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# Not Clawing the Hand that Feeds You: The Case of Co-opted Boards and Clawbacks

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**ABSTRACT** We examine how board co-option, defined as the fraction of the board comprising directors appointed after the CEO assumed office, is related to clawback adoption. We find that co-opted boards have a lower probability of adopting clawback provisions. Further, the negative association between board co-option and clawback adoption is more pronounced when at least one co-opted member is on the compensation committee and when there is a higher likelihood that a clawback provision will be triggered. Finally, we find that board co-option is an important mechanism through which longer tenured CEOs reduce the likelihood of clawback adoption.

## 1. Introduction

Clawback provisions have become increasingly prevalent in recent years, with the aim to provide a punishment mechanism that more closely links an executive's compensation to his/her financial reporting behavior. Clawbacks typically allow firms to recoup compensation from executives in the event of an accounting restatement. Despite evidence that clawbacks affect important firm outcomes such as earnings management and contracting (e.g. Chan, Chen, & Chen, 2013; Chan, Chen, Chen, & Yu, 2012, 2015; Dehaan, Hodge, & Shevlin, 2013; Iskandar-Datta & Jia, 2013), their efficacy has been questioned because the provisions are rarely enforced (Babenko, Bennett, Bizjak, & Coles, 2015; Fried & Shilon, 2011). Instead of examining the outcomes of clawbacks, some studies focus on how various corporate governance mechanisms are associated with clawback adoption (e.g. Addy, Chu, & Yoder, 2014; Babenko et al., 2015). In this paper, we extend the literature by examining how a specific governance attribute, board co-option, affects the likelihood of a board adopting a clawback.

Board co-option is a relatively new construct in the corporate governance literature; it refers to how beholden directors are to the CEO. Coles, Daniel, and Naveen (2014) find that as board co-option increases, board monitoring weakens: turnover-performance sensitivity decreases,

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non-performance-related pay increases, and investment increases.<sup>1</sup> These effects are incremental to CEO tenure and other board characteristics such as board independence. Following Coles et al. (2014), we define a co-opted board as the fraction of the board made up of directors appointed after the CEO assumed office.

Our focus on co-opted boards is motivated by the fact that in practice, CEOs (and other top executives) are likely to exert considerable influence on the selection of board members (Coles et al., 2014). Related to the concept of co-opted boards is that of friendly boards (Adams & Ferreira, 2007). A distinction between co-opted boards and friendly boards, however, is that the former are not only likely to be friendly toward the CEO, but they are also likely to be more beholden to him/her, at least for the appointment to the board. The latter aspect makes the issue of ‘biting the hand that feeds you’ more salient. In matters of compensation, directors often have financial, social, and psychological reasons for favoring executives (Fried & Shilon, 2011). To the extent that directors feel loyal to an executive or otherwise care about their relationship with that person, the decision to adopt a policy to recover excess pay from that executive is likely to have a personal cost (Bebchuk & Fried, 2005; Fried & Shilon, 2011).<sup>2</sup> As the extent of co-option increases, a greater proportion of directors may take relational factors into account when deciding whether to adopt a clawback provision, suggesting that a board’s decision to adopt clawbacks is negatively associated with board co-option after controlling for CEO characteristics (e.g. CEO tenure), board characteristics (e.g. board independence), and other firm characteristics (e.g. profitability).<sup>3</sup>

However, prior studies also indicate that directors suffer from reputational damage in the labor market when they are implicated in financial misconduct (Brochet & Srinivasan, 2014; Ertimur, Ferri, & Maber, 2012; Fich & Shivdasani, 2007; Srinivasan, 2005). This concern about reputation value in the director labor market might fully mitigate the directors’ tendency to be beholden to the CEO, suggesting no association between clawback adoption and co-option. In the extreme, directors may even advocate for clawback adoption to demonstrate their commitment to board independence, which suggests a positive relation between clawback adoption and co-option. Hence, the relation between board co-option and clawbacks is ultimately an empirical question.

To examine the relation between board dynamics and clawbacks, we obtain information on board characteristics from Riskmetrics and information on clawbacks from GMI International. By merging these two sets of information and only focusing on firms that adopt clawback provisions during our sample period, we obtain a sample of 2900 firm-years over the 2007–2013 period. Using this sample, we examine whether co-opted boards have an incremental effect on clawback adoption after including controls for CEO, board, and other firm characteristics as well as year and firm fixed effects. Although the inclusion of firm fixed effects eliminates all firm-year observations where there are no changes in clawback status,<sup>4</sup> it also controls for

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<sup>1</sup>While Coles et al. (2014) provide no direct evidence of whether an increase in investment due to board co-option enhances or destroys shareholder value, based on related work by Pan, Wang, and Weisbach (2013) they suggest that such increased investment reflects overinvestment that harms shareholders.

<sup>2</sup>Even if there is a very low likelihood of enforcing clawbacks in the future, the adoption of a mechanism that has a non-zero probability of being detrimental to the future welfare of one’s benefactor/friend could be perceived as ‘unfriendly.’

<sup>3</sup>It is important to control for these characteristics to demonstrate the incremental effect of board co-option because studies have documented that such characteristics are associated with clawbacks (e.g. Addy et al., 2014; Babenko et al., 2015; Brown, Davis-Friday, & Guler, 2011; Chan et al., 2015; Dehaan et al., 2013). For example, Addy et al. (2014) show that greater management entrenchment is associated with a lower likelihood of clawbacks, while board interlocks with other companies with clawbacks are associated with a higher likelihood.

<sup>4</sup>During our sample period, no firms drop their clawback provisions.

any time-invariant firm-level omitted variables. In all of the empirical designs, we find robust evidence that co-opted boards are negatively associated with clawback adoption.

Next, we run two sets of cross-sectional analyses to enrich our examination of how the board's beholdenness to the CEO affects clawbacks and to provide some supporting identification of the causal effect.<sup>5</sup> First, we rely on the natural assumption that co-opted board directors are more likely to influence the adoption of a clawback policy if they are on the compensation committee because a clawback policy is essentially a component of a firm's entire remuneration policy (Babenko et al., 2015; Conyon & Peck, 1998; Dehaan et al., 2013). Consistent with our expectations, we find that the negative association between board co-option and clawback adoption is more pronounced when at least one co-opted member is present on the compensation committee. Second, we examine how the likelihood of triggering a clawback provision moderates the effect of board co-option on clawback adoption. We conjecture that co-opted boards are less likely to adopt clawbacks if there is a higher likelihood that the clawback provision will be triggered. Using prior restatements to proxy this likelihood, we find evidence that co-opted boards are less likely to adopt clawbacks if there is a higher likelihood that the provision will be triggered. In a supplementary analysis, we examine how board co-option is an underlying mechanism through which CEOs can exert their power to reduce the likelihood of clawback adoption. Using CEO tenure as a proxy for CEO power, we find significant evidence that CEO power is associated with higher board co-option, which is in turn associated with a reduced likelihood of clawbacks. The Sobel (1982) test provides further evidence of the statistical significance of board co-option as a mediating mechanism linking CEO power and clawback adoption.

We contribute to the literature that examines the consequences of having a board that is positively predisposed toward the CEO (e.g. Adams & Ferreira, 2007; Coles et al., 2014; Fracassi & Tate, 2012; Hwang & Kim, 2009).<sup>6</sup> We focus on board co-option as an important yet understudied dimension of board dynamics. Board co-option is an important dimension because of the concern that the CEO's involvement in the selection of the board directors could lead to beholdenness, which in turn weakens board monitoring and the CEO's (and other top executives') discipline. Unlike Coles et al. (2014), who focus on the implementation of ex post discipline by co-opted boards, we focus on the adoption of ex ante monitoring mechanisms, specifically clawbacks, to constrain bad behavior. To the best of our knowledge, our paper is the first to examine how the board's beholdenness to the CEO can affect its implementation of policies that specifically target financial misreporting.<sup>7</sup> Because clawbacks primarily relate to accounting restatements, they provide a unique opportunity to examine more closely how boards can actually perform their fiduciary duties in establishing policies to ensure that management complies with disclosure regulations. We find that after controlling for other governance attributes, co-opted boards are less likely to adopt clawbacks.

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<sup>5</sup>In addition to providing a richer analysis of the relation between board co-option and clawbacks, these cross-sectional analyses help to mitigate endogeneity concerns.

<sup>6</sup>For example, Fracassi and Tate (2012) show that CEO-director connections weaken board monitoring and destroy corporate value. Hwang and Kim (2009) find that firms with board members who are personally connected to the CEO have higher CEO compensation, lower pay-performance sensitivity, and lower turnover-performance sensitivity.

<sup>7</sup>Research in political science and finance also suggests that one reason policies are not implemented is because the policy makers do not want to 'bite the hand that feeds them.' For example, voting on antismoking legislation is associated with tobacco industry lobbying and campaign contributions (Givel & Glantz, 2001; Glantz & Begay, 1994; Monardi & Glantz, 1998). Ovtchinnikov and Pantaleoni (2012) report that Microsoft's political contributions increased significantly during the firm's antitrust litigation with the Department of Justice, with the latter finally announcing that it would not order the breakup of the company.

The remainder of this paper is organized as follows. Section 2 presents some background on clawbacks and our hypotheses. Section 3 covers the empirical analyses on board dynamics and clawbacks. Section 4 details our conclusions.

## **2. Background and Hypothesis Development**

### *2.1. Literature Review*

Since the early 2000s, firms have increasingly and voluntarily adopted clawbacks, particularly those triggered by material accounting restatements (Dehaan et al., 2013). This trend is probably driven by the financial reporting failures of the late 1990s and early 2000s as well as by increasing concern over how incentive compensation encourages accounting manipulation to increase executive pay. Recent studies examining the economic consequences of clawbacks typically focus on the fact that the adoption of clawbacks could have a positive impact on financial reporting ex ante by punishing executives for financial misreporting ex post. This positive impact could in turn be associated with various positive economic consequences, such as better loan terms and higher firm valuation.

Chan et al. (2012) demonstrate that the incidence of accounting restatements declines after firms initiate such provisions. In addition, they show that investors and auditors view such provisions as being associated with increased accounting quality and lower audit risk. Similarly, Dehaan et al. (2013) find that clawback provisions improve financial reporting quality. Chan et al. (2015) document that clawback initiation leads firms to replace accounting-based earnings manipulation with real activity management. Chan et al. (2013) examine the effect of clawbacks on bank loan contracting and document that banks use more financial covenants and performance pricing provisions in loan contracts and decrease interest rates after firms initiate clawbacks. Moreover, they find that loan maturity increases and loan collateral decreases in the wake of a clawback. Iskandar-Datta and Jia (2013) find that the shareholders of firms with clawback provisions are associated with higher stock valuations.

Some scholars question whether the benefits of clawback adoption that the accounting literature documents are simply artifacts of self-selection. That is, certain types of firms choose to adopt clawbacks, as opposed to clawbacks actually constraining the bad behavior that they target (Denis, 2012). For example, Fried and Shilon (2011) document that the overwhelming majority of clawback policies give directors complete discretion to forego a clawback of excess pay, even if the directors determine that the executive committed misconduct. Most of the remaining policies allow directors wide discretion in defining 'misconduct.' The authors conclude that only 5% of clawback policies require directors to recover excess pay, irrespective of whether there was a determination of misconduct. Babenko et al. (2015) examine the corporate proxy statements of 242 firms with restatements following the adoption of a clawback and find that compensation was recovered in only 3 instances, despite restatements serving as the most prominent trigger event in clawback policies.

Currently, clawback provisions related to material accounting restatements are still voluntary, and prior studies have focused on examining the provisions' economic consequences. A clawback provision reflects a proactive policy toward resolving agency problems, as opposed to a reactive policy such as firing the CEO. Boards play an important role in whether clawback provisions are adopted because they are essentially the 'regulators' within a firm. However, there is substantial debate about the efficacy of clawback provisions.

Section 304 of the Sarbanes-Oxley Act enables the SEC to clawback executive compensation when there is a material earnings misstatement arising from misconduct. However, due to the SEC's limited resources and the difficulty of proving that a restatement was the result of

misconduct, very few clawback cases have reached the courts (Fried & Shilon, 2011). Babenko et al. (2015) find little evidence that firms themselves trigger clawbacks to recover pay following a financial restatement or shareholder suit, even though restatements are the most prominent trigger events in clawback policies. One possible explanation Denis (2012) suggests is that while directors can, in theory, renegotiate future compensation or fire a manager following a financial restatement, they are reluctant to do so and are more likely to take the lesser step of requiring repayment of any ill-gotten gains. This approach is consistent with prior evidence showing that boards can be reluctant to take action against CEOs, even if such action is warranted (Adams, Hermalin, & Weisbach, 2010).

## 2.2. *The Effect of Board Co-option on Clawbacks*

The appointment of co-opted directors to the board is likely to be influenced by the CEO (and other top executives) (Coles et al., 2014). Carl Icahn, a famous activist investor, asserts that directors who are appointed by the CEOs whom they are supposed to be monitoring are essentially ‘cronies’ (*Business Week Online*, 18 November 2005). Although ‘cronies’ may seem like an exaggeration, at the minimum these directors are likely to be more sympathetic toward the CEO (Finkelstein & Hambrick, 1989). Because of concerns about board capture, the NYSE and NASDAQ have adopted listing requirements that substantially reduce CEOs’ direct influence over the process of nominating directors to the board. For example, the NYSE requires the committee to be composed entirely of independent directors. However, as Coles et al. (2014) note, CEOs are likely to influence the board nomination process despite increasing attempts to reduce their role. They are likely to sway the selection of the slate of directors being nominated, a slate that is typically voted in by shareholders (Cai, Garner, & Walkling, 2009; Hermalin & Weisbach, 1998). Consistent with the notion of board capture, Coles et al. (2014) find that greater board co-option leads to weaker board monitoring by diminishing turnover-performance sensitivity, increasing pay (without a commensurate increase in pay-performance sensitivity), and increasing empire building.

We extend the work of Coles et al. (2014) by examining how co-option affects clawback implementation. An examination of clawbacks in the context of co-opted boards is a natural extension of Coles et al. (2014) because the implementation of clawbacks in the context of a co-opted board can be regarded as analogous to the proverbial ‘biting the hand that feeds you,’ i.e. turning against a benefactor.<sup>8</sup> Clawbacks, by their very nature, impose an expected cost of employment on the CEO (and other top executives) because of the non-zero probability that their compensation will be recovered by the firm.

With clawback provisions, the financial benefit to directors in recovering excess pay from the executive is extremely small relative to the cost because directors typically hold a very small equity stake in the firm. Bebchuk and Fried (2005) argue that directors are unlikely to bear reputational costs for their CEO pay decisions because most such decisions can be justified on economic grounds *ex post*. In addition, developing a reputation as a director who blocks compensation arrangements sought by executives can only hurt the director’s chances of being invited to join other boards (Fried & Shilon, 2011).

Executives, especially CEOs, have power and influence over directors that make it personally costly and difficult for the latter to make compensation decisions that executives oppose

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<sup>8</sup>The audit literature has examined how auditors who are more reliant on their clients, for instance regarding non-audit fees, are less stringent with regard to allowing financial manipulation and misreporting in client audits (e.g. Klein, 2002; Abbott, Parker, & Peters, 2004). One might argue that this approach is similar in spirit to having an implicit policy of not ‘biting the hand that feeds you.’



(Bebchuk & Fried, 2005; Fried & Shilon, 2011). There are numerous financial, social, and psychological reasons behind directors' reluctance, especially if they are appointed by the CEO to make shareholder-serving compensation decisions. For example, a director who was put on the board by a particular executive may feel disloyal when subsequently suggesting that the executive's pay should be reduced or more closely tied to performance. Director compensation may also be adversely affected because of its close links to CEO compensation (Brick, Palmon, & Wald, 2006). To the extent that directors feel loyal to the executive or otherwise care about their relationship with him/her, they are likely to find the decision to recover excess pay to be personally costly. These costs are likely to exceed whatever small personal financial benefit is gained from recovering such excess pay. Hence, we expect that a more co-opted board, due to the directors' indebtedness to the CEO, is less likely to adopt a clawback provision.

However, previous studies also indicate that directors suffer from reputation penalties when they are implicated in financial misconduct, such as alleged financial misrepresentation and financial restatements (Fich & Shivdasani, 2007; Srinivasan, 2005). Similarly, Ertimur et al. (2012) report that the directors, particularly the compensation committee members, of firms involved in the option backdating scandal suffered reputation penalties. Brochet and Srinivasan (2014) find that independent directors are held accountable when investors sue firms for financial and disclosure-related fraud.<sup>9</sup> To the extent that all directors, including those who have been co-opted, seek to protect their reputation in the labor market, we would observe no association between board co-option and clawback adoption.

The relation between board co-option and clawback adoption may also be positive. For example, the co-opted directors may signal to the director labor market by advocating the clawback adoption to demonstrate their commitment to board independence. CEOs may view the adoption of clawback as a cheap form of window dressing, hence supporting it to provide the appearance of good governance to investors while knowing that the provision will never be binding. Another possible reason to expect a positive association is that Dehaan et al. (2013) document an increase in total CEO compensation (in particular, base salary) following clawback adoption.

To summarize, the relation between board co-option and clawbacks is ultimately an empirical question. Hence, we state the hypothesis in null form:

H1: Firms with co-opted boards are not associated with clawback adoption.

### *2.3. Cross-sectional Analyses of the Effect of Board Co-option on Clawbacks*

In this section, we present two hypotheses that explore the cross-sectional variation in the link between board co-option and clawbacks. These analyses have two objectives. First, we want to provide richer analyses of the underlying mechanism behind clawback adoption and the factors considered by co-opted boards in adopting clawback provisions. To achieve the former, we examine the impact of having a co-opted director on the compensation committee. For the latter, we examine an important consideration for any policy-maker when implementing a policy – the likelihood of having to enforce it. This consideration is more pertinent for co-opted boards because they are more likely to be beholden to the CEO, against whom they may have to act in

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<sup>9</sup>However, the evidence is far from conclusive. Agarwal, Jaffe, and Karpoff (1999) find that director turnover is unchanged after fraud, and Fich and Shivdasani (2007) find that directors do not leave a sued firm beyond normal levels. Other studies also conclude that the related financial loss borne by outside directors is generally small, if any (Black, Cheffins, & Klausner, 2006; Srinivasan, 2005).



the future. Second, we aim to rely on these analyses to further identify the causal effect of board co-option on clawbacks.<sup>10</sup>

### 2.3.1. *Having a co-opted director on the compensation committee*

Among board committees, the compensation committee has a significant influence over issues related to CEO compensation (Conyon & Peck, 1998). Many academics argue in favor of having an independent compensation committee to ensure that top executives act in the interests of shareholders (Main & Johnston, 1993; Williamson, 1985). Because clawbacks concern CEO compensation, if a subcommittee within the board is assigned to consider and make recommendations about their use, this task is most likely to be delegated to the compensation committee. As Babenko et al. (2015) report, the primary enforcer of clawback provisions is the board's compensation committee.<sup>11</sup>

The compensation arrangements that are determined by the compensation committee are influenced by many factors other than performance. For example, O'Reilly, Main, and Crystal (1988, p. 271) hypothesize that CEO pay might be driven by social norms 'in which individuals base their judgments on a self-referential starting point, in this case, perhaps setting CEO compensation level initially based on their own level but possibly ending up with something higher.' Based on results showing that CEO pay is higher when the average salary of the compensation committee members is higher, they conclude that the evidence is consistent with a social comparison theory perspective.

Williamson (1985) suggests that the absence of an independent compensation committee could be viewed as an executive writing his/her employment contract with one hand and then signing it with the other. Based on the conjecture that having a co-opted director on the compensation committee reduces the committee's independence and its directors' willingness to 'claw the hand that feeds them,' our second hypothesis is as follows:

H2: The association between board co-option and clawback adoption is more pronounced when a co-opted director is on the compensation committee.

### 2.3.2. *The likelihood of a clawback provision being triggered in the future*

Clawbacks impose a non-zero probability that the CEO's compensation will be recovered in the event of financial misreporting. The decision to have a clawback provision is likely to involve many serious considerations, one of which is the probability that the provision will have to be enforced. A co-opted director is less likely to support the adoption of clawbacks if there is a higher likelihood that the provision will be triggered. Hence, our final hypothesis is as follows:

H3: The association between board co-option and clawback adoption is more pronounced when there is a higher likelihood that a clawback provision will be triggered in the future.

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<sup>10</sup>To the extent that the results of these analyses are consistent with expectations regarding the factors that could moderate the effect of board co-option on clawback adoption, the likelihood is reduced that an (uncontrolled) omitted factor correlated with board co-option drives the association between board co-option and clawback adoption.

<sup>11</sup>The compensation committee would propose a clawback. For example, Compensation Advisory Partners (2015, pp. 153–154) indicates the key questions that compensation committee members should discuss when considering a clawback provision. This provides some evidence that compensation committees are indeed heavily involved in the decision to adopt clawbacks.

### 3. Sample and Empirical Results

We obtain the director data from Riskmetrics and the Investor Responsibility Research Center (IRRC), clawback data from GMI Ratings,<sup>12</sup> CEO data from Execucomp, and financial data from the Compustat Fundamentals Annual database. The sample period is from 2007 to 2013. The sample period begins in 2007 because GMI Ratings' coverage of clawbacks only starts in that year. We exclude financial firms from the analysis because financial institutions that received federal bailout funds during the financial crisis in 2008 and 2009 were subject to mandatory clawbacks enforced by the Department of Treasury, whereas our goal is to examine how board co-option affects firms' voluntary implementation of clawback provisions. Because clawbacks can violate home country laws for some foreign firms, we remove such firms from our sample (Fried & Shilon, 2011). The resulting sample consists of 6399 firms-years. Because we are also interested in within-firm variation in the predictor variables to explain the within-firm variation in the predicted variable, firms with no variation in clawbacks over the sample period are dropped. In other words, this analysis focuses on firms that adopt clawback provisions during our sample period, which thus allows us to draw causal inferences. To be included in our second sample set, a firm must have gone from having no clawback provision to adopting such a provision within our sample period. This approach results in a significant reduction in the sample size, from 6399 to 2900 firm-year observations. We report the results based on the above two samples separately.

#### 3.1. Keys Measures: Co-option and Clawbacks

Following Coles et al. (2014), we use two main measures of co-option. The first is based on directors elected after the CEO takes office. Specifically, we measure co-option as follows:

$$\text{Co-option} = \frac{\text{Number of co-opted directors}}{\text{Board size}},$$

where *Number of co-opted directors* is the number of directors who are elected after the CEO takes office and *Board size* is the total number of directors. *Co-option* ranges from 0 to 1, with a higher value indicating greater board capture.

The second measure of co-option focuses on co-opted directors' tenure, with the underlying presumption that a director who has been on the board longer has greater influence:

$$\text{TW Co-option} = \frac{\sum_{i=1}^{\text{board size}} \text{Tenure}_i * \text{Co-opted Director Dummy}_i}{\sum_{i=1}^{\text{board size}} \text{Tenure}_i},$$

where *Co-opted Director Dummy<sub>i</sub>* equals one if director *i* is a co-opted director and zero otherwise. *Tenure<sub>i</sub>* refers to director *i*'s tenure on the board. *TW Co-option* ranges from 0 to 1, with a higher value indicating greater board capture.

Data on voluntary clawback provisions are obtained from GMI Ratings. Specifically, GMI Ratings maintains a database on the adoption of clawbacks based on firms' annual proxy statements. *Clawback* is coded one if a firm has a clawback provision during the year and zero otherwise.

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<sup>12</sup>Formed in 2010 through the merger of the Corporate Library, Governance Metrics International and Audit Integrity, GMI Ratings provides global research coverage of the environmental, social, governance, and accounting-related risks that affect the performance of public companies. Prior studies using these data (e.g. Dehaan et al., 2013; Chan et al., 2015) cite the Corporate Library as the data source.

### 3.2. Relation Between Clawbacks and Co-option

To examine the relation between clawbacks and co-option, we rely on the following logistic regression specification:

$$\text{Clawback}_{it} = \beta_0 + \beta_1 \text{Board Co-option}_{it} + \beta' X_{it} + \varepsilon_{it}. \quad (1)$$

*Board Co-option* is either *Co-option* or *TW Co-option*. *Clawback*, *Co-option*, and *TW Co-option* are defined in Section 3.1.  $i$  indexes firms, and  $t$  denotes time.  $X$  represents our control variables. Similar to Coles et al. (2014), the focus of our analyses is on the unique aspect of the board being beholden to the CEO, as opposed to simply CEO power/entrenchment or other board characteristics. In addition to controlling for CEO power/entrenchment using the natural logarithm of one plus the number of years since the CEO's appointment (*CEO Tenure*), we include two other proxies, *CEO Duality* and *CEO Ownership*, in the regression model. *CEO Duality* is an indicator variable that equals one if the CEO is also the board chair and zero otherwise. A CEO who is also the chair is likely to be more powerful (Hermalin & Weisbach, 1998). *CEO Ownership* is the percentage of outstanding shares held by the CEO, as one who owns more of the firm's outstanding shares is likely to be more powerful. Because CEO turnover may potentially confound the results, we include *CEO turnover*, an indicator variable that equals one if there is a change in CEO during the year and zero otherwise. We also control for changes in CEO compensation, which are known to occur around clawback adoption (Dehaan et al., 2013). We first consider two measures related to the composition (or 'mix') and magnitude (or 'level') of the CEO's annual compensation. They are (i) *Total Comp*, the natural logarithm of the value of the CEO's total annual compensation (i.e. salary, bonus, restricted stock and option grants, and long-term incentive plan payouts), and (ii) *% Equity Comp*, defined as *Equity Comp* divided by *Total Comp*, where *Equity Comp* is the natural logarithm of an adjusted Black-Scholes value of the CEO's option and fair value of restricted stock grants received during the year. In addition to these two measures of CEOs' annual (or 'flow') compensation, we control for two common measures of the incentives provided by CEOs' equity portfolio (i.e. stock and option) holdings. The first measure of equity incentives is *Portfolio Delta*, which captures the sensitivity of a CEO's equity portfolio value to changes in stock price. The second measure of equity incentives is *Portfolio Vega*, which captures the sensitivity of a CEO's equity portfolio value to changes in the volatility of stock returns. We follow the literature (e.g. Coles, Daniel, & Naveen, 2006; Core & Guay, 1999) and measure *Portfolio Delta* as the natural logarithm of the change in the risk-neutral (Black-Scholes) value of the CEO's equity portfolio given a 1% change in the firm's stock price, and *Portfolio Vega* as the natural logarithm of the change in the risk-neutral (Black-Scholes) value of the CEO's equity portfolio given a 0.01 change in the risk of the company's stock (measured by the standard deviation of the firm's return).

Next, we control for a set of board variables to ensure that we are capturing the incremental effect of the board being beholden to the CEO. It is possible that this dimension of the board is correlated with many other dimensions that have been examined in the corporate governance literature (e.g. Adams et al., 2010; Addy et al., 2014; Goh, Lee, Ng, & Yong, 2016; Jia, 2017; Zhang & Yu, 2016). Hence, we include controls for the percentage of independent directors on the board (*Independence*); the percentage of directors who own more than 5% of the firm's outstanding shares (*Blockholder Directors*); the percentage of directors who hold more than two outside board seats (*Busy Board*); the total number of directors on the board (*Board Size*); the number of directors on the audit committee (*Audit Committee*); the percentage of directors who attend less than 75% of board meetings (*Board Meetings*); an indicator variable that equals one if there is at least one interlocked director on the board and zero otherwise (*Board Interlock*);

whether the company has dual classes of stock (*Dual class*); and whether the board is classified (*Classified Board*).

In addition to CEO and board characteristics, we control for the shareholders' voting rights (Addy et al., 2014). The six voting indices are obtained from Gompers, Ishii, and Metrick (2003) and include limits on shareholders' ability to amend the bylaws (*Limit Amend Bylaws*), the charter (*Limit Amend Charter*), cumulative voting rights (*Cumulative Voting*), secret balloting rights (*Secret Ballot*), super majority voting rights (*Super Majority*), and unequal voting rights (*Unequal Voting*).

We control for other firm-level characteristics that influence both board co-option and clawbacks, such as the presence of external monitors, by including the percentage of outstanding shares owned by institutional investors (*Institutional Ownership*) and the log of 1 plus the number of analysts following a firm (*Analyst Following*). We also include control variables that capture common firm characteristics, namely, firm size (*Size*), accounting profitability (*Profit*), leverage ratio (*Leverage*), growth opportunities (*MB*), and the number of segments (*Segment*), together with year, industry, or firm fixed effects in various regression specifications.

The objective of including the above comprehensive set of control variables and firm fixed effects is to mitigate the endogeneity concerns prevalent in the corporate governance literature (Adams et al., 2010; Hermalin & Weisbach, 1998). Controlling for these variables and fixed effects is important for documenting the incremental effect of board co-option, which is a unique construct introduced by Coles et al. (2014) to capture the notion of the board being beholden to the CEO. For ease of reference, the definitions of all of the above variables are outlined in the appendix. All standard errors are clustered by firm.

### 3.3. Main Results

Table 1 provides some descriptive information on the variables used in Equation (1). Panel A shows the distribution of the firms within our sample for the period between 2007 and 2013. *Co-option* and *TW Co-option* are fairly stable across the years, indicating that the degree of board co-option remains relatively constant over our sample period. We observe an increasing trend of clawback adoption over the sample period, which is consistent with the trend reported in prior studies (e.g. Chan et al., 2012). The relatively constant degree of co-option and the increasing prevalence of clawbacks over time suggest that time trends are unlikely to explain any association between co-option and clawbacks. Nevertheless, as noted earlier, we include year fixed effects to examine the association between co-option and clawbacks within years.

Panel B presents the descriptive statistics for the variables. The mean of *Clawback* is 0.405, indicating that 40.5% of the observations within our sample have a clawback provision. *Co-option* indicates that co-opted directors comprise 44.2% of the board of directors on average. *TW Co-option* indicates the total tenure of the co-opted directors relative to the total tenure of the entire board. The average *TW Co-option* of 21.0%, compared with the average *Co-option* of 44.2%, suggests that co-opted directors have fewer years of experience on the board than do non-co-opted directors. This result is expected because co-opted (non-co-opted) directors are defined as those appointed after (before) the current CEO took office. On average, 79.7% of the board members are independent, which suggests, when compared with the average *Co-option* of 44.2%, that 35.5% of the directors are deemed independent but are in fact co-opted. Furthermore, the average board size in our sample is 9.42, 53.0% of the CEOs are also the board chair, and 22.4% of the directors hold more than two outside board seats. On average, 41.7% of the compensation committee has at least one co-opted director (*I(Co-opt Com)*), and 13.8% of the firms announced financial income-decreasing restatements during the preceding two years (*Restate*). Other characteristics of the boards and firms are presented in Panel B of Table 1.

**Table 1.** Sample.

Panel A: Distribution of observations over time				
Year	Number of Firms	Co-option	TW Co-option	Clawback
2007	852	46.99%	18.80%	18.90%
2008	906	45.40%	17.45%	24.94%
2009	975	44.98%	18.53%	33.85%
2010	898	42.96%	22.75%	39.09%
2011	960	43.99%	24.91%	46.98%
2012	970	43.10%	23.22%	55.46%
2013	838	42.12%	21.14%	64.08%

  

Panel B: Descriptive statistics					
	Mean	Median	Std	P25	P75
<i>Clawback</i>	0.405	0.000	0.491	0.000	1.000
<i>Co-option</i>	0.442	0.400	0.300	0.200	0.667
<i>TW Co-option</i>	0.210	0.123	0.225	0.018	0.365
<i>CEO Tenure</i>	2.606	2.773	0.466	2.398	2.944
<i>CEO Duality</i>	0.530	1.000	0.499	0.000	1.000
<i>CEO Ownership</i>	0.013	0.003	0.033	0.001	0.009
<i>CEO Turnover</i>	0.076	0.000	0.265	0.000	0.000
<i>Total Comp</i>	8.293	8.346	0.920	7.674	8.927
<i>% Equity Comp</i>	0.729	0.797	0.206	0.662	0.870
<i>Portfolio Delta</i>	5.338	5.335	1.418	4.401	6.273
<i>Portfolio Vega</i>	3.634	4.071	2.574	2.650	5.187
<i>Independence</i>	0.797	0.818	0.104	0.727	0.889
<i>Blockholder Directors</i>	0.085	0.000	0.278	0.000	0.000
<i>Busy Board</i>	0.224	0.200	0.176	0.100	0.333
<i>Board Size</i>	9.416	9.000	2.219	8.000	11.000
<i>Audit Committee</i>	3.887	4.000	1.016	3.000	4.000
<i>Board Meetings</i>	0.005	0.000	0.023	0.000	0.000
<i>Dual Class</i>	0.046	0.000	0.209	0.000	0.000
<i>Classified Board</i>	0.477	0.000	0.499	0.000	1.000
<i>Limit Amend Bylaws</i>	0.902	1.000	0.297	1.000	1.000
<i>Limit Amend Charter</i>	0.926	1.000	0.262	1.000	1.000
<i>Cumulative Voting</i>	0.069	0.000	0.253	0.000	0.000
<i>Secret Ballot</i>	0.137	0.000	0.344	0.000	0.000
<i>Super Majority</i>	0.414	0.000	0.493	0.000	1.000
<i>Unequal Voting</i>	0.023	0.000	0.149	0.000	0.000
<i>Institutional Ownership</i>	0.771	0.802	0.189	0.685	0.902
<i>Analyst Following</i>	2.201	2.303	0.810	1.792	2.773
<i>Size</i>	7.868	7.703	1.489	6.753	8.849
<i>Leverage</i>	0.169	0.149	0.149	0.027	0.269
<i>Profit</i>	0.132	0.125	0.086	0.079	0.178
<i>MB</i>	2.756	1.996	2.653	1.311	3.186
<i>Segment</i>	0.825	0.693	0.509	0.693	1.099
<i>I(Co-opt Com)</i>	0.417	0.000	0.493	0.000	1.000
<i>Restate</i>	0.138	0.000	0.345	0.000	0.000

Notes: This table presents descriptive information about the sample. There are 6399 firm-year observations from 2007–2013. Panel A reports the distribution of the observations over time. Panel B provides more descriptive statistics for the variables used in our analyses of the relation between clawbacks and board co-option. All variables are defined in the appendix.

Table 2 presents the Pearson correlations among the variables. As expected, there is a positive correlation between the two co-option measures, *Co-option* and *TW Co-option*. The correlations between the key variables of interest offer some preliminary evidence of a negative relation between co-option and clawbacks. The correlation between *Clawback* and *Co-option* (*TW Co-option*) is  $-0.22$  ( $-0.23$ ) and is statistically significant at the 1% level.

Table 2. Correlations.

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]
[1] <i>Claw</i>	1.00																
[2] <i>Co-option</i>	-0.22	1.00															
[3] <i>TW Co-option</i>	-0.23	0.50	1.00														
[4] <i>CEO Tenure</i>	0.14	0.17	0.14	1.00													
[5] <i>CEO Duality</i>	-0.02	0.20	0.24	0.22	1.00												
[6] <i>CEO Ownership</i>	-0.19	0.29	0.29	0.15	0.14	1.00											
[7] <i>CEO Turnover</i>	0.00	0.06	-0.18	0.03	-0.13	-0.04	1.00										
[8] <i>Total Comp</i>	0.28	-0.05	-0.10	0.23	0.15	-0.21	0.01	1.00									
[9] <i>% Equity Comp</i>	0.19	-0.06	-0.09	0.11	0.06	-0.19	-0.01	0.72	1.00								
[10] <i>Portfolio Delta</i>	0.03	0.22	0.24	0.28	0.25	0.37	-0.05	0.44	0.28	1.00							
[11] <i>Portfolio Vega</i>	0.11	-0.01	-0.02	0.13	0.12	-0.10	0.00	0.35	0.27	0.41	1.00						
[12] <i>Independence</i>	0.23	-0.05	-0.04	0.12	0.16	-0.27	-0.02	0.27	0.26	-0.02	0.15	1.00					
[13] <i>Blockholder Directors</i>	-0.05	-0.04	-0.03	-0.05	-0.11	0.04	0.05	-0.11	-0.10	-0.06	-0.08	-0.10	1.00				
[14] <i>Busy Board</i>	0.19	-0.08	-0.15	0.11	0.12	-0.16	0.04	0.40	0.30	0.20	0.18	0.30	-0.06	1.00			
[15] <i>Board Size</i>	0.30	-0.17	-0.20	0.18	0.08	-0.20	0.05	0.34	0.15	0.13	0.18	0.20	0.02	0.22	1.00		
[16] <i>Audit Committee</i>	0.21	-0.14	-0.13	0.16	0.09	-0.15	0.01	0.21	0.10	0.03	0.08	0.26	-0.04	0.20	0.48	1.00	
[17] <i>Board Meetings</i>	-0.03	0.01	0.02	-0.04	-0.01	0.01	-0.01	0.00	0.00	0.01	0.01	-0.03	0.03	0.01	0.05	0.01	1.00
[18] <i>Dual Class</i>	-0.05	0.05	0.01	0.02	-0.03	0.13	-0.01	0.02	-0.03	0.09	0.01	-0.21	0.03	-0.05	0.01	-0.06	0.05
[19] <i>Classified Board</i>	-0.11	0.03	0.03	-0.10	0.05	0.08	-0.01	-0.15	-0.08	-0.05	-0.03	-0.07	-0.01	-0.10	-0.07	-0.03	0.04
[20] <i>Limit Amend Bylaws</i>	0.04	-0.01	0.00	0.04	0.01	-0.05	-0.01	0.07	0.10	0.02	0.07	0.04	-0.02	0.04	0.01	0.00	0.02
[21] <i>Limit Amend Charter</i>	0.06	-0.05	0.01	0.10	-0.02	-0.08	-0.02	0.05	0.04	0.04	0.06	0.06	0.02	0.04	0.08	0.06	0.02
[22] <i>Cumulative Voting</i>	-0.04	-0.03	-0.03	0.03	-0.02	-0.02	0.00	-0.10	-0.07	-0.06	-0.03	-0.02	0.03	-0.04	-0.03	0.04	0.00
[23] <i>Secret ballot</i>	0.14	-0.07	-0.10	0.11	0.09	-0.09	0.02	0.21	0.12	0.12	0.11	0.15	-0.07	0.17	0.21	0.14	0.00
[24] <i>Super Majority</i>	0.29	-0.10	-0.13	0.18	0.03	-0.15	0.01	0.37	0.25	0.18	0.16	0.23	-0.09	0.23	0.24	0.18	-0.05
[25] <i>Unequal Voting</i>	0.00	0.03	0.01	0.04	-0.05	0.08	0.00	0.04	0.01	0.09	0.00	-0.11	0.03	-0.03	0.02	-0.02	0.05
[26] <i>Institutional Ownership</i>	-0.11	0.07	0.05	-0.10	-0.04	-0.09	0.00	0.01	0.09	0.02	0.06	0.05	-0.09	0.02	-0.24	-0.12	0.00
[27] <i>Analyst Following</i>	0.15	-0.01	0.00	0.14	0.08	-0.12	0.02	0.36	0.25	0.28	0.19	0.13	-0.11	0.20	0.20	0.12	0.00
[28] <i>Size</i>	0.34	-0.12	-0.14	0.28	0.15	-0.21	0.02	0.70	0.44	0.56	0.35	0.23	-0.11	0.41	0.51	0.30	0.01
[29] <i>Leverage</i>	0.09	-0.02	-0.06	0.09	0.05	-0.09	0.02	0.21	0.16	0.05	0.06	0.12	-0.02	0.15	0.14	0.12	-0.01

(Continued).

**Table 2.** Continued.

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	
[30]	<i>Profit</i>	-0.03	-0.01	0.01	-0.06	0.00	0.03	-0.01	0.11	0.12	0.23	0.06	-0.03	0.01	0.05	-0.15	-0.07	-0.01	
[31]	<i>MB</i>	0.03	0.00	0.00	-0.03	-0.02	-0.01	-0.01	0.13	0.14	0.25	0.09	0.03	0.00	0.08	-0.04	-0.03	0.00	
[32]	<i>Segment</i>	0.03	-0.02	-0.04	0.11	0.06	-0.03	0.02	0.07	0.07	0.00	-0.02	0.04	-0.03	0.12	-0.06	0.05	0.02	
[33]	<i>I(Co-opt Comp)</i>	-0.19	0.40	0.78	0.11	0.13	0.25	-0.16	-0.12	-0.11	0.18	-0.03	-0.11	-0.01	-0.18	-0.20	-0.12	0.01	
[34]	<i>Restate</i>	-0.08	0.02	0.00	-0.02	-0.03	0.00	0.01	-0.05	-0.02	-0.07	-0.01	0.01	0.02	-0.01	-0.07	-0.08	0.00	
		[18]	[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]	[31]	[32]	[33]		
[18]	<i>Dual Class</i>	1.00																	
[19]	<i>Classified Board</i>	-0.03	1.00																
[20]	<i>Limit Amend Bylaws</i>	-0.01	0.02	1.00															
[21]	<i>Limit Amend Charter</i>	-0.01	0.09	0.13	1.00														
[22]	<i>Cumulative Voting</i>	-0.03	-0.05	-0.03	0.00	1.00													
[23]	<i>Secret Ballot</i>	-0.06	-0.09	0.07	0.03	0.02	1.00												
[24]	<i>Super Majority</i>	-0.12	-0.15	0.04	0.08	-0.13	0.18	1.00											
[25]	<i>Unequal Voting</i>	0.58	-0.07	-0.01	0.02	-0.02	-0.03	-0.06	1.00										
[26]	<i>Institutional Ownership</i>	0.03	0.04	0.13	0.10	-0.04	-0.09	-0.02	-0.01	1.00									
[27]	<i>Analyst Following</i>	-0.06	-0.10	0.06	0.01	-0.01	0.10	0.25	-0.02	0.06	1.00								
[28]	<i>Size</i>	0.02	-0.21	0.05	0.07	-0.05	0.30	0.44	0.05	-0.12	0.50	1.00							
[29]	<i>Leverage</i>	0.00	-0.05	-0.04	0.01	-0.05	0.10	0.14	0.02	0.00	-0.01	0.15	1.00						
[30]	<i>Profit</i>	0.02	-0.01	-0.04	-0.08	-0.02	0.00	0.04	0.03	0.12	0.14	0.18	0.00	1.00					
[31]	<i>MB</i>	0.03	0.00	0.01	-0.02	-0.04	0.05	0.05	0.06	0.05	0.14	0.23	0.08	0.44	1.00				
[32]	<i>Segment</i>	-0.01	0.02	0.00	-0.01	-0.01	0.08	0.03	-0.01	-0.02	-0.06	0.05	0.11	0.08	0.00	1.00			
[33]	<i>I(Co-opt Comp)</i>	0.03	0.00	0.00	0.00	0.00	-0.11	-0.13	0.02	0.04	-0.01	-0.15	-0.06	0.02	0.00	-0.05	1.00		
[34]	<i>Restate</i>	0.03	0.01	0.04	0.01	0.02	-0.04	-0.03	0.02	0.05	-0.04	-0.09	0.00	-0.08	-0.05	0.02	0.00		

Notes: This table presents the Pearson correlations among the variables used in our analyses of the relation between clawbacks and board co-option. All correlations with absolute values greater than 0.05 are statistically significant at the 0.01 level or lower (two-tailed). All variables are defined in the appendix.



Table 3 documents the regression results based on Equation (1). Columns 1 and 2 present the results with firm and year fixed effects, and Columns 3 and 4 present the results with industry and year fixed effects. For each set of results, we use *Co-option* and *TW Co-option* as the measure of co-option. In Columns (1) and (2), we find consistent evidence that board co-option is negatively and significantly associated with the likelihood of adopting a clawback provision. The coefficient

**Table 3.** Relation between clawbacks and board co-option.

Measure of Board Co-option	(1)	(2)	(3)	(4)
	<i>Co-option</i>	<i>TW Co-option</i>	<i>Co-option</i>	<i>TW Co-option</i>
<b>Board Co-option</b>	<b>-1.616</b>	<b>-3.418</b>	<b>-1.115</b>	<b>-2.236</b>
	(-2.94)***	(-3.69)***	(-6.24)***	(-8.83)***
<i>CEO Tenure</i>	-0.325	-0.647	0.116	0.150
	(-0.41)	(-0.82)	(0.85)	(1.13)
<i>CEO Duality</i>	-0.262	0.017	-0.094	0.000
	(-0.97)	(0.05)	(-0.82)	(0.00)
<i>CEO Ownership</i>	16.795	15.749	-1.336	-1.850
	(1.71)*	(1.74)*	(-0.43)	(-0.62)
<i>CEO Turnover</i>	0.273	-0.121	0.037	-0.285
	(1.12)	(-0.48)	(0.33)	(-2.54)**
<i>Total Comp</i>	0.105	0.138	0.217	0.187
	(0.40)	(0.53)	(2.30)**	(1.97)**
<i>% Equity Comp</i>	-0.680	-1.151	-0.128	-0.162
	(-0.68)	(-1.19)	(-0.38)	(-0.49)
<i>Portfolio Delta</i>	-0.611	-0.501	-0.260	-0.196
	(-2.96)***	(-2.15)**	(-3.85)***	(-2.95)***
<i>Portfolio Vega</i>	0.143	0.137	0.050	0.047
	(1.54)	(1.45)	(1.66)*	(1.58)
<i>Independence</i>	-2.225	-1.573	2.232	2.374
	(-1.16)	(-0.80)	(3.71)***	(3.95)***
<i>Blockholder Directors</i>	-0.027	0.026	-0.177	-0.185
	(-0.06)	(0.05)	(-1.06)	(-1.09)
<i>Busy Board</i>	2.050	2.037	0.896	0.776
	(2.04)**	(1.98)**	(2.67)***	(2.31)**
<i>Board Size</i>	0.145	0.140	0.117	0.111
	(1.42)	(1.35)	(3.70)***	(3.45)***
<i>Audit Committee</i>	0.105	0.091	0.034	0.045
	(0.78)	(0.66)	(0.61)	(0.81)
<i>Board Meetings</i>	-3.959	-3.947	-2.615	-2.596
	(-1.77)*	(-1.70)*	(-1.77)*	(-1.70)*
<i>Dual Class</i>	-0.364	-0.633	-0.040	-0.098
	(-0.55)	(-1.10)	(-0.12)	(-0.29)
<i>Classified Board</i>	0.228	0.244	-0.063	-0.084
	(0.54)	(0.55)	(-0.59)	(-0.78)
<i>Limit Amend Bylaws</i>	0.568	0.539	-0.061	-0.049
	(1.10)	(0.99)	(-0.33)	(-0.26)
<i>Limit Amend Charter</i>	0.039	0.067	-0.172	-0.133
	(0.06)	(0.11)	(-0.83)	(-0.62)
<i>Cumulative Voting</i>	-0.535	-0.603	-0.181	-0.243
	(-0.76)	(-0.76)	(-0.76)	(-1.02)
<i>Secret ballot</i>	1.567	1.327	0.182	0.155
	(1.22)	(1.28)	(1.13)	(0.98)
<i>Super Majority</i>	-0.077	-0.071	0.347	0.297
	(-0.22)	(-0.20)	(3.02)***	(2.58)***
<i>Unequal Voting</i>	-1.272	-1.504	-0.503	-0.615
	(-1.77)*	(-1.91)*	(-2.11)**	(-2.56)**
<i>Institutional Ownership</i>	-0.724	-0.791	-0.298	-0.325

(Continued).

Table 3. Continued.

Measure of Board Co-option	(1)	(2)	(3)	(4)
	<i>Co-option</i>	<i>TW Co-option</i>	<i>Co-option</i>	<i>TW Co-option</i>
<i>Analyst Following</i>	(-0.72) -0.455	(-0.79) -0.401	(-1.00) -0.074	(-1.07) -0.056
<i>Size</i>	(-1.35) 0.706 (1.92)*	(-1.23) 0.666 (1.71)*	(-0.97) 0.353 (4.77)***	(-0.73) 0.315 (4.29)***
<i>Leverage</i>	-1.656 (-1.22)	-1.829 (-1.35)	0.308 (0.81)	0.254 (0.65)
<i>Profit</i>	-5.451 (-2.52)**	-5.635 (-2.57)**	-0.277 (-0.42)	-0.167 (-0.25)
<i>MB</i>	0.028 (0.96)	0.040 (1.42)	0.001 (0.04)	0.001 (0.03)
<i>Segment</i>	0.028 (0.04)	-0.004 (-0.01)	0.212 (1.72)*	0.203 (1.62)
Observations	2900	2900	6316	6316
R <sup>2</sup>	0.567	0.573	0.252	0.260
Industry FE	No	No	Yes	Yes
Firm FE	Yes	Yes	No	No
Year FE	Yes	Yes	Yes	Yes

Notes: This table presents the results of the regressions examining the relation between clawbacks and board co-option. The dependent variable is *Clawback*. We define all variables in the appendix. *z*-Statistics are presented beneath the coefficients within parentheses. Constants are included but not reported. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively. Standard errors are corrected for heteroscedasticity and are clustered at the firm level.

of *Co-option* is  $-1.616$  ( $z$ -stat =  $-2.94$ ) and the coefficient of *TW Co-option* is  $-3.418$  ( $z$ -stat =  $-3.69$ ). To assess the economic significance of these results, we calculate the marginal effect of a one-standard-deviation increase in board co-option on the probability of clawback adoption.<sup>13</sup> Using the coefficients in Column 1 (Column 2), we estimate that a one-standard-deviation increase in *Co-option* (*TW Co-option*) reduces the probability of adopting clawback by 11.95% (12.74%). These results are consistent with the interpretation that co-opted boards are less likely to use policies that punish CEOs.

Columns (3) and (4) examine the effect of board co-option on the use of clawbacks. Consistent with our prediction that co-opted boards are less likely to ‘claw the hand that feeds them,’ we find that a co-opted board is negatively associated with the use of clawbacks. The coefficient on *Co-option* is  $-1.115$  ( $z$ -stat =  $-6.24$ ), and the coefficient on *TW Co-option* is  $-2.236$  ( $z$ -stat =  $-8.83$ ). The economic magnitude is such that a one-standard-deviation increase in *Co-option* (*TW Co-option*) reduces the use of clawbacks by 8.25% (8.35%).

Moving on to the control variables, we find that CEO incentives (*Portfolio Delta*) are significantly related to clawbacks. There is some evidence that certain aspects of the board of directors, specifically *Busy Board* and *Board Meetings*, are related to clawbacks. We also find a significant association between shareholders’ voting rights (*Unequal Voting*) and clawbacks. Finally, larger firms (*Size*) are associated with greater use of clawbacks, possibly because they are subject to greater scrutiny and are under greater pressure to institute policies to ensure that managers are punished for bad behavior.

<sup>13</sup>The marginal effect of a one-standard-deviation (SD) increase in the board co-option measure is computed as  $p \times (1 - p) \times b \times \text{SD}$ , where  $p$  is the base rate (44.2% for *Co-option* and 21.0% for *TW Co-option*), and  $b$  is the estimated coefficient from the logistic regression (Liao, 1994).

**Table 4.** The effect of having co-opted directors on the compensation committee.

Measure of <i>Board Co-option</i>	(1)	(2)	(3)	(4)
	<i>Co-option</i>	<i>TW Co-option</i>	<i>Co-option</i>	<i>TW Co-option</i>
<b><i>Board Co-option</i>*<i>I(Co-opt Comp)</i></b>	<b>- 2.284</b>	<b>- 5.462</b>	<b>- 2.316</b>	<b>- 5.407</b>
	(- 3.80)***	(- 3.64)***	(- 7.80)***	(- 10.16)***
<i>Board Co-option</i>	- 0.954	- 0.638	- 0.250	0.938
	(- 1.75)*	(- 0.57)	(- 1.27)	(1.86)*
<i>I(Co-opt Comp)</i>	0.288	0.790	0.634	1.060
	(0.87)	(1.64)	(3.75)***	(6.15)***
Controls	Yes	Yes	Yes	Yes
Observations	2900	2900	6316	6316
$R^2$	0.579	0.584	0.267	0.279
Industry FE	No	No	Yes	Yes
Firm FE	Yes	Yes	No	No
Year FE	Yes	Yes	Yes	Yes

Notes: This table presents the results of the regressions examining the effect of having co-opted directors on the compensation committee on the relation between clawbacks and board co-option. The dependent variable is *Clawback*. We define all variables in the appendix. *z*-Statistics are presented beneath the coefficients within parentheses. We include the same set of control variables as in Table 3. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively. Standard errors are corrected for heteroscedasticity and are clustered at the firm level.

### 3.4. Cross-sectional Analyses

#### 3.4.1. Role of co-opted compensation committee members

H2 predicts that the association between board co-option and clawbacks is more pronounced when co-opted directors are present on the compensation committee. To test this hypothesis, we construct the variable *I(Co-opt Comp)* and extend Equation (1) by interacting *Board Co-option* with a measure of co-option in the compensation committee:

$$\begin{aligned} \text{Clawback}_{it} = & \beta_0 + \beta_1 \text{Board Co-option}_{it} \times I(\text{Co-opt Comp}) + \beta_2 \text{Board Co-option}_{it} \\ & + \beta_3 I(\text{Co-opt Comp})_{it} + \beta' X_{it} + \varepsilon_{it}. \end{aligned} \quad (2)$$

*I(Co-opt Comp)* is an indicator variable that equals one if at least one co-opted director sits on the compensation committee and zero otherwise.<sup>14</sup>

Table 4 presents the results based on Equation (2). In the interest of parsimony, we report only the results for the variables of interest in the table. In all columns, we find that the coefficients on *Co-option* × *I(Co-opt Comp)* and *TW Co-option* × *I(Co-opt Comp)* are negative and statistically significant at the 1% level. Hence, there is statistically significant evidence in support of H2.<sup>15</sup>

<sup>14</sup>As a robustness check, we also use the percentage of co-opted directors on the compensation committee to measure co-option to the committee. We find similar results using this alternative proxy.

<sup>15</sup>Ai and Norton (2003) question the properties of the estimators of the coefficient on the interaction term in a logistic model such as Equation (2), as well as their related test statistics. However, Greene (2010) concludes that an overall statistical inference cannot be obtained from the Ai and Norton (2003) measure. Furthermore, Kolasinski and Siegel (2010) argue that it is appropriate to draw inferences from the interaction term in nonlinear models. Therefore, we use the interaction coefficient to assess the directional effect of our results. As a further robustness check, we calculate the modified statistical output, as Ai and Norton (2003) suggest and Evans, Nagarajan, and Schloetzer (2010) use, by using the ‘inteff’ procedure in STATA. We find that the inferences based on this test statistic are similar to those reported in Tables 4 and 5.

### 3.4.2. The likelihood of the need to enforce a clawback provision in the future

To examine how the likelihood of the need to enforce a clawback provision moderates the effect of board co-option on clawbacks, we extend Equation (1) as follows:

$$\begin{aligned} \text{Clawback}_{it} = & \beta_0 + \beta_1 \text{Board Co-option}_{it} \times \text{Enforce}_{it} + \beta_2 \text{Board Co-option}_{it} \\ & + \beta_3 \text{Enforce}_{it} + \beta' X_{it} + \varepsilon_{it}, \end{aligned} \quad (3)$$

where *Enforce* is the likelihood that a clawback provision will be triggered in the future. We proxy for *Enforce* using *Restate*, which is an indicator variable that equals one when the firm has announced a financial restatement because of an accounting failure, a regulatory investigation, or financial fraud at least once in the past two years, and zero otherwise. We obtain data on accounting restatements from Audit Analytics. Firms with a history of restatements are more likely to have accounting problems in the future. Files, Sharp, and Thompson (2014) provide evidence that repeated restatements by the same firm are likely to occur, especially among clients of non-Big N auditors and those with lower ex ante accounting quality.

Table 5, Panel A presents the logistic regression results based on Equation (3). In all columns, we find robust evidence that the coefficients on *Co-option*  $\times$  *Restate* and *TW Co-option*  $\times$  *Restate* are negative and statistically significant. The evidence indicates that the negative association between board co-option and clawback adoption (usage) is more pronounced for firms with prior restatements in Columns 1 and 2 (Columns 3 and 4), consistent with our prediction in H3.

Above, we present evidence that co-opted boards are less likely to adopt clawbacks, especially when a co-opted director is on the compensation committee. We provide further insights by examining whether the significant interaction we observe in Panel A is driven by a co-opted compensation committee (*Comp Co-option*). We report the results in Panel B, Table 5. As expected, the coefficients on *Comp Co-option*  $\times$  *Restate* are negative and statistically significant at the 1% level in all columns.

Overall, the results presented in Table 5 provide evidence to support H3 that a co-opted board, especially a co-opted compensation committee, is even less likely to adopt clawback if there is a high likelihood that such a provision will be triggered. This evidence adds further credence to the notion that co-opted boards are less likely than non-co-opted boards to have policies that punish CEOs for accounting problems.

### 3.5. Alternative Measures of Board Co-option

Coles et al. (2014) highlight that CEO tenure is an important determinant of board co-option and the exclusion of CEO tenure as a control variable could result in bias due to omitted correlated variables. Following Coles et al. (2014), we include CEO tenure and other CEO characteristics in all of our regressions. As an additional analysis, we follow Coles et al. (2014) in using *Residual Board Co-option*, which is the residual from the regression of *Board Co-option* on *CEO Tenure*, to measure board capture. The residual is a proxy for the power related to the co-option of the board and is orthogonalized to the power related to CEO tenure. In Table 6, we present the results with the two proxies of *Residual Board Co-option* – *Residual Co-option*, and *Residual TW Co-option*. Consistent with the results in Table 3, we find that all results with *Residual Co-option* are similar to our earlier results with *Co-option* in Panel A. Panels B, C, and D re-produce our cross-sectional analyses using residual board co-option measures, and we obtain similar results. These results increase our confidence that the board's beholdenness to the CEO has an incremental effect on reducing the likelihood of clawback adoption.

**Table 5.** The likelihood of the need to enforce a clawback provision in the future.

Panel A: The relation between board co-option and restatement on clawbacks				
	(1)	(2)	(3)	(4)
Measure of Board Co-option	Co-option	TW Co-option	Co-option	TW Co-option
<b>Board Co-option*Restate</b>	<b>- 2.653</b>	<b>- 3.930</b>	<b>- 1.541</b>	<b>- 2.291</b>
	(- 2.86)***	(- 2.03)**	(- 3.72)***	(- 4.04)***
<i>Board Co-option</i>	- 1.305	- 3.213	- 0.950	- 2.025
	(- 2.30)**	(- 3.27)***	(- 5.02)***	(- 7.55)***
<i>Restate</i>	0.758	0.260	0.147	- 0.104
	(1.60)	(0.70)	(0.65)	(- 0.60)
Controls	Yes	Yes	Yes	Yes
Observations	2900	2900	6316	6316
$R^2$	0.571	0.576	0.256	0.265
Industry FE	No	No	Yes	Yes
Firm FE	Yes	Yes	No	No
Year FE	Yes	Yes	Yes	Yes

  

Panel B: The relation between co-opted compensation and restatement on clawbacks				
	(1)	(2)	(3)	(4)
Measure of CompCo-option	Co-option	TW Co-option	Co-option	TW Co-option
<b>Comp Co-option*Restate</b>	<b>- 2.395</b>	<b>- 4.898</b>	<b>- 1.243</b>	<b>- 1.838</b>
	(- 2.67)***	(- 3.59)***	(- 3.84)***	(- 4.27)***
<i>Comp Co-option</i>	- 1.249	- 1.376	- 0.804	- 1.006
	(- 2.91)***	(- 2.77)***	(- 5.17)***	(- 5.98)***
<i>Restate</i>	0.289	0.402	- 0.067	- 0.076
	(0.82)	(1.13)	(- 0.38)	(- 0.46)
Controls	Yes	Yes	Yes	Yes
Observations	2900	2900	6316	6316
$R^2$	0.574	0.576	0.256	0.262
Industry FE	No	No	Yes	Yes
Firm FE	Yes	Yes	No	No
Year FE	Yes	Yes	Yes	Yes

Notes: This table presents the results of the regressions examining the need to enforce a clawback provision moderating the effect of board co-option on clawbacks. The dependent variable is *Clawback*. Enforcement likelihood is measured by *Restate*. We define all variables in the appendix. z-Statistics are presented beneath the coefficients within parentheses. We include the same set of control variables as in Table 3. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively. Standard errors are corrected for heteroscedasticity and are clustered at the firm level.

### 3.6. Alternative Specification of the Regression Model

In our main results, we use a logistic regression model to investigate the relation between clawback adoption and a co-opted board. Here, we consider an alternative approach, the Hazard model, in which the sample includes only the years in which the firm does not have clawback and the first year in which the clawback is adopted. We remove the firm-years after the initial clawback adoption and report the results for the reduced sample in Table 7. The results remain unchanged with this alternative model specification.

### 3.7. Board Capture as a Mechanism Linking CEO Tenure to Clawbacks

By virtue of being around longer, a CEO with a longer tenure has a greater likelihood of capturing the board. Board co-option, in turn, reduces the likelihood of clawback adoption. In other words,

**Table 6.** Robustness check: Alternative measures of board co-option.

Panel A: Board co-option and clawback adoption				
	(1)	(2)	(3)	(4)
Measure of Board Co-option	Residual Co-option	Residual TW Co-option	Residual Co-option	Residual TW Co-option
<b>Board Co-option</b>	<b>- 1.616</b>	<b>- 3.418</b>	<b>- 1.113</b>	<b>- 2.238</b>
	<b>(- 2.94)***</b>	<b>(- 3.69)***</b>	<b>(- 6.21)***</b>	<b>(- 8.83)***</b>
Controls	Yes	Yes	Yes	Yes
Observations	2900	2900	6399	6399
R-square	0.573	0.567	0.252	0.26
Industry FE	No	No	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	No	No
Panel B: Co-opted directors on the compensation committee and clawback adoption				
	(1)	(2)	(3)	(4)
Measure of Board Co-option	Residual Co-option	Residual TW Co-option	Residual Co-option	Residual TW Co-option
<b>Board Co-option*I(Co-opt Comp)</b>	<b>- 1.311</b>	<b>- 3.258</b>	<b>- 1.593</b>	<b>- 3.977</b>
	<b>(- 1.69)*</b>	<b>(- 1.72)*</b>	<b>(- 4.76)***</b>	<b>(- 5.62)***</b>
<i>I(Co-opt Comp)</i>	- 0.704	- 0.353	- 0.387	- 0.052
	<b>(- 2.91)***</b>	<b>(- 1.05)</b>	<b>(- 3.55)***</b>	<b>(- 0.33)</b>
<i>Board Co-option</i>	- 1.085	- 1.21	- 0.401	0.208
	<b>(- 1.88)*</b>	<b>(- 0.91)</b>	<b>(- 1.90)*</b>	<b>- 0.34</b>
Controls	Yes	Yes	Yes	Yes
Observations	2900	2900	6399	6399
R-square	0.573	0.567	0.252	0.26
Industry FE	No	No	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	No	No
Panel C: The relation between board co-option and restatement on clawbacks				
	(1)	(2)	(3)	(4)
Measure of Board Co-option	Residual Co-option	Residual TW Co-option	Residual Co-option	Residual TW Co-option
<b>Board Co-option*Restate</b>	<b>- 2.692</b>	<b>- 4.167</b>	<b>- 1.658</b>	<b>- 2.159</b>
	<b>(- 2.66)***</b>	<b>(- 1.91)*</b>	<b>(- 3.89)***</b>	<b>(- 3.55)***</b>
<i>Board Co-option</i>	- 1.294	- 3.213	- 0.936	- 2.032
	<b>(- 2.30)**</b>	<b>(- 3.29)***</b>	<b>(- 4.93)***</b>	<b>(- 7.55)***</b>
<i>Restate</i>	- 0.421	- 0.565	- 0.54	- 0.576
	<b>(- 1.44)</b>	<b>(- 1.49)</b>	<b>(- 3.83)***</b>	<b>(- 4.11)***</b>
Controls	Yes	Yes	Yes	Yes
Observations	2900	2900	6399	6399
R <sup>2</sup>	0.571	0.576	0.256	0.265
Industry FE	No	No	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	No	No

(Continued).

**Table 6.** Continued.

Panel D: The relation between co-opted compensation committee and restatement on clawbacks				
	(1)	(2)	(3)	(4)
Measure of Board Co-option	Residual Comp Co-option	Residual Comp TW Co-option	Residual Comp Co-option	Residual Comp TW Co-option
<b>Comp Co-option*Restate</b>	<b>- 1.593</b>	<b>- 3.100</b>	<b>- 0.965</b>	<b>- 1.413</b>
	(- 1.65)*	(- 2.31)**	(- 2.92)***	(- 3.66)***
<i>Comp Co-option</i>	- 1.305	- 1.397	- 0.828	- 1.03
	(- 3.05)***	(- 2.85)***	(- 5.28)***	(- 6.08)***
<i>Restate</i>	- 0.43	- 0.67	- 0.515	- 0.565
	(- 1.30)	(- 1.78)*	(- 3.73)***	(- 3.98)***
Controls	Yes	Yes	Yes	Yes
Observations	2900	2900	6399	6399
R <sup>2</sup>	0.572	0.572	0.255	0.26
Industry FE	No	No	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	No	No

Notes: This table provides results for an alternative measure of board co-option, the residual from a regression of board co-option on CEO tenure. The residual is a proxy for the power related to the co-option of the board and is orthogonal to the power related to CEO tenure. In Panels A to D, we present the results with the two proxies of *Residual Board Co-option - Residual Co-option* and *Residual TW Co-option*, with industry and year fixed effects as well as with firm and year fixed effects. We define all variables in the appendix. z-statistics are presented beneath the coefficients within parentheses. We include the same set of control variables as in Table 3. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively. Standard errors are corrected for heteroscedasticity and are clustered at the firm level.

the channel via with longer tenure is associated with a lower likelihood of clawback adoption is board co-option.<sup>16</sup>

In this section, we perform a path analysis to test our prediction that CEO power (proxied by *CEO Tenure*) affects clawback provisions (*Clawback*) via board co-option. In a path analysis, a structural equation model is used to decompose the correlation between two variables into a direct and an indirect path through a mediating variable.<sup>17</sup> Following studies that use path analyses (e.g. Pevzner, Xie, & Xin, 2015; Shevlin, Urcan, & Vasvari, 2013), we estimate the following model:

$$\text{Board Co-option}_{it} = \alpha_0 + \alpha_1 \text{CEO Tenure}_{it} + \varepsilon_{it}, \quad (4a)$$

$$\text{Clawback}_{it} = \beta_0 + \beta_1 \text{Board Co-option}_{it} + \beta_2 \text{CEO Tenure}_{it} + \beta' X_{it} + \varepsilon_{it}, \quad (4b)$$

where *CEO Tenure* is the logarithm of 1 plus the number of years of CEO appointment at the firm and  $X_{it}$  is the set of controls used in Equation (1).

Panel A of Table 8 shows the path diagram. Specifically,  $\alpha_1$  is the coefficient for the path from CEO power to board capture, and  $\beta_1$  is the coefficient for the path from board capture to clawbacks. The path coefficient for  $\alpha_1 \times \beta_1$  is the magnitude of the indirect path from CEO

<sup>16</sup>Another possible channel is through reduced need for monitoring. Dikolli, Mayew, and Nanda (2014) provide evidence that longer tenured CEOs have less uncertainty about their abilities; thus, the board needs to monitor them less. Accordingly, there might be less of a need to adopt clawbacks to monitor CEOs who have served in their position longer.

<sup>17</sup>Specifically, a path analysis is used to answer *how* one variable (CEO tenure in our case) affects another (i.e. clawbacks). We argue that the impact occurs through a *mediating variable*, board co-option. In contrast, an interaction analysis is used to answer *when* a *moderating variable* affects the association between two variables. Baron and Kenny (1986) provide a discussion on mediation versus moderation.



**Table 7.** Alternative model specification.

Measure of Board Co-option	(1)	(2)	(3)	(4)
	Co-option	TW Co-option	Co-option	TW Co-option
<i>Board Co-option</i>	-1.400 (-2.40)**	-3.745 (-4.31)***	-0.845 (-5.04)***	-1.932 (-8.18)***
<i>CEO Tenure</i>	-0.636 (-0.72)	-0.802 (-0.91)	-0.195 (-1.85)*	-0.164 (-1.61)
<i>CEO Duality</i>	-0.314 (-1.10)	-0.011 (-0.03)	-0.103 (-1.04)	-0.032 (-0.32)
<i>CEO Ownership</i>	10.272 (1.13)	10.500 (1.33)	0.827 (0.34)	0.749 (0.33)
<i>CEO Turnover</i>	0.103 (0.38)	-0.382 (-1.21)	0.048 (0.31)	-0.215 (-1.39)
<i>Total Comp</i>	0.017 (0.06)	0.038 (0.13)	0.240 (2.59)***	0.215 (2.33)**
<i>% Equity Comp</i>	-0.800 (-0.72)	-1.132 (-1.04)	-0.265 (-0.80)	-0.261 (-0.79)
<i>Portfolio Delta</i>	-0.377 (-1.88)*	-0.254 (-1.15)	-0.254 (-4.19)***	-0.198 (-3.30)***
<i>Portfolio Vega</i>	0.108 (1.23)	0.117 (1.23)	0.069 (2.33)**	0.060 (2.06)**
<i>Independence</i>	-0.999 (-0.54)	-0.238 (-0.13)	1.460 (2.93)***	1.606 (3.21)***
<i>Blockholder Directors</i>	0.141 (0.27)	0.146 (0.25)	-0.031 (-0.21)	-0.035 (-0.24)
<i>Busy Board</i>	2.336 (2.21)**	2.311 (2.19)**	0.805 (2.81)***	0.666 (2.31)**
<i>Board Size</i>	0.145 (1.55)	0.132 (1.37)	0.088 (3.27)***	0.081 (2.94)***
<i>Audit Committee</i>	0.058 (0.37)	0.100 (0.63)	-0.021 (-0.41)	-0.016 (-0.29)
<i>Board Meetings</i>	-3.642 (-1.42)	-3.603 (-1.36)	-2.301 (-1.17)	-2.232 (-1.12)
<i>Dual Class</i>	-10.503 (-14.81)***	-10.583 (-15.41)***	-0.070 (-0.29)	-0.137 (-0.55)
<i>Classified Board</i>	0.458 (0.92)	0.477 (0.92)	0.006 (0.07)	-0.009 (-0.09)
<i>Limit Amend Bylaws</i>	0.561 (0.91)	0.545 (0.85)	0.011 (0.07)	0.025 (0.16)
<i>Limit Amend Charter</i>	0.304 (0.57)	0.377 (0.69)	-0.024 (-0.14)	0.005 (0.03)
<i>Cumulative Voting</i>	0.122 (0.13)	-0.026 (-0.03)	-0.064 (-0.32)	-0.107 (-0.54)
<i>Secret ballot</i>	1.483 (1.11)	1.336 (1.18)	0.199 (1.53)	0.170 (1.31)
<i>Super Majority</i>	-0.005 (-0.01)	-0.035 (-0.09)	0.236 (2.38)**	0.189 (1.91)*
<i>Unequal Voting</i>	-1.856 (-2.31)**	-2.368 (-2.70)***	-0.412 (-1.00)	-0.535 (-1.28)
<i>Institutional Ownership</i>	-0.789 (-0.77)	-1.113 (-1.04)	-0.276 (-1.08)	-0.314 (-1.24)
<i>Analyst Following</i>	-0.482 (-1.31)	-0.405 (-1.11)	-0.118 (-1.86)*	-0.101 (-1.61)
<i>Size</i>	0.515	0.446	0.274	0.243

(Continued).

Table 7. Continued.

Measure of Board Co-option	(1)	(2)	(3)	(4)
	Co-option	TW Co-option	Co-option	TW Co-option
<i>Leverage</i>	(1.34) −0.822 (−0.60)	(1.11) −0.980 (−0.70)	(4.24)*** 0.321 (0.99)	(3.79)*** 0.264 (0.80)
<i>Profit</i>	−4.636 (−2.21)**	−4.514 (−2.12)**	−0.741 (−1.24)	−0.695 (−1.15)
<i>MB</i>	0.042 (1.17)	0.071 (1.96)*	0.012 (0.76)	0.014 (0.84)
<i>Segment</i>	0.119 (0.16)	0.145 (0.18)	0.140 (1.44)	0.122 (1.25)
Observations	1888	1888	4489	4489
R <sup>2</sup>	0.361	0.378	0.107	0.116
Industry FE	No	No	Yes	Yes
Firm FE	Yes	Yes	No	No
Year FE	Yes	Yes	Yes	Yes

Notes: This table provides results for an alternative model specification in which we retain all firm-year with no adoption and only the first year of adoption in the sample. We define all variables in the appendix. *z*-Statistics are presented beneath the coefficients within parentheses. We include the same set of control variables as in Table 3. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively. Standard errors are corrected for heteroscedasticity and are clustered at the firm level.

power to clawback provision as mediated through board co-option.<sup>18</sup> The significance of the indirect effect is estimated using the Sobel (1982) test.

We report the path coefficients of interest for the regressions with firm and year fixed effects in Panel B, and regressions with industry and year fixed effects in Panel C. In each panel, Columns 1 and 2 present the results with *Co-option* and *TW Co-option* as the measure of co-option, respectively. As the results are similar in both panels, we thus focus our discussion on the results with *Co-option* in Panel B. The coefficient for the direct path between CEO tenure and a clawback provision [ $p(\text{CEO Tenure}, \text{Clawback})$ ] is positive and significant, suggesting that CEOs have a direct influence over clawbacks. The coefficient of the path between CEO tenure and board co-option [ $p(\text{CEO Tenure}, \text{Co-option})$ ] is positive and highly significant, indicating that powerful CEOs can influence the formation of a co-opted board. The coefficient of the path between board co-option and a clawback provision [ $p(\text{Co-option}, \text{Clawback})$ ] is negative and significant, indicating that co-opted boards are less likely to implement clawbacks. The total mediated path of board co-option [ $p(\text{CEO Tenure}, \text{Co-option}) \times p(\text{Co-option}, \text{Clawback})$ ] is negative and statistically significant at the 1% level. Hence, the evidence suggests that board co-option is a significant channel through which CEO tenure affects clawbacks. In other words, CEOs with longer tenures can reduce the likelihood of a clawback by capturing the board.

#### 4. Conclusion

The adoption of policies to constrain potential agency problems is an important function of boards of directors. Although boards can adopt many tools to address agency problems ex ante (e.g. compensation, including various long- and short-term compensation incentives), these tools are typically adopted to incentivize performance, which might in turn have the possibly

<sup>18</sup>To carry out the path analysis, we estimate Equation (4b) using a linear probability model. Standardized coefficients are reported in Panels B and C of Table 8.

**Table 8.** Co-opted board as an underlying mechanism linking CEO tenure and clawbacks.

Panel A: Path diagram		
CEO Power (CEO Tenure)	→ $\alpha_1 (+)$	Board Capture (Co-option)
		→ $\beta_1 (-)$
		Clawbacks (Clawback)
	Co-option	TW Co-option
<i>Panel B: Path analysis (with firm and year fixed effects)</i>		
Direct path		
$p(\text{CEO Tenure, Clawback}) = \beta_2$	0.076 (2.86)***	0.078 (3.08)***
Mediated path of board co-option		
$p(\text{CEO Tenure, Co-option}) = \alpha_1$	0.095 (3.49)***	0.054 (3.82)***
$p(\text{Co-option, Clawback}) = \beta_1$	-0.157 (-4.24)***	-0.297 (-5.35)***
Total mediated path of board co-option = $(\alpha_1 * \beta_1)$	-0.015 (-4.03)***	-0.016 (-1.75)*
Controls	Yes	Yes
Observations	2900	2900
<i>Panel C: Path analysis (with industry and year fixed effects)</i>		
Direct path		
$p(\text{CEO Tenure, Clawback}) = \beta_2$	0.027 (1.22)	0.028 (1.30)
Mediated path of board co-option		
$p(\text{CEO Tenure, Co-option}) = \alpha_1$	0.131 (7.90)***	0.068 (6.82)***
$p(\text{Co-option, Clawback}) = \beta_1$	-0.192 (-6.30)***	-0.354 (-9.10)***
Total mediated path of board co-option = $(\alpha_1 * \beta_1)$	-0.025 (-4.03)***	-0.024 (-1.75)*
Controls	Yes	Yes
Observations	6399	6399

Notes: Panel A provides a path diagram that depicts the prediction of how CEO power can affect clawbacks indirectly via board capture. The path coefficient  $\alpha_1$  is the magnitude of the path coefficient from CEO tenure to a co-opted board. The path coefficient  $\beta_1$  is the magnitude of the path from board co-option to clawbacks. The path coefficient  $\alpha_1 * \beta_1$  measures the magnitude of the indirect path from CEO tenure to clawbacks mediated through a co-opted board. The predicted signs of the path coefficients are included in parentheses.

Panels B (Panel C) reports the results from a path analysis for regressions with firm and year fixed effects (industry and year fixed effects), respectively. The path analysis examines the effect of CEO tenure on clawbacks through a co-opted board.  $p(X_1, X_2)$  stands for the standardized path coefficient. The  $t$ -statistics of the coefficients are reported in parentheses.

We estimate the following model:

$$\text{Board Co-option}_{it} = \alpha_0 + \alpha_1 \text{CEO tenure}_{it} + \epsilon_{it},$$

$$\text{Clawback}_{it} = \beta_0 + \beta_1 \text{Board Co-option}_{it} + \beta_2 \text{CEO tenure}_{it} + \beta' X_{it} + \epsilon_{it},$$

where  $\text{CEO tenure}$  is the logarithm of one plus the number of years the CEO has worked at the firm and  $X_{it}$  is the same set of controls as in our main regression. The path coefficient  $\beta_2$  is the magnitude of the direct path from CEO tenure to clawbacks. The path coefficient  $\alpha_1 * \beta_1$  is the magnitude of the indirect path from CEO tenure to clawbacks mediated through a co-opted board. The significance of the indirect effect is estimated using the Sobel (1982) test. The table reports the path coefficients of interest. We define all variables in the appendix. \*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Standard errors are corrected for heteroscedasticity and are clustered at the firm level.

unintended consequence of encouraging financial misreporting. Clawbacks are a unique tool in that the typical objective is to punish CEOs for financial misreporting. This study examines whether co-opted boards are associated with clawback adoption.

We focus on co-opted boards because in practice, CEOs are likely to exert considerable influence over the selection of board members (Coles et al., 2014). Directors often have financial,

social, and psychological reasons for favoring executives in compensation matters; they are likely to feel loyal and to care about their relationship with the CEO. With the implementation of a clawback provision, it is personally costly for these directors to seek to recover excess pay from the CEO (Bebchuk & Fried, 2005; Fried & Shilon, 2011).

We find robust evidence that board co-option is negatively associated with the likelihood of clawback adoption, which is consistent with the notion that co-opted directors are unlikely to claw back the pay of the CEO 'responsible' for their appointment. Endogeneity might be a concern in our setting. Endogeneity can generally be classified into two categories: reverse causality and omitted correlated variables. To address omitted correlated variables, we included a wide array of control variables in our regressions, including many CEO and board characteristics, and industry, firm, and year fixed effects. Reverse causality is less likely to be a problem in our setting because it seems unlikely that clawback adoption can affect board co-option, which is simply the percentage of the board comprising directors appointed after the start of the CEO's tenure.

We perform a series of cross-sectional analyses to provide further evidence that board co-option affects clawback adoption. First, given that the board subcommittee most directly involved in remuneration issues is the compensation committee, we expect board co-option to have a stronger effect on clawback adoption if co-opted directors are on the compensation committee. Our evidence indicates that this is indeed the case, adding further credence to the notion that co-opted boards are less willing to punish the CEO for financial misreporting than are non-co-opted boards. Second, we examine how the likelihood of the future enforcement of a clawback provision influences the relation between board co-option and clawback adoption. We find that co-opted boards are less likely to adopt clawbacks if there is a higher likelihood that co-opted directors will have to enforce the clawback provision in the future. Finally, using a path analysis, we show that board co-option is an underlying mechanism through which CEOs with longer tenures can exert their power to reduce the likelihood of clawbacks.

Similar to the work of Coles et al. (2014), our paper offers partial analyses of some of the economic consequences of co-opted boards. It does not address the issue of whether board co-option, on average, is optimal in terms of shareholder value optimization or societal welfare. To the extent that co-opted boards capture friendly boards (i.e. boards friendly to the CEO), some papers have suggested that positive outcomes could arise from more effective communication between friendly boards and top management (Adams & Ferreira, 2007; Kang, Liu, Low, & Zhang, 2014). To the best of our knowledge, previous studies on co-opted boards have typically documented negative consequences. Future research might seek to explore the possible positive consequences of co-opted boards.

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## Appendix

### Variable definitions

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<i>Clawback</i>	Indicator variable, coded 1 if the firm has a clawback provision and 0 otherwise.
<i>Co-option</i>	Fraction of the board comprising directors appointed after the CEO assumed office.
<i>TW Co-option</i>	Tenure-weighted co-option, which is the sum of the tenure of co-opted directors divided by the sum of the tenure of all directors.
<i>Comp Co-option</i>	Fraction of the compensation committee comprising directors appointed after the CEO assumed office.
<i>Residual Co-option</i>	Residuals from regressing <i>Co-option</i> on <i>CEO Tenure</i> .
<i>Residual TW Co-option</i>	Residuals from regressing <i>TW Co-option</i> on <i>CEO Tenure</i> .
<i>CEO Tenure</i>	Logarithm of 1 plus the number of years of CEO appointment at the firm.
<i>CEO Duality</i>	Indicator variable, coded 1 if the CEO is also the chairman of the board and 0 otherwise.
<i>CEO Ownership</i>	Percentage of shares owned by the CEO.
<i>CEO Turnover</i>	Indicator variable, coded 1 if the CEO is replaced and 0 otherwise.
<i>Total Comp</i>	Log of 1 plus total compensation.
<i>%Equity Comp</i>	Percentage of equity compensation, calculated as the value of restricted stock grants plus the value of option grants, all scaled by total compensation.
<i>Portfolio Delta</i>	Log of the dollar change in wealth associated with a 0.01 change in the standard deviation of the firm's returns. Obtained from Coles, Daniel, and Naveen (2013).
<i>Portfolio Vega</i>	Log of the dollar change in wealth associated with a 1% change in the firm's stock price. Obtained from Coles et al. (2013).
<i>Independence</i>	Percentage of independent directors on the board.
<i>Blockholder Directors</i>	Percentage of directors who own at least 5% of the common shares.
<i>Busy Board</i>	Percentage of directors who hold more than two outside board seats.
<i>Board Size</i>	Total number of directors on the board.
<i>Audit Committee</i>	Number of audit committee members.
<i>Board Meetings</i>	Percentage of directors who attend less than 75% of board meetings.
<i>Dual Class</i>	Indicator variable, coded 1 if the company has dual classes of stock and 0 otherwise.
<i>Classified Board</i>	Indicator variable, coded 1 if the board is classified and 0 otherwise.
<i>Limit Amend Bylaws</i>	Indicator variable, coded 1 if the company governance attribute limits shareholders' ability to amend the bylaws and 0 otherwise.
<i>Limit Amend Charter</i>	Indicator variable, coded 1 if the company governance attribute limits shareholders' ability to amend the corporate charter and 0 otherwise.
<i>Cumulative Voting</i>	Indicator variable, coded 1 if the company allows cumulative voting and 0 otherwise.
<i>Secret Ballot</i>	Indicator variable, coded 1 if the company uses an independent third party to count proxies and 0 otherwise.
<i>Super Majority</i>	Indicator variable, coded 1 if the charter requirement for mergers or other business combinations is higher than the threshold requirements for state law and 0 otherwise.
<i>Unequal Voting</i>	Indicator variable, coded 1 if the company limits the voting rights of some shareholders and expands the voting rights of others and 0 otherwise.
<i>Institutional Ownership</i>	Percentage of institutional ownership.
<i>Analyst Following</i>	Log of 1 plus number of analysts following the firm.
<i>Size</i>	Natural logarithm of market capitalization.
<i>Leverage</i>	Long-term debt divided by beginning total assets.
<i>Profit</i>	EBITDA divided by beginning total assets.
<i>MB</i>	Market to book ratio.
<i>Segment</i>	Natural logarithm of the number of segments.
<i>I(Co-option Comp)</i>	Indicator variable, coded 1 if the number of co-opted directors on the compensation committee is one or more and 0 otherwise.
<i>Restate</i>	Indicator variable, coded 1 if the firm announces financial income-decreasing restatements due to accounting failures, a regulatory investigation or financial fraud in the previous 2 years and 0 otherwise.

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