When Loyalty is Optional: The Economics of Corporate Opportunity Waivers and CEO Compensation*

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May 26, 2025

ABSTRACT

Corporate opportunity waivers (COWs) allow executives to appropriate business opportunities from their firms for personal gain. We develop a model that incorporates CEO moral hazard, the board's waiver decision, and compensation design. While waivers divert opportunities from the firm, they may be optimal because they attract higher-quality CEOs and strengthen incentives. However, firms with weak governance may adopt them too often. Waiver contracts typically feature high levels of performance-based pay. Empirically, waivers are more common for founder CEOs, firms with well-connected CEOs, and those with poor governance. Using a difference-in-differences design based on state-level COW laws, we find that firms significantly increase performance-based pay following adoption.

Keywords: Corporate opportunity waivers, managerial loyalty, performance pay
JEL codes: G30, G34, J33, M12, M52

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I. Introduction

As a fundamental principle of corporate governance, the fiduciary duty of loyalty requires officers and directors to act in the best interests of shareholders rather than their own. Traditionally, the corporate opportunity doctrine was a mandatory feature of common law, until Delaware and several other states amended their statutes to explicitly permit corporate opportunity waivers (COWs). These waivers allow firms to renounce corporate opportunities in advance, enabling officers or directors to appropriate them for personal gain, and are now common among firms incorporated in states that have modified their statutes (Rauterberg and Talley (2017)). Why do boards adopt corporate opportunity waivers, and what implications do these waivers have for firms? Existing research suggests that waivers to the duty of loyalty may be adopted due to board capture or the need to raise capital, particularly among smaller firms that rely on venture investment (Fich, Harford, and Tran (2023); Eldar and Grennan (2024)).[1] In this paper, we focus on a different motivation—expanding the contracting space between firms and executives—and examine whether and why waivers create value for firms, as well as how they influence optimal compensation design.

To understand why a board might adopt a waiver to the duty of loyalty once legally permitted, we develop a model that integrates the endogenous generation of business opportunities, the waiver adoption decision, and optimal compensation design. In the model, the CEO must exert effort to generate positive-NPV projects, whose value when implemented within the firm is uncertain. The CEO does not know this value ex ante but observes it ex post, before deciding whether to pursue the project within the firm or divert it to her side business, if permitted under the firm's existing policy. A key feature of the model is that the board of directors, acting in the interest of shareholders, can preemptively adopt a corporate opportunity waiver policy. This policy allows the CEO to divert any project to her side business at her discretion, without requiring case-by-case board approval or facing any monetary or reputational repercussions.

Intuitively, the benefit of a waiver for the firm is that it strengthens the CEO's

[1] Nevertheless, board capture alone cannot explain why firms adopting COW policies experience positive stock returns at adoption, as found by Rauterberg and Talley (2017) and confirmed by us, and the need for financing is likely less relevant for large firms.

incentive to exert effort and generate profitable projects, while also reducing the variance of the CEO's realized payoff due to the embedded fallback option, thereby lowering the required risk premium. Additionally, when firms have access to a pool of CEO candidates of varying quality, waivers provide the added benefit of attracting higher-quality executives. The downside, however, is that once the policy is adopted, the CEO may choose to divert a positive-NPV project to her side business, resulting in a loss of firm value. This latter effect can be partially mitigated through contract design that includes high levels of performance-based pay, which implicitly penalizes the CEO for diverting too many profitable projects. We also show that waiver adoption and corresponding changes in CEO compensation are more likely in firms whose CEOs have greater ability to divert projects, such as those who hold directorships at other firms.

Finally, we extend the model to incorporate conflicts of interest between shareholders and boards. Specifically, we assume that directors may extract private benefits from having a firm's waiver policy, for example, due to their affiliations with or investments in other businesses. We show that while waiver adoption is more frequent when such conflicts are present, it does not affect the CEO's compensation contract compared to a scenario in which the board maximizes shareholder value—unless the conflicted board also co-invests with the CEO outside the firm or extracts benefits when the CEO diverts profitable projects.

We next test the model's predictions empirically by analyzing the determinants of waiver adoption and examining how corporate opportunity waivers affect CEO compensation design. To do so, we first collect data on disclosed waiver adoptions and terminations, as reported by firms in their SEC filings.[2] Consistent with the model's predictions, we find that disclosed waiver adoptions are more common among firms whose CEOs have greater ability to divert profitable projects to side ventures, such as CEOs with connections to other firms or those who hold outside board seats. Adoption is also more likely among firms with founder-CEOs, possibly because these executives are more difficult to replace, making their retention more important. Finally, consistent with the model's prediction that conflicted boards adopt waivers too frequently, we find

[2]When firms adopt waivers by modifying their charter or certificate of incorporation, they are required to report this information to the SEC. However, not all waiver adoptions must be disclosed. Specifically, disclosure is not required if the waiver is authorized solely by board resolution.

that firms with less independent, more co-opted boards are also more likely to adopt corporate opportunity waivers.

To examine the effect of waivers on CEO compensation design, we exploit the staggered adoption of COW laws by U.S. states as a shock to legal restrictions on the fiduciary duty of loyalty and the scope of firms' contracting space. The advantage of this design, compared to directly examining the effect of firms' endogenous choices to adopt waivers, is that not all waiver policies are observable to researchers, and their adoption is related to firm characteristics in potentially complex ways.[3] The downside, however, is that not all firms chose to implement these policies in affected states, leading us to underestimate the effect of waivers on compensation. Specifically, following the literature, we employ an intention-to-treat (ITT) difference-in-differences (DiD) design (e.g., Fich, Harford, and Tran (2023); Eldar and Grennan (2024)), drawing on detailed compensation data from Incentive Lab covering the period 2006–2020. We focus on the adoption of COW laws by four U.S. states during our sample period: Nevada, New Jersey, Maryland, and Washington.

Using a stacked difference-in-differences design that compares firms in adopting and never-treated states, as well as alternative DiD estimators by Callaway and Sant'Anna (2021) and Nagengast, Rios-Avila, and Yotov (2024), we find that firms increase CEO performance-based pay by nearly 30% following the adoption of COW laws in their states, while non-performance-related pay declines and total pay remains unchanged. The effects of state COW laws are not limited to a specific type of performance-based pay: they are observed for both short-term and long-term pay, absolute and relative performance metrics, and for pay tied to both accounting measures and stock returns.

Given that a state's legal, institutional, and economic context may influence the adoption of COW laws, and that firms may lobby their state legislatures for such adoption (Karpoff and Wittry (2018)), we also show that our results are robust to excluding firms in the top lobbying industries, as well as the top lobbying firms in each treated state.

[3]For example, it is difficult to determine from public filings whether Elon Musk—who is the CEO of Tesla and also holds management positions at Space Exploration Technologies Corp., X Corp., X.AI Corp., Neuralink Corp., and The Boring Company—is covered by a corporate waiver policy at Tesla. Tesla's 2024 proxy statement mentions that both its prior state of incorporation (Delaware) and its current state of incorporation (Texas) have laws allowing the company to renounce specified business opportunities, suggesting the relevance of these laws to the firm, but stopping short of disclosing whether the firm has actually adopted such a policy.

In addition, our findings remain robust when we restrict the sample of treated firms to those physically located in states other than their state of incorporation, suggesting that the results are not driven by changes in local economic conditions in the firms' states of incorporation.

Consistent with the model's predictions, the increase in performance-based pay is more pronounced for CEOs who serve on multiple boards or have connections to other firms, as well as for those who had low performance-based pay prior to adoption of COW laws. Similarly, firms operating in more competitive industries, where it may be easier for the CEO to implement the project elsewhere in the same industry, experience larger increases in performance-based pay following their states' adoption of COW laws. Furthermore, firms with co-opted boards and low board independence are more likely to increase CEO performance-based pay after COW laws are enacted, likely because these firms are more inclined to adopt waivers, once permitted by law, due to conflicts of interest. Interestingly, we also find some evidence that total CEO pay increases at these firms following their states' adoption of COW laws.

Our paper contributes to the theoretical and empirical literature on corporate governance. Several prior studies demonstrate that lax corporate governance, broadly defined, can be optimal for firms (see, e.g., Burkart, Gromb, and Panunzi (1997), Stein (1989), Coles, Daniel, and Naveen (2008), Adams and Ferreira (2007), Atanassov (2013), Edmans (2014), and Hermalin and Weisbach (2012)) because it reduces managerial myopia, increases managerial initiative, minimizes CEO compensation, promotes innovation, or improves information sharing between the CEO and the board, among other benefits. We contribute to this literature by showing that corporate opportunity waivers, which allow managers to appropriate business opportunities for personal gain, can, in fact, be optimal for some firms as they expand the contracting space between firms and executives and strengthen managerial incentives.

Our paper is also related to the law and finance literature that analyzes the importance of the legal framework for firms (La Porta, Lopez-de Silanes, Shleifer, and Vishny (1998, 2000)), as well as the literature examining the effects of various corporate laws, such as business combination and other anti-takeover laws, universal demand laws, and corporate opportunity waiver laws, on firm outcomes (see, e.g., Bertrand and

Mullainathan (2003), Giroud and Mueller (2010), Cain, McKeon, and Solomon (2017), Fich, Harford, and Tran (2023), and Eldar and Grennan (2024)).

The rest of this paper is organized as follows. Section II briefly describes the institutional background. Section III presents the theoretical model. Section IV describes data sources and presents summary statistics. Section V reports our main empirical results. Section VI concludes.

II. Institutional Background

In July 2000, Delaware departed from the long-standing tradition of the corporate opportunity doctrine and enacted legislation allowing firms to preemptively renounce certain business opportunities that may be presented to the corporation or any of its managers, directors, or stockholders by adopting corporate opportunity waivers.

Grossman and Day (2009) argue that, in the absence of COWs, the corporate opportunity doctrine exposed officers and directors to significant litigation risk. Rooted in *Guth v. Loft*, the doctrine held that "a corporate officer or director may not take a business opportunity for his own if: (1) the corporation is financially able to exploit the opportunity; (2) the opportunity is within the corporation's line of business; (3) the corporation has an interest or expectancy in the opportunity; and (4) by taking the opportunity for his own, the corporate fiduciary will thereby be placed in a position inimical to his duties to the corporation." These conditions created fertile ground for shareholder lawsuits. First, the burden of proof rested on the defendant to show that they had not seized a corporate opportunity. Second, courts often struggled to determine whether a disputed project qualified as such. Third, lawsuits could often arise years later, when the firm's interests, financial capabilities, and lines of business may have changed (Talley (1998)). Finally, the doctrine presented particular legal challenges when a CEO or officer also served on the board of another company operating in a related market or industry.

The legislation introduced in Delaware was therefore motivated by a desire to remove legal ambiguity for officers and directors and to provide firms, particularly small businesses, with contractual flexibility to facilitate access to external financing from individuals and venture capitalists who might share similar business interests and overlapping duties of loyalty. While there is evidence that the adoption of COWs has increased board

overlap (Geng, Hau, Michaely, and Nguyen (2023), Hu, Jiang, John, and Ju (2023), and Eldar and Grennan (2024)) and facilitated VC investment (Eldar and Grennan (2024)), in practice, however, large public firms with stable cash flows have also shown a significant appetite for embracing COWs (Rauterberg and Talley (2017)).

Following Delaware, eight other U.S. states have adopted similar COW laws, including Nevada, New Jersey, Maryland, and Washington in recent years.[4] More details on the adopted COW laws in the United States are provided in Table 1, along with their enactment and effective dates. Notably, the gap between a state's law enactment and its effective date is relatively short, averaging 133 days and varying from 0 days (New Jersey) to 240 days (Washington).

In Appendix A, we also present several examples of firm-specific waiver policies disclosed in SEC filings. As mentioned earlier, these policies are not always required to be disclosed, particularly when authorized by a board resolution. Among firms that did disclose waivers, some stated that the purpose was to allow individuals with multiple business affiliations to serve as officers and to provide firms with greater flexibility to attract and retain the most qualified candidates.

III. Model

A. Setup

We model a CEO who is employed by a firm and must exert effort e at date 0 to generate a business opportunity of size e. Exerting effort is associated with a non-pecuniary personal cost to the CEO of $\frac{ce^2}{2}$. The value of the business opportunity implemented inside the firm (per unit of size) is random, $v \in \{v_H, v_L\}$, where the probability of $v = v_H$ is p, and the probability of $v = v_L$ is $1 - p$. We assume that $v_H > v_L > 0$, implying that the business opportunity is valuable for the firm even if its realized value turns out to be lower than expected. The value v is realized at date 1, after the CEO has exerted her effort, and becomes known to all at that date.

The new element of the model is that the firm's board of directors, acting in the

[4] Additionally, in 2022, Alberta became the first Canadian jurisdiction to introduce statutory corporate opportunity waivers.

interest of the firm's shareholders,[5] can adopt a corporate opportunity waiver ('waiver' for short) at date 0. The waiver allows the firm's CEO to pursue a business opportunity in her side business after observing value v, if she so chooses, without requiring explicit permission from the board or facing any repercussions.[6] For simplicity, we assume that the business opportunity always provides a fixed benefit b to the CEO if pursued outside the firm. If the board does not adopt the waiver, the CEO can implement the business opportunity only within the firm.

Following the contracting literature (e.g., Holmström (1979)), we model the CEO's compensation as a linear contract consisting of a fixed wage, w, and performance-based pay, α, tied to the firm's value. Finally, we assume that the CEO is risk-averse, with mean-variance preferences, and that she can earn a fixed reservation wage $\overline{W}$ through employment elsewhere.

B. Firm with a Corporate Opportunity Waiver

Suppose first that the board has adopted a waiver and cannot renege on this policy. Given the realized value v and a specified compensation contract (w, α), the CEO chooses to implement the business opportunity within the firm whenever her payoff from doing so exceeds the payoff from implementing it outside. Since the fixed wage is paid to the CEO regardless of her choice, as she remains employed by the firm, this results in the following condition:

$$\alpha v > b. \tag{1}$$

Given the binary distribution of v, three scenarios are possible: (i) $\alpha v_L > b$; (ii) $\alpha v_H < b$; or (iii) $\alpha v_L < b < \alpha v_H$. In the first scenario, the waiver is irrelevant because the CEO always implements the business opportunity within the firm (the solution is equivalent to one without the waiver). Given any small cost associated with a waiver, the firm would never adopt it. In the second scenario, adopting the waiver is also clearly suboptimal for a value-maximizing board, as the CEO would always implement the business opportunity

[5] We discuss the case of a conflicted board that extracts private benefits when the firm adopts a corporate opportunity waiver policy in Section III.D.

[6] A value-maximizing board would never want to grant permission ex post for the CEO to pursue the business opportunity outside the firm. We assume that a board adopting a COW policy can commit not to renege on it later. If the board could renege ex post, the policy's adoption would be irrelevant to firm value and compensation design, as the CEO would rationally anticipate the ex post reversal.

outside the firm, and the firm would still be required to pay a fixed wage to the CEO. We therefore next consider the most interesting case, in which the CEO sometimes prefers to implement the opportunity within the firm and sometimes outside it, depending on the realized value v, i.e., the case when $\alpha v_L < b < \alpha v_H$.

It follows directly from (1) is that whenever the board decides to adopt a waiver, it must always choose a level of performance-based pay satisfying $\alpha^* \geq b/v_H$, as otherwise, the CEO would always implement the business opportunity outside. This result also implies that firms with low performance-based pay prior to a corporate opportunity waiver adoption will increase performance-based pay upon adoption to at least b/v_H.

When choosing optimal effort, the CEO maximizes her expected utility

$$\max_e w + eE[V] - \frac{\rho e^2 Var(V)}{2} - \frac{ce^2}{2}. \tag{2}$$

where $E[V]$ and $Var[V]$ are, respectively, the CEO's expected value and the variance from developing business opportinity (per unit of size), ρ is the CEO's coefficient of risk aversion, and the last term captures the non-pecuniary cost of effort to the CEO. The optimization gives the CEO's optimal effort

$$e^* = \frac{E[V]}{c + \rho Var(V)}. \tag{3}$$

From the CEO's perspective, the expected value and variance of a business opportunity are as follows

$$E[V] = p\alpha v_H + (1-p)b, \tag{4}$$

$$Var[V] = p(1-p)(\alpha v_H - b)^2. \tag{5}$$

Note that the expected value, $E[V]$, increases with b, thereby creating a stronger incentive for the CEO to exert effort as b rises, while the variance, $Var[V]$, decreases with b (since $\alpha v_H > b$), making the CEO's payoff less risky due to the fallback option of implementing the business opportunity outside the firm. Substituting these values into (3), we obtain the CEO's optimal effort

$$e^* = \frac{p\alpha v_H + (1-p)b}{c + \rho p(1-p)(\alpha v_H - b)^2}. \tag{6}$$

The individual rationality constraint for the CEO binds and implies

$$\overline{W} = w + e^* E[V] - \frac{\rho e^{*2} Var(V)}{2} - \frac{ce^{*2}}{2}. \tag{7}$$

As is standard, we assume that in designing the optimal compensation contract for the CEO, the principal maximizes the expected firm value net of compensation costs, which amounts to maximizing

$$\max_{\alpha,w} (1-\alpha)\, e^* p v_H - w, \tag{8}$$

subject to the CEO's incentive-compatibility constraint (6) and the individual rationality constraint (7). This maximization results in the following compensation contract.

Proposition 1. *Suppose the board has adopted a corporate opportunity waiver. Then, the CEO's optimal performance pay, α^*, and wage, w^*, are given by*

$$\alpha^* = \frac{\sqrt{B^2 + 4\rho p^2 (1-p)(v_H - b) C} - B}{2\rho p^2 (1-p)(v_H - b) v_H}, \tag{9}$$

$$w^* = \overline{W} - \frac{\frac{1}{2}\left(\alpha^* p v_H + (1-p) b\right)^2}{c + \rho p (1-p)\left(\alpha^* v_H - b\right)^2}. \tag{10}$$

where constants B and C are given, respectively, by (21) and (22) in the Appendix.

All proofs are in Appendix B.

C. Firm Without a Corporate Opportunity Waiver

Now, consider the case in which the board has not adopted a waiver, either because doing so was suboptimal or because it was legally disallowed. Let the compensation contract chosen by the board in this case be denoted as (w_0, α_0). The CEO maximizes expected utility (2), with the expected payoff and variance given by

$$E[V] = \alpha_0 \left(p v_H + (1-p) v_L\right), \tag{11}$$

$$Var[V] = \alpha_0^2 p (1-p)\left(v_H - v_L\right)^2. \tag{12}$$

Then, the CEO's optimal effort is

$$e^* = \frac{\alpha_0 \left(p v_H + (1-p) v_L\right)}{c + \alpha_0^2 \rho p (1-p)\left(v_H - v_L\right)^2}. \tag{13}$$

The board maximizes expected firm value net of compensation costs, subject to constraints (6) and (7)

$$\max_{\alpha_0, w_0} (1-\alpha_0)\, e^* \left(p v_H + (1-p) v_L\right) - w_0, \tag{14}$$

which results in the optimal compensation constract summarized below.

Proposition 2. *Suppose the board has not adopted a corporate opportunity waiver. Then, the CEO's optimal performance pay, α^*, and wage, w^*, are given by*

$$\alpha_0^* = \frac{\sqrt{c^2 + 4c\rho p\,(1-p)\,(v_H - v_L)^2} - c}{2\rho p\,(1-p)\,(v_H - v_L)^2}, \tag{15}$$

$$w_0^* = \overline{W} - \frac{\frac{1}{2}\alpha_0^2\,(pv_H + (1-p)\,v_L)^2}{c + \rho\alpha_0^2 p\,(1-p)\,(v_H - v_L)^2}. \tag{16}$$

D. Optimal Adoption of Corporate Opportunity Waivers

The board chooses to adopt a waiver at date 0 whenever it creates greater value for shareholders.

Proposition 3. *The corporate opportunity waiver is optimally adopted by the board if*

$$\frac{(\alpha_0^* - \frac{\alpha_0^{*2}}{2})\,(pv_H + (1-p)\,v_L)^2}{c + \alpha_0^{*2}\rho p\,(1-p)\,(v_H - v_L)^2} < \frac{(1-\alpha^*)\,(p\alpha^* v_H + (1-p)\,b)\,pv_H + \frac{1}{2}\,(p\alpha^* v_H + (1-p)\,b)^2}{c + \rho p\,(1-p)\,(\alpha^* v_H - b)^2}. \tag{17}$$

where α^* and α_0^* are given by expressions (9) and (15), respectively.

While it may be difficult to analytically evaluate the inequality above, the rationale for the value-maximizing board to adopt a waiver is clear. The benefit of a waiver is that it provides stronger incentives for the CEO to exert effort and generate business opportunities. Additionally, it reduces the variance of the CEO's realized payoff due to the fallback option of investing in her side business, lowering the compensation risk premium demanded by the CEO. The drawback, however, is that once the waiver is adopted, the CEO may choose to implement business opportunities outside the firm, leading to a loss of firm value ex post. This tradeoff explains why some firms opt for a waiver while others do not, even when all boards are value-maximizing and no conflicts of interest exist. The ultimate adoption decision depends on the CEO's ability to divert opportunities to their side businesses (b); firm profitability and volatility (summarized by the variables v_L, v_H, and p in the model); as well as the CEO's risk aversion parameter (ρ) and cost of effort (c). The corollary below shows that when performance pay prior to the waiver's legalization (α_0^*) is low or when the CEO's diversion ability (b) is high, optimal performance pay weakly increases once the waiver becomes legally allowed.

Corollary 1. *If $\alpha_0^* < b/v_H$ when the corporate opportunity waiver is legally disallowed, then the CEO's performance pay weakly increases when the waiver becomes legally allowed, i.e., $\alpha^* \geq \alpha_0^*$.*

E. CEOs of Varying Ability

Here, we disvuss the extension of the model to allow for CEOs of different abilities. Our goal is to analyze whether waiver adoption enables firms to attract and retain higher-ability CEOs who would otherwise be unaffordable. Specifically, suppose the firm has access to two types of CEO candidates: a low-ability one (as described earlier) and a high-ability one. The latter has higher productivity (both inside and outside the firm) by a factor of $k > 1$, as well as better outside opportunities, $\overline{W}_k > \overline{W}$. For illustrative purposes, suppose that when a waiver is illegal, hiring a low-ability CEO is optimal, and when it is legalized, switching to a contract with a waiver and a low-ability CEO yields higher value to the principal. It is possible to show (see Appendix) that, under certain conditions, firms would obtain even greater value if they also replaced the CEO with a higher-ability one. The intuition is that a waiver helps to motivate the CEO, and it is more valuable when the CEO is highly productive. Additionally, a higher-ability CEO values the waiver more because she can extract greater benefits from investments outside the firm. The trade-off, however, is that higher-ability CEOs also have better outside options, which implies that they may be more expensive, all else equal.

F. Conflicted Board

So far, we have considered the case in which the board acts solely in the interest of shareholders when deciding whether to adopt a corporate opportunity waiver. However, in practice, some directors may extract private benefits from the firm's adoption of a waiver—for example, due to their affiliations, directorships, or investments in other businesses, or a desire to appease the CEO. Here, we briefly discuss how incorporating such conflicts of interest into the model affects the results.

Specifically, suppose that instead of (8), the board maximizes the following objective:

$$\max_{\alpha,w} (1-\alpha)\, e^* p v_H - w + \beta, \tag{18}$$

where β measures the strength of the board's personal preference (or bias) for a waiver.

It follows from (18) that the optimal contract (w^*, α^*) is independent of the board's preference for the waiver, β. Therefore, the only implication of a conflicted board with such a bias is a higher likelihood of adopting the waiver.[7]

G. Comparative Statics and Testable Implications of the Model

When states amend their statutes to allow waivers of the duty of loyalty, some firms will adopt corporate opportunity waiver policies and adjust their executive compensation contracts, shifting from (w_0^*, α_0^*) to (w^*, α^*).

For example, if a firm's CEO has access to side businesses where corporate opportunities can be exploited for personal gain (high b), corporate opportunity waivers are more likely to be relevant. Consequently, we expect waiver adoption and larger changes in firms' compensation policies following the enactment of COW laws. Furthermore, because adopting corporate opportunity waivers requires a minimum level of performance-based pay ($\alpha^* \geq b/v_H$), firms with lower levels of performance-based pay prior to the adoption of COW laws should experience more significant changes in compensation contracts. Because waivers have an additonal benefit of attracting and retaining higher-ability CEOs, we also expect more adoption and larger compensation changes for firms with higher-ability CEOs, such as founders.

Additionally, firms with conflicted boards—such as those with weak corporate governance—are more likely to adopt corporate opportunity waivers due to board preferences for such arrangements. As a result, these firms are also more likely to modify their CEO compensation contracts. In contrast, for other firms and managers, changes in compensation contracts should be less pronounced, forming the basis of our empirical predictions.

Prediction 1: *Corporate opportunity waivers are more likely to be adopted:*

(i) for managers with access to other businesses;

[7] In Appendix C, we also consider the case in which directors' benefits from a waiver are correlated with those of the CEO, such as when directors co-invest in the business opportunity outside the firm alongside the CEO. In this scenario, the CEO's optimal contract depends on the board's preference for a waiver, β, because the board internalizes the effect of a waiver on the CEO's effort and, consequently, on the profitability of the business opportunity outside the firm.

(ii) for higher-quality managers;

(iii) for firms with poor corporate governance.

Prediction 2: *Compensation contracts are more likely to change following the state's adoption of COW laws:*

(i) for managers with access to other businesses;

(ii) for higher-quality managers;

(iii) for managers with low pre-adoption performance-based pay;

(iv) for firms with poor corporate governance.

We next test these predictions of the model using states' adoption of COW laws and data on waiver adoptions by firms.

IV. Data Sources and Empirical Design

V. Empirical Design

In our DiD analysis of CEO compensation, we follow Fich, Harford, and Tran (2023) and conduct an intention-to-treat analysis based on the adoption of COW laws by U.S. states. One advantage of this setting over using the actual disclosed COW policies implementation by individual firms is that it alleviates concerns about the endogeneity of firms' decisions to adopt and disclose COW policies, which are likely related to firm characteristics.[8] However, it is also worth noting that this setting tends to underestimate the actual effect of COWs, as some firms incorporated in treated states may choose not to adopt them. Therefore, our estimates are likely a lower bound of the actual effects of COWs on CEO compensation contracts.

To avoid biases that can arise from using two-way fixed effects regressions in the traditional staggered DiD design (Baker, Larcker, and Wang (2022)), particularly when treatment effects may change over time, we employ the stacked DiD approach with an

[8]For example, a firm may anticipate that its executive is considering a move to another firm and may preemptively increase their compensation and adopt a COW policy to make the offer more attractive. A researcher may then erroneously conclude that the adoption of COW policies leads to an increase in executive pay.

event window of [-4, +4] years. Because we focus on performance-based pay, which can be equal to zero for some executives and is heavily skewed in the data, we use Poisson model in most of our analyses, as recommended by Cohn, Liu, and Wardlaw (2022) and Chen and Roth (2024). Specifically, the specification of our baseline DiD analysis is

$$Y_{kijst} = \beta_0 + \beta_1 \cdot \ COW_{ijt} + X'\Gamma + \mu_{kis} + \nu_t + \varepsilon_{kijst}, \tag{19}$$

where k indexes the CEO, s indexes the stack, i represents the firm, j denotes the state where the firm is incorporated, and t stands for the year. Y is the dependent variable (e.g., performance-based pay), COW is an indicator variable equal to one if a corporate opportunity waiver law is effective in a firm's state of incorporation at the beginning of the firm's fiscal year, X is a vector of control variables, Γ is the vector of the corresponding coefficients, μ_{kis} is the CEO-firm-stack fixed effects, ν_t is the year fixed effects, and ε_{kijst} is the error term. Since COW legislation is enacted at the state level, we cluster standard errors by state.

A. Data and Summary Statistics

We collect data on individual firms' disclosed corporate opportunity waivers using SEC filings available on EDGAR, focusing on the nine U.S. states that adopted COW statutes during our sample period (2001–2022). To extract firm-specific information on waiver adoption, we combine traditional textual analysis with advanced AI techniques.

Specifically, we search the universe of SEC filings, including proxy statements (DEF 14A), annual reports (10-K), current reports (8-K), and registration statements (S-1), for linguistic patterns that indicate the presence of a corporate opportunity waiver, using variations of words such as "waive," "renounce," or "disclaim" near terms like "corporate opportunity." We extract the relevant paragraphs and analyze them using the GPT-4o-mini language model via API, prompting it to classify whether the paragraph reflects the adoption or termination of a corporate opportunity waiver and whether the waiver applies to directors and/or officers. For each adopting firm, we assign the earliest filing date as the COW adoption date. For terminations, which are rare in our sample period, we manually review all flagged cases to verify that they reflect actual termination of a previously adopted waiver. Full methodological details, including the search terms and classification prompt, are provided in Appendix E.

Our data on the performance-based pay of firms' executives come from the ISS Incentive Lab database, which began coverage in 2006 when the U.S. Securities and Exchange Commission (SEC) significantly revised executive compensation disclosure rules by introducing the Compensation Discussion & Analysis (CD&A) section and modifying the disclosure of other items. We therefore use the four treated states that introduced COW legislation between 2007 and 2016, which are Nevada, New Jersey, Maryland, and Washington. Accordingly, our sample ends in 2020, four years after the last COW law adoption. We use states that never adopted COW laws (never-treated states) as the control group. Other compensation-related data come from ExecuComp. Corporate accounting data come from Compustat. Text-based product market competition measures are from the Hoberg and Phillips data library (see Hoberg and Phillips (2016)). Governance data come from ISS/ESG (formerly RiskMetrics).

Figure 1 illustrates the growing prevalence of corporate opportunity waiver policies over the 2001-2022 period. Starting from just a few adopting firms in the early 2000s, the number of firms with disclosed COW provisions increased steadily, accelerating after 2013 and particularly after 2019. By 2022, over 750 public firms reported having COW policies in place. This rising trend coincides with the staggered adoption of state-level COW laws, indicating a broad and increasing acceptance of contractual flexibility in fiduciary duties. The pattern highlights a shift in corporate governance practices, with an increasing number of firms choosing to waive the traditional duty of loyalty to facilitate managerial contracting.

Table 2 presents an overview of firm-level adoption and termination of corporate opportunity waivers based on SEC filings from 2001 to 2022. Panel A reports the annual number of adoptions and terminations. During this period, 1,146 firms adopted a waiver, while only 12 firms terminated an existing waiver, indicating that termination events are rare.[9] The number of adoptions increases significantly over time, particularly from 2013 onward, peaking in 2021 with 200 adoptions. This upward trend suggests growing acceptance and strategic use of COWs by firms following legal authorization by states. Panel B provides information on which corporate roles are covered by the waivers. On

[9]Some firms are acquired, go private, or enter bankruptcy, while others appear for the first time during our sample period. The changing number of firms in the sample explains why the net aggregate number of firm-level COWs (Figure 1) does not equal total adoptions minus terminations.

average, 60.7% of firm-level COWs cover officers, while 82.0% cover directors.

On average, the market appears to view the adoption of firm-level COW provisions favorably, consistent with prior findings reported by Rauterberg and Talley (2017), but based on a larger sample. Table 3 reports cumulative abnormal returns (CARs) around the dates when firms disclose the adoption of corporate opportunity waivers in SEC filings. The analysis uses two event windows, (–1, +1) and (–3, +3), and three asset pricing models (the market-adjusted model, the market model, and the Fama-French-Carhart four-factor model) to estimate abnormal returns. Specifically, day 0 is the filing date of a firm's first SEC filing indicating the adoption of a COW. Among the six CARs (2 windows and 3 models), the values range from 1.23% to 1.88%, five of which are statistically significant at the 5% or 10% level and the remaining one has a p-value of 0.11. These results suggest that investors react positively to waiver adoptions, potentially viewing them as tools for enhancing contractual flexibility rather than as signs of governance failure.

Table 4 reports the summary statistics of the relevant variables. Firms in our sample are large and profitable, with the average total assets of $23.6 billion, ROA of 4.9%, and Tobin's Q of 1.91. The total pay of CEOs in our sample averages $8.4 million, out of which $3.7 million is classified as performance-based pay. Approximately $2.9 million of this performance-based pay is linked to firms' accounting variables, such as ROA and earnings, while $1.1 million is tied to the company's stock price or stock returns. Furthermore, the majority of performance-based pay evaluates performance on an absolute basis, averaging $3.3 million, as opposed to benchmarking performance relative to other firms in the industry or the firm's peers ($1.3 million). More than 58% of CEOs have seats on boards of other firms, with the median CEO having one outside board seat and more than 20% having two or more seats. According to BoardEx, CEOs are on average connected to five different organizations, which can include other firms, universities, charities, government organizations, and clubs. Finally, 4.6% of firms in our sample are incorporated in a state that has adopted a COW law.

We next compare firm characteristics in states that adopt COW policies in the year prior to adoption with those in states that serve as controls (see Table 5). Notably, we do not observe any significant differences in firm characteristics between the two groups

across multiple dimensions, including CEO compensation policies.

VI. Empirical Results

A. Corporate Opportunity Waiver Adoption

We first investigate firm-level determinants of COW adoption, focusing on managerial characteristics and board structure. Corporate opportunity waivers are more relevant for firms whose CEOs have greater ability to divert opportunities to other businesses, and the model predicts that firms are more likely to adopt them in such cases. To proxy for the CEO's ability to divert corporate opportunities, we use two measures of the CEO's formal and informal networks. One is *Connected CEO*, a variable equal to one if the CEO is connected to more unique organizations in a given year than the sample median, as reported in BoardEx. The other is *CEO Outside Board Seats*, which is the number of external corporate boards on which the CEO serves in a given year.

Another dimension we consider is CEO quality, as the model predicts that firms may adopt opportunity waivers to attract and retain higher-ability CEOs. Given that it is inherently difficult to measure CEO ability, we focus on CEO-founders, based on the idea that founders may possess higher ability and firm-specific human capital, making their retention more important to firms. Retaining founders may also be more challenging if they are more likely to engage in multiple ventures.

To investigate how these factors affect the likelihood of waiver adoption by firms, we use a linear probability model in which the dependent variable equals one if the firm has a COW policy in place in a given year, and zero otherwise. The sample is limited to firms incorporated in states with effective COW statutes.[10] Control variables include the log of total assets, ROA, Tobin's Q, leverage, and annual stock returns. Standard errors are clustered at the firm level.

Table 6 reports the results. In general, we find that larger, less profitable firms (as measured by ROA and Tobin's Q), and those with higher leverage, are more likely to adopt corporate opportunity waivers, pointing to a role for financial constraints and

[10] Occasionally, firms may adopt waivers in states without COW statutes—for example, because they plan to re-incorporate in another state or hope that a court will consider a COW policy on a case-by-case basis if a dispute arises. Such cases are rare and are not included in our analysis.

limited growth opportunities in shaping firms' willingness to relax fiduciary protections. The evidence also indicates that waiver policies are more likely when CEOs have broader external networks. In particular, Column 1 shows that well-connected CEOs have a higher likelihood of a waiver, with a one standard deviation increase in connections raising the probability of adoption by 0.3 percentage points, or a 6% increase relative to the sample mean of 5.5%. Similarly, as reported in Column 2, each additional external board seat held by the CEO is associated with a 0.7 percentage point increase in the likelihood of a waiver, or 13% relative to the mean. Column 3 reports the results for founder CEOs and shows that firms are 4.6 percentage points more likely to adopt a waiver when their CEO is a founder, which nearly doubles the likelihood of adoption relative to the mean.

Regarding board structure, the model predicts that waiver adoption will be more frequent when the board of directors is conflicted and not strictly maximizing shareholder value—for example, when directors adopt a waiver policy for personal reasons, are involved in other ventures, or are influenced by the CEO. Specifically, we consider two variables related to board structure: board independence and board co-option, based on the idea that less independent and more co-opted boards are more likely to be conflicted. Columns 4 and 5 report the relevant results, showing that board independence is negatively associated with COW adoption, while board co-option is positively associated. For example, a one standard deviation increase in board co-option translates into a 1.4 percentage point higher likelihood of waiver adoption, or a 25% increase relative to the mean. That waiver policies are more likely when the board is influenced by or aligned with management underscores a potential dark side of COWs.

In sum, our evidence shows that firm-level waiver policies are more likely when managers have greater ability to divert corporate opportunities due to broader external networks, when CEOs are founders, and when traditional oversight mechanisms are relatively weaker.

B. CEO Compensation

Having examined firms' waiver adoption decisions, we next turn to the analysis of how waivers affect CEO compensation. The model suggests that, following waiver adoption,

firms must ensure that the CEO's diversion of profitable corporate opportunities to side ventures is not excessive, and that higher performance-based pay helps achieve this. As mentioned earlier, for identification purposes, we do not focus on actual firm-level adoption in these tests. Instead, we examine the effect of states' adoption of COW laws on CEO compensation using the stacked DiD specification in equation (19), with particular attention to performance-based pay.[11]

Figure 2 shows trends in CEOs' performance-based pay from four years before to four years after the COW law's effective date, using the year of adoption as the base year. The figure provides graphical evidence that the parallel trends condition is satisfied prior to adoption, while after adoption, performance-based pay increases significantly.

Table 7 reports the results of the relevant stacked DiD analysis, where the dependent variables are CEO performance pay (in $ million), non-performance pay (in $ million), the ratio of performance pay to total CEO compensation, and total CEO compensation (in $ million). The model is estimated using a Poisson regression in specifications 1-4 and 7-8, where the dependent variables are measured in dollars and are highly skewed, and using OLS regression in specifications 5–6, where the dependent variable is a ratio. We first present the results using only fixed effects (CEO-firm and year) without any control variables (odd-numbered specifications). We then add a base set of controls, including firm size (log of assets), Tobin's Q, leverage (debt-to-assets), ROA, and stock returns during the year (even-numbered specifications). The estimated coefficient on COW in Column 1 is 0.260 and significant at the 1% level, implying that following the adoption of COW laws, performance-based pay increases by almost 30% ($= e^{0.260} - 1$) for treated firm CEOs compared to control firm CEOs. The magnitude of the estimate drops only slightly to 28% when we add controls in Column 2. These results are consistent with the model's prediction that when firms adopt COW policies (made feasible by the state's passage of the law), they tend to increase performance-based pay for their CEOs.

Mirroring this result, we also find in Columns 3-4 that non-performance pay decreases by approximately 14 to 18%, suggesting that firms adjust the structure of CEO com-

[11]The market tends to react positively to the passage of these COW laws. Internet Appendix Table IA.4 reports results on abnormal stock returns around the enactment of COW laws. Panel A shows an average 3-day abnormal return of approximately 35 basis points ($p < 5\%$). Panel B shows that smaller firms and firms with larger institutional ownership experienced greater increases in CAR, consistent with the expectation that COW laws can relax the financial constraints of small firms by facilitating funding from financial institutions.

pensation rather than just increase compensation across the board. In Columns 5–6, we focus on the percentage of performance-based pay in total CEO compensation. These results reveal that the fraction of performance-based pay increases by approximately 8%, with the coefficient on the COW indicator significant at the 1% level. Finally, in the last two specifications, we examine whether states' adoption of COW laws affects the level of total CEO compensation and find no significant effect.

Overall, the evidence from Table 7 indicates that when managerial loyalty is expected to decrease following the passage of COW laws, firms rely more on performance-based pay to strengthen managerial incentives, while non-performance pay decreases, with no significant net effect on total CEO compensation.

B.1. Alternative Estimation Methods

The estimation in Table 7 used the stacked DiD analysis to deal with potential dynamic treatment effects in staggered settings. In Table IA.1 of the Internet Appendix we show that our results are robust to using an alternative DiD estimator proposed by Callaway and Sant'Anna (2021). We also find similar results when we implement the more flexible DiD estimator developed by Nagengast, Rios-Avila, and Yotov (2024) and Nagengast and Yotov (2025) that allows us to use the Poisson model.

B.2. States' Legal, Institutional, and Economic Contexts Relevant to COW Laws

One potential concern with using state laws for identification, as we do here, is that they may be adopted in response to specific legal, institutional, or economic conditions that are also correlated with firm policies (see, e.g., Karpoff and Wittry (2018)). For example, states may enact corporate waiver laws in reaction to particular economic conditions, and it may be these conditions, rather than the laws themselves, that drive changes in firms' CEO compensation policies.

In our setting, this concern is partly mitigated by the fact that not all firms are headquartered in the same state as their state of incorporation (78% of firms are incorporated in the same state where they are headquartered), and by the absence of significant differences in firm characteristics between adopting and non-adopting states, as reported in Table 5. To allay this concern further, in Table IA.2 of the Internet Appendix, we

restrict the sample to firms headquartered in a different state from their state of incorporation and repeat the analysis from Table 7. If our results were driven by local economic conditions rather than the adoption of COW laws, we would expect different results. However, we find very similar magnitudes of estimates in Table IA.2 compared to those in Table 7, alleviating concerns that local economic conditions drive our results.

Another related issue is that, for some firms in treated states, the adoption of COW laws may not be exogenous, as these firms could have actively lobbied for the laws. For example, waiver laws have been of particular interest to firms in the oil and gas and high-tech industries, which tend to attract more private equity investment, frequently engage in joint ventures and complex business arrangements, and may have influenced state legislatures through lobbying or campaign contributions. Following the recommendation of Karpoff and Wittry (2018), we therefore run our tests by excluding these 'motivating firms' from the sample. Specifically, in Panels A and B of Table IA.3 we exclude firms from the oil and gas in industry (SIC codes 1300-1339, 1370-1382, 1389, 2900-2912, and 2990-2999) and from the high-tech industry (defined as in Luo (2005)), respectively. The results are very similar to those reported in Table 7.

Furthermore, in Panel C of Table IA.3, we more directly address the issue of lobbying by excluding the top lobbying firms in each treated state, using disclosed data on lobbying activity from state-level sources.[12] The results show that the coefficient on the COW variable in Column 1 drops by 20% relative to the one in Table 7 (from 0.25 to 0.20) but remains statistically significant.

Overall, excluding motivating firms from the sample or focusing on firms incorporated in one state but located in another, and thus not exposed to local economic conditions in the incorporating state, does not significantly affect our results.

C. What Type of Performance-Based Pay is Affected by COW Laws?

We further investigate the treatment effects of waiver laws adoption on various types of performance-based pay, including pay linked to stock price or returns, accounting

[12]For New Jersey, we obtain data for one year prior to the enactment (2010) of the COW law from www.elec.nj.gov. For other states, lobbying data are available from https://www.pdc.wa.gov, lobbyethics.maryland.gov, and www.leg.state.nv.us. However, coverage starts later than the year of COW law enactment in the respective state, so we use data from the earliest available year: 2021 for Maryland and Nevada and 2016 for Washington.

performance measures, long-term and short-term performance-based pay, and absolute and relative performance-based pay. Table 8 reports the relevant results using Poisson regressions. All coefficients on COW are positive and statistically significant at the 5% level. The increases in different types of performance-based pay range from 14% (stock-linked) to 38% (accounting-linked). These results indicate that the increase in performance-based pay is not concentrated in any single category but applies broadly across various types, suggesting that firms seek to strengthen incentives comprehensively.

D. Heterogeneity in the Treatment Effects

D.1. CEO's External Networks: Ability to Divert Opportunities

When the CEO has no access to other businesses, she cannot divert the firm's corporate opportunities for personal gain. In this case, the state's adoption of COW laws should be irrelevant to the firm's contracting with its CEO and should have no effect on CEO pay. In contrast, COW laws are expected to have a greater impact when the CEO is involved in multiple other businesses. We therefore examine heterogeneity in treatment effects on performance-based pay, using CEO external networks as a proxy for the CEO's ability to divert opportunities. Specifically, we use two measures: *Connected CEO*, a dummy variable equal to one if the number of unique organizations the CEO is connected to is above the median in a given year, and zero otherwise; and *CEO Outside Board Seats*, the number of external corporate boards on which the CEO serves.

Columns 1 and 2 of Table 9 report the results, which show that firms increase CEO performance-based pay more when the CEO has greater ability to divert corporate opportunities to her other businesses. For example, Column 2 indicates that while performance-based pay increases by approximately 15.4% for CEOs with no other board seats, each external seat increases it by an additional 13%.

D.2. Founder CEOs

When examining the effect of corporate opportunity waivers on performance-based pay, it is natural to consider the role of founder CEOs, who stand out because they not only lead the company but also have strong entrepreneurial instincts and a unique ability to generate and pursue business opportunities, both within and outside the firm. Given that

waivers explicitly allow them to engage in external business ventures, founder CEOs may be more inclined to take advantage of this flexibility than professional CEOs, making it particularly important to understand whether and how firms respond by adjusting their compensation incentives.

However, the role of founder CEOs in this context may be less straightforward. On one hand, their substantial ownership stakes naturally align their interests with shareholder value, potentially reducing the need for additional incentive mechanisms. On the other hand, founder CEOs are inherently entrepreneurs, often possessing, or having the potential to develop, business ventures beyond their firm. This entrepreneurial nature makes it easier for them to pursue new business ideas independently, especially when a waiver is in place, allowing them to engage in external opportunities without violating fiduciary duties. This raises concerns that a founder CEO may divert attention or resources away from the firm, increasing the importance of stronger performance-based incentives to maintain alignment with shareholder interests.

To investigate the role of founder CEOs empirically, we include an interaction term between the founder CEO indicator and the COW law indicator in our DiD analysis. Column 3 in Table 9 reports the result, which shows that the effect of a waiver on performance-based pay is stronger when firms have founder CEOs. While founder CEOs already have strong ownership incentives, the introduction of a COW amplifies concerns about potential conflicts of interest or effort diversion, prompting firms to reinforce performance-based compensation. Rather than reducing reliance on incentive-based pay, firms appear to respond to the added flexibility of a COW by further tightening pay-for-performance mechanisms. This evidence supports the view that when a waiver grants CEOs greater freedom to engage in outside ventures, firms compensate by strengthening incentives to keep the CEO focused on firm performance.

D.3. Performance-Based Pay Before the COW Law Adoption

We also expect firms with weaker incentives in compensation contracts prior to COW law adoption to be more sensitive to this legislative shock. In particular, if firms with lower performance-based pay adopt COW policies without adjusting their pay structure, they are more likely to experience negative effects on firm value, as CEOs may

find it advantageous to seize corporate opportunities and implement them elsewhere. To mitigate this negative effect, these firms will need to make a larger adjustment to performance-based pay.

To investigate this issue empirically, in Column 4 of Table 9, we define a dummy variable for performance-based pay below the sample median in the year before COW law adoption and interact this variable with the indicator for states' COW law adoption. The results show that the positive treatment effect on performance-based pay is primarily concentrated in firms with relatively lower performance-based pay before the law's adoption.

D.4. Product Market Competition

Another dimension of heterogeneity we consider relates to product market competition. When a firm operates in a more competitive market, managerial loyalty becomes more important. Specifically, in industries where firms offer similar products (i.e., face greater competition due to low product differentiation), managers may find it easier to appropriate business opportunities. For example, suppose a CEO encounters an opportunity to implement a better technology at her firm but finds it more profitable to take it to a competitor where she holds a board seat and owns stock—perhaps because the competitor is larger or has better financing. If the two firms offer similar products, the transfer of technology will be more seamless, while at the same time having a more negative impact on the focal firm.

Thus, we expect firms in more competitive industries to be more aggressive in adjusting their CEO's performance-based pay following COW adoption. To test this conjecture, we use two firm-level text-based measures of competition—product similarity and the text-based Herfindahl-Hirschman Index (THHI) (see Hoberg and Phillips (2016))—as well as the traditional Herfindahl-Hirschman Index (HHI) of industry concentration, based on firms' market shares of total sales at the two-digit SIC code industry level. Accordingly, we define three dummy variables for stronger competition by the relevant median values in the year before the law adoption: High Simm, LowTHHI, and LowHHI. The results are reported in Table 10. Across all specifications, we find that the coefficients on the interaction terms are positive and significant at the 1% level, which

confirms that firms in more competitive environments tend to have a larger increase in performance-based pay following COW laws adoptions.

D.5. Corporate Governance

As shown in the model and reported in Table 6, firms with weak corporate governance are more likely to adopt corporate opportunity waivers. Here, we examine whether corporate governance is also related to adjustments in CEO compensation—particularly performance-based pay—following state adoptions of COW laws. After the adoption of corporate opportunity waivers, managers face fewer restrictions on their fiduciary duty of loyalty (i.e., the corporate opportunity doctrine). In the absence of strong governance, managers are more likely to appropriate business opportunities for personal gain. As a result, it becomes more important for such firms to align managerial and shareholder interests, e.g., through greater use of performance-based pay. We therefore expect firms with weaker governance to exhibit a larger increase in performance-based pay.

To test this hypothesis, we use two measures of corporate governance: board independence and CEO co-option (Coles, Daniel, and Naveen, 2014). We define dummy variables for strong governance based on whether each firm is above or below the sample median in the year prior to law adoption: High Board Independence and Low Board Co-option. The relevant interaction terms between these governance indicators and the COW treatment variable are included in our DiD regression specifications. Table 11 reports the results. Column 1 (2) presents the test for board independence (co-option). For both measures, the coefficients on the interaction terms are negative and statistically significant at the 1% level, indicating that the treatment effect is stronger for firms with weaker internal governance. This finding is consistent with the expectation that, following COW adoption, firms with weaker governance rely more on performance-based pay to strengthen interest alignment.

E. Robustness Tests

One potential issue is how to treat observations where a COW law becomes effective in the middle of a fiscal year, as firms may need time to adjust their policies. As a robustness test, we therefore drop the year of COW law adoption, and the results are

reported in Panel D of Table IA.3. The positive treatment effect on performance-based pay remains robust in these tests.

Another concern is that our sample may contain only a small fraction of treated firms. This issue stems from data restrictions, as performance-based pay data has only been available since 2006, limiting our analysis to the four states that adopted COW laws after 2006. Furthermore, Incentive Lab data covers only the top 750 firms (by sales), resulting in 102 treated firms in our sample across the four treated states.

To address concerns about the imbalance between treated and control firms, we conduct robustness tests using propensity score matching. For each treated firm, we match one control firm (from the same SIC2 industry) based on total assets in the year before law adoption. Panel E of Table IA.3 reports the relevant results: odd-numbered columns use Poisson regressions, while even-numbered columns use OLS panel regressions, as the dependent variable is a percentage between zero and one. Our results remain robust in these propensity-score-matching tests. In particular, the coefficients on COW are very similar to those in our main tests (0.260 vs 0.260 for *Performance Pay* and 0.076 vs 0.072 for *%Performance Pay*).

VII. Conclusion

In this paper, we build a model to examine why a board of directors may adopt a corporate opportunity waiver policy for the CEO and explore its implications for optimal compensation design. By modeling endogenous business opportunities and compensation structure, we show that although a COW policy can lead to the diversion of some profitable projects away from the firm, it may benefit shareholders by strengthening managerial incentives, reducing pay variance, and helping attract and retain higher-ability CEOs. Nevertheless, when the board is conflicted, waivers may be adopted too frequently relative to what a value-maximizing board would choose. We demonstrate that a compensation contract with a waiver policy in place typically features higher performance-based pay for covered executives, implicitly penalizing them for diverting profitable corporate opportunities ex post.

Using novel data on actual firm-level COW policies, we find that, consistent with the model's predictions, firms are more likely to adopt these policies when their CEOs

have greater ability to divert corporate opportunities, as proxied by CEO connections and outside directorships. Adoption is also more likely among founder CEOs, whose retention may be particularly valuable to the firm. Finally, firms with less independent and more co-opted boards are more likely to adopt waivers. On average, the market tends to react positively to news of waiver adoptions, suggesting that the benefits—such as stronger incentives and improved retention—tend to outweigh the risks associated with governance failures.

We also find that firms significantly restructure CEO compensation following waiver adoption. Using a stacked difference-in-differences analysis based on states' adoption of COW laws, we find that firms increase CEO performance-based pay by nearly 30% following adoption. Consistent with the model's predictions, this effect is stronger for CEOs who are more likely to appropriate business opportunities—such as those with multiple board seats, broader external connections, or who operate in more competitive industries.

Overall, our findings highlight the double-edged nature of corporate opportunity waivers. While they may be implemented in contexts of weak governance, they can also create value for firms by expanding contractual flexibility and improving managerial incentives.

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Figure 1. Number of Firms with COW Policies in Place Over Time.
The figure shows the number of firms that have COW policies in place as of a given year, as disclosed in their SEC filings.

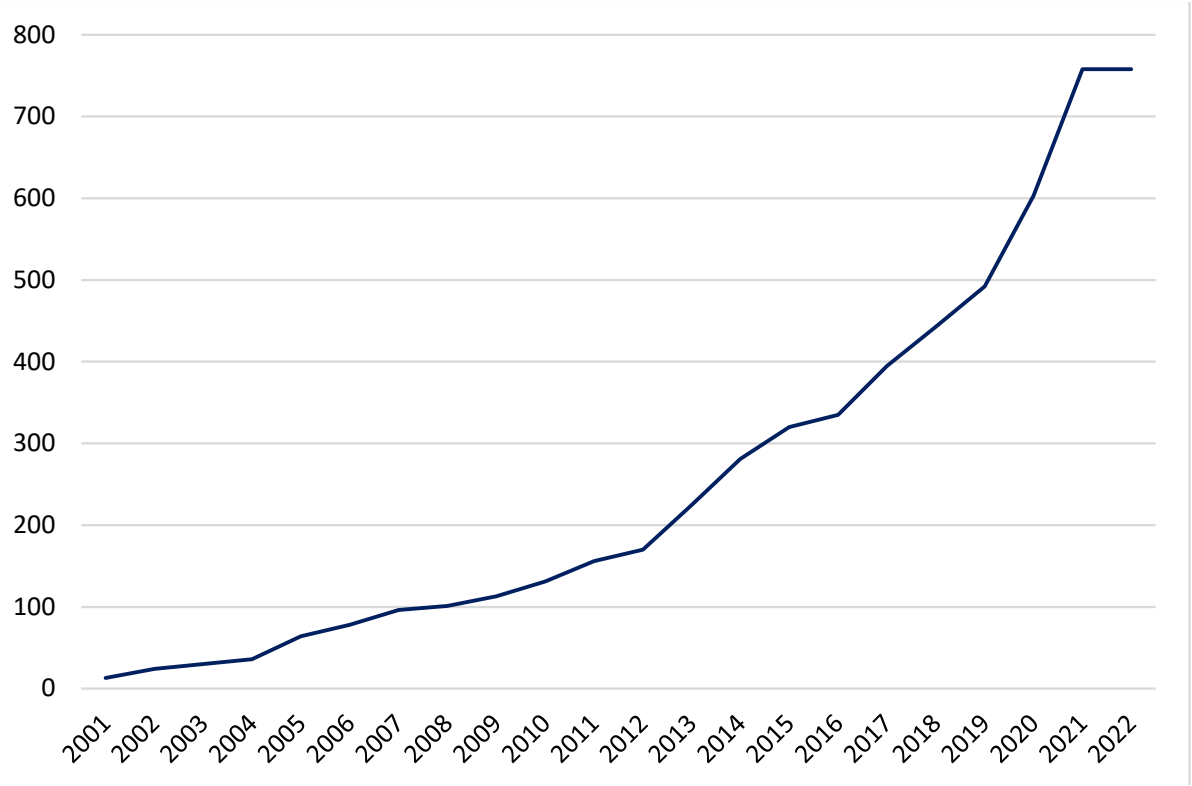


Figure 2. Parallel Trends Prior to States' Adoption of COW Laws.
The figure shows the effects of COW law adoption on CEO performance-based pay. We plot the Poisson regression coefficients β_h, estimated from the stacked DiD analysis using the following model: $Perform_Pay_{kijst} = \mu_{kis} + \nu_t + \Sigma_{h=-4}^{h=4} \beta_h \times D_h + X_{it} \cdot \Gamma + \varepsilon_{kijst}$, where k stands for CEO, s stands for stack, i stands for firm, j stands for the state where a firm is incorporated, t stands for year, the dependent variable is CEO performance-based pay, D_h is a dummy variable equal to one for observations in year h relative to the year when a corporate opportunity waiver law is effective in the firm's incorporated state at the beginning of its fiscal year, X is a vector of control variables, Γ is the vector of the corresponding coefficients, μ_{kis} is the CEO-firm-stack fixed effects, ν_t is the year fixed effects, and ε_{kijst} is the error term. Year 0 serves as the baseline year. The x-axis shows the time relative to the event year. The error bars correspond to the 90% confidence intervals of the coefficient estimates. The confidence intervals are based on standard errors clustered at the state level.

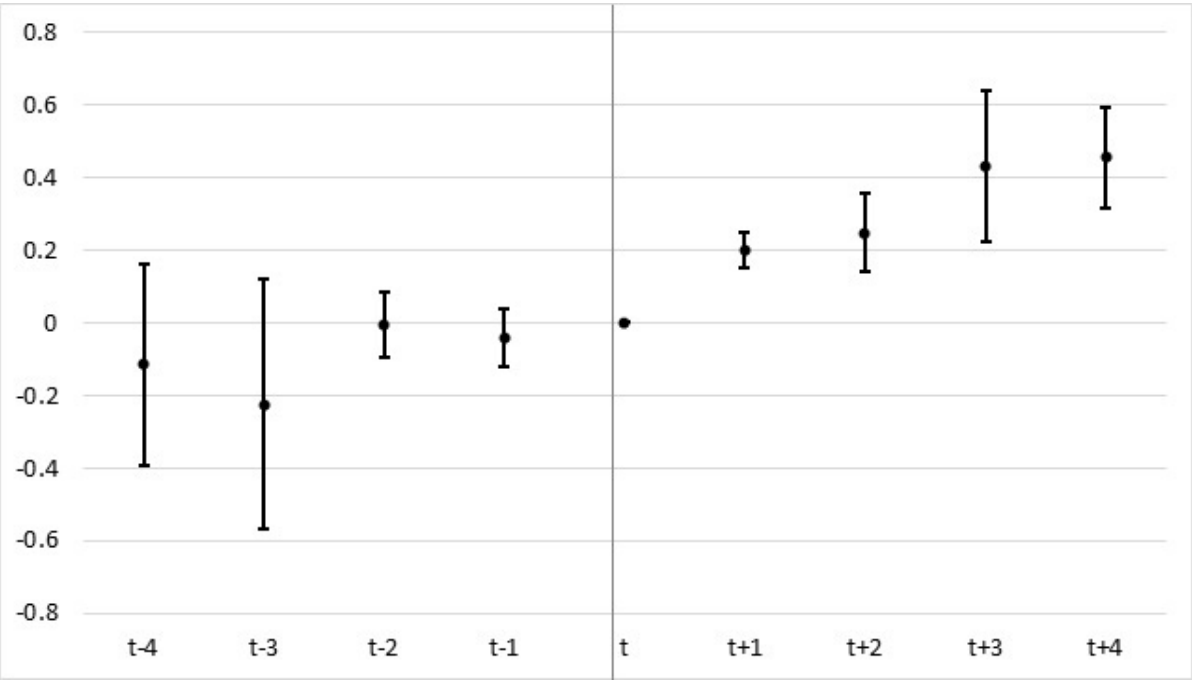


Table 1. Corporate Opportunity Waiver Laws

This table lists the states that adopted corporate opportunity waiver laws, along with the relevant statutes, enactment dates, and effective dates. Data are from Rauterberg and Talley (2017). For the compensation-related DiD analysis, we use only the last four states (Nevada, New Jersey, Maryland, and Washington) due to data availability constraints in Incentive Lab, which begins coverage in 2006 (both pre- and post-adoption data are needed).

State	*Implementing Statute*	*Enacted*	*Effective*
Delaware	*Del. Code Ann. Tit. 8, §122(17)*	Jun 23, 2000	Jul 1, 2000
Oklahoma	*Okla. Stat. Ann. Tit. 18, §1016(17)*	Jun 4, 2001	Nov 1, 2001
Missouri	*Mo. Ann. Stat. §351.385(16)*	Jul 3, 2003	Oct 1, 2003
Kansas	*Kan. Stat. Ann. §17-6102 (17)*	May 17, 2004	Jan 1, 2005
Texas	*Tex. Bus. Orgs. Code Ann. §2.101(21)*	May 17, 2005	Jan 1, 2006
Nevada	*Nev. Rev. Stat. Ann. §78.070(8)*	Jun 13, 2007	Oct 1, 2007
New Jersey	*NJ Stat. Ann. 14A:3-1(q)'*	Mar 1, 2011	Mar 1, 2011
Maryland	*Md. Code Ann., Corps. & Ass'ns §2-103(15)*	May 15, 2014	Oct 1, 2014
Washington	*Wash. Rev. Code Ann. §23B.02.020(5)(k)'*	May 6, 2015	Jan 1, 2016

Table 2. Corporate Opportunity Waiver Adoptions, Terminations, and Covered Persons

Panel A of the table shows the number of new COW policies adopted by firms over time in states that legalized such policies, as disclosed in SEC filings. Panel B reports who is identified as being covered by the policy in the filing.

Panel A: COW Adoptions and Terminations

Year	*COW Adoptions*	*COW Terminations*
2001	13	0
2002	11	0
2003	6	0
2004	9	0
2005	32	1
2006	20	0
2007	24	0
2008	10	0
2009	21	0
2010	33	0
2011	36	0
2012	22	0
2013	64	0
2014	67	0
2015	57	0
2016	45	0
2017	94	1
2018	71	0
2019	89	1
2020	168	3
2021	200	3
2022	54	3
Total	1,146	12

Panel B: COW Policy Coverage

Covered Persons	*Mean*
Officers	0.607
Directors	0.820

Table 3. Abnormal Returns Around Corporate Opportunity Waiver Adoptions

This table shows the cumulative abnormal returns around the dates of adoption of corporate opportunity waivers as disclosed in SEC filings. Day 0 is the day on which the first filing mentioning COW is filed. t-statistics based on standard errors clustered at the state level are reported in brackets. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. Variable definitions are provided in Appendix F.

	CAR(-1,1)	*p-value*	*N*	*CAR(-3,3)*	*p-value*	*N*
Market-adjusted	1.46%	0.04**	317	1.88%	0.02**	317
Market model	1.23%	0.08*	279	1.33%	0.11	278
Fama-French-Carhart 4-factor	1.31%	0.06*	279	1.38%	0.09*	278

Table 4. Summary Statistics

This table reports the summary statistics for the main variables used in our analysis. The sample period is 2006–2020. Variable definitions are provided in Appendix F.

Variable	*Mean*	*SD*	*p25*	*p50*	*p75*	*N*
COW	0.046	0.209	0	0	0	8,700
Performance Pay ($M)	3.671	3.627	1.103	2.654	5.007	8,700
Non-Performance Pay ($M)	4.928	8.695	1.817	3.499	6.089	8,700
% Performance Pay	0.420	0.229	0.256	0.435	0.566	8,700
Total Pay ($M)	8.404	6.531	3.963	6.821	11.038	8,700
Stock-Linked Pay ($M)	1.072	2.004	0	0	1.406	8,700
Accounting-Linked Pay ($M)	2.906	3.262	0.750	1.823	4.000	8,700
Short-Term Performance Pay ($M)	1.550	1.773	0.650	1.093	1.813	8,700
Long-Term Performance Pay ($M)	2.145	2.863	0	1.192	3.049	8,700
Absolute Performance Pay ($M)	3.278	3.568	0.9	2.066	4.429	8,700
Relative Performance Pay ($M)	1.345	2.297	0	0	1.922	8,700
Log(Assets)	8.866	1.514	7.757	8.714	9.839	8,697
Assets ($B)	23.640	50.584	2.337	6.084	18.753	8,697
Tobin's Q	1.905	1.263	1.164	1.524	2.156	8,144
Debt/Assets	0.275	0.202	0.121	0.254	0.384	8,697
Firm ROA	0.049	0.080	0.019	0.045	0.085	8,235
Stock Return	0.125	0.334	-0.063	0.114	0.289	8,594
Board Independence	0.811	0.106	0.750	0.833	0.900	6,655
Board Co-option	0.468	0.289	0.250	0.444	0.667	6,655
CEO Connections	4.645	3.229	2	4	6	8,072
CEO Outside Board Seats	0.803	0.826	0	1	1	6,504
TNIC HHI	0.243	0.248	0.067	0.139	0.340	8,444
HHI	0.067	0.076	0.026	0.036	0.074	8,700
Similarity	5.847	12.013	1.179	1.773	3.834	8,476

Table 5. Firm Characteristics in Treated and Control States

This table reports the summary statistics for the main variables of firms incorporated in treated states (those that adopt COW laws in the sample—Nevada, New Jersey, Maryland, and Washington) and those incorporated in control states (those that have never adopted COW laws) in the year prior to COW law adoption. The sample period is 2006–2020. The last column reports the *t*-statistic for the difference in means, with standard errors clustered at the state-of-incorporation level. Variable definitions are provided in Appendix F.

Variable	*COW States*	*Non-COW States*	*t-stat*
Performance Pay ($M)	2.782	3.050	-0.36
NonPerformance Pay ($M)	5.066	5.216	0.57
Total Pay ($M)	7.856	8.021	0.31
% Performance Pay	0.341	0.362	-0.72
Log(Assets)	8.835	8.740	0.71
Assets	21601	20571	0.01
Tobin's Q	1.923	1.989	0.40
Debt/Assets	0.348	0.254	0.03
Firm ROA	0.044	0.048	-1.12
Stock Return	0.161	0.187	-0.80
Board Independence	0.791	0.786	0.33
Board Co-option	0.523	0.462	1.47
CEO Connections	4.917	4.210	1.09
CEO Outside Board Seats	0.817	0.873	-0.64

Table 6. Determinants of Corporate Opportunity Waiver Adoptions

This table shows the determinants of firm-level corporate opportunity waiver by in states that allow them. The dependent variable equals one if a firm has a waiver in place in a given year, as disclosed in the firm's SEC filings. The sample covers firms in nine states that have adopted COW laws, starting from the year of state's adoption and ending in 2022. t-statistics based on standard errors clustered at the firm level are reported in brackets. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. Variable definitions are provided in Appendix F.

	(1)	(2)	(3)	(4)	(5)
Dependent Variable:			*Adopted Waiver (0/1)*		
CEO Connections	0.001**				
	[2.00]				
CEO Outside Board Seats		0.007***			
		[4.35]			
Founder CEO			0.046***		
			[10.53]		
Board Independence				-0.049***	
				[-3.99]	
Board Co-option					0.048***
					[10.66]
Log(Assets)	0.007***	-0.001	0.005***	0.001	0.002
	[11.42]	[-0.90]	[5.42]	[1.17]	[1.43]
Frim ROA	-0.004*	-0.020**	-0.009	-0.020**	-0.021**
	[-1.67]	[-2.05]	[-1.15]	[-2.11]	[-2.27]
Tobin's Q	-0.001***	-0.003***	-0.004***	-0.003***	-0.004***
	[-3.15]	[-3.16]	[-4.48]	[-3.24]	[-3.56]
Debt/Assets	0.059***	0.055***	0.063***	0.057***	0.058***
	[14.07]	[7.43]	[10.26]	[7.79]	[7.97]
Stock Return	-0.001	0.008**	0.004	0.007*	0.006*
	[-0.57]	[2.28]	[1.61]	[1.85]	[1.66]
Observations	50,665	18,331	26,991	18,820	18,820
R-squared	0.067	0.052	0.057	0.054	0.059
Year FE	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y

Table 7. Corporate Opportunity Waivers and CEO Pay

This table shows the effects of corporate opportunity waiver laws on the CEO's performance-based pay. A stacked difference-in-differences analysis is used, with an event window of [-4, +4] years. Treated firms are those incorporated in Nevada, New Jersey, Maryland, and Washington. Control firms include only those incorporated in states that have never adopted corporate opportunity waiver laws. Poisson regressions are used in Columns 1–4 and 7–8. OLS panel regressions are used in Columns 5–6 when the dependent variable is a ratio between zero and one. The sample period is 2006–2020. CEO-firm fixed effects and year fixed effects are included throughout. *t*-statistics based on standard errors clustered by firm are reported in brackets. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. Variable definitions are provided in Appendix F.

	Performance Pay		*Non-Performance Pay*		*% Performance Pay*		*Total Pay*	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
COW	0.264***	0.250***	-0.166***	-0.132**	0.079***	0.075***	0.045	0.057
	[3.19]	[2.84]	[-2.85]	[-2.25]	[3.22]	[3.01]	[0.63]	[1.07]
Log(Assets)		0.237***		0.372***		-0.004		0.246***
		[4.48]		[4.71]		[-0.26]		[4.25]
Tobin's Q		0.044		0.111***		-0.011		0.093**
		[1.00]		[2.85]		[-1.31]		[2.42]
Debt/Assets		-0.076		-0.309		-0.043		-0.047
		[-0.32]		[-1.01]		[-0.71]		[-0.28]
Firm ROA		0.203		-0.508		0.042		-0.256
		[0.61]		[-1.32]		[0.55]		[-0.83]
Stock Return		0.109***		0.027		0.014		0.069***
		[2.93]		[0.38]		[1.55]		[2.93]
Observations	8,436	7,819	8,700	8,028	8,700	8,028	8,700	8,028
R-squared	0.790	0.808	0.757	0.774	0.719	0.733	0.826	0.842
CEO-Firm FE	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y

Table 8. Effects on Various Types of Performance-Based Pay

This table shows the effects of corporate opportunity waiver laws on the CEO's performance-based pay. A stacked difference-in-differences analysis is used, with an event window of [-4, +4] years. Treated firms are those incorporated in Nevada, New Jersey, Maryland, and Washington. Control firms include only those incorporated in states that have never adopted corporate opportunity waiver laws. Poisson regressions are used in all specifications. The sample period is 2006-2020. CEO-firm fixed effects and year fixed effects are included. t-statistics based on standard errors clustered by firm are reported in brackets. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. Variable definitions are provided in Appendix F.

Dependent Variable:	*Absolute Perf Pay* (1)	*Relative Perf Pay* (2)	*Long-Term Perf Pay* (3)	*Short-Term Perf Pay* (4)	*Stock-Linked Perf Pay* (5)	*Acc-Linked Perf Pay* (6)
COW	0.242***	0.170***	0.291**	0.251***	0.130**	0.321***
	[4.39]	[3.10]	[2.51]	[2.91]	[1.98]	[2.75]
Log(Assets)	0.214***	0.294***	0.187**	0.344***	0.378**	0.179***
	[3.78]	[2.90]	[2.49]	[3.81]	[2.27]	[2.58]
Tobin's Q	0.019	-0.033	0.060*	0.018	-0.155	0.079*
	[0.43]	[-0.31]	[1.76]	[0.28]	[-1.10]	[1.65]
Debt/Assets	-0.308	-0.006	-0.114	-0.329	0.857	-0.092
	[-1.19]	[-0.01]	[-0.36]	[-0.95]	[1.44]	[-0.48]
Firm ROA	-0.044	0.708	0.194	0.350	0.683	0.350
	[-0.13]	[1.19]	[0.73]	[0.72]	[1.23]	[0.82]
Stock Return	0.115***	0.124*	0.077*	0.122**	0.184***	0.080*
	[3.28]	[1.65]	[1.69]	[2.24]	[2.98]	[1.77]
Observations	7,804	4,633	7,612	6,470	4,160	7,691
R-squared	0.803	0.670	0.729	0.693	0.610	0.781
CEO-Firm FE	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y

Table 9. Heterogeneity: CEO External Network, Founder Status, and Performance-Based Pay Prior to Law Adoption

This table examines the role of a CEO's external network, founder status, and performance-based pay prior to the law in shaping the effect of corporate opportunity waivers on performance-based pay. A stacked difference-in-differences analysis is used, with an event window of [-4, +4] years. Treated firms are those incorporated in Nevada, New Jersey, Maryland, and Washington. Control firms include only those incorporated in states that have never adopted corporate opportunity waiver laws. Poisson regressions are used in all specifications. The sample period is 2006–2020. CEO-firm fixed effects and year fixed effects are included. t-statistics based on standard errors clustered by firm are reported in brackets. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. Variable definitions are provided in Appendix F.

Dependent Variable:	*Performance Pay*			
	(1)	(2)	(3)	(4)
COW	0.144*	0.109	0.273***	0.067**
	[1.70]	[1.24]	[3.16]	[2.39]
Connected CEO	-0.108			
	[-1.04]			
COW×Connected CEO	0.292**			
	[2.45]			
CEO is on Multiple Boards		-0.071		
		[-0.96]		
COW×CEO is on Multiple Boards		0.240***		
		[2.78]		
COW×Founder CEO			0.695***	
			[5.57]	
Low Performance Pay Prior				-0.131*
				[-1.71]
COW×Low Performance Pay Prior				0.686***
				[5.18]
Log(Assets)	0.146**	0.186***	0.165***	0.170***
	[2.48]	[2.71]	[2.79]	[3.05]
Tobins Q	0.027	0.047	0.032	0.036
	[0.59]	[0.86]	[0.70]	[0.81]
Debt/Assets	0.062	0.017	0.035	0.070
	[0.25]	[0.07]	[0.15]	[0.31]
ROA	0.070	-0.083	0.114	0.057
	[0.20]	[-0.25]	[0.35]	[0.18]
Return	0.106***	0.062*	0.121***	0.119***
	[3.28]	[1.85]	[3.06]	[3.04]
Observations	7,077	5,860	7,027	7,686
R-squared	0.819	0.804	0.801	0.810
CEO-Firm FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y

Table 10. Heterogeneity: Product Market Competition

This table examines the role of product market competition in shaping the effect of corporate opportunity waivers on performance-based pay. A stacked difference-in-differences analysis is used, with an event window of [-4, +4] years. Treated firms are those incorporated in Nevada, New Jersey, Maryland, and Washington. Control firms include only those incorporated in states that have never adopted corporate opportunity waiver laws. Poisson regressions are used in all specifications. The sample period is 2006–2020. CEO-firm fixed effects and year fixed effects are included. t-statistics based on standard errors clustered at the state level are reported in brackets. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. Variable definitions are provided in Appendix F.

Dependent Variable:	*Performance Pay*		
	(1)	(2)	(3)
COW	0.371***	0.378***	0.372***
	[3.83]	[4.07]	[4.26]
High THHI	-2.606**		
	[-2.34]		
COW×High THHI	-0.304***		
	[-3.55]		
COW×High HHI		-0.315***	
		[-4.69]	
Low Similarity			-0.350
			[-1.07]
COW×Low Similarity			-0.261***
			[-4.02]
Log(Assets)	0.257***	0.252***	0.253***
	[4.64]	[4.86]	[4.61]
Tobin's Q	0.043	0.039	0.042
	[0.95]	[0.89]	[0.94]
Debt/Assets	-0.139	-0.180	-0.131
	[-0.56]	[-0.76]	[-0.50]
Firm ROA	0.192	0.148	0.187
	[0.55]	[0.44]	[0.54]
Stock Return	0.109***	0.109***	0.110***
	[2.85]	[2.82]	[2.89]
Observations	7,547	7,643	7,569
R-squared	0.807	0.809	0.807
CEO-Firm FE	Y	Y	Y
Year FE	Y	Y	Y

Table 11. Heterogeneity: Corporate Governance

This table examines the role of corporate governance in shaping the effect of corporate opportunity waivers on performance-based pay. A stacked difference-in-differences analysis is used, with an event window of [-4, +4] years. Treated firms are those incorporated in Nevada, New Jersey, Maryland, and Washington. Control firms include only those incorporated in states that have never adopted corporate opportunity waiver laws. Poisson regressions are used in all specifications. The sample period is 2006–2020. CEO-firm fixed effects and year fixed effects are included. t-statistics based on standard errors clustered at the state level are reported in brackets. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. Variable definitions are provided in Appendix F.

Dependent Variable:	*Performance Pay*	
	(1)	(2)
COW	0.373***	0.334***
	[4.61]	[3.62]
High Board Independence	0.115**	
	[1.99]	
COW×High Board Independence	-0.291***	
	[-4.92]	
Low Board Co-option		0.235***
		[4.60]
COW×Low Board Co-option		-0.308***
		[-4.14]
Log(Assets)	0.215***	0.219***
	[3.34]	[3.47]
Tobin's Q	0.023	0.028
	[0.45]	[0.54]
Debt/Assets	-0.314	-0.328
	[-1.25]	[-1.31]
Firm ROA	-0.091	-0.093
	[-0.30]	[-0.31]
Stock Return	0.051	0.047
	[1.40]	[1.32]
Observations	5,932	5,932
R-squared	0.804	0.805
CEO-Firm FE	Y	Y
Year FE	Y	Y

Appendix A. Corporate Opportunity Waivers in Practice

Below, we provide several examples of language used by firms in their SEC filings to describe corporate opportunity waivers (COWs). Note that firms may not be required to disclose the adoption of COWs in SEC filings. Specifically, disclosure may not be necessary if the waiver is authorized solely by board resolution, is not included in the firm's charter or certificate of incorporation, and is not deemed material.

Liberty Broadband Corp. is a holding company operating in cable, broadband, and mobile location technology. It was spun off from Liberty Media in 2014. The company's Form S-1/A outlines its corporate opportunity waiver:

"*Our executive officers and members of our company's board of directors have fiduciary duties to our stockholders. Likewise, any such persons who serve in similar capacities at Liberty, Liberty Interactive, TripCo or any other public company have fiduciary duties to that company's stockholders. For example, there may be the potential for a conflict of interest when our company, Liberty, Liberty Interactive or TripCo pursues acquisitions and other business opportunities that may be suitable for each of them. Therefore, such persons may have conflicts of interest or the appearance of conflicts of interest with respect to matters involving or affecting more than one of the companies to which they owe fiduciary duties. Our company has renounced its rights to certain business opportunities and our restated certificate of incorporation provides that no director or officer of our company will breach their fiduciary duty and therefore be liable to our company or its stockholders by reason of the fact that any such individual directs a corporate opportunity to another person or entity (including Liberty, Liberty Interactive and TripCo) instead of our company, or does not refer or communicate information regarding such corporate opportunity to our company, unless (x) such opportunity was expressly offered to such person solely in his or her capacity as a director or officer of our company or as a director or officer of any of our subsidiaries, and (y) such opportunity relates to a line of business in which our company or any of its subsidiaries is then directly engaged. In addition, any potential conflict that qualifies as a "related party transaction" (as defined in Item 404 of Regulation S-K) is subject to review by an independent committee of the applicable issuer's board of directors in accordance with its corporate governance guidelines. Any other potential conflicts that arise will be addressed on a case-by-case basis, keeping in mind the applicable fiduciary duties owed by the executive officers and directors of each issuer. From time to time, we may enter into transactions with Liberty or Liberty Interactive and/or their respective subsidiaries or other affiliates. There can be no assurance that the terms of any such transactions will be as favorable to our*

company, Liberty, Liberty Interactive or any of their respective subsidiaries or affiliates as would be the case where there is no overlapping officer or director."

NetSuite Inc. is a cloud computing software company that went public in 2007 and was acquired by Oracle in 2016. Its IPO prospectus identified Lawrence J. Ellison as the controlling shareholder and outlined its corporate opportunity waiver as follows:

"*On October 17, 2007, our board of directors approved resolutions to renounce and waive any interest or expectancy we might have under the so-called "corporate opportunity doctrine," with regard to Lawrence J. Ellison, subject to Mr. Ellison completing the transfer of shares formerly held by Tako Ventures to a new limited liability company and implementing the contemplated voting restrictions, as described in the section titled "—Share Transfer by Lawrence J. Ellison" below. Under the corporate opportunity doctrine, as a majority stockholder, Mr. Ellison might, in certain circumstances, have had a duty to present to the corporation matters that come to him that are within our line of business or would be deemed of interest to us. Under the waiver, we have renounced any such duty, and Mr. Ellison will not need to present any such opportunities to us but could be permitted to direct any such opportunity to Oracle or elsewhere. A company is permitted to renounce or waive its right to corporate opportunities under Section 122(17) of Delaware General Corporation Law. An example of when the corporate opportunity waiver could be applicable is in the event that Mr. Ellison were approached by a company that would like to be acquired, and which is engaged in a line of business that relates to our business. Under Delaware law, a controlling stockholder may, under certain circumstances, be obligated to present this kind of opportunity to the corporation they control. With the renunciation and waiver that our board has approved, we have eliminated uncertainty about this kind of question, and Mr. Ellison would not have any obligation to present any such opportunities to us. He would be free to pursue any such opportunities himself, or to present them to another company, without notifying us or giving us any ability to participate.*"

Triller Inc. is a company specializing in online video, social media, and combat sports. The firm's corporate opportunity waiver is described in its Form S-1 as follows:

"*Our amended and restated certificate of incorporation will contain a waiver of the corporate opportunity doctrine and certain of our officers and directors are now, and all of them may in the future become, affiliated with entities engaged in business activities similar to those intended to be conducted by us and, accordingly, may have conflicts of interest in allocating their time and determining to which entity a particular business opportunity should be presented.*

The purpose for the surrender of corporate opportunities is to allow Covered Persons

with multiple business affiliations to continue to serve as an officer or on our board of directors. Our officers and directors may from time to time be presented with opportunities that could benefit both another business affiliation and us. In the absence of the "corporate opportunity" waiver in our charter, certain candidates would not be able to serve as an officer or director. We believe we substantially benefit from having representatives who bring significant, relevant and valuable experience to our management, and, as a result, the inclusion of the "corporate opportunity" waiver in our amended and restated certificate of incorporation provides us with greater flexibility to attract and retain the officers and directors that we feel are the best candidates. Consequently, our directors' and officers' discretion in identifying and presenting business opportunities to us may result in a conflict of interest when determining whether the terms, conditions and timing of a particular business opportunity are appropriate and in our stockholders' best interest, which could negatively impact the timing for certain business opportunities."

Some companies likely have corporate opportunity waivers but do not disclose them in public filings, possibly because they are adopted by board action rather than through amendments to the certificate of incorporation. For instance, in some high-tech giants, CEOs are involved in multiple other businesses (e.g., as founders, large investors, or board members). Without corporate opportunity waivers, these CEOs could face significant litigation risk. For example, Tesla's 2024 annual report does not explicitly mention the adoption of a corporate opportunity waiver but indicates that the CEO is actively involved in other businesses:

"*We are highly dependent on the services of Elon Musk, Technoking of Tesla and our Chief Executive Officer. Although Mr. Musk spends significant time with Tesla and is highly active in our management, he does not devote his full time and attention to Tesla. For example: Mr. Musk also currently holds management positions at Space Exploration Technologies Corp., X Corp., X.AI Corp., Neuralink Corp. and The Boring Company, and is involved in other ventures and with the Department of Government Efficiency.*"

Also, Tesla's 2024 proxy statement notes the existence of active corporate opportunity waiver laws in both Delaware (its previous state of incorporation) and Texas (its current state of incorporation), suggesting their relevance to the firm (see the figure below).

Figure IA.1. Excerpt from Tesla's 2024 proxy statement

ISSUE	DELAWARE	TEXAS
		of promoting a social, charitable, or environmental purpose. Texas also has a public benefit corporation statute.
Business Opportunities	Under Delaware law, the corporate opportunity doctrine holds that a corporate officer or director may not generally and unilaterally take a business opportunity for his or her own. Factors to be considered include: (i) whether the corporation is financially able to exploit the opportunity; (ii) if the opportunity is within the corporation's line of business; (iii) whether the corporation has an interest or expectancy in the opportunity; and (iv) whether by taking the opportunity for his or her own, the corporate fiduciary will thereby be placed in a position inimical to his duties to the corporation. The DGCL permits a Delaware corporation to renounce, in its certificate of incorporation or by action of the board of directors, any interest or expectancy of the corporation in, or being offered an opportunity to participate in, specified business opportunities or specified classes or categories of business opportunities that are presented to the corporation or one or more of its officers, directors or stockholders.	Texas law generally follows the Delaware corporate opportunity doctrine. The TBOC permits a Texas entity to renounce, in its certificate of formation or by action of its board of directors, an interest or expectancy of the entity in, or an interest or expectancy of the entity in being offered an opportunity to participate in, specified business opportunities or a specified class or category of business opportunities presented to the entity or one or more of its managerial officials or owners.

Appendix B. Proofs

Proof of Proposition 1. Substituting constraints (3) and (6) into maximization of the board (8), yields the following optimization with respect to performance-based pay

$$\max_{\alpha} \frac{(1-\alpha)\left(p\alpha v_H + (1-p)\, b\right) p v_H + \frac{1}{2}\left(p\alpha v_H + (1-p)\, b\right)^2}{c + \rho p\,(1-p)\left(\alpha v_H - b\right)^2} - \overline{W}. \tag{20}$$

Taking the first-order condition produces a quadratic equation for α^*, which has the standard solution given by (9) in the proposition, where constants are

$$B = 2\rho p b\,(1-p)^2\,(v_H - b) + \rho b^2\,(1-p) + cp, \tag{21}$$

$$C = cpv_H + \rho b^2\,(1-p)\left(b + p\,(2-p)\,(v_H - b)\right). \tag{22}$$

Then it follows from (6) that optimal wage is given by (10). Finally, it is straightforward to verify that the second-order condition is always satisfied at α^* and w^*. □

Proof of Proposition 2. Optimization (14) simplifies to the following maximization with respect to α_0

$$\max_{\alpha_0} \frac{\left(\alpha_0 - \frac{\alpha_0^2}{2}\right)\left(pv_H + (1-p)\, v_L\right)^2}{c + \alpha_0^2 \rho p\,(1-p)\left(v_H - v_L\right)^2} - \overline{W} \tag{23}$$

Taking the first-order condition gives the optimal performance pay (15) and the fixed wage (16) in the proposition. □

Proof of Proposition 3. The proof follows directly from comparing the principal's values in (20) and (23) given the optimal contracts. □

Proof of Corollary 1. If adopting the waiver is suboptimal, then performance pay α_0^* remains unchanged when the waiver becomes legally allowed. In contrast, if adoption is optimal, the firm must raise performance pay to at least b/v_H otherwise, the CEO would always invest outside, yielding negative firm value. Thus, if $\alpha_0^* < b/v_H$ when the waiver is disallowed and adoption is optimal, then performance pay ncreases when the waiver becomes allowed, i.e., $\alpha^* > \alpha_0^*$. □

Appendix C. Conflicted Board that Co-Invests with the CEO

Here, we consider the case in which the board has conflicts of interest and its preference (or bias) for a corporate opportunity waiver is correlated with the benefits received by the CEO. For example, directors may co-invest with the CEO outside the firm or receive consulting agreements, directorships, or other perks when the CEO invests outside. Suppose the CEO's optimal compensation contract (w_1^*, α_1^*) satisfies $\alpha_1^* v_L < b < \alpha_1^* v_H$. We assume that the conflicted board maximizes the following objective function:

$$\max_{\alpha, w} (1-\alpha)\, e^* p v_H - w + e^* \beta (1-p) b, \tag{24}$$

where e^* is still given by expression (6), and the individual rationality constraint (7) determines the wage. In this case, the CEO's optimal compensation contract is given by

$$\alpha_1^* = \frac{\sqrt{B_1^2 + 4\rho p^2 (1-p)(v_H - b) C_1} - B_1}{2\rho p v_H (1-p)\left(p(v_H - b) + b\beta(1-p)\right)}, \tag{25}$$

$$w_1^* = \overline{W} - \frac{\frac{1}{2}\left(\alpha_1^* p v_H + (1-p) b\right)^2}{c + \rho p (1-p)\left(\alpha_1^* v_H - b\right)^2}, \tag{26}$$

where

$$B_1 = B + 2\rho\beta b^2 (1-p)^3, \tag{27}$$

$$C_1 = C - \beta b (1-p)\left(c + \rho b^2 (1-p)(2-p)\right). \tag{28}$$

Appendix D: Higher- and Lower-Ability CEOs

A higher-ability CEO has productivity that is greater by a factor of $k > 1$ both inside and outside the firm, which implies that the decision to invest outside remains unchanged:

$$\alpha k v > k b. \tag{29}$$

Expression for optimal effort by a high-ability CEO when the firm have a waiver in place is still given by (3), but the expected value and variance are modified as follows

$$E[V] = k\left(\alpha p v_H + (1-p) b\right), \tag{30}$$

$$Var[V] = k^2 p (1-p)\left(\alpha v_H - b\right)^2. \tag{31}$$

The principal maximizes the expected firm value net of compensation costs, subject to the CEO's IC-constraint and the IR-constraint or

$$\max_{\alpha_k, w_k} (1-\alpha_k)\, e^* k p v_H - w_k, \tag{32}$$

which is equivalent to maximizing the following value with respect to α_k

$$\max_{\alpha_k} k^2 \frac{(1-\alpha_k)\left(\alpha_k p v_H + (1-p)\, b\right) p v_H + \frac{1}{2}\left(\alpha_k p v_H + (1-p)\, b\right)^2}{c + \rho k^2 p\,(1-p)\left(\alpha_k v_H - b\right)^2} - \overline{W}_k. \tag{33}$$

This optimization produces the following solution for the optimal contract

$$\alpha_k^* = \frac{\sqrt{B_k^2 + 4\rho k^2 p^2 (1-p)\,(v_H - b)\, C_k} - B_k}{2\rho k^2 p^2 (1-p)\,(v_H - b)\, v_H}, \tag{34}$$

$$w_k^* = \overline{W}_k - \frac{\frac{1}{2}\left(\alpha_k^* p v_H + (1-p)\, b\right)^2}{c + \rho k^2 p\,(1-p)\left(\alpha^* v_H - b\right)^2}, \text{ where} \tag{35}$$

$$B_k = 2\rho k^2 p b\,(1-p)^2 (v_H - b) + \rho k^2 b^2 (1-p) + cp, \tag{36}$$

$$C_k = cp v_H + \rho k^2 b^2 (1-p)\left(b + p\,(2-p)\,(v_H - b)\right). \tag{37}$$

We need to show that, under certain conditions, the value in (33) is greater than one in (20). To do so, let's compare the two expressions using the contract (w^*, α^*) optimal for the low-ability CEO. If we can show that firms want to switch to high-ability CEOs even without reoptimizing compensation, then it would also be true if firms are allowed to reoptimze. Indeed, when the condition below is satisfied (sufficient condition), firms will opt for higher-ability CEOs with waivers.

$$\frac{(k^2-1)\, c\left((1-\alpha)\left(\alpha p v_H + (1-p)\, b\right) p v_H + \frac{1}{2}\left(\alpha p v_H + (1-p)\, b\right)^2\right)}{\left(c + \rho k^2 p\,(1-p)\left(\alpha v_H - b\right)^2\right)\left(c + \rho p\,(1-p)\left(\alpha v_H - b\right)^2\right)} > \overline{W}_k - \overline{W}. \tag{38}$$

Appendix E. Identifying Corporate Opportunity Waiver Adoptions and Terminations

Our search begins in 2001, the year following the adoption of the first state-level COW statute (Delaware in 2000), and ends in 2022. For all firms incorporated in Delaware, Oklahoma, Missouri, Kansas, Texas, Nevada, New Jersey, Maryland, or Washington states post the adoption of a COW law, we search their SEC filings for variations of words "waive," "renounce," or "disclaim" in close proximity to "corporate opportunity" or similar terms. Specifically, we use the following regular expressions in Python to identify candidate sentences:

```
r'\b(?:waiv\w*|renounc\w*|disclaim\w*)\b.*?\b(?:corporate|commercial|business)\s+opportunit\w*\b'
r'|\b(?:corporate|commercial|business)\s+opportunit\w*\b.*?\b(?:waiv\w*|renounc\w*|disclaim\w*)\b'
```

In each SEC filing identified by the search above, we locate the relevant sentence and extract a window of 500 characters before and 500 characters after, creating a contextual paragraph that we refer to as the *relevant paragraph*. This paragraph provides surrounding language to aid in validating and interpreting whether the disclosure reflects the adoption or termination of a corporate opportunity waiver, or an unrelated statement.

To extract structured information from the relevant paragraphs, we use the API interface of the GPT-4o-mini language model, which has the strength for reasoning and classification tasks. We prompt the model with a standardized instruction asking it to determine whether the paragraph reflects the adoption or termination of a corporate opportunity waiver. The prompt includes a list of recognized synonyms and alternative formulations of COWs (e.g., "business opportunity waiver," "renounce corporate opportunities," etc.). The model is instructed to carefully distinguish between adoption and termination language, and to avoid false positives in cases where the filing refers to the removal or expiration of a COW. The specific prompt used is as follows:

*You are a financial AI that reads SEC filings and determines whether a company has a **corporate opportunity waiver (COW)**. COWs are sometimes referred to using other terminology. Recognize the following **aliases or alternative descriptions** of COWs as equivalent:*

- *"business opportunity waiver"*

- "commercial opportunity waiver"
- "renounce corporate opportunities"
- "disclaim corporate opportunities"
- "renounce business opportunities"
- "disclaim business opportunities"
- "renounce commercial opportunities"
- "disclaim commercial opportunities"

Please pay attention to the wording. We do not want an affirmative answer if the firm is terminating its COW. Please answer the following question based on the text:

*1. Does this firm have or is this firm implementing a **corporate opportunity waiver (COW)**? Answer '0' (no) or '1' (yes)*
*2. Is this firm terminating an existing **corporate opportunity waiver (COW)**? Answer '0' (no) or '1' (yes)*
*3. If #1 = 1, does the **corporate opportunity waiver (COW)** cover officers? Answer '0' (no) or '1' (yes)*
*4. If #1 = 1, does the **corporate opportunity waiver (COW)** cover directors? Answer '0' (no) or '1' (yes)*

Finally, for each firm identified as having adopted a COW, we sort all relevant SEC filings by their filing date and assign the earliest date as the adoption date. In the case of COW terminations, which are relatively rare, we manually review all instances flagged by ChatGPT as potential terminations to verify their validity and ensure that they reflect actual withdrawal or removal of a previously adopted waiver. The final output of our COW data extraction includes indicator variables for firm-level adoption and termination of COWs, along with the corresponding effective dates. For each adoption event, we additionally construct indicator variables capturing whether the COW explicitly applies to officers or directors, based on the language extracted from the relevant SEC filings.

Appendix F. Variable Definitions

Variable Name	*Description*
Perform_Pay	CEO pay in a given year that is linked to a performance metric, measured in million dollars.
Non_Perform_Pay	CEO pay in a given year that is not linked to a performance metric (e.g., salary), measured in million dollars..
%Perform_Pay	CEO Pay in a given year that is linked to a performance metric scaled by total CEO pay.
Total Pay	Total CEO pay in a given year, measured in million dollars.
Stock Linked	CEO performance pay linked to stock market metrics (e.g., stock return, price, TSR), measured in million dollars.
Accounting Linked	CEO performance pay linked to accounting metrics (e.g., ROA, earnings), measured in million dollars.
Short-Term Perform	CEO performance pay linked to metrics that vest in 12 months or less, measured in million dollars.
Long-Term Perform	CEO performance pay linked to metrics that vest in more than 12 months, measured in million dollars.
Absolute Perform	CEO performance pay linked to absolute metrics (ROA greater 5%), measured in million dollars.
Relative Perform	CEO performance pay linked to relative metrics (ROA above the median ROA of firms in the firm's peer group), measured in million dollars.
COW	Equal to one if the firm is incorporated in a state that has a COW law in place and zero otherwise.
Log(Assets)	Natural logarithm of total book assets.
Tobin's Q	Market value of equity (number of shares outstanding multiplied by the price) plus the book value of debt, scaled by total book assets.
Debt/Assets	Short and Long-term debt scaled by total book assets.
Firm ROA	Net income scaled by total book assets.
Stock Return	Firm stock return over the fiscal year.
CEO Connections	Number of unique organizations the CEO is connected to in a given year (BoardEx).
Connected CEO	Equals one if the number of organizations the CEO is connected to in a year is greater than the sample median and zero otherwise (BoardEx).
CEO is on Multiple Boards	Equals one is the CEO serves on multiple firms' boards in a given year and zero otherwise.
CEO Outside Board Seats	Number of external corporate boards on which the CEO serves in a year.
Board Independence	Number of independent directors divided by the total number of directors.
Board Co-option	Fraction of the board comprised of directors appointed after the CEO assumed office (following Coles, Daniel, and Naveen (2014)).
Founder CEO	Equals one if the CEO's tenure reported in ExecuComp began prior to the firm's appearance in Compustat and zero otherwise.

IA.1 Internet Appendix to *"Buying Managerial Loyalty Through Performance-Based Pay: Theory and Evidence from Corporate Opportunity Waiver Laws"*

Table IA.1. Robustness Tests: DiD Estimators by Callaway and Sant'Anna (2021) and Nagengast, Rios-Avila, and Yotov (2024)

This table shows the effects of corporate opportunity waiver laws on the performance-based pay of CEO compensation using alternative DiD estimators. Treated firms are those incorporated in Nevada, New Jersey, Maryland, and Washington. Control firms include only those incorporated in states that never adopted corporate opportunity waiver laws. The sample is 2006–2020, with an event window of [-4, +4] years. Columns 1–2 report the average treatment effect using a DiD estimator of Callaway and Sant'Anna (2021), whereas Columns 3–4 report the average treatment effect using a DiD estimator of Nagengast, Rios-Avila, and Yotov (2024) with a Poisson model. Controls from Table 4 are included in Columns 2 and 4. CEO-firm fixed effects and year fixed effects are included in all specifications. t-statistics based on standard errors clustered by firm are reported in brackets. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. Variable definitions are provided in Appendix F.

Dependent Variable:	*Performance Pay*			
Method:	*Callaway and Sant'Anna (2021)*		*Nagengast, Rios-Avila, and Yotov (2024)*	
	(1)	(2)	(3)	(4)
COW	2.723**	4.076**	2.322 ***	1.496***
	[2.12]	[2.07]	[3.51]	[5.41]
Controls	N	Y	N	Y
CEO-Firm FE	Y	Y	Y	Y
Firm FE	N	N	N	N

Table IA.2. Restricting Sample to Firms Headquartered in a State Different from the State of Incorporation

This table shows the effects of corporate opportunity waiver laws on the performance-based pay of CEO compensation. The sample is restricted to firms headquartered in a state different from the state of incorporation and covers the period 2006–2020. A stacked difference-in-differences analysis is used. Treated firms are those incorporated in Nevada, New Jersey, Maryland, and Washington. Control firms include only those incorporated in states that never adopted corporate opportunity waiver laws. Poisson regressions are used in Columns 1, 2, and 4. OLS panel regressions are used in Column 3 when the dependent variable is a ratio between zero and one. The event window is [-4, +4]. CEO-firm fixed effects and year fixed effects are included. t-statistics based on standard errors clustered by firm are reported in brackets. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. Variable definitions are provided in Appendix F.

	Performance Pay	*Non-Performance Pay*	*% Performance Pay*	*Total Pay*
	(1)	(2)	(3)	(4)
COW	0.226***	-0.162**	0.075*	-0.009
	[2.98]	[-2.11]	[1.96]	[-0.11]
Log(Assets)	0.411***	0.243***	0.045	0.306***
	[4.70]	[3.11]	[1.64]	[5.17]
Tobins Q	0.011	0.020	-0.009	0.018
	[0.20]	[0.32]	[-0.67]	[0.49]
Debt/Assets	-0.805*	-0.412	-0.196*	-0.522***
	[-1.76]	[-1.42]	[-1.84]	[-2.66]
Firm ROA	-0.267	0.018	-0.036	-0.160
	[-0.66]	[0.08]	[-0.26]	[-0.80]
Stock Return	0.101***	-0.042	0.025	0.015
	[3.00]	[-0.36]	[0.97]	[0.25]
Observations	1,736	1,853	1,853	1,853
R-squared	0.804	0.795	0.728	0.873
CEO-Firm FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y

Table IA.3. Robustness Tests

This table reports various robustness tests on the effects of corporate opportunity waivers on CEO performance-based pay. A stacked difference-in-differences analysis is used, with an event window of [-4, +4] years. Treated firms are those incorporated in Nevada, New Jersey, Maryland, and Washington. Control firms include only those incorporated in states that have never adopted corporate opportunity waiver laws. The sample period is 2006–2020. Control variables from Table 4 are included in all panels. Panel A reports results for the sample that excludes firms from the oil and gas industry (SIC codes 1300-1339, 1370-1382, 1389, 2900-2912, and 2990-2999). Panel B reports results for the sample that excludes firms from the high-tech industry, as defined by Luo (2005). Panel C reports results for the sample that excludes the top lobbying firms in each treated state. Panel D presents robustness tests that drop the years of law adoption. Panel E presents robustness tests using propensity score matching, where each treated firm is matched to one control firm (within the same two-digit SIC code industry) based on total assets in the year before the law's adoption. In all panels, Poisson regressions are used in Columns 1, 2, and 4, while OLS panel regressions are used in Column 3 when the dependent variable is a ratio between zero and one. CEO-firm fixed effects and year fixed effects are included. *t*-statistics based on standard errors clustered at the state level are reported in brackets. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. Variable definitions are provided in Appendix F.

Panel A. Excluding Firms in the Oil & Gas Industry

	Performance Pay	*Non-Performance Pay*	*% Performance Pay*	*Total Pay*
	(1)	(2)	(3)	(4)
COW	0.249***	-0.163***	0.078***	0.069
	[2.84]	[-2.90]	[3.17]	[1.42]
Observations	7,762	7,963	7,963	7,963
R-squared	0.808	0.771	0.732	0.841
Controls	Y	Y	Y	Y
CEO-Firm FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y

Panel B. Excluding Firms in the High-Tech Industry

	Performance Pay	*Non-Performance Pay*	*% Performance Pay*	*Total Pay*
	(1)	(2)	(3)	(4)
COW	0.274**	-0.143***	0.084***	0.044
	[2.46]	[-2.96]	[3.08]	[1.00]
Observations	5,594	5,751	5,751	5,751
R-squared	0.794	0.782	0.723	0.850
Controls	Y	Y	Y	Y
CEO-Firm FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y

Panel C. Excluding Lobbying Firms in Treated States

	Performance Pay	*Non-Performance Pay*	*% Performance Pay*	*Total Pay*
	(1)	(2)	(3)	(4)
COW	0.201**	-0.103	0.066**	0.084*
	[2.30]	[-1.50]	[2.71]	[1.72]
Observations	7,741	7,914	7,914	7,914
R-squared	0.808	0.769	0.730	0.839
Controls	Y	Y	Y	Y
CEO-Firm FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y

Panel D. Dropping Year of State's Adoption

	Performance Pay	*Non-Performance Pay*	*% Performance Pay*	*Total Pay*
	(1)	(2)	(3)	(4)
COW	0.251***	0.072***	-0.169**	0.075
	[2.64]	[2.78]	[-1.99]	[1.19]
Observations	7,025	7,025	7,025	7,025
R-squared	0.812	0.711	0.786	0.843
Controls	Y	Y	Y	Y
CEO-Firm FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y

Panel E. Propensity Score Matching

	Performance Pay	*Non-Performance Pay*	*% Performance Pay*	*Total Pay*
	(1)	(2)	(3)	(4)
COW	0.230***	0.092**	-0.178*	0.079*
	[3.47]	[2.39]	[-1.88]	[1.78]
Observations	973	973	973	973
R-squared	0.783	0.689	0.793	0.853
Controls	Y	Y	Y	Y
CEO-Firm FE	Y	Y	Y	Y
Year FE	Y	Y	Y	Y

Table IA.4. Announcement Returns on COW Laws Enactment Dates

Panel A reports the mean cumulative abnormal return (CAR) and buy-and-hold abnormal returns (BHAR) around the enactment dates of COW laws for firms incorporated in treated states. We use the Fama-French-Carhart four-factor model and a window of (-1, 1) days, where day 0 is the enactment date. Panel B presents OLS regressions with enactment date CARs (using [-1,+1] window in Panel A) as the dependent variable regressed on firm characteristics measured the year before the COW enactment. All regressions include SIC2-digit industry and year fixed effects. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. Variable definitions are provided in Appendix F.

Panel A. Mean Enactment Date Announcement Returns

Variable	*Mean*	*t-stat*	*N*
CAR	0.35%	2.36**	671

Panel B. OLS Regressions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent Variable					*CAR*			
Log(Assets)	0.002						-0.003*	
	[1.50]						[-1.92]	
Log(MVE)		0.001						-0.003**
		[0.68]						[-2.00]
Tobin's Q			-0.002***				-0.001	-0.001
			[-2.75]				[-1.36]	[-0.67]
Debt/Assets				-0.000			0.006	-0.001
				[-0.03]			[0.47]	[-0.07]
Firm ROA					0.032***		0.016	0.017
					[3.54]		[1.10]	[1.15]
Ins. Ownership						0.009*	0.019**	0.021**
						[1.96]	[2.20]	[2.31]
Observations	512	609	452	512	452	479	314	314
R-squared	0.121	0.112	0.128	0.117	0.138	0.174	0.191	0.192
Ind FE	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y	Y