Director Self-Dealing and the Design of Compensation Contracts

Lily Fang
INSEAD, lily.fang@insead.edu

Sterling Huang
Singapore Management University, shuang@smu.edu.sg
Corresponding author

This Draft: June 14, 2022

In 2020, the average total director compensation in U.S. listed companies stood at $450,680, 6.67 times the median household income. Company pairs with shared directors have more similar pay than can be explained by size, industry, and performance. Following a landmark Delaware court ruling that required more accountability of director pay, Delaware-incorporated firms reduced total director compensation relative to other firms. The ruling was associated with positive, non-transient stock price reactions for Delaware-incorporated firms. Collectively, our results indicate that holding directors more accountable of their compensation enhances firm value.

Keywords: Director Compensation; Determinants; Self-dealing; Natural Experiment; Seinfeld v Slager
JEL Classification: G30, G34

Electronic copy available at: http://ssrn.com/abstract=4137132

Director Self-Dealing and the Design of Compensation Contracts

1. Introduction

The average total compensation paid to an outside director[1] in the U.S. was $450,680 in 2020, 6.67 time the median household income. This is a very high level of compensation in both absolute and relative terms, especially considering that being an outside director is not a full-time job and numerous directors sits on multiple boards. Given the crucial role directors play in corporate governance (Hermalin and Weisbach, 2003), it is important to understand the determinants and governance of director compensation. Yet unlike CEO compensation for which there is a large literature, relatively little is known about director compensation. In this paper, we fill this gap first by establishing some stylized facts about director compensation among U.S public firms, and second by analyzing the governance of director compensation.

From a governance perspective, director pay is unique because directors are the only group of people that set their own pay. This power is embedded in Section 8.11 of the Model Business Corporate Act, which states that the board of directors may fix the compensation of directors unless the articles of incorporation provide otherwise. Inherent in this provision is the possibility of self-interested directors to award substantial compensation to themselves, irrespective of company performance, a situation we will call director self-dealing. Although external pay consultants are often hired to advise companies on director pay-setting, such exercises typically involve benchmarking to industry and market practice; it is unclear whether director compensation is set in a way that makes directors incentivized and accountable for company performance.

Concerns for director self-dealing have led to an increase in lawsuits filed against company boards that allege breaches of fiduciary duties in connection with excessive director

---

[1] In this paper, we use the term "outside director" throughout to refer to directors who are not executives of the companies they serve as board members for. They are often referred to as "independent directors" or "non-executive directors" in the literature.

compensation.[2] But identifying self-dealing is empirically challenging for at least two reasons. First, it is difficult to establish the existence and to measure the extent of self-dealing. Prior studies that examined corporate self-dealing (e.g., Johnson, La Porta, Lopez-de-Silanes and Shleifer, 2000; La Porta, Lopez-de-Silanes and Zamarripa, 2003) have typically proxied for both the existence and extent of self-dealing with an estimate of the private benefits of control, measured as the price premium of shares with superior voting rights (e.g., Dyck and Zingales, 2004). Second, there is an omitted variable problem. To establish self-dealing in director compensation requires demonstrating that the pay is "excessive". But factors unobservable to researchers (such as the complexity of the job, director effort and risk tolerance) can affect the level of pay, rendering it nearly impossible to pin down "excessive pay" and self-dealing.

We overcome these challenges in two ways. Our first test for self-dealing in director pay stems from the insight that inefficiency in pay-setting means that the pay-performance relationship is weak; there is noise in the pay-setting such that factors that should otherwise be irrelevant turn out to be related to pay, obscuring the pay-performance relationship and distorting incentives. We argue that firm-level connections through shared directors is a variable that should not matter to director pay, after controlling for economic factors such as firm size, industry membership, and performance. However empirically we find that this variable is one of the most significant variables explaining director compensation, and firm-pairs that share common directors have pay levels that are more similar than can be explained by fundamental economic factor including firm size, industry, and performance. Our interpretation of this finding is that this reflects the real-world practice of pay benchmarking.

---

[2] For example, Facebook settled the shareholder derivative lawsuit *Espinoza v. Zuckerberg* in January 2016, a case where plaintiffs challenged the decision of Facebook's board of directors in 2013 to approve compensation for its outside directors. Espinoza asserted claims against the defendant directors, Zuckerberg et al., for breach of their fiduciary duties, unjust enrichment, and waste of corporate assets. In *Stein v. Blankfein* (Delaware Chancery Court No. 2017-0354), Goldman Sachs Group Inc. agreed to cut pay for some board members to settle a shareholder lawsuit alleging the bank's compensation plan was too generous.

Firms with shared directors are more naturally in the benchmarking set; directors sitting on two companies boards would know the pay practices of the other firm. A "catching up with the Jones" type of practice takes place, leading connected firms to pay directors more similarly, beyond fundamentals.

Our second test exploits the unexpected landmark Delaware court ruling in *Seinfeld v Slager* in 2012, which signaled a drastic shift in Delaware court treatment of director compensation from a more director-friendly legal standard to a more stringent, shareholder-friendly standard. Historically, the standard of judicial review for director conduct is the "business judgment rule", which is a presumption by the court in favor of director discretion, including in pay-setting, as long as the compensation plan is shareholder approved.

But the landmark ruling in the *Seinfeld v Slager* case changed this legal tradition. The Chancery Court refused to grant board members of the company the protection offered by the business judgment rule, even though the plan was approved by company shareholders. The judge instead applied a more stringent, "entire fairness" legal standard, writing:

"*there must be some meaningful limit imposed by the stockholders on the Board for the plan to receive the blessing of the business judgment rule… If a board is free to use its absolute discretion under even a stockholder-approved plan, with little guidance as to the total pay that can be awarded, a board will ultimately have to show that the transaction is entirely fair.*"[3]

The *Seinfeld v Slager* case thus signaled a sudden and drastic shift in Delaware court treatment of director compensation cases, which provides us an opportunity to assess the existence and extent of self-dealing in director compensation. Starting from 2012, directors of Delaware corporations, but not in firms incorporated elsewhere, are held more accountable for their compensation decisions. Using a difference-in-differences design, we examine the director compensation changes in Delaware relative to that in other states around the Slager

---

[3] More details of the case is discussion in Section 4.

ruling. If self-dealing is present in director pay-setting, we expect direct pays to drop in Delaware relative to other states after the ruling. Pay composition (cash versus equity) may also change in Delaware relative to other states, because cutting certain components of pay – for example equity options – may be perceived as less costly to directors as cutting cash pay.

Consistent with self-dealing, we find that total compensation declines by 2% of the average pre-ruling compensation (14% of one standard deviation of pre-ruling compensation) for directors at Delaware-incorporated (treated) firms relative to those at the control firms after the ruling. This reduction is both statistically and economically significant. Stock market reacted positively to the ruling: In the 3-day window (event dates [-1, +1]) around the ruling, stock prices of Delaware-incorporated increased by 1.13% relative to non-Delaware incorporated firms after controlling for market movements[4], a magnitude that is also significant both statistically and economically.

We took care to make sure that there were no other news announcements in our event window, and longer terms stock performance analysis indicates that this increase did not reverse. The 1.13% stock price increase implies a total shareholder value increase of about 300 million, far outweighing the actual cost-savings related to lower director compensation.

Our paper makes several contributions. It is the first paper, since Cordeior, Veliyath, and Eramus (2000) to systematically examine director compensation. Given the importance of directors in corporate governance, this is an under-researched topic. We provide not only stylized facts about director compensation, but also use a clean identification method to directly establish evidence of director self-dealing in pay-setting. Our results indicate that stronger governance around director pay is value-enhancing for firms. These results relate to the literature on legal institutions and financial markets (Johnson, La Porta, Lopez-de-Silanes, and

---

[4] The 3-day market-model CAR for Delaware-incorporated firms was 0.77%, versus -0.36% of non-Delaware firms.

Shleifer, 2000; La Porta, Lopez-de-Silanes, and Zamarripa, 2003). Prior studies highlight the channels through which majority shareholders might extract rents at the expense of minority shareholders. Our paper complements this stream of literature by highlighting agency problems associated with the ability of directors to derive corporate benefits at the expense of shareholders.

The remainder of our paper is organized as follows. Section 2 describes our sample and data construction. Section 3 presents stylized facts and determinants of director pay. Section 4 focuses on director self-dealing. Section 5 concludes.

2. Sample Selection and Variable Measurement

2.1. Sample and variables

Our sample consists of listed non-financial firms in the U.S. and our sample period is from 2000 to 2020. We obtain directors' and executives' compensation data from Boardex, financial and share price information from Compustat and CRSP, and institutional ownership information from Thomson Reuters. While boards include both inside (executive) and outside (non-executive) directors, our paper focuses on the compensation of outside directors, to distinguish from the literature on executive compensation. Our final sample consists of 92,014 director-year observations associated with 11,452 unique outside directors.

Directors' compensation packages consist of three main components: salaries and bonuses, which we refer to as the cash component of the compensation, option awards, and stock awards, both of which are part of the equity-linked component of the compensation. Theoretical literature on executive compensation generally conclude that an optimal compensation contract should consist of a cash component and a linear performance-dependent component (Holmstrom and Milgrom, 1987). Thus the empirical fact that director compensation consists of these three components indicates that the overall design of the

compensation package comforts to theoretical predictions. The variable *SalBon* is (the natural logarithm of) the sum of the independent director's annual salary and bonus payments; the variable *Option* is (the natural logarithm of) an adjusted Black-Scholes value of the director's option awards, and the variable *Stock* is (the natural logarithm of) restricted stock grants and long term incentive pay received during the year. The variable *TotalComp* is (the natural logarithm of) the value of the director's total annual compensation.

We construct a number of firm- and director-specific variables, many of which have been identified by prior research as relevant for executives' compensation (e.g., Core, Holthausen, and Larcker, 1999; Core, Guay, and Larcker, 2008). Firm-level measures include *Firm Size*, *ROA, Stock Return, Cash, Intangibles, Institutional Ownership.* We also include CEO pay (*CEO Comp*) at the same firm as an independent variable because we hypothesize that since it is set by the same board, it would be related to director compensation.[5]

Individual director attributes are captured by three categories of variables. The first category is a director's committee membership on the board: *Audit Cmmt*, *Nom Cmmt, Comp Cmmt, Risk Cmmt, and Tech Cmmt* are indicator variables for a director's membership on the Audit, Nomination, Compensation, Risk, and Technology committees, respectively.

The second category of individual director attributes relates to their human capital and connections. Consistent with prior literature (e.g., Larcker, So and Wang, 2013; Hallock, 1997), we measure a director's external connection and network by the number of external board memberships that a director has during the year (*Num Pub Board*). In addition, we measure a director's internal connection with a firm by examining whether he/she is connected to the at least one other director on the board through past employment or board membership *before* a

---

[5] Coles, Daniel, and Naveen (2014) find that directors appointed by the CEO decrease their monitoring of the CEO and increase CEO compensation.

director joined the board. This relationship is captured by the variable *Connected Dir*, which equals one if a director has a connection to the firm prior to joining the board and zero otherwise.

The third category of individual director attributes relate to their qualification, experience and personal traits. *MBA* is an indicator that equals one if a director holds an MBA degree. *Tenure* indicates the (natural logarithm of) the number of years that a director sits on the board.[6] *Industry Exp* measures the (natural logarithm of) number of years that a director sits on an external board that operates in the same industry at SIC 2-digit level. *International* is a binary variable equal one if a director is non-American.[7] Finally, we have gender information on directors. *Female* is an indicator that takes the value of one if a director is female and zero otherwise.[8]

Panel A of Table 1 reports descriptive statistics for various director characteristics. Notably, 40% of new directors joining a board have existing connections with the firm through past employment or education, highlighting the importance of connections in this labor market. Directors in our sample hold 2.23 board seats on average at listed firms. The average tenure of the directors is 7.87 years, of which 6.62 years are in the relevant industry. 50%, 46%, and 47% of directors sit on audit, compensation, and nomination committee, respectively. 35% of directors hold an MBA degree, and 18% of directors are female.

Panel B shows summary statistics for various firm characteristics. The average institutional ownership is 64% among our firms. The average total assets of the firm is about 7 billion USD, which is larger than the average of the CRSP/Compustat universe (excluding financial firms) of 4.2 billion USD. Thus our sample has a large-firm tilt.

---

[6] Huang and Hilary (2018) studies the relationship between board tenure and firm performance and find that board tenure exhibits an inverted U-shaped relationship with firm performance, executive compensation, and financial reporting quality. Our inference remains the same if we further control for squared *Tenure*.

[7] Masulis, Wang, and Xie (2012) finds that foreign independent directors affect firm performance and acquisition performance.

[8] Prior studies show that female board representation affects firm performance, investment, and corporate decisions (Chen, Crossland, and Huang, 2016; Adams and Ferreira, 2009).

3. Director Compensation: Stylized Facts and Determinants

Table 2 Panel A1 tabulates the evolution of director compensation over time, showing both the total compensation and the individual components. For comparison, we also tabulate CEO compensation over the same period in Panel A2. The average total compensation of independent directors more than doubled from $187,700 in 2000 to $450,680 in 2020. This rate of pay increase exceeds that of CEO compensation, which increased by about 60% from 13 million to 21 million from 2000 to 2020. The only interruption in the near monotonic rise was during the burst of the Dotcom bubble, when the mean compensation drop from $187,700 in 2000 to $135,080 in 2003. But the downward trend is quickly reversed, and by 2005, the average compensation rose to $233,970.

The cash compensation increases threefold during the total sample period, from an average of $36,560 in 2000 to $97,240 in 2020. Most of the increase in cash compensation occurred between 2000 and 2006, reflecting the tight labor market for directors and the increased committee work to fulfill Sarbanes-Oxley requirements (Adams, Ragunathan, and Tumarkin, 2021). Total equity compensation also more than doubled from an average of $144,270 in 2000 to $344,860 in 2020. However, within equity compensation, there has been a dramatic shift away from options and towards restricted stock units. Option compensation declined significantly from an average of $111,780 in 2000 to an average of $17,290 in 2020. Stock compensation gain popularity from an average of $32,490 in 2000 to $327,570 in 2020.

The *Dir/CEO Pay Ratio* calculates the aggregate compensation for independent directors of a company as a percentage of a CEO's total pay. We find that the director-CEO pay ratio is steadily increasing from 74% in 2000 to 84% in 2020, indicating that director pay has increased faster than CEO pay.

Panel B1 (Panel B2) tabulates directors' (CEOs') compensation by the Fama-French ten industries and shows that director compensation varies significantly across industries.

Directors from the telecommunication industries receive the highest total compensation of about 345,040 per year. While directors from consumer durables and utility industries are less well paid, fetching an average compensation of $207,870 and $198,410, respectively.

Table 3 examines the determinants of director compensation in a multivariate setting. We estimate the following panel regression:

$$DirComp_{ijt} = \alpha_{0,ijt} + \beta' \, DirectorChar + \gamma' FirmChar + FirmFE + YearFE + \varepsilon_{ijt} \quad (1)$$

where i, j, and t index firms, directors, and time, respectively. *DirectorChar* is a vector of variables measuring director characteristics (e.g., connection, committee membership, education, gender). *FirmChar* is a vector of variables associated with firm characteristics (e.g., size, profitability, governance). *FirmFE* and *YearFE* are firm and year fixed effects, respectively.

Column (1) of Table 3 reports the baseline regression results for the total annual compensation for outside directors. The results indicate that director total compensation varies significantly across firms and individuals. Focusing on firm-level variables, we find that larger, more profitable firms, firms with higher past-12-month returns, higher cash holdings, higher institutional ownership and less intangible assets award higher total compensations to directors.

Focusing on individual characteristics, we find that director total compensation is related to workload. Directors who serve on committees, especially those serving on the Audit, Compensation, and Nomination Committees are paid more. We also find that director experience and qualification are associated with higher pay. Directors with MBA degrees, with longer industry experience, longer tenure of service at the firm, and those holding multiple board seats are paid more. International directors are not paid differentially otherwise, however

9

female directors are paid less than their male peers, even controlling for other characteristics. Thus there was a gender pay gap of \$11,954 among directors during our sample period.[9]

In Column (2) we add one more variable – CEO compensation in the same company – as an additional explanatory variable. We find that this variable has a very strong explanatory power for director pay. On the one hand, since CEO pay is set by the same board, this finding could indicate director self-dealing or quid-pro-quo with the CEO: If director compensation is soft-indexed to CEO pay, then awarding higher CEO pay not only curries favor with the CEO but indirectly leads to higher director pay. Indeed Coles, Daniel, and Naveen (2014) finds some evidence that directors appointed after the CEO assumed office are more likely to award excessive compensation to the CEO.[10] But on the other hand, there could be fundamental reasons why director pay is highly correlated with CEO pay: for example, if workload and complexity are particularly high in a certain firm, then both CEO pay and director pay can be high. When we examine the sub-component of director pay, we find that CEO pay only has significant explanatory power for directors' equity-based pay; it has no explanatory power for the cash portion of the director's pay. As the strong correlation between director and CEO pay is only evident for the risky portion of the pay, overall the evidence seems to favor the interpretation that the correlation is economically based rather than a sign of self-dealing.

Another variable worth commenting on is *Connected Dir.* This variable indicates whether a director is connected with at least one other member of the board *before* he/she joined the board. The regression results indicate that all else equal, connected directors are paid significantly higher than non-connected directors. The interpretation of this result is also ambiguous because on the one hand, higher pay for connected directors could indicate a cozy

---

[9] Female directors' compensation is about 4.39% (Exp(0.043)-1) lower. Since the average total compensation per director is \$272,310 over our sample period, the gender pay gap is \$11,954 (4.39%*272,310).
[10] Early studies such as Hempel and Fay (1994) did not find any relationship between CEO compensation and director compensation. Other governance critics (e.g., Lublin, 1991) have argued that a relationship exists by virtue of the dynamics of the pay-setting process on corporate boards.

relationship network where networked directors bring each other to boards and give each other rich packages. On the other hand, a connected director could be more informed and more valuable for a firm. A connected director may be appointed precisely because the board has good information about the director's skills and capabilities. Looking at the different components of pay, we find that connected directors have significantly higher cash and benefits but lower equity-linked pay. In fact the result of higher total pay is entirely driven by the cash and benefits components of the pay. This pattern favors the cozy relationship interpretation of higher pay for connected directors.

Overall the stylized facts in this section indicate that director compensation is high and has increased significantly in the past 20 years, outpacing the pay increase in many other segments of the labor market, including the CEO market. But director pay is generally positively correlated with numerous measures associated with performance, effort/workload, and qualification. While there are some indications that director pay may result from a cozy network of directors and CEOs, the evidence remains inconclusive. The difficulty of interpreting certain variables highlights the difficulty of pin-point potential self-dealing. Therefore to examine self-dealing, we need stronger identification strategies, which we present in the next Section.

4. Director Self-dealing

In this section, we derive and test hypotheses and employ strong identification techniques to directly examine the possibility of self-dealing in the director pay setting.

4.1. Economically Irrelevant Criteria: Connections Among Firms

To derive a testable hypothesis for self-dealing, we consider the cost of self-dealing. Self-dealing is costly because it indicates poor governance and distorted incentives. Theoretical

work on optimal executive pay generally concludes that a linear contract in pay-for-performance is the optimal contract design (Holmstrom and Milgrom, 1987). If self-dealing distorts incentives and makes the compensation contract inefficient, we should observe that it obscures the pay-performance relationship. Empirically, this means economically irrelevant variables turn out to be significant in explaining director pay. Our strategy to implement this idea is to identify a variable that should be irrelevant in the pay-setting and show that it is nevertheless empirically relevant.

Pay consultants frequently indicate that benchmarking is an important part of determining executive and director compensation. While benchmarking on industry membership and performance makes sense, benchmarking on irrelevant or spurious characteristics would be evidence of an inefficient pay setting.

We conjecture that there is an inefficient type of benchmarking, a "catching up with the Jones" effect in director pay setting. Directors, through inter-locked board positions, may be knowledgeable about the pay practices in other firms that they are board members to. And so, firms connected through common directorships may exhibit more similarity in director pay levels than we expect from economically meaningful factors. For example, if firms A and B are "connected" through a common director, we do not expect this firm-level connection to be related to the similarity in director pay, beyond economic factors such as industry membership, firm size, and performance (all variables we already control for). If firms A and B nevertheless exhibit similar pay levels among its directors after controlling for these factors, then the evidence is consistent with the "catching up with Jones" type of benchmarking effect, which distorts the pay-performance relationship.

To operationalize this test, we construct pair-wise "connection" variables between firms where "connection" equals 1 if two firms share a common director, and zero otherwise. This results in an average of 171,147 firm pairs in each year with no missing compensation and

financial information or a total of 3,422,959 pairs over our sample period, of which 0.8% of pairs is identified as connected firm pairs. We then compute pair-wise absolute differences in average director pay between firms. Univariate comparison in Table 4 Panel A shows that connected firms pairs have significantly smaller pay differences than non-connected firms. The t test of difference in mean shows that the difference is statistically significant at 1% level.

To further rule out the possibility that other economic factors and firm characteristics might drive difference in compensation practice, we re-estimate the effect controlling for differences in firm size, accounting and stock performance, governance quality (proxied by institutional ownership) and asset and financing structure (proxied by percentage of assets in cash and intangibles). In addition, we control for unobservable time invariant firm characteristics through firm fixed effects and we control for year fixed effects to account for intertemporal trends. Results in Column (1) of Panel B Table 4 show that the coefficient on *Connected Firm* is negative and significant at 1% level, suggesting that the connected firm pairs exhibit much smaller compensation gaps even after accounting for firm, industry and economic factors that affect pay-performance relation. In Column (2), we further include firm*year fixed effects for both focal and paired firms to account for the effect of time varying changes in firm characteristics on compensation. We continue to find that connected firm pairs exhibit smaller compensation differences beyond those that are explained by difference in performance and other characteristics. The results is consistent with the spurious type of benchmarking, the "catching up with Jones" effect, which distorts the pay-performance relationship.

4.2. Evidence from Difference-in-Differences Analysis: The Seinfeld v. Slager Ruling

Our second test of director self-dealing exploits the landmark *Seinfeld vs. Slager case* which was an unanticipated landmark ruling on director compensation in the state of Delaware

The ruling disproportionately affects Delaware incorporated firms than firms incorporated in other states. Our difference-in-differences approach compare the change in director pay in Delaware-incorporated firms (i.e., treated firms) with the change in non-Delaware firms (i.e., control firms) following the ruling. In this section we first provide the legal background of the *Seinfeld vs. Slager* case, and then present our empirical evidence from the difference-in-differences analysis.

4.2.1. The Delaware Chancery Court ruling in Seinfeld v. Slager (2012)

Section 8.11 of the Model Business Corporate Act states that the board of directors may fix the compensation of directors unless the articles of incorporation or bylaws provide otherwise. This provision means that corporate directors can uniquely set their own pay. Self-interested directors can therefore award substantial compensation to themselves, potentially destroying value for the firm.

Directors' decisions are usually protected by the business judgment rule, which allows directors to make corporate decisions without fear of subsequent lawsuits brought by stockholders with the benefits of hindsight. However, the safeguards from the business judgment rule do not automatically extend to self-dealing transactions. Director decisions regarding their compensation necessarily involve self-dealing because a director who receives a personal financial benefit from the transaction stands on both sides of the transaction (i.e., setting and receiving the compensation). As a result, board members would bear the burden of proving that the compensation they pay themselves is entirely fair to the company. This so-called "entire fairness standard" imposes a tougher burden of establishing fair dealing and fair price when the underlying transactions are challenged in the court[11]. Unlike business judgment

---

[11] The Entire Fairness standard of review is most favorable to plaintiffs and requires defendants to prove, subject to strict judicial scrutiny, that the challenged transaction was objectively fair.The court's decision does not turn on whether the interested directors acted in good faith but whether, in the absence of arms-length bargaining, the transaction, viewed objectively, is fair and reasonable to shareholders. When the entire fairness test applies, a

rule where the plaintiffs (usually shareholders) challenging the transaction have the burden to
rebut the presumption by disproving that the directors acted in the best interests of the
corporation, the burden of proof under "entire fairness standard" is shifted to the defendants
(e.g., directors) that the challenged transaction was objectively fair to the corporation.

One way directors can avoid having to meet the entire fairness standard and still rely
on business judgment rule protection in the context of setting their own compensation is to
have their compensation plan approved by shareholders[12]. Prior to *Seinfeld v. Slager* (2012)*,*
the generally held understanding of Delaware law was that the Delaware courts would treat
fully informed shareholder ratification as validation of a transaction and would remove these
transactions from the purview of the entire fairness standard[13]. However, the courts also

---

transaction must be fair as to both process and price (i.e. fair dealing and fair price). "Fair dealing" encompasses
questions of process, including how the transaction is timed, initiated, structured, negotiated, and disclosed, and
how the approvals of the directors and the stockholders are obtained. "Fair price" relates to the economic and
financial terms of the transaction, including any relevant factors that affect the intrinsic or inherent value of the
corporation, such as the market value and assets of the corporation, a pro forma analysis or other valuation metrics,
and possibly a solvency opinion to ensure that the transaction will not render the corporation insolvent. The fair
dealing and fair price components are not viewed in isolation, but, rather, in conjunction.

[12] Despite shareholder approval, director compensation can still be challenged in courts by alleging one of the
followings: (1) the underlying transaction constituted waste of corporate assets, or (2) ratification was based on
incomplete disclosure. The standard for claiming waste of corporate assets is high and rarely satisfied by a
shareholder plaintiff because a plaintiff must show that the underlying transaction is associated with "a transfer
of corporate assets that serves no corporate purpose or for which no consideration at all is received". (Lewis v.
Vogelstein, 699 A.2d 327, 336, Del. Ch. 1997). It often requires particularized facts supporting a reasonable
inference that the board authorized an exchange "so one-sided that no business person of sound judgment could
conclude that the corporation has received adequate consideration." (Steiner v Meyerson, WL 441999, Del. Ch.
1995). As a result, shareholder complaints alleging that director compensation constituted corporate waste are
commonly dismissed. Another way for the plaintiff to eliminate the protection of the business judgment rule given
to a ratified director decision is to successfully allege that the proxy statement soliciting shareholder approval of
the compensation plan was misleading or omitted material information. To access the ratification safe harbor,
"directors must meet an affirmative burden of demonstrating full and fair disclosure", by showing that "even after
reviewing a complaint in the light most favorable to the plaintiff, it does not contain facts supporting an inference
that the directors failed to disclose a material fact or otherwise mislead shareholders" (Sample v. Morgan, 914
A.2d 647, 665, Del. Ch. 2007).

[13] There are three possible effects of shareholder approval of a self-dealing transaction. First, ratification can be
treated as a complete defense to any charge of a breach of fiduciary duty or care. (see e.g. *In re* Wheelabrator
Techs., Inc. S'holders Litig., 663 A.2d 1194 Del. Ch. 1995; Sample v. Morgan, 914 A.2d 647, 665, Del. Ch. 2007).
Second, ratification can shift the burden of proof back to the plaintiff to prove the unfairness of a self-dealing
transaction (see e.g. Citron v. E.I. du Pont de Nemours & Co., 584 A.2d 490, 500 Del. Ch. 1990). Lastly,
ratification can change the standard of judicial review from the entire fairness to the waste standard of review.
However, the standard for claiming waste is high and "very rarely satisfied by a shareholder plaintiff because if
under circumstances any reasonable person might conclude that the deal made sense, the judicial inquiry ends"
(Michelson v. Duncan, 407 A.2d 211, 224 Del. 1979). A finding of waste is inappropriate, even if hindsight
proves that the transaction may have been ill-advised. The rationale behind these stringent requirements is that
"courts are ill-fitted to attempt to weigh the adequacy of consideration under the waster standard ex post to judge
the appropriate degrees of business risk". (Freedman v Mulva, 2012 WL 1099893)

recognized that the incentive for directors to award excessive compensation is not eliminated by having a ratified compensation plan because shareholder-ratified compensation plans could contain lax limitations and offer directors sufficient discretion to make decisions regarding their compensation that might not be aligned with the interest of its shareholders.

On June 29, 2012, Vice Chancellor Sam Glasscock of the Delaware Court of Chancery issued an unprecedented decision regarding the fiduciary duties of the board compensation committees in awarding compensation to independent directors. In *Seinfeld v. Slager* (2012), a Republic Services, Inc. stockholder challenged the fairness of Restricted Stock Units (RSU) granted to the company's independent directors under the company's stockholder-approved compensation plan. The plan did not include specific RSU grants for directors or set forth a director-specific ceiling on compensation. Instead, the plan imposed generic limits of 10.5 million shares total that the board of directors could receive per year. With twelve directors, the Board could have theoretically awarded each director 875,000 RSUs worth over $21.6 million per director per year or a total value of $260,295,000 for the entire board per year. While the actual awards did not approach this boundary[14], the court ruled that the board's decisions concerning the directors' compensation were not entitled to the protection of the business judgment rule but subjected to entire fairness review.

The court state that "*Even though the stockholders approved the plan, the defendant directors are interested in self-dealing transactions under the stock plan. The stock plan lacks sufficient definition to afford the defendant directors protection under the business judgment rule. The sufficiency of definition that anoints a stockholder-approved option or bonus plan with business judgment rule protection exists on a continuum. Though the stockholders*

---

[14] The restricted stock units granted to the directors had a value of approximately $25 per share at the time of the awards. In 2009, the board awarded each of the directors $743,700 in restricted stock units, which raised their compensation for 2009 to between $843,000 and $891,000. In 2010, the board awarded each director 7,500 restricted stock units, valued at $215,000, which brought their 2010 compensation to between $320,000 and $345,000 each.

approved this plan, there must be some meaningful limit imposed by the stockholders on the Board for the plan to . . . receive the blessing of the business judgment rule . . . . A stockholder-approved carte blanche to the directors is insufficient. The more definite a plan, the more likely that a board's compensation decision will be labeled disinterested and qualify for protection under the business judgment rule. If a board is free to use its absolute discretion under even a stockholder-approved plan, with little guidance as to the total pay that can be awarded, a board will ultimately have to show that the transaction is entirely fair."

In other words, in assessing director compensation, the entire fairness standard of review applies when directors grant themselves compensation pursuant to stockholder-approved compensation plans unless those plans provide either the specific magnitude of compensation for the directors or director-specific ceilings on that compensation.

The *Slager* case is extensively cited by other cases, legal scholars, and practicing lawyers. It is discussed in law firm memos, in textbooks, and taught at law schools. The *Slager* case is cited 357 times, according to the Westlaw database, among which are thirty-one legal cases, many court documents, and a large number of legal articles. [15] The entire fairness standard of review on director compensation is re-affirmed in a recent Delaware Chancery Court case, *Calma* v. *Templeton* (2015). In *Calma*, the board's compensation committee granted RSU awards under Citrix's 2005 Equity Incentive Plan, which was approved by a majority of Citrix's shareholders. The only limit on compensation imposed by the compensation plan was that "no beneficiary could receive more than one million shares (or RSUs) per calendar year." Based on Citrix's stock price, one million RSUs were worth over $55 million on the date the lawsuit was filed. As in the *Seinfeld* v. *Slager* (2012), the court held that there is no shareholder ratification defense for self-awarded director compensation granted under a stockholder-approved compensation plan that lacks "sufficiently defined terms" or

---

[15] Search performed on 10 Oct 2020.

"some meaningful limit" on director discretion. The court further clarifies that benchmarking against peer companies alone is not likely to prove that compensation is entirely fair because shareholders may challenge the inclusion of specific peer firms or the exclusion of others.

While the legal scholars and lawyers are still debating the ways to set director compensation to reduce litigation risk and the associated liabilities, the consensus at the moment is that imposing realistic and specific dollar limits on independent director compensation under stockholder-approved plans at the time those plans are subject to stockholder approval will help a board of directors establish a valid shareholder ratification defense. The stockholder ratification defense is important because if established, safeguards from the business judgment rule will apply, and a court will only review such decisions for claims of corporate waste or material misrepresentation in disclosure.

4.2.2. Difference-in-differences analysis

We use the introduction of the Delaware court ruling as a plausibly exogenous source of variation in the independent director's compensation setting process. Our main tests use data from three years before (i.e., 2009–2011) to three years after the *Slager* ruling (i.e., 2013–2015). We exclude the ruling year 2012 to get a clean before and after event period. We obtain historical incorporation information from SEC filings. We exclude firms with missing historical incorporation information or with changing state of incorporation during the sample period to mitigate the concerns that firms strategically change the state of incorporation to avoid the ruling. [16] We further exclude firms from financial industries (SIC 6000-6999).

We estimate the following difference-in-differences specification:

$$DirComp_{ijt} = \beta_{0,ijt} + \beta_{1,ijt}Post_t \times Treat_{ij} + \gamma'X_{ijt} + FirmFE + YearFE + \varepsilon_{ijt} \qquad (2)$$

---

[16] Prior studies has shown that corporate re-incorporation is rare (e.g. Bebchuk and Cohen, 2003; Huang, Roychowdhury and Sletten, 2020). Consistent with prior studies, 2.3% of our sample firms re-incorporated during our sample period and we exclude those firms from our analyses. However, our results remain robust when we include those firms.

where *i*, *j*, and *t* index firms, directors, and time, respectively. *X* represents a vector of control variables. *Treat* is an indicator that equals one for Delaware incorporated firms and zero otherwise. *FirmFE* denotes firm fixed effects, which are included to control for cross-sectional differences in director compensation. Similarly, *YearFE* denotes year fixed effects, which are included to abstract away from systematic temporal effects. Note that the main effects of *Post* and *Treat* are absorbed by the time and firm fixed effects, respectively. *Post* is an indicator that equals one from 2013 onwards and zero otherwise and delineates the post-ruling period. The β_1 coefficient in Eq. (1) captures the average treatment effect on the treated (ATT) and provides an estimate of the effect of court rulings on independent directors' compensation and incentives. The court ruling aims to curtail director self-dealing in the compensation setting process, and we expect β_1 to be negative for treatment firms in the post-ruling period relative to control firms.

Table 5 reports the results from estimating Eq. (2). We find that total compensation declines significantly (t-statistics=-9.17) for directors at treated firms relative to those at the control firms following the Delaware court ruling. Moreover, the decline is economically meaningful. The coefficient on *Post*Treat* indicates that directors' total annual compensation declined by 2% of the average pre-ruling director pay and 14% of one standard deviation in total compensation. The results are consistent with the notion that requiring more accountability of director pay led to significant decreases in director pay at Delaware firms relative to other firms.

Columns (2) and (4) indicate that the decline in total compensation stems from a reduction in equity compensation. Column (2) shows no significant difference in non-equity compensation between treated and control firms.

Columns (3) to (4) reports estimates for equity compensation and its components. The coefficient on *Post*Treat* shows that the amount of directors' compensation paid in the form of stock and options declined for treated directors. The economic magnitude is such that the

decline in in option and stock compensation represents 23% and 1.4% of the average pre-ruling director option and stock pay, and 10.6% and 3.6% of one standard deviation of the respective component. Thus the evidence in this table shows that the court ruling led to lower pay for directors of Delaware incorporated companies, and the bulk of the pay cut came from the equity-linked portion, and specifically the option portion. The ruling had no effect on the cash portion of the pay.

The significant decrease of director compensation following the ruling, and the fact that the cut mainly came from the equity, and specifically the option portion of director compensation is consistent with the notion that prior to the ruling, self-dealing led to inflated director pay. Post ruling, when Delaware firms decided to reduce director pay, they cut the component of the pay that is in decline in popularity and that is least costly to cut.[17]

We conduct several robustness tests on our difference-in-differences analysis.

First, inferences from both difference-in-differences specifications rely on the maintained assumption that absent the treatment, both treated and control firms would have continued to exhibit parallel trends in the outcomes of interest. To assess the validity of the parallel trend assumption, Figure 1 shows a year-by-year difference in total compensation (Panel A) and equity compensation (Panel B) between Delaware and Non-Delaware firms. In both graphs, there is no apparent trend before the court ruling in 2012, suggesting that treatment and control firms exhibit a similar or parallel trend before the ruling. There is a sharp decline in both total and equity compensation immediately after the introduction of the court ruling,

---

[17] An alternative, related argument is that options are also the least justified part of directors' pay. The theoretical agency literature highlights the importance of risk-related agency conflicts, whereby undiversified executives are more risk-averse to firm-specific risk than are diversified shareholders; providing executives with convex incentives tied to stock price (e.g., option) can alleviate these agency conflicts. Unlike executives, independent directors may not have a significant part of their wealth tied with the company and may be better diversified, and therefore it is unclear why they need to be compensated with options (Armstrong, Glaeser and Huang, 2021). This reasoning possibly explains the overall decline in popularity of options in compensation packages and is consistent with the notion that options are the least "expensive" form of compensation to cut.

suggesting that firms set lower compensation in response to increased fiduciary duties in self-dealing transactions.

Second, to mitigate the concerns that our results are attributable to differences in directors' skills and abilities or other innate characteristics (e.g., risk aversion), we re-estimate our main specifications after including director fixed effects, in addition to firm and year fixed effects. Director fixed effects absorb time-invariant features of director ability and preferences and limit our analysis to within-firm, within director variation. We present the results of this analysis in Panel A of Table 6. We find that our inferences remain unchanged.

Third, to mitigate concerns that our results might be confounded by the effects of industry trend or practice, we re-estimate our main tests after including industry and year joint fixed effects, which are constructed as a unique vector of year fixed effects for each two-digit SIC code. Panel B of Table 6 shows that our results remain robust.

Fourth, a related concern is that changes in state policies or rulings might occur at the state of location level. To address this related concern, we include state of headquarter location and year joint fixed effects. The resulting specification compares firms with different treatment intensities that are located in the same state, at the same point in time. We present the results of this analysis in Panel C of Table 6. Again, the coefficient on *Post*Treat* remains largely unchanged. We conclude that our results are not driven by changes in economics or regulations at the state or industry level. The stability of coefficients across three different specifications suggest that these additional fixed effects do not capture any correlated and omitted effects, further supporting the exogeneity of the ruling and our research setting.

4.2.3. Cross-sectional tests

Our analyses in the previous section suggest that the court ruling holds the director more accountable for the compensation setting process, and firms respond to the ruling by

reducing annual compensation, in particular, the equity component of the annual compensation. We next turn our attention to examining how pre-ruling compensation practice differentially impacts the compensation adjustment process following the unanticipated introduction of the Delaware court ruling. We hypothesize that directors who receive more compensation relative to some benchmark models are likely to experience more adjustment in their compensation after the ruling. We use the determinant model developed in Section 3 as the benchmark model, which models director compensation as a function of their experience, skill, function, the connection in addition to various firm and industry characteristics. We split our sample into two groups based on the compensation level in 2011 (i.e., the year immediately before the passage of the court ruling). *High Pay Directors* (*Low Pay Directors*) are those who received more (less) compensation than predicted by the benchmark model in 2011. We then re-estimate Eq. (2) for each subsample. We expect *High Pay Directors* to respond more to the shock.

Table 7 reports the results. Panel A shows the results for *High Pay Directors*, while Panel B reports the results for *Low Pay Directors*. Across both subsamples, we find a significant decline in total compensation and is driven by the decline in equity compensation. Consistent with our hypothesis, the economic magnitude is higher for *High Pay Directors*. The Chi-Square statistics reported at the bottom of Table 7 reveal that the reduction in compensations is significantly more pronounced in the *High Pay Directors* subsample than the *Low Pay Directors* group. We find some evidence that the reduction of equity compensation is partially offset by an increase in cash compensation, but the effect is concentrated among *Low Pay Directors* subsample. While option compensation is declining across both subsamples, we do not observe any reduction in stock compensation among *Low Pay Director* group, suggesting that director compensation contract is designed in such a way that firms mitigate litigation risk associated with the introduction of Delaware court ruling, but only to the extent that it will not jeopardize long-term incentive alignment. In designing the compensation

contract, firms trade off the incentive alignment against the need to justify and defend the compensation plan in the event of a shareholder lawsuit.

4.2.4. Market reaction and firm valuation

If self-dealing in director pay harms firm value, then we expect the market to react positively to the *Seinfeld vs. Slager* ruling because it constraints the extent of self-dealing. We test this prediction in this section.

We examine the investor reaction around the announcement of the Delaware court ruling. We compute 3-day cumulative abnormal returns (CARs) for Delaware-incorporated and other-state-incorporated firms during the event window $(0, +3)$, where event day 0 is the announcement date of the Delaware court ruling. We use the CRSP value-weighted return as the market return and estimate the market model parameters over the 200-day period from event day -210 to event day -11. To mitigate the concerns that the Delaware ruling was anticipated, we also examine 3-day cumulative abnormal returns during the event window $(-4, -1)$. Panel A of Table 8 reports the results. We find strong support that the Delaware court ruling that holds directors more accountable for their compensation creates shareholder value. More specifically, Delaware incorporated firms generate CAR of 0.77% over a 3-day window, while other firms generate CAR of -0.36%. The difference of CAR between treated and control firms is 1.1% of firm value, which is significant both statistically and economically: On average, the 1.1% higher stock return implies that the value associated with the court ruling that reduced director self-dealing is about 300 million per firm. Note that we do not find any evidence that the ruling is anticipated. The CAR during the pre-event window is statistically insignificant between treated and control firms.

To mitigate the concern that our event study captures the fundamental difference between Delaware-incorporated and other firms that happen to be correlated with the

announcement of the court ruling, we address this point by means of a placebo test. We performance a placebo test on June 19, 2012. This is the closest trading date such that the pre- and post-event windows do not overlap between actual and placebo events. Panel B presents the estimates for the placebo event study. We do not find any significant difference over pre- and post- placebo event windows between treated and control firms.

We next examine in multivariate tests whether the court ruling affects firm valuation. We measure firm value by Tobin's Q (*Tobin*), which is defined as the natural logarithm of the market value of the firm's equity plus the difference between the book value of the firm's assets and the book value of the firm's equity and deferred tax, divided by the book value of the firm's assets. Using a difference-in-differences specification, results in Panel C of Table 8 indicate that the Delaware incorporated firms experience a significant increase in Tobin's Q relative to the control firms following the passage of court ruling.

5. Conclusion

Our paper examines the determinants of director compensation over the period of 2000 to 2020 and provides key stylized facts about how the director compensation changed over the last twenty years.

Overall, our findings indicate that director compensation level is high, both in absolute terms and in relation to the rest of the economy. It has also increased faster than the overall labor market, including the CEO market. The general contractual features exhibit features of theoretically predicted efficient contract in the sense that the contracts provide for a cash portion and a linear performance-based portion. The empirical determinants of the level of pay also show that many factors related to job complexity (such as firm size), effort (committee membership), and qualification (education, experience, etc) are positively correlated with pay.

On the other hand, we find that female directors are paid less even controlling for other factors, and that directors connected with the boards they join are paid more.

Our main focus and innovation in the paper is the identification of self-dealing in director pay setting. We show that factors that should not affect director pay, such as firm-level connections through shared directors are empirically relevant in determining pay, indicating an inefficient type of benchmarking and catching up with Jones in director pay setting. In addition, to the best of our knowledge ours is the first paper that exploits the 2012 Seinfeld vs. Slager ruling in Delaware to provide direct evidence of self-dealing. The landmark ruling increased the amount of scrutiny and accountability that firms need to be subject to for director pay setting. Our difference-in-differences analysis show that post ruling, the total pay of directors for Delaware-incorporated firms dropped significantly relative to directors for non-Delaware-incorporated firms. The stock market reacted positively to this ruling, with gains that are not reversed, indicating that self-dealing is costly and harms company value. Overall, our results suggest that holding directors more accountable of their compensation decisions affect ex ante design of incentive compensation contracts. Our results highlight the importance of legal institutions in shaping the compensation practices of firms.

References

Adams, R., Ferreira, D. 2009. Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics* 94, 291-309.

Adams, R., Ragunathan, V., Tumarkin, R., 2021. Death by committee? An analysis of corporate board sub-committees. *Journal of Financial Economics* 141, 1119-1146.

Armstrong, C. Glaeser, S. Huang, S. 2021. Contracting with Controllable Risk. *The Accounting Review*, Forthcoming

Bebchuk, L. Cohen, A. 2003. Firms' decision where to incorporate. *The Journal of Law and Economics* 46, 383-425.

Calma v. Templeton, 114 A.3d 563 (Del. Ch. April 30, 2015)

Chen, G., Crossland, C., Huang, S. 2016. Female board representation and corporate acquisition intensity. *Strategic Management Journal* 37, 303-313.

Core, J.E., Guay, W.R., Larcker, D.F., 2008. The power of the pen and executive compensation. *Journal of Financial Economics* 88, 1-25.

Core, J.E., Holthausen, R.W., Larcker, D. 1999. Corporate governance, chief executive officer compensation, and firm performance. *Journal of Financial Economics* 51, 371-406.

Cordeiro, J., Veliyath, R., Eramus, E. 2000. An empirical investigation of the determinants of outside director compensation. *Corporate Governance: An International Review* 8, 268-279.

Dyck, A., Zingales, L. 2004, Private benefits of control: An international comparison, *Journal of Finance* 59, 537-600.

Hallock, K., 1997. Reciprocally interlocking boards of directors and executive compensation. *Journal of Financial and Quantitative Analysis* 32, 331-344.

Hempel, P. Fay, C. 1994. Outside Director Compensation and Firm Performance. *Human Resource Management* 33, 111-133.

Holmstrom, B., Milgrom, P., 1987. Aggregation and linearity in the provision of intertemporal incentives. *Econometrica* 55, 303-328.

Huang, S. Hilary, G. 2018. Zombie board: board tenure and firm performance. *Journal of Accounting Research* 56, 1285-1329.

Huang, S. Roychowdhury, S., Sletten, E. 2020. Does litigation encourage or deter real earnings management? *The Accounting Review* 95, 251-278.

Johnson, S., La Porta, R., Lopez-de-Silanes, F., Shleifer, A. 2000. Tunneling, *American Economic Review Papers and Proceedings* 90, 22-27.

La Porta, R., Lopez-de-Silanes, F., Zamarripa, G. 2003. Related lending, *Quarterly Journal of Economics* 118, 231-268.

Djankov, S., La Porta, R., Lopez-de-Silanes, F., Shleifer, A. 2008. The law and economics of self-dealing. *Journal of Financial Economics* 88,430-465.

Larcker, D., So, E., Wang, C. 2013. Boardroom centrality and firm performance. *Journal of Accounting and Economics* 55, 225-250.

Masulis, R. Wang, C., Xie, F. 2012. Globalizing the boardroom-The effects of foreign directors on corporate governance and firm performance. *Journal of Accounting and Economics* 53, 527-554.

Seinfeld v. Slager, C.A. No. 6462-VCG (Del. Ch. June 29, 2012)

Appendix A Variable Definition

Variable	Definition
TotalComp	The natural logarithm of total compensation
SalBon	The natural logarithm of salary plus bonus
EquityComp	The natural logarithm of option and stock compensation (i.e., Option+Stock)
Option	The natural logarithm of the value of option grants
Stock	The natural logarithm of the value of restricted stock grants
Dir/CEO Pay Ratio	The aggregate compensations for independent directors as a percentage of a CEO's total pay.
Connected Dir	An indicator equals one if a director is connected with an existing board member through past board memberships and education
Num Pub Board	Number of external public board memberships
Industry Exp	Tenure as a director in the same industry as the current firm
Tenure	Tenure as a director of the current firm
Audit Cmmt	An indicator equals one if a director sits on the audit committee
Comp Cmmt	An indicator equals one if a director sits on the compensation committee
Nom Cmmt	An indicator equals one if a director sits on the nomination committee
Risk Cmmt	An indicator equals one if a director sits on the risk committee
Tech Cmmt	An indicator equals one if a director sits on the technology committee
Female	An indicator equals one if a director is female
International	An indicator equals one if a director is non-American
MBA Degree	An indicator equals one if a director holds an MBA degree
Firm Size	The natural logarithm of total assets
ROA	Operating profit before depreciation over total assets
StockReturn	The natural logarithm of stock return over fiscal year
Cash	Cash holding over total assets
Intangibles	Goodwill over total assets
IO	Percentage of outstanding shares owned by institutional investors
CEO Comp	The natural logarithm of total CEO compensation
Post	An indicator equals one for years from 2013 onwards
Treat	An indicator equals one for Delaware incorporated firms
CAR[x,y]	Cumulative abnormal return from day x to day y, where day 0 is the announcement of the court ruling (June 29, 2012). The benchmark model is the market-adjusted model where the parameters are estimated from day -230 to day -30.
Tobin	The market value of the firm's equity at the end of the year plus the difference between the book value of the firm's assets and the book value of the firm's equity and deferred tax at the end of the year, divided by the book value of the firm's assets at the end of the year.

Figure 1 Parallel Trend

The sample period is from 2009 to 2015, excluding the event year 2012. We exclude firms from financial industries (SIC 6000-6999) and firms with missing or changing state of incorporation. All variables are defined in Appendix A. The graph presents the average difference in total compensation between Delaware and Non-Delaware firms, by year, relative to the compensation level in year t-4 (i.e., year 2008)

Panel A Total Compensation
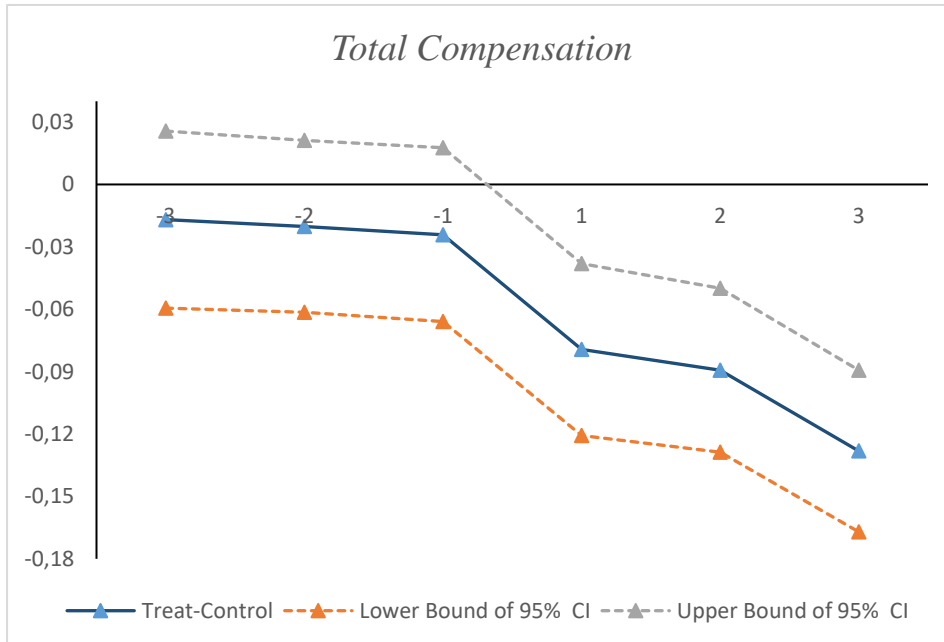
Panel B Equity Compensation

28
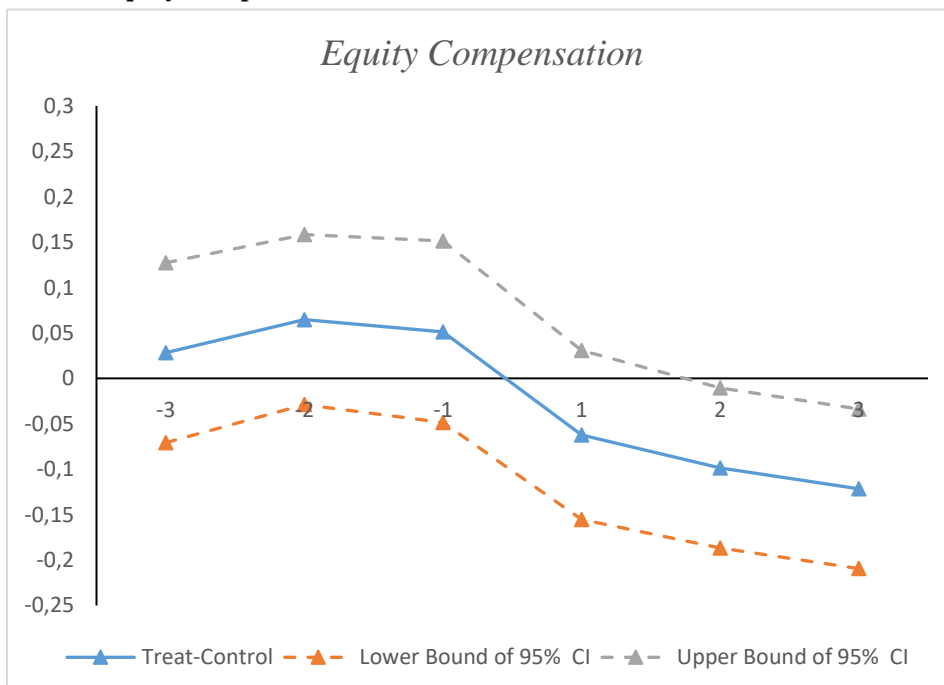
Table 1 Descriptive Statistics

The sample period is from 2000 to 2020. All variables are defined in Appendix A. Panel A provides descriptive statistics for director characteristics, and Panel B reports those for firm characteristics.

	N	Mean	Median	Std	P25	P75
Panel A Director Characteristics						
Connected Dir	92014	0.40	0.00	0.49	0.00	1.00
Num Pub Board	92014	2.23	2.00	1.26	1.00	3.00
Industry Exp	92014	6.62	5.00	5.81	2.00	10.00
Tenure	92014	7.87	6.10	6.73	2.80	11.10
Audit Cmmt	92014	0.50	1.00	0.50	0.00	1.00
Comp Cmmt	92014	0.46	0.00	0.50	0.00	1.00
Nom Cmmt	92014	0.47	0.00	0.50	0.00	1.00
Risk Cmmt	92014	0.05	0.00	0.21	0.00	0.00
Tech Cmmt	92014	0.03	0.00	0.18	0.00	0.00
Female	92014	0.18	0.00	0.38	0.00	0.00
International	92014	0.05	0.00	0.22	0.00	0.00
MBA Degree	92014	0.35	0.00	0.48	0.00	1.00
Panel B Firm Characteristics						
Firm Size	92014	8.91	9.00	1.58	7.89	10.00
ROA	92014	0.16	0.15	0.10	0.10	0.21
StockReturn	92014	0.08	0.11	0.37	-0.08	0.29
Cash	92014	0.13	0.07	0.15	0.03	0.18
Intangibles	92014	0.15	0.11	0.15	0.01	0.25
IO	92014	0.64	0.75	0.32	0.55	0.86
CEO Comp	92014	9.02	9.17	1.06	8.43	9.75

Table 2 Director Compensation Trend and Components

The sample period is from 2000 to 2020. All variables are defined in Appendix A. Panel A1 (Panel A2) tabulates director (CEO) compensation by year. Panel B1 (Panel B2) tabulates director (CEO) compensation by the Fama-French ten industries. Compensation figures are in units of 1,000 dollars.

	Panel A1 Director Compensation-Time Trend							Panel A2 CEO Compensation-Time Trend				
Year	TotalComp (Raw)	SalBon (Raw)	EquityComp (Raw)	Option (Raw)	Stock (Raw)	Dir/CEO Pay Ratio	Year	TotalComp (Raw)	SalBon (Raw)	EquityComp (Raw)	Option (Raw)	Stock (Raw)
2000	187.70	36.56	144.27	111.78	32.49	74.03%	2000	13,312.4	1,539.5	11,574.1	9,804.5	1,769.6
2001	153.12	35.87	110.84	75.24	35.59	74.39%	2001	9,100.8	1,327.4	7,583.4	6,379.6	1,203.8
2002	132.63	36.14	90.91	62.50	28.41	74.97%	2002	6,643.4	1,430.4	5,006.1	3,957.1	1,049.0
2003	135.08	37.02	91.08	61.34	29.74	76.24%	2003	7,722.1	1,552.3	5,971.1	3,980.6	1,990.5
2004	188.54	41.54	137.48	77.66	59.82	79.90%	2004	8,446.3	1,843.6	6,405.7	4,086.2	2,319.5
2005	223.97	45.19	165.53	87.23	78.30	82.60%	2005	9,262.3	1,974.1	7,045.4	3,858.0	3,187.4
2006	257.43	60.52	185.67	68.54	117.13	82.66%	2006	11,094.4	1,526.9	9,354.5	3,713.8	5,640.7
2007	237.26	68.53	159.96	63.65	96.31	82.91%	2007	11,376.8	1,248.5	9,887.4	3,926.8	5,960.6
2008	222.07	71.70	140.82	55.77	85.05	82.89%	2008	10,501.5	1,231.3	9,080.2	3,996.0	5,084.3
2009	276.32	76.67	189.34	67.01	122.33	83.79%	2009	13,158.3	1,223.9	11,755.4	5,153.2	6,602.3
2010	274.70	81.51	183.19	49.80	133.39	82.84%	2010	14,450.4	1,387.6	12,885.6	5,138.1	7,747.5
2011	289.12	86.51	192.35	46.98	145.37	83.59%	2011	14,853.3	1,435.0	13,221.7	5,153.5	8,068.2
2012	288.42	88.85	191.03	46.49	144.54	83.89%	2012	14,365.4	1,418.8	12,701.2	4,780.9	7,920.3
2013	356.38	91.54	256.23	51.18	205.05	83.80%	2013	17,340.4	1,401.8	15,666.0	6,520.2	9,145.8
2014	357.69	96.79	250.36	45.09	205.26	83.80%	2014	16,436.8	1,378.5	14,762.9	5,707.5	9,055.4
2015	311.81	97.91	204.49	37.76	166.73	83.97%	2015	15,147.2	1,370.3	13,600.0	5,178.2	8,421.9
2016	341.65	96.74	233.88	36.98	196.90	83.99%	2016	18,340.6	1,347.2	16,740.2	5,306.0	11,434.2
2017	345.81	97.28	237.42	22.63	214.79	84.19%	2017	17,562.1	1,318.6	15,919.8	5,045.9	10,873.9
2018	302.78	96.76	195.37	13.55	181.81	83.16%	2018	34,555.4	1,258.5	32,932.6	4,157.7	28,774.9
2019	385.35	100.06	275.01	18.54	256.46	84.01%	2019	19,254.8	1,315.9	17,639.8	4,744.6	12,895.2
2020	450.68	97.24	344.86	17.29	327.57	84.46%	2020	21,798.3	1,290.6	20,173.1	5,798.8	14,374.3

Table 2, Continued

Panel B1 Director Compensation-By Industry	TotalComp (Raw)	SalBon (Raw)	EquityComp (Raw)	Option (Raw)	Stock (Raw)
Consumer Nondurables	229.09	68.01	153.05	37.54	115.51
Consumer Durables	207.87	73.88	120.70	16.68	104.02
Manufacturing	228.68	73.82	144.89	30.30	114.60
Energy	293.73	83.65	196.73	22.03	174.70
Business Equipment	300.34	62.77	229.49	89.57	139.92
Telecommunication	343.08	81.84	252.95	53.38	199.57
Wholesale, Retail and Service	228.17	61.91	159.18	41.85	117.32
Healthcare	345.04	68.08	264.88	146.55	118.33
Utilities	198.41	73.78	116.00	9.26	106.73
Other	232.63	67.94	155.22	44.30	110.92

Panel B2 CEO Compensation-By Industry	TotalComp (Raw)	SalBon (Raw)	EquityComp (Raw)	Option (Raw)	Stock (Raw)
Consumer Nondurables	14,529.3	1,589.8	12,710.6	5,682.7	7,027.9
Consumer Durables	37,519.5	1,419.8	35,950.7	3,733.9	32,216.8
Manufacturing	12,490.2	1,494.5	10,716.5	4,924.9	5,791.5
Energy	15,229.7	1,872.3	13,152.3	4,078.0	9,074.2
Business Equipment	12,861.1	1,090.3	11,579.2	5,570.6	6,008.6
Telecommunication	21,680.0	3,138.1	18,110.9	8,038.4	10,072.5
Wholesale, Retail and Service	11,069.8	1,405.0	9,428.9	4,660.1	4,768.8
Healthcare	13,139.2	1,243.5	11,680.0	6,780.3	4,899.7
Utilities	9,897.4	1,299.8	8,423.5	2,297.9	6,125.6
Other	10,479.4	1,559.9	8,672.4	3,361.6	5,310.8

Table 3 Determinants of Director Compensation-Director Level

The sample period is from 2000 to 2020. We exclude firms from financial industries (SIC 6000-6999). All variables are defined in Appendix A. Intercepts are included but unreported. *t*-statistics are presented below the coefficients in parentheses. Standard errors are corrected for heteroscedasticity and are clustered by the director. ***, **, and * denote statistical significance (two-sided) at the 1%, 5%, and 10% levels, respectively.

	(1) TotalComp	(2) TotalComp	(3) SalBon	(4) SalBon	(5) EquityComp	(6) EquityComp	(7) Option	(8) Option	(9) Stock	(10) Stock
Connected Dir	0.017	0.018	0.008	0.008	-0.025	-0.023	-0.011	-0.010	-0.035	-0.034
	(2.54)**	(2.67)***	(0.48)	(0.49)	(-1.77)*	(-1.69)*	(-0.68)	(-0.65)	(-2.44)**	(-2.38)**
CEO Comp		0.107		0.002		0.016		0.059		0.154
		(20.97)***		(0.24)		(2.96)***		(5.18)***		(15.55)***
Num Pub Board	0.014	0.013	0.023	0.023	0.017	0.010	-0.002	-0.003	0.019	0.018
	(5.71)***	(5.46)***	(3.99)***	(3.99)***	(3.19)***	(5.60)***	(-0.36)	(-0.44)	(3.59)***	(3.40)***
Industry Exp	0.004	0.004	0.006	0.006	0.010	-0.001	0.001	0.001	0.010	0.010
	(4.60)***	(4.55)***	(3.18)***	(3.18)***	(5.63)***	(-0.78)	(0.79)	(0.76)	(5.47)***	(5.44)***
Tenure	0.010	0.010	0.016	0.016	-0.001	0.047	-0.001	-0.001	-0.000	-0.000
	(12.78)***	(12.92)***	(10.45)***	(10.45)***	(-0.81)	(3.49)***	(-0.38)	(-0.36)	(-0.06)	(-0.03)
Audit Cmmt	0.021	0.021	0.097	0.097	0.047	0.074	0.000	0.000	0.033	0.033
	(3.10)***	(3.11)***	(6.90)***	(6.90)***	(3.48)***	(5.40)***	(0.02)	(0.01)	(2.48)**	(2.48)**
Comp Cmmt	0.016	0.015	0.011	0.011	0.075	0.039	0.005	0.004	0.060	0.059
	(2.44)**	(2.37)**	(0.74)	(0.74)	(5.46)***	(2.92)***	(0.31)	(0.29)	(4.43)***	(4.39)***
Nom Cmmt	0.017	0.017	0.063	0.063	0.040	-0.037	0.002	0.002	0.032	0.031
	(2.77)***	(2.69)***	(4.38)***	(4.38)***	(2.99)***	(-1.16)	(0.14)	(0.11)	(2.38)**	(2.32)**
Risk Cmmt	-0.006	-0.006	0.050	0.050	-0.037	0.101	-0.009	-0.009	-0.091	-0.091
	(-0.50)	(-0.50)	(1.25)	(1.25)	(-1.15)	(2.67)***	(-0.27)	(-0.27)	(-2.65)***	(-2.67)***
Tech Cmmt	0.023	0.019	0.043	0.043	0.109	-0.034	0.002	-0.000	0.070	0.063
	(1.22)	(0.99)	(0.94)	(0.93)	(2.87)***	(-2.30)**	(0.05)	(-0.00)	(1.63)	(1.50)
Female	-0.043	-0.044	0.041	0.041	-0.033	-0.010	-0.056	-0.056	0.007	0.006
	(-6.86)***	(-7.03)***	(2.02)**	(2.02)**	(-2.21)**	(-0.32)	(-3.56)***	(-3.58)***	(0.43)	(0.38)
International	-0.009	-0.010	-0.027	-0.027	-0.007	0.041	-0.015	-0.016	0.025	0.023
	(-0.66)	(-0.77)	(-0.68)	(-0.68)	(-0.23)	(3.32)***	(-0.46)	(-0.49)	(0.81)	(0.74)
MBA Degree	0.016	0.016	-0.009	-0.009	0.041	0.193	0.026	0.027	0.016	0.017
	(2.71)***	(2.81)***	(-0.57)	(-0.57)	(3.23)***	(18.20)***	(1.93)*	(1.95)*	(1.22)	(1.28)
Firm Size	0.119	0.083	0.059	0.058	0.202	0.135	0.041	0.020	0.353	0.300
	(11.62)***	(7.93)***	(3.31)***	(3.26)***	(9.57)***	(6.35)***	(1.61)	(0.78)	(18.37)***	(15.47)***
ROA	0.540	0.421	0.376	0.374	0.625	0.410	0.403	0.337	0.440	0.268
	(8.99)***	(7.17)***	(4.98)***	(4.93)***	(5.48)***	(3.64)***	(2.76)***	(2.31)**	(4.17)***	(2.54)**

Stock Return	0.206	0.149	-0.024	-0.025	0.315	0.211	0.036	0.004	0.303	0.219
	(24.44)***	(16.88)***	(-2.21)**	(-2.11)**	(18.72)***	(11.92)***	(2.04)**	(0.22)	(20.62)***	(14.00)***
Cash	0.189	0.185	-0.212	-0.212	0.663	0.655	0.845	0.843	0.021	0.015
	(3.14)***	(3.12)***	(-2.61)***	(-2.61)***	(5.42)***	(5.40)***	(5.53)***	(5.53)***	(0.19)	(0.14)
Intangibles	-0.169	-0.161	-0.195	-0.194	-0.187	-0.172	0.277	0.282	-0.349	-0.338
	(-2.88)***	(-2.75)***	(-2.18)**	(-2.18)**	(-1.49)	(-1.38)	(1.90)*	(1.93)*	(-3.06)***	(-2.97)***
IO	0.064	0.055	0.255	0.255	0.060	0.044	0.176	0.171	-0.099	-0.112
	(3.19)***	(2.77)***	(6.00)***	(6.00)***	(1.29)	(0.94)	(3.32)***	(3.22)***	(-2.10)**	(-2.39)**
Observations	92,014	92,014	92,014	92,014	92,014	92,014	92,014	92,014	92,014	92,014
R-squared	0.542	0.553	0.328	0.329	0.466	0.469	0.424	0.426	0.616	0.619
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 4 Compensation Among Connected Firms

The sample period is from 2000 to 2020. We exclude firms from financial industries (SIC 6000-6999). All variables are defined in Appendix A. Intercepts are included but unreported. *t*-statistics are presented below the coefficients in parentheses. Standard errors are corrected for heteroscedasticity and are clustered by the firm. ***, **, and * denote statistical significance (two-sided) at the 1%, 5%, and 10% levels, respectively.

	Panel A Univariate Comparison			
	Non-Connected	Connected	Difference	p-value
Diff Tot Comp	14.96	13.56	-1.S40	0.000

	Panel B Multivariate Regression	
	(1)	(2)
	Diff TotalComp	*Diff TotalComp*
Connected Firm	-1.059	-1.140
	(-7.21)***	(-8.97)***
Diff ROA	1.929	-0.111
	(3.90)***	(-0.62)
Diff Firm Size	2.487	2.333
	(22.80)***	(21.60)***
Diff Stock Return	-0.002	0.287
	(-0.04)	(5.81)***
Diff Cash	-0.285	0.586
	(-0.92)	(1.69)*
Diff Intangibles	0.323	0.143
	(1.39)	(1.29)
Diff IO	-0.357	-0.087
	(-3.50)***	(-2.15)**
Observations	3,422,959	3,422,959
R-squared	0.324	0.605
Focal Firm FE	Yes	No
Paired Firm FE	Yes	No
Year FE	Yes	No
Focal Firm*Year FE	No	Yes
Paired Firm*Year FE	No	Yes

Table 5 Director Self-Dealing and Difference-in-Differences Estimation

The sample period is from 2009 to 2015, excluding the event year 2012. We exclude firms from financial industries (SIC 6000-6999) and firms with missing or changing state of incorporation. All variables are defined in Appendix A. Intercepts are included but unreported. *t*-statistics are presented below the coefficients in parentheses. Standard errors are corrected for heteroscedasticity and are clustered by director and pre/post-period. ***, **, and * denote statistical significance (two-sided) at the 1%, 5%, and 10% levels, respectively.

	(1) *TotalComp*	(2) *SalBon*	(3) *EquityComp*	(4) *Option*	(5) *Stock*
Post*Treat	**-0.096**	**-0.012**	**-0.164**	**-0.211**	**-0.062**
	(-9.17)* **	**(-0.37)**	**(-6.61)*** **	**(-7.14)*** **	**(-2.46)** **
Connected Dir	0.022	-0.000	0.004	0.019	-0.001
	(3.55)***	(-0.01)	(0.29)	(1.22)	(-0.08)
CEO Comp	0.059	0.003	0.141	-0.043	0.231
	(6.75)***	(0.17)	(4.94)***	(-2.02)**	(8.42)***
Num Pub Board	0.013	0.022	0.013	-0.012	0.023
	(5.04)***	(2.97)***	(2.61)***	(-1.93)*	(3.92)***
Industry Exp	0.003	0.006	0.010	-0.001	0.009
	(2.67)***	(2.02)**	(4.53)***	(-0.23)	(4.20)***
Tenure	0.011	0.018	-0.002	0.002	-0.002
	(10.91)***	(7.48)***	(-0.83)	(0.99)	(-0.76)
Audit Cmmt	0.034	0.168	0.080	0.015	0.064
	(4.72)***	(9.68)***	(4.48)***	(0.91)	(3.88)***
Comp Cmmt	0.027	0.052	0.111	0.025	0.090
	(4.00)***	(3.03)***	(6.36)***	(1.72)*	(6.15)***
Nom Cmmt	0.015	0.033	0.082	0.005	0.081
	(2.12)**	(1.75)*	(3.95)***	(0.31)	(5.24)***
Risk Cmmt	-0.030	0.078	-0.028	-0.045	-0.065
	(-2.07)**	(1.60)	(-0.92)	(-1.39)	(-2.08)**
Tech Cmmt	0.012	0.095	0.020	0.045	0.008
	(0.47)	(1.73)*	(0.40)	(0.95)	(0.20)
Female	-0.043	0.091	-0.056	-0.025	-0.040
	(-6.58)***	(3.27)***	(-3.72)***	(-1.46)	(-2.44)**
International	-0.018	-0.020	-0.055	0.025	-0.017
	(-1.43)	(-0.48)	(-1.89)*	(0.88)	(-0.51)
MBA Degree	0.005	0.021	0.002	0.029	-0.008
	(0.42)	(1.02)	(0.14)	(1.91)*	(-0.51)
Firm Size	0.052	-0.060	0.070	-0.249	0.325
	(1.87)*	(-1.38)	(1.36)	(-3.90)***	(8.13)***
ROA	0.888	0.003	1.437	2.946	-0.174
	(10.20)***	(0.02)	(8.44)***	(14.89)***	(-1.41)
Stock Return	0.248	-0.079	0.417	0.084	0.244
	(11.78)***	(-2.82)***	(11.20)***	(2.97)***	(5.44)***
Cash	-0.270	-0.252	0.132	0.225	0.616
	(-3.70)***	(-1.24)	(0.40)	(0.86)	(3.10)***
Intangibles	0.106	-0.518	0.575	2.835	-0.718
	(0.94)	(-2.23)**	(2.21)**	(10.44)***	(-3.51)***
IO	-0.080	0.268	-0.360	0.269	-0.574
	(-2.11)**	(3.19)***	(-4.54)***	(2.16)**	(-7.63)***
Observations	22,230	22,230	22,230	22,230	22,230
R-squared	0.436	0.348	0.417	0.642	0.552
Firm FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes

Table 6 Robustness Tests

The sample period is from 2009 to 2015, excluding the event year 2012. We exclude firms from financial industries (SIC 6000-6999) and firms with missing or changing state of incorporation. All variables are defined in Appendix A. Intercepts are included but unreported. *t*-statistics are presented below the coefficients in parentheses. ***, **, and * denote statistical significance (two-sided) at the 1%, 5%, and 10% levels, respectively. Standard errors are corrected for heteroscedasticity and are clustered by the director.

	(1)	(2)	(3)	(4)	(5)
Panel A Control for Director Fixed Effects					
	TotalComp	*SalBon*	*EquityComp*	*Option*	*Stock*
Post*Treat	**-0.097**	**-0.011**	**-0.184**	**-0.225**	**-0.073**
	(-8.59)* **	**(-0.43)**	**(-7.14)*** **	**(-6.53)*** **	**(-2.54)** **
Controls	Yes	Yes	Yes	Yes	Yes
Observations	22,230	22,230	22,230	22,230	22,230
R-squared	0.631	0.693	0.573	0.708	0.671
Director FE	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Panel B Control for Industry-year Fixed Effects					
	(1)	(2)	(3)	(4)	(5)
	TotalComp	*SalBon*	*EquityComp*	*Option*	*Stock*
Post*Treat	**-0.103**	**-0.054**	**-0.172**	**-0.293**	**0.011**
	(-8.37)* **	**(-1.38)**	**(-5.88)*** **	**(-8.54)*** **	**(0.38)**
Controls	Yes	Yes	Yes	Yes	Yes
Observations	22,230	22,230	22,230	22,230	22,230
R-squared	0.468	0.371	0.454	0.694	0.587
Firm FE	Yes	Yes	Yes	Yes	Yes
Industry*Year FE	Yes	Yes	Yes	Yes	Yes
Panel C Control for State-year Fixed Effects					
	(1)	(2)	(3)	(4)	(5)
	TotalComp	*SalBon*	*EquityComp*	*Option*	*Stock*
Post*Treat	**-0.097**	**-0.060**	**-0.163**	**-0.149**	**-0.058**
	(-8.59)* **	**(-1.61)**	**(-5.95)*** **	**(-5.35)*** **	**(-2.05)** **
Controls	Yes	Yes	Yes	Yes	Yes
Observations	22,230	22,230	22,230	22,230	22,230
R-squared	0.467	0.364	0.463	0.687	0.590
Firm FE	Yes	Yes	Yes	Yes	Yes
State*Year FE	Yes	Yes	Yes	Yes	Yes

Table 6 Cross-sectional Analyses

The sample period is from 2009 to 2015, excluding the event year 2012. We exclude firms from financial industries (SIC 6000-6999) and firms with missing or changing state of incorporation. All variables are defined in Appendix A. Intercepts are included but unreported. *t*-statistics are presented below the coefficients in parentheses. Standard errors are corrected for heteroscedasticity and are clustered by director and pre/post-period. ***, **, and * denote statistical significance (two-sided) at the 1%, 5%, and 10% levels, respectively.

	(1) *TotalComp*	(2) *SalBon*	(3) *EquityComp*	(4) *Option*	(5) *Stock*
Panel A High Pay Directors					
Post*Treat	-0.112	-0.060	-0.208	-0.264	-0.118
	(-9.26)***	(-1.18)	(-6.16)***	(-6.27)***	(-3.22)***
Controls	Yes	Yes	Yes	Yes	Yes
Observations	9,274	9,274	9,274	9,274	9,274
R-squared	0.576	0.426	0.490	0.648	0.600
Firm FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Panel B Low Pay Directors					
	(1) *TotalComp*	(2) *SalBon*	(3) *EquityComp*	(4) *Option*	(5) *Stock*
Post*Treat	-0.074	0.054	-0.129	-0.177	-0.029
	(-4.55)***	(1.00)	(-3.04)***	(-3.05)***	(-0.62)
Controls	Yes	Yes	Yes	Yes	Yes
Observations	8,364	8,364	8,364	8,364	8,364
R-squared	0.540	0.421	0.450	0.658	0.582
Firm FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Test of difference in coefficients across subsamples					
p-value	0.016	0.097	0.069	0.079	0.091

Table 7 Announcement Return and Firm Valuation

The sample period is from 2009 to 2015, excluding the event year 2012. We exclude firms from financial industries (SIC 6000-6999) and firms with missing or changing state of incorporation. All variables are defined in Appendix A. Intercepts are included but unreported. *t*-statistics are presented below the coefficients in parentheses. Standard errors are corrected for heteroscedasticity and are clustered by director and pre/post-period. ***, **, and * denote statistical significance (two-sided) at the 1%, 5%, and 10% levels, respectively.

	Panel A Announcement Returns		
	Non-Delaware	Delaware	P-value
CAR[-4,-1]	0.27%	0.00%	0.534
CAR[0,+3]	-0.36%	0.77%	0.001
	Panel B Placebo Tests		
	Non-Delaware	Delaware	P-value
CAR[-4,-1]	-0.10%	0.15%	0.370
CAR[0,+3]	-0.65%	-0.37%	0.323
	Panel C Firm Valuation		
	(1)		
	Tobin		
Post*Treat	**0.054**		
	(2.46)**		
Firm Size	-0.602		
	(-9.34)***		
ROA	1.144		
	(3.66)***		
Stock Return	0.372		
	(12.55)***		
Cash	0.451		
	(2.17)**		
Intangibles	0.049		
	(0.16)		
IO	-0.183		
	(-1.75)*		
Observations	2,509		
R-squared	0.873		
Firm FE	Yes		
Year FE	Yes		