent with

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[11] The last two columns report the differences between the coefficients across partitions. Although the coefficient magnitudes for *Excessive DEC* are 4.3 and 1.7 times larger when comparing columns (1) – (2) and (3) – (4), these differences are not statistically significant.

[12] The last two columns report that the difference between the coefficients on *Excessive DCL* for *Non-Bus_RPT* and *Bus_RPT* is statistically significant at the 1% level for the *ERPT* specification, while

prior literature suggesting that non-business RPTs are more prone to self-dealing (Kohlbeck and Mayhew 2017). Overall, these findings provide additional corroborating evidence for our main results.

Third, we consider the effects of director compensation on "ex ante" versus "ex post" RPTs. Ryngaert and Thomas (2012) group RPTs into ex ante RPTs and ex post RPTs. Ex ante RPT are those transactions that originate before the counterparty becomes a related party, while the ex post RPTs are those transactions initiated after a counterparty becomes related party. They show that ex ante (ex post) RPTs are significantly positively (negatively) associated with operating profitability. Our primary premise is that overcompensating independent directors impairs their independence and leads to bad monitoring. The ex post RPTs lend themselves well to this argument. Therefore, to provide empirical support for our argument, we partition our RPT sample into ex ante RPTs and ex post RPTs.[13] Panel C of Table 6 documents the results that are generally consistent with our argument. Columns 1 and 2 (3 and 4) report the results for the subsamples of ex ante RPTs and ex post RPTs, respectively, using *ERPT* (*$RPT*). The estimated coefficients are considerably larger for the ex post subsample (with significant differences for *Excessive DCL*). Overall, the results provide some evidence supporting the idea that opportunism primarily resides in ex post RPTs (i.e., "not all RPTs are created equal" and "not all RPTs are bad").

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insignificant for the *$RPT* specification. The difference between the coefficients on *Excessive DEC* for *Non-Bus_RPT* and *Bus_RPT* is statistically significant for the two specifications.

[13] The "ex ante" vs. "ex post" RPTs analysis is performed using 2013 data only due to the high cost of hand-collecting data.

4.3.2. Moderating Effects of External and Internal Monitoring on RPTs

In this section, we examine whether a firm's external and internal monitoring quality have a moderating effect on the association between the director compensation and RPTs. Specifically, we partition the RPT sample based on: (1) external monitoring characteristic using *Inst_Holdings%*, and (2) internal monitoring characteristics using *CGQ* and *Ind_Director%*.

Panels A and B of Table 7 report the results for *ERPT* and *$RPT*, respectively. Across the three partitions and two panels, the evidence shows that the estimated coefficients on our test variables are generally considerably larger for the weak monitoring subsamples; however, the differences are not always statistically significant. Overall, the tenor of these results is that both external and internal monitoring can moderate the effects of RPTs.

4.3.3. Changes Analyses

To provide additional support for our main findings, we examine whether increases in *Excessive DCL* and *Excessive DEC* are associated with increases in RPTs. It is intuitive that the *existence* of RPTs (*ERPT*) is quite sticky from period to period, thus we do not expect strong results when using *ERPT*. Consequently, we supplement the above tests with also using the *number* of RPTs (*#RPT*), as that variable has greater variation over time.

Table 8 reports the results. Not surprisingly, we do not find significance when *ERT* is the outcome variable. However, we observe positive and statistically significant estimated coefficients for *$RPT* and *#RPT*. These changes analyses, which control for time-invariant

firm characteristics, lend additional credence to our primary findings that are based on associations.

4.3.4. Audit Committee Independent Directors versus Non-Audit Committee Independent Directors (Untabulated Director-Level Analyses)

Finally, in this section, we partition the RPT sample into two subsamples: (1) firms that delegate the RPT approval authority to the Audit Committee, and (2) firms that do not delegate the RPT approval authority to the Audit Committee. We then examine whether the compensation of the Audit Committee independent directors is differentially associated with RPTs for the two groups within each firm, thus providing a de facto "firm fixed effects" control. In contrast to our primary analyses, these tests are conducted at the *director* level.

In untabulated regression results, we observe that *Audit Director × Excessive DCL* is positive and significant in the two columns representing the cases where the Audit Committee has RPT approval authority. In contrast, the interaction term is not significant when firms do not delegate the approval authority to the Audit Committee. Although not directly comparable to our primary analyses (that are conducted at the firm level rather than at the director level), we believe that these findings provide further support to our primary results.

5. Conclusion

The Financial Accounting Standards Board expresses concerns that the non-arm's length nature of RPTs can potentially create agency problems and hamper board monitoring efficacy, providing corporate insiders with the potential means to extract wealth from outside shareholders via self-dealing. Consistent with the FASB's concern, the results from prior

studies show that firms with weaker corporate governance mechanisms are more likely to engage in RPTs (e.g., Gordon, Henry, and Palia 2004; Kohlbeck and Mayhew 2010). These studies focus on corporate governance mechanisms such as board composition and large shareholder concentration. However, the potential effect of directors' compensation on their ability to objectively monitor RPT activities has received little attention.

In this paper, we fill this void by examining whether independent directors' compensation is associated with the RPTs. We focus on both directors' total compensation and their equity-based compensation. Using hand-collected data for S&P 1500 non-financial firms, we find a positive relation between directors' total compensation level and RPTs. However, we do not find that directors' equity-based compensation to be negatively associated with RPTs. Next, we decompose the compensation measures into "market" (i.e., predicted) and "excessive" components and find that the results are driven by the excessive components. These findings suggest that overcompensating the directors in the form of total compensation has an adverse effect on their independence and board monitoring efficacy.

As is common in corporate governance research, it is difficult to completely rule out the possibility of (unknown) correlated omitted variables. In our empirical tests, we include a number of controls motivated by prior research, we conduct a two-stage estimation, we perform changes analyses, and we provide results for cross-sectional tests to at least partially address such endogeneity concerns. However, we acknowledge that residual endogeneity may exist and thus our results should be interpreted with caution.

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Appendix A: Variable Definitions

Variables	Definitions
ERPT	Existent of RPT disclosed in firm's annual filing for each firm in any given year, which is an indicator variable that equals to one if there exist at least one
$RPT	Dollar amount of RPTs disclosed in firm's annual filing for each firm in any given year
#RPT	Number of RPTs disclosed in firm's annual filing for each firm in any given year
DIR_RPT	Existent or dollar amount of RPTs with independent directors or their relatives
Non-DIR_RPT	Existent or dollar amount of RPTs with CEOs, executives, shareholders, and associates or their relatives
Bus_RPT	Existent or dollar amount of RPTs involving selling, buying, leasing and M&A activities
Non-Bus_RPT	Existent or dollar amount of RPTs that are not Business RPTs
Ex-Ante_RPT (2013)	Existent or dollar amount of Ex-Ante RPTs in 2013, which are transactions that originate before the counterparty becomes a related party or before the IPO
Ex-Post_RPT (2013)	Existent or dollar amount of Ex-Post RPTs in 2013, which are transactions that occur after the counterparty obtains related party status
DCL	Average compensation of all independent directors for each firm in any given year
Market DCL	The market level compensation determined from the compensation regression model (equation 2)
Excessive DCL	The portion of director's total compensation deviated from market level, measured as the residual from compensation regression model (equation 2)

DEC	Ratio of equity-based compensation to total compensation for all independent directors for each firm in any given year

Appendix A: Variable Definitions (continued)

Variables	Definitions
Market DEC	The market level compensation structure determined from the compensation regression model (equation 2)
Excessive DEC	The deviation of director's pay structure from market level, measured as the residual from compensation regression model (equation 2)
Audit_Director	An indictor variable that equals to one if the director is a member of audit committee; zero otherwise
Director_Age	The age of directors
#Board_Meeting	The number of board meetings during a given year
Advertising_Cost	The ratio of advertising cost to total assets
Capex	The ratio of capital expenditure to total assets
Cash_Flow	The ratio of operating cash flow to total assets
CEO_Ownership	The percentage of the firm's equity that is held by the CEO
CEO_Pay	Total CEO compensation in million dollars
Ind_Director%	Percentage of independent directors on the board
Inst_Holdings%	Percentage of total shares owned by institutional shareholders
Leverage	The ratio of long-term debt to total assets
#Employees	The natural logarithm of the number of employees
Size	The natural logarithm of the firm's total assets
PP&E	The ratio of property, plant and equipment to total assets
R&D	The ratio of research and development expenses to total assets
Tobin's Q	The sum of the market value of equity, liquidating value of preferred stock and debt divided by the book value of total assets

Appendix A: Variable Definitions (continued)

Variables	Definitions
Volatility	The standard deviation of the firm's daily return during a given year
Working_Capital	The ratio of current assets minus liabilities to total assets
Segment	The number of business segments
Analyst_Follow	The natural logarithm of the number of analysts following the firm
CGQ	Corporate Governance Quotient. A metric ranging from 0 to 100 developed by the Institutional Shareholder Services (ISS) that rates public firms in terms of the quality of their corporate governance. A score of 0 represents the lowest quality of corporate governance. A score of 100 represents the highest quality of corporate governance

Table 1: Descriptive Statistics

Panel A: Main Variables

Variable	Mean	Std. Dev	P10	P50	P90
ERPT	0.481	0.500	-	-	1
$RPT (million $)	1.112	55.800	-	-	0.011
Bus_ERPT	0.251	0.433	-	-	1
Non-Bus_ERPT	0.282	0.450	-	-	1
DIR_ERPT	0.264	0.441	-	-	1
Non-DIR_ERPT	0.340	0.474	-	-	1
Ex-Ante_ERPT (2013)	0.081	0.273	0	0	0
Ex-Post_ERPT (2013)	0.394	0.489	0	0	1
Bus_$RPT (million $)	1.102	55.800	-	-	0.004
Non-Bus_$RPT (million $)	0.011	0.097	-	-	0.003
DIR_$RPT (million $)	1.100	55.800	-	-	0.003
Non-DIR_$RPT (million $)	0.012	0.107	-	-	0.002
Ex-Ante_$RPT (2013) (million $)	0.003	0.050	-	-	0.000
Ex-Post_$RPT (2013) (million $)	3.324	97.100	-	-	0.009
DCL (in million $)	0.197	0.122	0.088	0.182	0.308
DEC	0.387	0.239	-	0.439	0.666

Table 1: Descriptive Statistics (continued)

Panel B: Control Variables

Variable	Mean	Std. Dev	P10	P50	P90
Size	8.018	1.601	6.045	7.876	10.312
Tobin's Q	1.747	1.295	0.699	1.391	3.132
ROA	0.066	0.068	0.008	0.061	0.140
CGQ	72.050	23.481	35.100	78.100	96.600
Ins_Holding%	0.789	0.164	0.592	0.800	0.959
Analyst_Follow	12.839	8.621	3.000	12.000	24.000
CEO_Pay (million $)	10.067	66.374	1.146	5.035	19.056
R&D	0.026	0.046	-	-	0.088
Advertising_Cost	0.013	0.037	-	-	0.040
Working_Capital	0.205	0.188	(0.013)	0.186	0.470
#Employees	2.333	1.308	0.718	2.175	4.173
#Board_Meeting	7.974	2.653	5.000	8.000	12.000
Segment	6.869	4.290	2.000	6.000	12.000
Leverage	2.531	11.397	1.294	2.046	3.973
PP&E	0.523	0.389	0.108	0.417	1.088
Capex	0.051	0.054	0.010	0.034	0.108
Cash_Flow	0.114	0.073	0.039	0.106	0.202
Volatility	0.016	0.006	0.009	0.015	0.024
CEO_Ownership	0.019	0.054	0.000	0.003	0.042
Director_Ownership	0.003	0.008	-	0.000	0.006
Director_Age	61.989	3.817	57.250	62.000	66.667
Ind_Director%	81.089	10.342	66.670	85.714	90.910

Table 1 provides descriptive statistics for the sample. Variables are defined in Appendix A.

Table 2: Pearson Correlation Table

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	ERPT															
2	Bus_ERPT	0.59***														
3	Non-Bus_ERPT	0.35***	0.22***													
4	$RPT	0.02	0.04	-0.01												
5	Bus_$RPT	0.02	0.04	-0.01	1.00***											
6	Non-Bus_$RPT	0.10***	0.09***	0.11***	-0.00	-0.00										
7	DCL	0.05*	0.04	0.10***	0.04	0.04	0.10***									
8	DEC	-0.04*	0.01	-0.08***	-0.02	0.02	-0.04	0.19***								
9	Size	0.06**	0.02	0.05*	0.03	0.03	0.19***	0.18***	0.11***							
10	Tobin's Q	-0.02	-0.00	-0.00	-0.01	-0.01	0.01	0.13***	-0.09***	-0.11***						
11	ROA	-0.01	-0.01	0.01	0.01	0.01	-0.02	0.01	-0.02	-0.02	0.49***					
12	CGQ	-0.11***	-0.10***	-0.11***	0.02	0.02	0.02	0.19***	0.24***	0.15***	-0.11***	-0.01				
13	Ins_Holding%	-0.12***	-0.10***	-0.02	-0.01	-0.01	-0.03	0.01	-0.05*	-0.23***	0.07**	-0.05*	0.11***			
14	Analyst_Follow	0.10***	0.08***	0.06**	0.03	0.03	0.02	0.41***	0.18***	0.30***	0.16***	0.11***	0.22***	-0.06**		
15	CEO_Pay	0.03	0.04	0.04	-0.00	-0.00	0.03	0.23***	0.07***	0.16***	0.10***	0.09***	0.14***	-0.06**	0.30***	
16	R&D	-0.08***	-0.08***	-0.08***	-0.01	-0.01	0.05**	0.17***	-0.08***	-0.06**	0.32***	-0.02	-0.01	0.07**	0.08***	0.00
17	Advertising_Cost	0.00	-0.01	0.07**	-0.01	-0.01	-0.00	-0.07***	0.00	-0.03	0.17***	0.22***	-0.00	-0.00	0.01	0.03
18	Working_Capital	-0.10***	-0.11***	-0.08***	-0.02	-0.02	-0.03	-0.12***	-0.11***	-0.21***	0.28***	0.20***	-0.19***	0.14***	-0.21***	-0.12***
19	#Employees	0.09***	0.09***	0.05*	0.00	0.00	0.06**	0.20***	0.16***	0.42***	-0.16***	0.04	0.36***	-0.19***	0.47***	0.28***
20	#Board_Meeting	0.02	0.02	0.03	0.00	0.00	0.05*	0.17***	0.10***	0.17***	-0.00	0.01	0.18***	0.00	0.26***	0.15***
21	Segment	-0.06**	-0.04*	-0.07**	0.02	0.02	0.09***	0.13***	0.11***	0.22***	-0.12***	-0.04*	0.15***	-0.09***	0.05*	0.11***
22	Leverage	-0.04	-0.04	-0.04	-0.00	-0.00	-0.02	0.00	0.06**	-0.00	-0.04	-0.03	0.06**	0.04*	0.03	0.00
23	PP&E	0.07**	0.09***	0.05*	0.04	0.04	-0.03	-0.06**	0.03	0.04	-0.17***	-0.04	-0.07***	-0.14***	0.06**	-0.05*
24	Capex	0.05*	0.06**	0.10***	0.03	0.03	0.00	0.02	0.00	0.01	0.01	0.05*	-0.11***	-0.02	0.15***	-0.01
25	Cash_Flow	0.01	-0.01	0.04	0.02	0.02	-0.02	0.04	-0.02	-0.02	0.50***	0.67***	-0.02	0.02	0.19***	0.07***
26	Volatility	0.01	-0.00	0.03	-0.02	-0.02	0.01	-0.15***	-0.16***	-0.23***	0.06**	-0.14***	-0.24***	0.22***	-0.25***	-0.15***
27	CEO_Ownership	0.12***	0.07***	0.11***	-0.01	-0.01	0.00	-0.14***	-0.16***	-0.07***	0.10***	0.05*	-0.32***	-0.19***	-0.13***	0.00
28	Director_Ownership	0.04	0.04*	0.02	-0.01	-0.01	-0.01	-0.06**	-0.08***	-0.06**	0.05*	0.03	-0.17***	-0.11***	-0.09***	-0.06**
29	Director_Age	0.04	0.01	0.01	-0.00	-0.00	0.06**	0.07***	0.01	0.04	-0.08***	-0.02	-0.01	-0.08***	0.00	0.02
30	Ind_Director%	-0.21***	-0.12***	-0.19***	0.01	0.01	-0.01	0.06**	0.19***	0.12***	-0.10***	-0.04	0.49***	0.07***	0.10***	0.06**

Table 2: Pearson Correlation Table (continued)

		16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
16	*R&D*															
17	*Advertising_Cost*	-0.07**														
18	*Working_Capital*	0.34***	0.05**													
19	*#Employees*	-0.24***	0.04*	-0.36***												
20	*#Board_Meeting*	0.08***	0.02	-0.06**	0.23***											
21	*Segment*	0.07**	-0.15***	0.01	0.20***	0.11***										
22	*Leverage*	-0.03	0.01	-0.05*	0.04	0.02	-0.01									
23	*PP&E*	-0.26***	0.02	-0.34***	0.05*	-0.06**	-0.09***	-0.02								
24	*Capex*	-0.18***	0.05*	-0.25***	-0.06**	-0.06**	-0.14***	-0.02	0.68***							
25	*Cash_Flow*	0.05*	0.24***	0.07***	0.01	0.01	-0.12***	-0.03	0.18***	0.29***						
26	*Volatility*	0.17***	0.16***	0.30***	-0.41***	-0.08***	-0.14***	-0.00	-0.05*	0.06**	-0.03					
27	*CEO_Ownership*	0.01	0.07***	0.13***	-0.11***	-0.10***	-0.07**	-0.02	-0.00	0.04	0.07***	0.16***				
28	*Director_Ownership*	0.03	0.06**	0.06**	-0.07***	-0.11***	-0.07**	-0.00	0.02	0.02	0.01	0.10***	0.06**			
29	*Director_Age*	-0.06**	-0.02	-0.04	0.06**	-0.03	0.02	-0.01	0.03	-0.03	-0.06**	-0.11***	0.05*	-0.09***		
30	*Ind_Director%*	0.03	-0.05*	-0.12***	0.19***	0.12***	0.16***	0.04	0.01	-0.07***	-0.04*	-0.19***	-0.29***	-0.15***	-0.02	

Table 2 presents the Pearson correlation matrix. ***, **, and * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix A.

Table 3: The Effect of Director Compensation on RPTs

Dependent =	(1) ERPT	(2) $RPT
DCL	0.551*	2.619*
	(1.72)	(1.84)
DEC	-0.022	-0.419
	(-0.14)	(-0.88)
Size	0.040	0.299**
	(1.01)	(2.35)
Leverage	-0.005	-0.008
	(-1.52)	(-1.62)
Tobin's Q	-0.029	-0.130
	(-0.79)	(-1.14)
ROA	-0.738	-1.974
	(-1.33)	(-1.07)
CGQ	-0.003**	-0.007
	(-1.97)	(-1.52)
Inst_Holdings%	-0.011***	-0.027***
	(-4.07)	(-3.56)
Analyst_Follow	0.015**	0.021
	(2.28)	(1.01)
CEO_Pay	-0.000	-0.002
	(-0.16)	(-0.43)
Ind_Director%	-0.023***	-0.075***
	(-5.07)	(-5.31)
CEO_Ownership	1.946*	4.659**
	(1.92)	(2.28)
Director_Ownership	-3.463	5.115
	(-0.39)	(0.22)
Director_Ownership^2	64.490	5.162
	(0.80)	(0.03)
Industry FE	Yes	Yes
Year FE	Yes	Yes
Error clustering	Yes	Yes
N	2,184	2,184
Pseudo R^2 / Adj. R^2	0.091	0.103

Table 3 reports linear regression. Column 1 reports the results for *ERPT*, and Column 2 reports the results for *$RPT* with t-statistics reported in parentheses below each coefficient. Year fixed effects and Fama-French 48 industrial fixed effects are included in each model and standard errors are clustered at the firm-level. ***, **, and * indicate the two-tailed statistical significance of coefficient estimates at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix A.

Table 4: Determinants of Director Compensation (Stage-1 Model)

Dependent =	(1) DCL	(2) DEC
Tobin's Q	0.014***	-0.010
	(4.13)	(-1.40)
R&D	0.492***	-0.082
	(3.89)	(-0.38)
Advertising_Cost	-0.045	0.034
	(-0.88)	(0.14)
Working_Capital	0.000	0.005
	(0.02)	(0.10)
Size	0.036***	0.024***
	(5.54)	(2.62)
#Employees	-0.007	0.001
	(-1.09)	(0.06)
#Board_Meeting	0.002	0.002
	(1.44)	(0.84)
Segment	0.001	0.003*
	(1.50)	(1.77)
Leverage	-0.005	0.025
	(-0.26)	(0.60)
PP&E	-0.029***	-0.034
	(-2.77)	(-1.29)
Capex	0.060	0.082
	(0.82)	(0.51)
ROA	-0.003	0.011
	(-0.05)	(0.09)
Cash_Flow	0.019	0.100
	(0.37)	(0.93)
Volatility	0.836*	2.505**
	(1.66)	(2.40)
CEO_Ownership	-0.167***	-0.543***
	(-3.28)	(-4.33)
Director_Age	0.001***	-0.001
	(2.96)	(-1.31)
Director_Ownership	0.687	-2.794**
	(1.38)	(-2.33)
Director_Ownership^2	-5.276	16.485*
	(-1.57)	(1.96)
Industry FE	Yes	Yes
Year FE	Yes	Yes
Error clustering	Yes	Yes
N	2,184	2,184
Adj. R^2	0.299	0.168

Table 4 reports the director compensation determinant model with t-statistics reported in parentheses below each coefficient. Year fixed effects and Fama-French 48 industrial fixed effects are included in each model and standard errors are clustered at the firm-level. ***, **, and *

indicate the two-tailed statistical significance of coefficient estimates at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix A.

Table 5: The Effect of Excessive Director Compensation on RPTs (Stage-2 Model)

Dependent =	(1) ERPT	(2) $RPT
Excessive DCL	1.073*	2.967**
	(1.91)	(2.10)
Excessive DEC	-0.011	-0.394
	(-0.04)	(-0.83)
Market DCL	-2.963	-4.815
	(-1.11)	(-0.86)
Market DEC	-4.297	-4.272
	(-1.47)	(-0.78)
Size	0.277**	0.606***
	(2.51)	(2.86)
Leverage	-0.008	-0.008
	(-1.37)	(-1.51)
Tobin's Q	-0.008	-0.018
	(-0.09)	(-0.11)
ROA	-1.442	-2.470
	(-1.50)	(-1.35)
CGQ	-0.005**	-0.007
	(-2.00)	(-1.55)
Inst_Holdings%	-0.018***	-0.027***
	(-4.01)	(-3.55)
Analyst_Follow	0.027**	0.027
	(2.48)	(1.23)
CEO_Pay	-0.000	-0.001
	(-0.01)	(-0.30)
Ind_Director%	-0.039***	-0.075***
	(-5.03)	(-5.37)
CEO_Ownership	0.467	1.309
	(0.19)	(0.37)
Director_Ownership	-13.529	0.563
	(-0.76)	(0.02)
Director_Ownership^2	142.875	15.620
	(0.91)	(0.08)
Industry FE	Yes	Yes
Year FE	Yes	Yes
Error clustering	Yes	Yes
N	2,184	2,184
Pseudo R^2 / Adj. R^2	0.0942	0.105

Table 5 decomposes directors' compensation into "market" (i.e., predicted) and "excessive" components to investigate which affects RPT activities with t-statistics reported in parentheses below each coefficient. Column 1 reports the results for *ERPT*, and Column 2 reports the results for *$RPT*. Year fixed effects and Fama-French 48 industrial fixed effects are included in each model and standard errors are clustered at the firm-level. ***, **, and * indicate the two-tailed statistical significance of coefficient estimates at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix A.

Table 6: The Effect of Director Compensation on RPT Groups

Panel A: The Effect of Director Compensation on Director RPTs vs. Non-Director RPTs

Dependent =	(1) DIR_ERPT	(2) Non-DIR_ERPT	(3) DIR_$RPT	(4) Non-DIR_$RPT	(5) Diff (1) – (2)	(6) Diff (3) – (4)
Excessive DCL	0.807**	0.186	1.988*	1.151	0.621	0.417
	(2.29)	(0.54)	(1.68)	(0.94)	(0.99)	(0.31)
Excessive DEC	-0.242	-0.007	-0.546	0.124	0.249	0.67
	(-1.21)	(-0.04)	(-1.30)	(0.30)	(0.10)	(1.18)
Market DCL	-3.256	-2.225	-6.034	0.216		
	(-1.52)	(-1.15)	(-1.54)	(0.04)		
Market DEC	-1.089	-0.962	-2.973	-0.824		
	(-0.49)	(-0.53)	(-0.60)	(-0.18)		
Size	0.297***	0.166**	0.521***	0.260		
	(3.51)	(2.27)	(3.08)	(1.37)		
Leverage	-0.003	-0.002	-0.007	-0.009		
	(-0.65)	(-1.12)	(-1.52)	(-1.63)		
Tobin's Q	0.115*	0.006	0.046	-0.034		
	(1.70)	(0.12)	(0.34)	(-0.26)		
ROA	-1.917***	0.311	-2.484	-0.317		
	(-2.70)	(0.51)	(-1.57)	(-0.23)		
CGQ	-0.002	-0.004***	-0.004	-0.008**		
	(-0.96)	(-2.70)	(-0.98)	(-2.02)		
Inst_Holdings%	-0.001	-0.011***	-0.010	-0.021***		
	(-0.35)	(-3.90)	(-1.53)	(-3.41)		
Analyst_Follow	-0.007	0.018**	0.020	0.019		
	(-0.94)	(2.51)	(1.10)	(0.99)		
CEO_Pay	-0.000	0.001	-0.009***	0.003		
	(-0.13)	(0.61)	(-2.79)	(0.94)		
Ind_Director%	-0.019***	-0.019***	-0.068***	-0.040***		
	(-3.42)	(-4.15)	(-5.33)	(-3.41)		

CEO_Ownership	-0.684	1.320	-1.451	5.005
	(-0.49)	(1.00)	(-0.44)	(1.60)
Director_Ownership	7.309	-8.024	36.301	-24.621
	(0.64)	(-0.80)	(1.42)	(-1.00)
Director_Ownership^2	-116.4	105.9	-387.3**	294.4
	(-0.97)	(1.24)	(-2.04)	(1.59)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Error clustering	Yes	Yes	Yes	Yes
N	2,184	2,184	2,184	2,184
Pseudo R^2 / Adj. R^2	0.098	0.104	0.076	0.085

Table 6: The Effect of Director Compensation on RPT Groups (continued)

Panel B: The Effect of Director Compensation on Business RPTs vs. Non-Business RPTs

Dependent =	(1) Non-Bus_ERPT	(2) Bus_ERPT	(3) Non-Bus_$RPT	(4) Bus_$RPT	(5) Diff (1) – (2)	(6) Diff (3) – (4)
Excessive DCL	1.366***	0.497	2.966**	2.003	0.869***	0.963
	(3.13)	(1.34)	(2.34)	(1.53)	(3.90)	(0.91)
Excessive DEC	-0.322	0.063	-0.417	0.140	0.385*	0.557**
	(-1.59)	(0.37)	(-0.97)	(0.35)	(1.80)	(2.22)
Market DCL	-2.921	-3.597	0.972	-5.351		
	(-1.20)	(-0.79)	(0.20)	(-1.11)		
Market DEC	-0.674	-0.855	-3.095	-0.616		
	(-0.32)	(-0.44)	(-0.69)	(-0.12)		
Size	0.125	0.174**	0.344*	0.446**		
	(1.46)	(2.28)	(1.90)	(2.32)		
Leverage	-0.004*	-0.006**	-0.007	-0.007		
	(-1.90)	(-2.17)	(-1.23)	(-1.36)		
Tobin's Q	-0.028	0.080	-0.129	0.180		
	(-0.35)	(1.38)	(-0.94)	(1.30)		
ROA	-0.644	-1.282**	-0.502	-3.253**		
	(-0.90)	(-2.05)	(-0.32)	(-2.11)		
CGQ	-0.005**	-0.003*	-0.009**	-0.004		
	(-2.31)	(-1.65)	(-2.29)	(-1.07)		
Inst_Holdings%	-0.002	-0.007***	-0.019***	-0.020***		
	(-0.65)	(-2.68)	(-3.00)	(-3.15)		
Analyst_Follow	0.024***	0.012*	0.016	0.014		
	(2.78)	(1.66)	(0.83)	(0.75)		
CEO_Pay	0.001	0.001	0.001	-0.001		
	(0.30)	(0.55)	(0.32)	(-0.09)		
Ind_Director%	-0.022***	-0.012**	-0.073***	-0.037***		
	(-3.85)	(-2.53)	(-5.69)	(-3.10)		

CEO_Ownership	0.377	-0.605	1.567	0.479
	(0.29)	(-0.47)	(0.46)	(0.14)
Director_Ownership	1.275	-1.938	-6.512	21.930
	(0.11)	(-0.16)	(-0.25)	(0.86)
Director_Ownership^2	-51.782	112.896	-139.674	-18.802
	(-0.51)	(0.70)	(-0.76)	(-0.10)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Error clustering	Yes	Yes	Yes	Yes
N	2,184	2,184	2,184	2,184
Pseudo R^2 / Adj. R^2	0.164	0.0789	0.124	0.0690

Table 6: The Effect of Director Compensation on RPT Groups (continued)

Panel C: The Effect of Director Compensation on Ex Ante RPTs vs. Ex Post RPTs

Dependent =	(1) 2013 Ex-Ante_ ERPT	(2) 2013 Ex-Post_ ERPT	(3) 2013 Ex Ante_ $RPT	(4) 2013 Ex-Post_ $RPT	(5) Diff (1) – (2)	(6) Diff (3) – (4)
Excessive DCL	0.567	0.874	0.975	3.176*	-0.307	-2.201
	(0.37)	(0.84)	(0.95)	(1.84)	(0.01)	(0.32)
Excessive DEC	1.164	-0.832*	0.618	-1.407*	1.996***	2.025***
	(1.44)	(-1.77)	(1.33)	(-1.80)	(3.33)	(4.11)
Market DCL	-5.141	-4.447	-2.000	1.089		
	(-0.74)	(-1.09)	(-0.51)	(0.16)		
Market DEC	10.559	-0.764	6.732	-6.378		
	(1.38)	(-0.17)	(1.50)	(-0.84)		
Size	0.197	0.226	0.170	0.587**		
	(0.66)	(1.30)	(1.00)	(2.05)		
Leverage	-0.012	0.020	-0.012	-0.000		
	(-0.21)	(0.79)	(-0.46)	(-0.00)		
Tobin's' Q	0.476**	-0.029	0.433***	-0.168		
	(2.04)	(-0.20)	(3.08)	(-0.71)		
ROA	-2.581	-0.872	-3.753**	-0.653		
	(-0.97)	(-0.51)	(-2.20)	(-0.23)		
CGQ	-0.045	-0.052	-0.009	-0.091		
	(-0.38)	(-0.73)	(-0.13)	(-0.78)		
Inst_Holdings%	-0.030**	-0.025***	-0.016***	-0.025**		
	(-2.30)	(-3.12)	(-2.71)	(-2.51)		
Analyst_Follow	-0.030	0.041**	-0.030*	0.028		
	(-0.99)	(2.49)	(-1.83)	(0.99)		
CEO_Pay	-0.012	0.005	-0.007	0.009		
	(-0.80)	(0.58)	(-0.84)	(0.67)		
Ind_Director%	-0.027	-0.047***	-0.016	-0.080***		
	(-1.55)	(-4.38)	(-1.53)	(-4.51)		

CEO_Ownership	3.175	1.257	1.718	4.683
	(0.60)	(0.37)	(0.52)	(0.84)
Director_Ownership	5.270	-19.847	17.606	-31.804
	(0.10)	(-0.78)	(0.74)	(-0.79)
Director_Ownership^2	-240.781	212.642	-179.045	344.929
	(-0.24)	(0.93)	(-0.93)	(1.07)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Error clustering	Yes	Yes	Yes	Yes
N	705	705	705	705
Pseudo R^2 / Adj. R^2	0.114	0.126	0.0309	0.106

Table 6 partitions the RPT sample based on counterparty and type to investigate whether the director compensation is associated differently with different RPTs with t-statistics reported in parentheses below each coefficient. Panel A partitions based on counterparties: (1) RPTs with independent directors (*DIR_RPT*), and (2) RPTs with other parties (*Non-DIR_RPT*). Panel B partitions based on: (1) Business RPTs (*Bus_RPT*), which include RPTs closer to the firm's core business operation, and (2) Non-business RPTs (*Non-Bus_RPT*). Panel C partitions based on: (1) ex ante RPTs, which are transactions that originate before the counterparty becomes a related party or before the IPO, and (2) ex post RPTs, which are transactions that occur after the counterparty obtains related party status. Columns 1 and 2 report the results for *ERPT*, and Columns 3 and 4 report the results for *$RPT*. Year fixed effects and Fama-French 48 industrial fixed effects are included in each model and standard errors are clustered at the firm-level. ***, **, and * indicate the two-tailed statistical significance of coefficient estimates at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix A.

Table 7: The Moderating Effects of Corporate Governance Quality and Institutional Holdings on RPTs

Panel A: The Moderating Effects of Corporate Governance Quality and Institutional Holdings on the existence of RPTs (*ERPT*)

Dependent = ERPT	(1) Low Inst. Hold.	(2) High Inst. Hold.	(3) Low CGQ	(4) High CGQ	(5) Low Indep. Dir.	(6) High Indep. Dir.	(7) Diff (1) – (2)	(8) Diff (3) – (4)	(9) Diff (5) – (6)
Excessive DCL	2.146**	0.528	1.948**	0.585	1.517**	0.591	1.618**	1.363	0.926
	(2.38)	(0.78)	(2.09)	(1.00)	(2.20)	(0.65)	(2.05)	(1.60)	(0.56)
Excessive DEC	-0.442	0.330	-0.132	0.379	-0.795**	0.680*	0.812**	0.511	1.475***
	(-1.18)	(0.95)	(-0.35)	(0.88)	(-2.03)	(1.66)	(2.03)	(0.87)	(6.80)
Market DCL	-2.710	-3.753	-5.898	-2.506	-2.931	-6.230			
	(-0.76)	(-0.97)	(-1.62)	(-0.59)	(-0.77)	(-1.42)			
Market DEC	-3.089	-5.598	-5.699	-1.389	-6.317	-0.583			
	(-0.77)	(-1.45)	(-1.32)	(-0.31)	(-1.37)	(-0.13)			
Size	0.312**	0.309*	0.432***	0.162	0.178	0.370**			
	(2.16)	(1.94)	(2.73)	(0.98)	(1.09)	(2.11)			
Leverage	-0.005	-0.011	-0.018**	-0.007	-0.021	-0.006			
	(-0.79)	(-1.47)	(-2.03)	(-0.93)	(-1.01)	(-1.01)			
Tobin's Q	0.123	-0.115	0.083	-0.124	-0.122	0.197			
	(1.01)	(-0.91)	(0.73)	(-0.74)	(-0.98)	(1.48)			
ROA	-2.539*	-0.730	-2.140	-0.568	-2.126	-0.066			
	(-1.68)	(-0.52)	(-1.40)	(-0.35)	(-1.33)	(-0.05)			
CGQ	0.000	-0.012***	-0.020***	-0.003	-0.003	-0.006			
	(0.12)	(-3.53)	(-2.72)	(-0.54)	(-1.01)	(-1.51)			
Inst_Holdings%	-0.022***	-0.003	-0.015**	-0.022***	-0.019***	-0.013*			
	(-2.65)	(-0.41)	(-2.37)	(-3.11)	(-3.17)	(-1.85)			
Analyst_Follow	0.017	0.035**	0.019	0.039**	0.042**	0.023			
	(1.09)	(2.23)	(1.13)	(2.38)	(2.51)	(1.42)			
CEO_Pay	0.004	-0.008	-0.008	0.001	0.000	-0.001			
	(0.60)	(-1.09)	(-0.84)	(0.22)	(0.06)	(-0.18)			
Ind_Director%	-0.048***	-0.032***	-0.036***	-0.036***	-0.029**	-0.003			
	(-4.71)	(-3.14)	(-3.40)	(-2.97)	(-2.26)	(-0.07)			

CEO_Ownership	0.189	4.833	-1.921	13.546**	-1.584	6.463
	(0.07)	(0.87)	(-0.62)	(2.03)	(-0.50)	(1.16)
Director_Ownership	-28.721	8.133	-61.850**	87.185**	-34.065	-30.711
	(-1.26)	(0.25)	(-2.06)	(2.02)	(-1.51)	(-0.67)
Director_Ownership^2	259.857	-102.163	847.051*	-1,956.688**	262.344	1,271.785
	(1.19)	(-0.15)	(1.88)	(-2.08)	(1.51)	(1.34)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Error clustering	Yes	Yes	Yes	Yes	Yes	Yes
N	1091	1093	1077	1107	1044	1140
Pseudo R^2	0.119	0.102	0.130	0.108	0.119	0.0854

Table 7: The Moderating Effects of Corporate Governance Quality and Institutional Holdings on RPTs (continued)

Panel B: The Moderating Effects of Corporate Governance Quality and Institutional Holdings on the dollar amount of RPTs (*$RPT*)

Dependent = $RPT	(1) Low Inst. Hold.	(2) High Inst. Hold.	(3) Low CGQ	(4) High CGQ	(5) Low Indep. Dir.	(6) High Indep. Dir.	(7) Diff (1) – (2)	(8) Diff (3) – (4)	(9) Diff (5) – (6)
Excessive DCL	3.328**	2.629	5.256**	1.295	3.620**	1.530	0.699	3.961*	2.09
	(1.97)	(1.62)	(2.52)	(0.72)	(2.22)	(0.95)	(0.12)	(1.90)	(0.72)
Excessive DEC	-0.776	-0.055	-0.420	0.073	-1.314**	0.306	0.721	0.493	1.62***
	(-1.16)	(-0.09)	(-0.66)	(0.10)	(-2.04)	(0.45)	(0.88)	(0.23)	(4.35)
Market DCL	-8.948	-2.935	-9.393	-3.103	-3.928	-11.114			
	(-1.27)	(-0.41)	(-1.27)	(-0.41)	(-0.49)	(-1.62)			
Market DEC	-0.778	-7.974	-7.744	0.687	-6.383	-0.678			
	(-0.11)	(-1.13)	(-1.07)	(0.08)	(-0.78)	(-0.09)			
Size	0.672**	0.584**	0.901***	0.281	0.354	0.847***			
	(2.39)	(2.13)	(3.26)	(0.89)	(1.19)	(2.80)			
Leverage	-0.020**	-0.006	-0.010	-0.004	-0.028**	-0.001			
	(-2.54)	(-1.18)	(-1.12)	(-0.80)	(-2.57)	(-0.25)			
Tobin's Q	0.174	-0.215	0.174	-0.334	-0.205	0.251			
	(0.76)	(-1.02)	(0.89)	(-1.23)	(-0.94)	(1.16)			
ROA	-3.915	-1.369	-3.942	-0.654	-4.288	1.626			
	(-1.44)	(-0.58)	(-1.52)	(-0.26)	(-1.46)	(0.69)			
CGQ	0.001	-0.013**	-0.037***	-0.003	-0.006	-0.007			
	(0.09)	(-2.28)	(-2.98)	(-0.25)	(-1.06)	(-1.08)			
Inst_Holdings%	-0.033**	0.001	-0.022**	-0.038***	-0.034***	-0.017*			
	(-2.08)	(0.06)	(-2.36)	(-3.13)	(-3.35)	(-1.87)			
Analyst_Follow	0.039	0.020	0.005	0.054*	0.064**	0.008			
	(1.27)	(0.72)	(0.17)	(1.82)	(2.14)	(0.25)			
CEO_Pay	-0.000	-0.008	-0.011	-0.003	-0.000	-0.007			
	(-0.07)	(-0.70)	(-0.59)	(-0.67)	(-0.03)	(-0.59)			
Ind_Director%	-0.084***	-0.068***	-0.068***	-0.074***	-0.054**	-0.055			
	(-4.69)	(-3.58)	(-3.62)	(-3.33)	(-2.43)	(-0.61)			

CEO_Ownership	1.655	6.060	-2.452	13.817*	-1.474	8.876
	(0.38)	(0.83)	(-0.54)	(1.82)	(-0.32)	(1.10)
Director_Ownership	-17.154	39.605	-41.999	116.293*	-22.191	16.213
	(-0.46)	(0.65)	(-1.16)	(1.65)	(-0.60)	(0.20)
Director_Ownership^2	131.181	-360.985	319.912	-2,195.709	135.417	112.862
	(0.50)	(-0.31)	(1.20)	(-1.54)	(0.51)	(0.07)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Error clustering	Yes	Yes	Yes	Yes	Yes	Yes
N	1091	1093	1077	1107	1044	1140
Adj. R^2	0.106	0.0807	0.161	0.099	0.147	0.086

Table 7 partitions the RPT sample based on an external governance measure (*Inst_Holdings)* and two internal governance measures (*CGQ* and *Ind_Director%*) to investigate whether director compensation is associated differently with the level of external and internal governance with t-statistics reported in parentheses below each coefficient. Columns 1 and 2 report partition based on institutional holdings, representing external governance. Columns 3 and 4 report partition based on CGQ, representing internal governance. Columns 5 and 6 report partition based on percentage of independent directors, representing another internal governance. Panel A reports the results for *ERPT*. Panel B reports the results for *$RPT*. Year fixed effects and Fama-French 48 industrial fixed effects are included in each model and standard errors are clustered at the firm-level. ***, **, and * indicate the two-tailed statistical significance of coefficient estimates at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix A.

Table 8: Changes Analyses

Dependent =	(1) ERPT	(2) $RPT	(3) #RPT
Δ*Excessive DCL*	0.150	2.095*	1.365**
	(1.32)	(1.87)	(2.38)
Δ*Excessive DEC*	-0.079	-0.855	-0.395
	(-0.98)	(-1.45)	(-1.43)
Δ*Market DCL*	1.036	7.076	0.944
	(0.81)	(0.94)	(0.24)
Δ*Market DEC*	-0.119	-3.340	0.329
	(-0.27)	(-0.96)	(0.19)
Δ*Size*	0.015	0.250	0.537**
	(0.24)	(0.50)	(2.58)
Δ*Leverage*	-0.000	0.001	-0.002
	(-0.55)	(0.31)	(-0.85)
Δ*Tobins Q*	0.004	-0.069	0.076
	(0.12)	(-0.28)	(0.59)
Δ*ROA*	-0.291	-1.213	-0.942
	(-1.02)	(-0.59)	(-1.05)
Δ*CGQ*	0.001*	0.005	0.002
	(1.74)	(1.41)	(1.47)
Δ*Inst_Holdings%*	-0.001	-0.001	0.002
	(-0.47)	(-0.06)	(0.43)
Δ*Analyst_Follow*	0.005	0.031	-0.001
	(1.15)	(0.96)	(-0.05)
Δ*CEO_Pay*	-0.000	-0.002	0.002
	(-0.24)	(-0.44)	(0.69)
Δ*Ind_Director%*	-0.002	-0.008	-0.002
	(-1.20)	(-0.74)	(-0.43)
Δ*CEO_Ownership*	0.622*	4.443	3.334**
	(1.65)	(1.47)	(2.15)
Δ*Director_Ownership*	0.087	10.810	8.931
	(0.03)	(0.37)	(0.71)
Δ*Director_Ownership²*	9.846	-21.705	12.236
	(0.41)	(-0.10)	(0.13)
Error clustering	Yes	Yes	Yes
N	1,405	1,405	1,405
Pseudo R^2 / Adj. R^2	0.078	0.176	0.020

Table 8 presents the results for the changes analysis with t-statistics reported in parentheses below each coefficient. Columns 1, 2, and 3 report the results for *ERPT*, *$RPT*, and *#RPT*, respectively. Standard errors clustered at the firm-level. ***, **, and * indicate the two-tailed statistical significance of coefficient estimates at the 1%, 5%, and 10% levels, respectively. Variables are defined in Appendix A.