

Traveling Governance Effect of Shareholder Activism: Evidence from Clawback Provision Adoption

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Abstract

We examine the propagation of governance mechanisms across firms held by the same institutional activist blockholders (IABs). We find that a firm is more likely to adopt clawback provisions when more of other firms held by the same IABs have adopted clawback — an effect we call traveling governance. This effect is stronger when the level and duration of common ownership by IABs are higher, and when IABs have more past activism experiences. This traveling governance effect is distinct from peer-effects stemming from common industry, common location, or board interlocks. Our results are not driven by endogenous selection by IABs. Further, our placebo tests show that this traveling governance is absent for firms held by the same passive institutional blockholders and firms that share common IABs only in the past. Finally, we find that traveling governance substitutes internal board governance, but complements external governance by the product market. Overall, our findings suggest that IABs act as effective gatekeepers to monitor their portfolio firms through an indirect and potentially less costly mechanism.

Keywords: Shareholder Activism; Spillover Effect; Clawback Provision; Institutional Investors

JEL Classification: G10; G23; G34; M12

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Abstract

We examine the propagation of governance mechanisms across firms held by the same institutional activist blockholders (IABs). We find that a firm is more likely to adopt clawback provisions when more of other firms held by the same IABs have adopted clawback — an effect we call traveling governance. This effect is stronger when the level and duration of common ownership by IABs are higher, and when IABs have more past activism experiences. This traveling governance effect is distinct from peer-effects stemming from common industry, common location, or board interlocks. Our results are not driven by endogenous selection by IABs. Further, our placebo tests show that this traveling governance is absent for firms held by the same passive institutional blockholders and firms that share common IABs only in the past. Finally, we find that traveling governance substitutes internal board governance, but complements external governance by the product market. Overall, our findings suggest that IABs act as effective gatekeepers to monitor their portfolio firms through an indirect and potentially less costly mechanism.

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1. Introduction

Prior literature has documented that institutional investors can play an active role in corporate governance (see, e.g., Gillan and Starks, 2000; Brav, Jiang, Partnoy, and Thomas, 2008). We focus on an indirect governance mechanism by analyzing clawback adoption across firms held by the same institutional activist blockholders (IABs). We document a traveling governance effect, namely, firms tend to follow other firms held by the same IABs in adopting clawback. Our findings suggest that institutional investors act as effective gatekeepers to propagate good corporate governance practices. To the best of our knowledge, we are the first in the literature to provide empirical evidence that good governance travels through the link of common block ownership, and this governance mechanism is distinct from peer effects stemming from common industry, common location, or board interlocks.

Direct monitoring of firms by activism can be very costly to activists. For example, Cheng, Huang, Li, and Lobo (2010) find that shareholders sometimes have to go through costly litigations in order to achieve their ultimate activism goal. Hence, it is unlikely that activists would go to every firm in their portfolios to help them adopt good governance practices individually (Almazan, Hartzell, and Starks, 2005). However, managers of firms with significant blockholdings by activists may proactively change their objective functions in such a way that they are more likely to implement good governance practices following other firms held by the same activists. In other words, institutional shareholders' past activism experiences may help to spread good governance across firms held by the same institutional activists.

The efficacy of governance by common ownership (i.e., ownership by investors holding blocks of shares in multiple firms) is controversial in prior literature. Common ownership weakens governance by spreading an investor too thin according to conventional wisdom. This argument is broadly in line with findings in the governance literature that busy directors who serve on too many boards are less effective monitors (Fich and Shivdasani, 2006). On the other hand, a theory paper by Edmans, Levit, and Reilly (2016) argues that managers have greater incentive to work harder for firms governed by common ownership than for firms governed by one investor who owns the firm, because managers come under pressure when other firms held by the same investor are performing well. Our evidences support this peer-pressure argument put forth by Edmans, Levit, and Reilly

(2016). In other words, when one firm institutes a good governance practice, it may put pressure on other firms held by the same activist shareholder to follow suit.

We focus on one of the most notable governance mechanisms aimed at tightening the link between top management compensation and long-term performance: clawback provisions. Clawback provisions have attracted considerable attention since the 2007–2008 financial crisis when policy makers, shareholder activists, and academics called into question the structure of compensation contracts for top executives. The 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act included a section 954 (DFA 954) to facilitate the enforcement of clawbacks. In general, clawback adoption can perhaps be considered a good governance practice, and its widespread adoption has been rather recent and gradual. Given the above, clawback adoption provides an ideal context to study the traveling governance effect as a result of common ownership by IABs. Clawback provisions enable firms to recover incentive compensation paid to top executives on the basis of misstated financial reports. For example, in November 2012, Diamond Foods announced that its former CEO Michael Mendes had resigned and would pay a \$2.74 million cash clawback, which were his bonuses in 2010 and 2011, and return 6,665 shares to the company, which were awarded to Mendes after 2010.⁵ The percentage of firms in the Russell 3000 Index voluntarily adopting clawback provisions has increased from 17 percent in 2009 to 53 percent in 2014.

Prior studies have shown that clawback provisions are effective in mitigating management's earnings manipulation behavior (e.g., Chan, Chen, Chen, and Yu, 2012). Additional studies have found that better corporate governance (e.g., Dehaan, Hodge, and Shevlin, 2013) is associated with adopting clawback provisions. In 2010, the Dodd-Frank Act required mandatory adoption of clawback provisions for all public companies, while the ultimate form and effective date of the rule remain unknown.⁶ Because clawback provisions increase management's risk of forfeiting compensation and limit their rent-extracting abilities, managers prefer delaying clawback provision

⁵ "Diamond Foods ex-CEO resigns and will pay \$2.7M clawback," *San Francisco Business Times*, November 21, 2012, <http://www.bizjournals.com/sanfrancisco/blog/2012/11/diamond-foods-clawback-ex-ceo-resigns.html>.

⁶ The Emergency Economic Stabilization Act of 2008 mandated clawback provisions for financial companies that were recipients of federal bailout funds through the Troubled Asset Relief Program (TARP). The SEC proposed Rule 10D-1 on July 1, 2015 to implement section 954 of the Dodd-Frank Act, which requires all listed companies to mandatorily adopt the clawback provision when the rule is implemented. However, the ultimate form and effective date of the rule remain uncertain (<https://www.sec.gov/news/pressrelease/2015-136.html>).

adoption. On the other hand, this provision provides investor protection, so investors favor earlier adoption. Accordingly, studies have shown that better corporate governance leads to voluntary adoption earlier than the mandate (e.g., Addy, Chu, and Yoder, 2014; Babenko, Bennett, Bizjak, and Coles, 2015; Huang, Lim and Ng, 2015; Gillan and Nguyen, 2016). It is under this premise that we investigate whether common ownership by institutional activist blockholders accelerates propagation of voluntary clawback provision adoption.

We observe anecdotally that some institutional activists promote clawback provision adoption by public firms, attempting to tighten the link between top management compensation and long-term performance.⁷ However, there has been little systematic analysis on institutional activists' role in spreading clawback provisions across firms in their portfolios. Using clawback provision adoption data of firms in the Russell 3000 Index from 2009 through 2014, we investigate how an institutional activist impacts a firm's decisions to adopt clawback provisions when some other portfolio firms have already adopted clawback. In this paper, we refer to institutional investors as institutional activists if they have engaged in at least one incidence of activism through a 13D filing. In our main analysis, we focus on institutional activists holding large blocks of shares (i.e., at least five percent of shares outstanding) in multiple firms, namely, institutional activist blockholders (IABs). We refer to firms sharing common IABs as activist portfolio (IAB) members.

We first examine whether firms follow clawback provision adoption by other firms that share common IABs with them. We posit that firms come under pressure to follow suit when other firms held by common IABs adopt clawback provisions. The rationale of such pressure stems from the explicit or implicit influence of IABs on corporate policies, helping good governance to travel from one firm to another in the activists' portfolios. Consistent with our conjecture, we find that a firm is more likely to adopt clawback provisions when more (or a larger fraction) of its activist portfolio members have adopted them. This effect is economically and statistically significant. For instance, an increase of one standard deviation in the number (fraction) of a firm's activist portfolio members that

⁷ The Council of Institutional Investors made recommendations to the SEC in 2006 that the Compensation Discussion and Analysis of the proxy statement should include: "The company's policy for recapturing incentive pay following specific events such as a restatement in which the 'performance' measures affecting a plan are adjusted (clawback provisions). If the company has no such policy, it should be required to state this fact and explain the reason" (<https://www.worldatwork.org/waw/adimLink?id=15007>).

have adopted clawback provisions corresponds to an increase of 2.7 (3.3) percentage points in the likelihood that the firm will adopt clawback provisions the following year. We refer to this effect as traveling governance.

Consistent with our conjecture that the effect stems from pressure from common IABs, we find that this traveling governance effect is stronger between two firms when they have a greater common ownership by IABs, are held by common IABs for a longer period, or are commonly held by IABs that have engaged in more prior activism activities. The effect is highly robust to controls of other spillover effects stemming from common industry, common location, and board interlocks, to controls of firm fixed effects, and to alternative measures of the fraction of activist portfolio members having adopted clawback using firm size or sales as weights.

In our empirical analysis, we focus on common ownership by activists, instead of the full spectrum of institutional investors, because we want to tease out passive investors, such as index funds, that also contribute to common ownership but have limited influence on corporate governance. However, to shed light on the unique role of IABs in inducing traveling governance, we conduct two placebo tests: first, we analyze whether a firm's clawback adoption is affected by clawback of other firms sharing common non-activist blockholders (e.g., passive funds); second, we study whether a firm's clawback adoption is affected by clawback adoption of firms that were connected through common IABs previously but such connections have already been terminated. We find that traveling governance is absent for firms in non-activist blockholders' portfolios, and also absent for firms that were once connected three years ago (but not connected now) through common IABs, suggesting that IABs play a unique role in propagating clawback provision adoption across firms in their current portfolios.

One potential concern of our analysis is that the endogenous nature of institutional activists' blockholdings precludes traveling governance's causal inferences, which are essential to evaluating the efficacy of pressure from activist portfolio members as a governance mechanism. For instance, an alternative explanation for our empirical results is that IABs invest in firms with similar clawback provision adoption status. We mitigate this concern about causality using two approaches. First, we conduct an analysis by relating a firm's adoption to changes in pressure from activist portfolio

members. Consistent with the notion that clawback provision adoption is a reaction to traveling governance, we find that the likelihood of such adoption increases with the change in the fraction of activist portfolio members adopting clawback provisions in the prior year. Second, we examine a firm's adoption decision after some of its activist portfolio members adopt clawback provisions for reasons exogenous to activists' holdings. In particular, we identify the firms that joined the Troubled Asset Relief Program (TARP) in 2008 as exogenous activist portfolio members, because these firms' clawback provisions were mandated by the Secretary of the Treasury. Consistent with our conjecture that activist portfolio members' pressure influences a firm's clawback provision adoption, we find that a non-TARP firm is more likely to adopt clawback provisions when it has activist portfolio members that join TARP and adopt clawback provisions mandatorily.

We also analyze channels through which travelling governance operates. A firm's clawback adoption can be a response to either other firms' clawback adoptions or their fundamentals.⁸ We use a two-stage approach to isolate the effect arising from other firms' fundamentals. In the first stage, we obtain a residual term of other firms' adoption status estimated with a regression model controlling for other firms' characteristics. We use the residual term in the second stage to predict the firm's clawback adoption and find a significant and positive relation. This evidence suggests that the traveling governance effect operates as a response to other firms' actions (i.e., clawback adoption).

We then examine whether traveling governance substitutes or complements internal governance mechanisms on clawback provision adoption. We argue that traveling governance induced by pressure from activist portfolio members can be viewed as a form of indirect external governance. Following the discussion of the relation between internal and external governance (e.g., Ferreira, Ferreira, and Raposo, 2011; Cohn and Rajan, 2013), we posit and find that traveling governance substitutes internal board governance in regulating executive compensation structure. We find that traveling governance works for the subsample of firms with lower board independence but not for firms with higher board independence. Using firms' historical earnings restatements as a proxy for quality of internal

⁸ Leary and Roberts (2014) discuss the importance of distinguishing channels through which peer effects of corporate financial policies operate. They argue that any correlation of corporate policies between firms may represent either a response to peer firms' actions or their fundamentals.

governance, we also obtain a similar conclusion that traveling governance is more prevalent in firms with weaker internal governance.

Next, we examine whether product market competition supplements the effect of traveling governance. Admati and Pfleiderer (2009) argue that the impact of investors' threat of exit from a firm decreases when the exit cost is higher. IABs face lower opportunity costs when exiting firms operating in a more competitive industry, because they can easily maintain exposure in the same industry, making their threat more convincing. Therefore, we posit that the effect of traveling governance increases with product market competition. Consistent with this conjecture, we find that traveling governance and product market competition are complements: traveling governance significantly affects clawback provision adoption for firms with higher product market competition, whereas its impact is less significant on firms with lower product market competition. For example, when we measure product market competition using the Herfindahl Index of sales based on the Fama-French 48 industry classifications, the marginal effect of adopter members is 0.20 (0.12) for firms with high (low) product market competition.

Finally, we analyze consequences of clawback provision adoption. We mitigate the causality concern, criticized by Denis (2012), between clawback provisions and corporate outcome by using traveling governance as an instrumental variable for voluntary clawback provision adoption. Traveling governance satisfies the relevance principle as indicated in our earlier analysis, and it also satisfies the exclusion principle, as it is induced by pressure outside firm boundaries. Thus, traveling governance is unlikely to affect corporate outcome through channels other than the clawback provision. Using the instrumental variable method, we provide evidence in support of Chan, Chen, Chen, and Yu (2012) that clawback provision adoption increases earnings quality, and in contrast to Babenko, Bennett, Bizjak, and Coles (2015) that Tobin's Q and R&D expenses increase after clawback provision adoption. Our results suggest that clawback provision adoptions have positive and causal effects on financial reporting quality and firm valuation.

Our study makes the following contributions to the literature. First, we contribute to the shareholder activism literature by documenting the effect of institutional activists on propagating good governance practices across firms in their portfolios. We are the first in the literature to provide

empirical evidence that good governance (i.e., adoption of clawback provisions) travels through the link of common IABs and that, more specifically, firms follow other firms sharing common institutional activists in clawback adoption. Our focus is an indirect, yet effective, governance mechanism, which supplements the consequences of shareholder activism as documented in prior studies.⁹ Our study broadens the understanding of shareholder activism's spillover effects on non-target firms and sheds light on the net gain of shareholder activism to activists who economize on their monitoring efforts as a consequence of the spillover effect.¹⁰ Our study paints a clearer picture of governance in a world of cross ownership by institutional investors (He and Huang, 2016), while providing empirical support for Edmans, Levit, and Reilly's (2016) argument on the efficacy of common ownership in governing multiple firms held by the same investor.

Second, we contribute to the literature on clawback provisions—most notably recent governance developments for reforming executive compensation structure. Although the consequences of clawback provisions have been extensively studied (e.g., Chan, Chen, Chen, and Yu, 2012; Denis, 2012; Kroos, Schabus, and Verbeeten, 2017), the mechanisms for adopting them, which can shed light on their desirability from both management's and shareholders' sides, are not well-understood. In this paper, we uncover a novel external force—peer pressure induced by common IABs on firms' voluntary adoption of clawback provisions. In particular, we find that a firm's likelihood of adopting clawback provisions increases with the fraction of firms in the common activist investors' portfolio that have already adopted clawback provisions. One policy implication, based on our results, is that if a low-cost, external force can successfully lead firms to adopt clawback provisions, voluntary adoption may be the best choice, since not every firm needs such provisions.

Third, our paper contributes to recent discussions on the interaction between multiple governance mechanisms in the presence of activist investors. Cohn and Rajan (2013) argue that

⁹ See, e.g., Karpoff, Malatesta, and Walkling (1996); Gillan and Starks (2000); Parrino, Sias, and Starks (2003); Brav, Jiang, Partnoy, and Thomas (2008); Brav, Jiang, and Kim (2009); Klein and Zur (2009); Cheng, Huang, Li, and Stanfield (2012); Cheng, Huang and Li (2015), Armstrong, Gow, and Larcker (2013), and Denes, Karpoff, and McWilliams (2016).

¹⁰ Our paper differs from Aslan and Kumar (2016) and Klein and Zur (2011) who study the spillover effect of direct activism on non-target firms or other related parties, in terms of the underlying mechanism. Aslan and Kumar (2016) find that direct activism on a target firm has an indirect spillover effect on other firms in the same industry, while Klein and Zur (2011) focus on the effect of activism on target's bondholders. In contrast, our focus is that firms follow good governance practices of other firms held by the same institutional activists.

internal and external governance could be complements or substitutes in the presence of activist investors. Our empirical evidence supports the traditional view that external governance, i.e., the traveling governance in our paper, substitutes internal governance (e.g., Ferreira, Ferreira, and Raposo, 2011). Moreover, our finding that product market competition complements traveling governance is consistent with Admati and Pfleiderer's (2009) argument that the governance effect of shareholders' threat of exit is more effective when exit cost is low.

The rest of the paper is organized as follows. Section 2 provides background information and develops our main hypotheses. Section 3 describes our sample and research design. Results are presented in section 4. Section 5 presents our analyses to address endogeneity issues. Section 6 presents the relation between traveling governance effects and other governance mechanisms. We revisit consequences of clawback provision adoption in section 7, and conclude in section 8.

2. Background and hypothesis development

2.1 Background on clawback provisions

Clawback provisions (i.e., compensation recovery provisions) allow firms to recoup compensation from executives in the event of accounting restatements. Clawback provisions have attracted considerable attention since the 2007–2008 financial crisis when academics, policy makers, and shareholder activists called into question the structure of compensation contracts for top executives. Proponents of clawback provisions suggest that they discourage managerial manipulation of executive pay by reporting earnings with an upward bias, which increases stock valuation. In contrast, opponents argue that such provisions can add noise to the underlying performance measure, reducing managerial efforts and firm value.

The clawback provision was first introduced in section 304 of the Sarbanes-Oxley Act in 2002 (SOX 304). However, SOX 304 has only been successfully implemented in a few cases (Chan, Chen, Chen, and Yu, 2012). In the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act, section 954 (hereinafter, DFA 954), which was created to recover erroneously awarded compensation, was included to facilitate the enforcement of clawbacks. DFA 954 mandates all U.S. public companies to include a clawback provision that is triggered by any material accounting restatement.

On July 1, 2015, the SEC proposed Rule 10D-1 to implement section 954 of the Dodd-Frank Act. These rules help national securities exchanges and associations (including NYSE and NASDAQ) to establish listing standards requiring public companies to adopt, implement, and disclose compensation clawback policies that provide for recovery of excess incentive-based compensation from current and former executive officers.

Although mandatory clawbacks have yet to be enforced, a number of firms have voluntarily adopted clawback provisions, which has attracted considerable attention from researchers. One stream of literature explores the consequences of voluntary clawback provision adoption and documents that the provisions improve financial reporting quality and firm valuation (e.g., Chan, Chen, Chen, and Yu, 2012; Dehaan, Hodge, and Shevlin, 2013; Iskandar-Datta and Jia, 2013). For instance, Chan, Chen, Chen, and Yu (2012) document that firm-initiated clawback provisions help to improve accounting quality by reducing restatements, increasing earnings response coefficients, and reducing audit risk. Dehaan, Hodge, and Shevlin (2013) provide further supporting evidence that after adopting clawback provisions, firms have lower analyst forecast dispersion, higher pay-for-performance sensitivity, and higher CEO compensation. Iskandar-Datta and Jia (2013) document positive market reaction to voluntary clawback provision adoption news, especially for firms with past restatements. However, mixed evidence is found on clawback provision effectiveness in reducing financial restatements. For instance, Babenko, Bennett, Bizjak, and Coles (2015) find no evidence on financial restatement reduction after clawback provision adoption.

Given the importance of clawback provisions in mitigating agency problems in CEO compensation, researchers have started to investigate the reason behind voluntary clawback adoption. Babenko, Bennett, Bizjak, and Coles (2015) find that firms are more likely to adopt clawback provisions when the probability of CEO misconduct is higher or when corporate governance is stronger. Addy, Chu, and Yoder (2014) find that the probability of clawbacks decreases with management entrenchment and increases with boards interlocked by directors on the compensation committee with other clawback firms. Huang, Lim and Ng (2015) demonstrate that the likelihood of clawback provision adoption is negatively associated with board co-option (i.e., the fraction of board members appointed after the CEO assumed office). The above studies mainly focus on explaining the

phenomenon of voluntary clawback provision adoption from the perspective of internal governance; however, knowledge of external driving factors behind clawback provision adoption is still limited.

2.2 Hypothesis development

Clifford (2009) finds that among a representative sample of U.S. public firms, 96 percent of them have blockholders. Both Clifford (2009) and Lindsey (2016) analyze the heterogeneity of blockholders in their ability to exert active monitoring. In our paper, we focus on institutional blockholders that have engaged in activism before (IABs), because they, unlike passive or insider blockholders, are more likely to exert external influence on the firm regarding corporate governance choices.

When firms in the investment portfolio adopt clawback provisions, IABs can update their knowledge on this policy change and obtain information on its costs and benefits. IABs may favor clawback provisions and share information gleaned from other firms (a spillover effect) in their portfolio by communicating with management. Therefore, we propose that IABs facilitate the spread of knowledge about clawback provision adoption among firms in the same investment portfolio.

H1. *Firms' likelihood of adopting clawback provisions increases as more (or a greater fraction) of its member firms in a blockholder's portfolio adopt clawback provisions.*

We regard the effect arising from common IABs as a form of external governance that travels across portfolio members. Prior research suggests that internal governance and external governance can be either substitutes for or complements to each other. For example, Cohn and Rajan (2013) argue that board governance (internal) and activism governance (external) are complements if boards can learn from activist investors. Giroud and Muller (2011) find that G-indexes are effective only for firms in noncompetitive industries, indicating that internal and external governance mechanisms are substitutes for each other. On the one hand, external governance can act as a substitute for internal board governance, because a weak board is ineffective in protecting shareholders of a firm against management misconduct. On the other hand, as suggested by Babenko, Bennett, Bizjak, and Coles (2015), firms with strong corporate governance are more likely to adopt clawbacks, so external governance may act as a complement to internal governance. Therefore, it is an empirical question

whether the traveling governance effect induced by common IABs is a substitute for or complement to the internal governance mechanism. Using board independence as the proxy for internal governance, our second hypothesis is presented in an alternative format.

H2a. *The traveling governance effect on clawback provision adoption is stronger for firms with weak board independence.*

H2b. *The traveling governance effect on clawback provision adoption is stronger for firms with strong board independence.*

Furthermore, we study the interaction between two sources of external governance, i.e., traveling governance and market competition. The threat of an activist investor, the underlying driver of traveling governance, becomes more credible when the investor has more bargaining power over the firms. For firms in more competitive industries, their investors have more choices when they threaten to replace the firm with another similar firm in the same industry. Therefore, industry competition should be positively related to the prevalence of traveling governance.

H3. *The positive effect of traveling governance on clawback provision adoption is stronger for firms in more competitive industries.*

3. Research design and data

3.1 Sample and data

We obtain the clawback provision adoption data set from MSCI (formerly GMI). This data set provides information about firms' adoption of clawback provisions during the period from 2008 through 2014 for around 3,000 US companies. Since the clawback adoption of activist portfolio members (main independent variable) is lagged by one year, we skip 2008 data in our regression analyses. Our main sample starts with 2009 and ends in 2014. We extract stock price and return information from CRSP and financial accounting information from Compustat. We get restatement data from AuditAnalytics, executive information and board information from MSCI (GMI), and institutional investor information from Thomson Reuters 13F filings (S34 dataset). We obtain institutional investors' shareholder activism records by checking 13D and 13D/A filings from AuditAnalytics which covers filings by all SEC registrants who have either filed an SC 13D or an SC 13D/A over the period since 2000. We download all these dataset in July 2015. We exclude Troubled Asset Relief Program (TARP) recipients, which are required by the Secretary of the Treasury to

implement mandatory clawback policies, from our analysis, because our focus is on voluntary clawback provision adoption.

Table 1 Panel A presents the definition of variables, and Panel B presents the sample construction procedure. We require firms to have at least one IAB member, with available financial information, corporate governance and executive information, and cannot be a participant of the TARP program.¹¹ The numbers of observations in our initial sample is 16,039, and it reduces after applying each of these filters. Our final sample consists of 10,301 unique firm-year observations from 2009 to 2014. Table 1 Panel C presents the sources of data used.

3.2 Identify common IABs and members sharing common IABs

We first obtain institutional investors' holdings from Thomson Reuters 13F filings (S34 dataset). We then obtain institutional investors' shareholder activism records by checking 13D and 13D/A filings from AuditAnalytics which covers filings by all SEC registrants who have either filed an SC 13D or an SC 13D/A. We manually match institutions identified in these two datasets (13F institutions and filers of 13D). We only retain institutions that hold at least five percent of shares outstanding in firms and have engaged in at least one incidence of shareholder activism prior to the year we analyze. We refer to institutions that satisfy these two requirements as institutional activist blockholders (IABs). For each firm i in our sample in year t , its IAB members refer to all firms that share at least one common institutional activist blockholder with firm i in year $t-1$.¹² In other words, if two firms are commonly held by the same activist investor in year $t-1$, and the investor's holding in each firm exceeds 5 percent of shares outstanding, then the two firms are treated as members with each other in year t . We refer to members sharing common IABs as activist portfolio members.

3.3 Regression specifications

¹¹ We require that each firm should have at least one IAB member because our research focus is how a firm responds to IAB members' clawback adoptions. This requirement reduces our sample size by 3,440. However, our main results are similar when we remove this restriction and include firms without any IAB members in unreported regression analysis.

¹² Since the institutional holding data in Thomson Reuters S34 data set is reported at quarterly frequency, we identify a firm as a member of firm i if they share at least one common institutional activist blockholder in any quarter in year $t-1$.

To examine the impact of common activist shareholders on member firms' clawback provision adoption, we estimate the following logit regression models.

$$\begin{aligned}
Clawback_{i,t} = & a_0 + b_1 \text{Log}(Pclawback_num)_{i,t-1} + b_2 MTB_{i,t-1} + b_3 LEV_{i,t-1} + b_4 ROA_{i,t-1} + b_5 Size_{i,t-1} \\
& + b_6 Total\ Accruals_{i,t-1} + b_7 Restatement_{i,t-1} + b_8 Institutional\ Ownership_{i,t-1} \\
& + b_9 Activist\ Ownership_{i,t-1} + b_{10} CEO\ Compensation_{i,t-1} + b_{11} CEO\ Tenure_{i,t-1} \\
& + b_{12} Board\ Size_{i,t-1} + b_{13} Independence_{i,t-1} + b_{14} Insider_{i,t-1} + b_{14} CEO\ Duality_{i,t-1} \\
& + e_{i,t-1},
\end{aligned} \tag{1}$$

$$\begin{aligned}
Clawback_{i,t} = & a_0 + b_1 Pclawback_pct_{i,t-1} + b_2 MTB_{i,t-1} + b_3 LEV_{i,t-1} + b_4 ROA_{i,t-1} + b_5 Size_{i,t-1} \\
& + b_6 Total\ Accruals_{i,t-1} + b_7 Restatement_{i,t-1} + b_8 Institutional\ Ownership_{i,t-1} \\
& + b_9 Activist\ Ownership_{i,t-1} + b_{10} CEO\ Compensation_{i,t-1} + b_{11} CEO\ Tenure_{i,t-1} \\
& + b_{12} Board\ Size_{i,t-1} + b_{13} Independence_{i,t-1} + b_{14} Insider_{i,t-1} + b_{14} CEO\ Duality_{i,t-1} \\
& + e_{i,t-1}.
\end{aligned} \tag{2}$$

The dependent variable, $Clawback_{i,t}$, is an indicator variable that equals one if firm i has clawback provisions in year t , and zero otherwise. We first use IABs' portfolio holdings in year $t-1$ to identify firm i 's member firms, and construct two key variables: $\text{Log}(Pclawback_num)_{i,t-1}$ and $Pclawback_pct_{i,t-1}$. The independent variable in Eq. (1), $\text{Log}(Pclawback_num)_{i,t-1}$, is natural logarithm of the number of firm i 's member firms that have adopted clawback provisions in year $t-1$. The independent variable in Eq. (2), $Pclawback_pct_{i,t-1}$, is the fraction of firm i 's member firms that have adopted clawback provisions in year $t-1$. If common IABs have an influence on a firm's clawback provision adoption by inducing it to follow its member firms that have adopted clawback provisions, we should observe $b_1 > 0$ for both Eq. (1) and Eq. (2). Since both connections through common IABs and members' clawback adoption are lagged by one year, b_1 estimated from above regression specifications can be interpreted as firm i 's response to its member firms' clawback adoption.

We control for several firm characteristic variables following prior studies (e.g., Addy, Chu, and Yoder, 2014; Chan, Chen, Chen, and Yu, 2012). MTB is market-to-book ratio; LEV is leverage ratio; ROA captures a firm's accounting profitability; $Size$ is natural logarithm of total assets; $Total\ Accruals$ is the difference between income and cash flow from operations. We include $Restatement$, which is an indicator variable that equals one if a firm has earnings restated in the past three years, and zero otherwise, to control for the possibility that historical accounting actions would have an impact on a firm's decision to adopt clawback provisions. We include institutional ownership ($Institutional\ Ownership$) and activist ownership ($Activist\ Ownership$) to control for shareholders' direct monitoring effect on a firm's clawback provision adoption decision. We also control for several

CEO and board characteristics. We include CEO compensation (*CEO Compensation*), CEO tenure (*CEO Tenure*), total number of directors on the board (*Board Size*), percentage of independent directors on the board (*Independence*), percentage of shares held by managers and directors (*Insider*), and CEO duality (*CEO Duality*) in our analyses.

4. Empirical Results

4.1 Summary statistics

Table 2 Panel A presents the descriptive statistics of key variables used in our analyses. The sample consists of 10,301 unique firm-year observations from 2009 to 2014 (please refer to section 3.1 for description of our sample construction procedure). *Clawback* has a mean value of 0.329, which suggests that 32.9 percent of firms in our sample have clawback provisions. The mean of *Pclawback_num* is 244, indicating that firms in our sample have 244 member firms that adopt clawback provisions on average. *Pclawback_pct* has a mean value of 0.256, and this suggests that firms included in our sample have 25.6 percent of member firms that adopt clawback provisions on average. As for control variables, the mean of *Restatement* is 0.343, suggesting that 34.3 percent of firms in our sample have restated earnings in the past three years. On average, firms have 33.5 percent of institutional ownership and 8.2 percent of activist ownership. Here, both institutional ownership and activist ownership are measured based on holdings by institutional investors that hold a block (at least five percent of shares outstanding). The mean value of *Independence* indicates that firms on average have 70.1 percent of independent directors on the board. 47 percent of CEOs in our sample also serve as chairman of the board.

In Table 2 Panel B, we report the descriptive statistics of key variables for firms that adopt clawback provisions and firms that do not have clawback provisions. Our sample has 3,386 clawback observations and 6,915 non-clawback observations. We find that the percentage of member firms that have clawback provisions is significantly higher for clawback adopters than for non-adopters. Clawback adopters have 30.5 percent of member firms with clawback provisions, while non-adopters have 23.3 percent of member firms with clawback provisions, and the difference is statistically significant. With respect to fundamental firm characteristics, compared with non-adopters, clawback

adopters are larger (*Size*) and have significantly higher leverage (*LEV*), better earnings profitability (*ROA*), and higher total accruals (*Total Accruals*). Clawback adopters and non-adopters are similar in market-to-book ratios (*MTB*) and the likelihood of financial misstatement (*Restatement*). As for CEO and board characteristics, CEOs in firms that have clawback provisions receive significantly higher compensation (*CEO Compensation*) and have shorter tenure (*CEO Tenure*). Clawback adopters are likely to have a larger board (*Board Size*), more independent directors on the board (*Independence*), and a lower percentage of shares held by managers and directors (*Insider*).

Table 2 Panel C provides the distribution of firms that have clawback provisions in our sample. The sample size in each year across years is relatively stable except in the year 2011 when we only have 1,390 observations. The sample size drops in year 2011 because, as we stated earlier, we drop firms which do not have any IAB members in the year when we identify IAB members. Over our sample period from 2009 through 2014, we find that the number and percentage of firms that adopt clawback provisions are increasing, which is consistent with prior research (e.g. Huang, Lim and Ng, 2015).

In Table 1 Panel D, we provide descriptive statistics for networks induced by common IABs. For each firm in our sample, we calculate the number of its IAB members, which refer to firms sharing common IABs with this focal firm. To shed light on the structure of this network induced by common IABs, we also identify, among all IAB members, the fraction of members that also share common industry affiliation, common location of headquarters, or common board members, with the focal firm. We report descriptive statistics of these variables for all firms in our final sample. As shown in Table 2, the average (median) number of IAB members of a firm is 1,010 (1,250). This number may seem high at first glance. There are two potential reasons for this: first, our sample period is quite recent and because of the rise of assets under management by institutional investors, most firms have blockholders and therefore firms are likely to share common IABs with a larger number of other firms; second, in our sample construction process, we drop firms that do not have any common IAB members, leading to an upward bias in the average number of IAB members of each firm in this table. We find that, among all IAB members, on average, 6.6% of them operate in the same industry as the focal firm, 8.5% have headquarters in the same state as the focal firm, and 0.5%

have board interlocks with the focal firm. These results highlight the fact that common IAB members identified in our sample differ dramatically from peer firms connected via other networks induced by common industry affiliation, common location, or board interlocks.

4.2 Traveling governance effect on clawback provision adoption

Table 3 provides regression results for our first hypothesis. Column (1) presents the results based on Eq. (1) and results of Eq. (2) are presented in column (2). The coefficient of $\text{Log}(P\text{clawback_num})$ is positive and significant (0.074, $z = 3.52$), which indicates that the likelihood that a firm will adopt clawback provisions increases with the number of its member firms that have clawback provisions. The coefficient of $P\text{clawback_pct}$ is significantly positive (1.262, $z = 3.17$), suggesting that the percentage of member firms that are clawback adopters is positively associated with the likelihood that a firm will adopt clawback provisions. The marginal effects of $\text{Log}(P\text{clawback_num})$ and $P\text{clawback_pct}$ are 0.015 and 0.254, respectively. Taken together, these findings imply the existence of the traveling governance effect on clawback provisions among firms that are connected via common IABs.¹³ The effect is also economically significant: an increase of one standard deviation in the number (fraction) of a firm's activist portfolio members that have adopted clawback provisions corresponds to an increase of 2.7 (3.3) percentage points in the likelihood that the firm will adopt clawback provisions the following year.

With regard to control variables, we find a higher likelihood of clawback provision adoption for larger firms (*Size*), more profitable firms (*ROA*), and firms with lower accruals (*Total Accruals*). The positive and significant coefficient of *Institutional Ownership* suggests that clawback adopters have a higher level of institutional investor participation. This result is consistent with findings in Gillan and Nguyen (2016) who show that the likelihood of clawback adoption is positively related to the number of institutional blockholders. Although we control for the activist ownership in the regression, it is not significant. In addition, firms that have higher CEO compensation (*CEO Compensation*), shorter CEO tenure (*CEO Tenure*), larger board size (*Board Size*), and more independent directors (*Independence*)

¹³ To deal with the concern that estimation of fixed effects may not converge in logit model and thus may bias the results, we replicate our main analysis using OLS regression model for robustness check, and we find similar results in unreported analysis.

on the board have a higher likelihood of clawback provision adoption. These findings are consistent with prior studies (e.g. Addy, Chu, and Yoder, 2014; Huang, Lim, and Ng, 2015).

To highlight the effect of common IABs on firms' clawback, we calculate three different value-weighted fractions of member firms with clawback provisions using (1) common ownership by IABs (*common ownership*), (2) the number of years in which a firm and its member firms are connected (*connecting years*), and (3) prior activism frequency by common IABs (*past activism*), as weights, respectively. These weights measure the strength of a connection, induced by common IABs, between a firm and one of its member firms, and we expect that the traveling governance effect should be stronger for member firms with greater weights. *common ownership* between a firm and a member firm is the aggregated percentage of shares outstanding of both firms held by these common IABs in year $t-1$. We measure *connecting years* in the five-year window ($[t - 5, t - 1]$) to capture duration of connections between a firm and a member firm. *past activism* is measured as the total number of 13D and 13D/A filings by common IABs in the period between year 2000 and year $t - 1$ (the results are similar if we measure this variable with past five years' 13D and 13D/A filings). Table 4 presents the results. The marginal effects from these regressions are 0.349, 0.316, and 0.316, respectively. All of these estimates are higher than the marginal effect from equally-weighted results reported in Table 3 (i.e., marginal effect of *Pclawback_pct* is 0.215). These results imply that traveling governance increases with the level and duration of common ownership by IABs as well as past activism experience of those IABs.

4.3 Traveling governance effect: Robustness tests

Prior research suggests that corporate decisions can also travel through other channels, such as board interlocks, common industry affiliation, and common location (e.g., Massa, Reham, and Vermaelen, 2007; Gleason, Jenkins, and Johnson, 2008; Chiu, Teoh, and Tian, 2013; Foucault, and Frésard, 2013; Addy, Chu, and Yoder, 2014; Leary and Roberts, 2014; Kedia, Koh, Rajgopal, 2015). In this section, we aim at differentiating the common activist blockholder effect we document from propagation effects arising from other networks. We investigate three channels of contagion, which are (1) industry peer relationship, (2) board interlocks, and (3) geographic peer relationship. Industry

peers are defined as firms that share the same two-digit SIC industry code. Members connected by board interlocks are firms that have common directors on board. Geographic peers are defined as firms that are located in the same state. To differentiate the impact of common IABs from the impact of other networks on clawback provision adoption, we control for the clawback provision adoption by industry peers, board interlock peers, and geographic peers in our main regression.

Results are reported in Table 5. In Panel A, we present results after controlling for industry peer effect of clawback provision adoption ($\text{Log}(P\text{clawback_num_Ind})$ and $P\text{clawback_pct_Ind}$). We find that the coefficients of $\text{Log}(P\text{clawback_num})$ and $P\text{clawback_pct}$ are both positive and significant, which are similar to our main findings in Table 3. The coefficients of $\text{Log}(P\text{clawback_num_Ind})$ are positive but insignificant, and the coefficients of $P\text{clawback_pct_Ind}$ are positive and significant. This suggests that industry peers also have an impact on a firm's clawback provision adoption. Results in Panel A show that peer pressure from members with the same activist is different from peer pressure from industry competitors.

Panel B reports results with the propagation effect of board interlocks controlled for. The coefficients of $\text{Log}(P\text{clawback_num})$ and $P\text{clawback_pct}$ remain positive and significant after controlling for the propagation effect of board interlocks ($\text{Log}(P\text{clawback_num_Board})$ and $P\text{clawback_pct_Board}$). This suggests that the peer pressure we document is different from that from board interlocks. We find that the coefficients of $\text{Log}(P\text{clawback_num_Board})$ and $P\text{clawback_pct_Board}$ are both positive and significant, indicating that firms that are connected by common directors exhibit similar clawback provision adoption policies. This finding is consistent with prior research on corporate governance's role in influencing clawback provision adoption decisions.

In Panel C, we control for the impact of geographic neighbors. We find that our results remain robust after controlling for the clawback provision adoption by firms located in the same state ($\text{Log}(P\text{clawback_num_State})$ and $P\text{clawback_pct_State}$). Taken together, the results in Table 4 further support our view that the peer pressure we document is different from peer pressure through other channels of connections.

In addition, the traveling governance effect is also robust to firm fixed effects, alternative construction of main explanatory variable, and alternative sample. We present the results with firm fixed effect in the appendix (Table A1). The coefficients of $\text{Log}(P\text{clawback_num})$ and $P\text{clawback_pct}$ are both positive and significant (0.092, $z = 1.98$; 2.352, $z = 2.54$), which are generally consistent with the findings in Table 3. This result further supports our view that a firm's likelihood of adopting clawback provisions is affected by its common activist blockholder members. In unreported tables, we find similar results using alternative explanatory variables constructed as asset- or sales-weighted fractions of member firms with clawback provisions, and we also obtain similar conclusion using a subsample of firms that do not have clawback provisions in the prior year.

4.4 Traveling governance effect: Two placebo tests

In this section, we conduct two placebo tests by identifying firms that share common non-activist blockholders, and firms that used to share common IABs previously (but no longer). Our findings will be strengthened if the travelling governance effect is weaker or absent among these firms.

We first investigate the role of activist versus non-activist blockholders in facilitating traveling governance. To accomplish this, we extend our traveling governance analysis to another set of members that share common blockholders which are non-activists. In light of the influential role of dedicated institutional investors in governance issues documented in prior literature, we restrict our non-activist blockholders to dedicated institutional investors, based on Bushee's classification, that have not engaged in any activism through 13-D filings.¹⁴ We identify non-activist members, which are members that share at least one common non-activist blockholder with the focal firm. Then we construct two new variables for each firm on the basis of its non-activist members. $\text{Log}(P\text{clawback_num_Non-Activist})$ is natural logarithm of the number of non-activist members that have clawback provisions. $P\text{clawback_pct_Non-Activist}$ is the fraction of non-activist member firms

¹⁴ Since shareholders can engage in other kinds of activism, such as submitting shareholder proposals (Ertimur, Ferri, and Muslu, 2011), besides filing a 13-D, according to our definition, these activist investors may be mistakenly classified as non-activist blockholders. However, such measurement error is biased against us to find different effects for firms connected through different types of blockholders (i.e., activist vs non-activist).

that have clawback provisions. As in Table 3, we include the variables constructed on the basis of activist portfolio members and other control variables.

In Panel A, Table 6, we present results of using two types of members: activist portfolio members and non-activist portfolio members. The dependent variable is *Clawback*, a dummy variable that equals one if a firm has clawback provisions, and zero otherwise. We find that the traveling governance effect only shows up for activist portfolio members but not for non-activist members. The coefficients of $\text{Log}(P\text{clawback_num_Non-Activist})$ and $P\text{clawback_pct_Non-Activist}$ are positive but not significant. The marginal effect of activist portfolio members is 0.015 (0.255) in the first (second) regression specification, while the marginal effect of non-activist portfolio members is 0.005 (0.029) in the first (second) regression specification. The result suggests that blockholders' past activism records can increase their bargaining power with a firm management team by negotiating clawback provision adoption policies, thus facilitating greater effect of propagation of clawback provision adoption across firms in their portfolio.

The second placebo test centers on the effect of clawback adoptions by past members on the clawback adoption of the focal firm. The question remains whether the traveling governance effect exists after the common activist relationship breaks up. To answer this question, we compare the travelling governance effects for current member firms and past member firms, and we expect the travelling governance effect to be weaker or absent for past members. We define past members as firms that share common IABs with the focal firm in year $t-3$, but the relation has been discontinued since year $t-2$. To facilitate comparison, we include the same explanatory variables as in our main analysis, constructed based on a firm's current IAB members identified in year $t-1$. $\text{Log}(P\text{clawback_Num})$ ($\text{Log}(P\text{clawback_Num_Past})$) is the natural logarithm of the number of current (past) connected firms that have clawback provisions. $P\text{clawback_pct}$ ($P\text{clawback_pct_Past}$) is the fraction of current (past) member firms with clawback provisions.

Table 6, Panel B presents the results for the impact of past member firms vs. current member firms in traveling governance. The coefficient of $\text{Log}(P\text{clawback_num_Current})$ is positive and significant, which is consistent with our main findings in Table 3, whereas the coefficient of $\text{Log}(P\text{clawback_num_Past})$ is insignificant, indicating that once the common activist peer relationship

breaks up, the traveling governance effect stops. Similarly, the coefficients of *Pclawback_pct* and *Pclawback_Past* suggest that traveling governance effect only exists among member firms that are currently connected via common IABs. Overall, the findings in Table 6 imply the common IABs' role in facilitating traveling governance.

5. Endogeneity of traveling governance

Peer pressure is endogenous because of the reflection problem (Manski, 1993). The reflection problem is a specific form of endogeneity that arises when researchers try to infer whether the actions or characteristics of a group influence the actions of the individuals that comprise the group. Our earlier findings of a positive correlation between firms' clawback adoption and the clawback adoption of other firms sharing the same IABs can be attributed to two alternative explanations. The first one is based on endogenous selection of firms with similar likelihood of adopting clawback provisions being held by common IABs. This selection argument stems from investors' portfolio choices based on firms' existing characteristics. The second explanation is that firms' clawback policies are responses to other firms' clawback adoption or other fundamentals. Since this response can operate through two channels (i.e., actions or characteristics), we need to clearly distinguish between the two channels through which travel governance operates. In this section, we implement two tests to overcome the endogenous selection problem and one test to distinguish between these two channels.

5.1 Traveling governance effect: Regression with changes in adopting members

To further support our argument of members' influence on firms' likelihood of clawback provision adoption, we test the incremental impact of a change in clawback provision adoption by member firms on firms' likelihood of clawback provision adoption by estimating the following logit regression models.

$$\begin{aligned}
 \text{Clawback}_{i,t} &= a_0 + b_1 \Delta \text{Log}(\text{Pclawback_num}_{i,t-1}) + b_2 \text{Log}(\text{Pclawback_num}_{i,t-2}) \\
 &\quad + b_3 \text{MTB}_{i,t-1} + b_4 \text{LEV}_{i,t-1} + b_5 \text{ROA}_{i,t-1} + b_6 \text{Size}_{i,t-1} + b_7 \text{Total Accruals}_{i,t-1} \\
 &\quad + b_8 \text{Restatement}_{i,t-1} + b_9 \text{Institutional Ownership}_{i,t-1} + b_{10} \text{Activist Ownership}_{i,t-1} \\
 &\quad + b_{11} \text{CEO Compensation}_{i,t-1} + b_{12} \text{CEO Tenure}_{i,t-1} + b_{13} \text{Board Size}_{i,t-1} \\
 &\quad + b_{14} \text{Independence}_{i,t-1} + b_{15} \text{Insider}_{i,t-1} + b_{16} \text{CEO Duality}_{i,t-1} + e_{i,t-1}, \quad (3) \\
 \text{Clawback}_{i,t} &= a_0 + b_1 \Delta \text{Pclawback_pct}_{i,t-1} + b_2 \text{Pclawback_pct}_{i,t-2} + b_3 \text{MTB}_{i,t-1} + b_4 \text{LEV}_{i,t-1} \\
 &\quad + b_5 \text{ROA}_{i,t-1} + b_6 \text{Size}_{i,t-1} + b_7 \text{Total Accruals}_{i,t-1} + b_8 \text{Restatement}_{i,t-1} \\
 &\quad + b_9 \text{Institutional Ownership}_{i,t-1} + b_{10} \text{Activist Ownership}_{i,t-1}
 \end{aligned}$$

$$\begin{aligned}
& + b_{11}CEO\ Compensation_{i,t-1} + b_{12}CEO\ Tenure_{i,t-1} + b_{13}Board\ Size_{i,t-1} \\
& + b_{14}Independence_{i,t-1} + b_{15}Insider_{i,t-1} + b_{16}CEO\ Duality_{i,t-1} + e_{i,t-1}.
\end{aligned} \tag{4}$$

$\Delta\text{Log}(P\text{clawback_num}_{i,t-1})$ is the change in the natural logarithm of number of member firms that have clawback provisions from year $t-2$ to year $t-1$. $\Delta P\text{clawback_pct}_{i,t-1}$ is the change in fraction of member firms that have clawback provisions from year $t-2$ to year $t-1$. If our main results in Table 3 are driven by the selection explanation, the change in member firms' clawback adoption should have limited, if not none, power to explain the focal firm's clawback adoption. In other words, we should expect b_l to be insignificant. In contrast, if b_l is positive and significant, then the result will support the second explanation (firms' clawback polices are responses to other firms' clawback adoption).

Results are presented in Table 7. We find that the coefficient of $\Delta\text{Log}(P\text{clawback_num}_{i,t-1})$ is positive and significant, suggesting that the decisions of clawback provision adoption by member firms have a positive influence on firms' likelihood of adopting clawback provisions. The significantly positive coefficients of $\Delta\text{Log}(P\text{clawback_num}_{i,t-1})$ and $\Delta P\text{clawback_pct}_{i,t-1}$ support our argument that firms' likelihood of clawback provision adoption is affected by their member firms' behavior of clawback provision adoption.¹⁵

5.2 Traveling governance effect: Members with mandatory clawback provisions

In this section, we investigate a firm's reaction to its members' mandatory adoption of clawbacks in order to mitigate the potential endogeneity concern that the results we find is driven by IABs' *ex ante* preference for firms with similar characteristics. Firms that joined the Troubled Asset Relief Program (TARP) in 2008 were required to implement mandatory clawback provisions by the Secretary of the Treasury. These TARP participants' clawback provision adoption is exogenous to other firms' decisions, because the adoption is subject to regulation over a subset of firms that obtain intervention from the government because of the 2008 crisis. We use such mandatory adoption as a shock to other non-TARP firms' voluntary clawback provision adoption.

¹⁵ We cannot rule out the possibility that the selection effect exists, i.e., some blockholders prefer to hold firms with clawback provisions. Our focus in this paper is that, after establishment of blockholdings in multiple firms, how the common ownership by IABs affects good governance practices to travel from one firm to another.

We examine how a non-TARP firm's member connection to TARP participants influences its own adoption decision. To accomplish this goal, we identify TARP members for each non-TARP firm in our sample. TARP members refer to members that have joined the Troubled Asset Relief Program (TARP). We construct two variables: $\text{Log}(P\text{clawback_TARP})$, which is the natural log number of TARP members that adopt clawback provisions; $P\text{clawback_pct_TARP}$, which is the fraction of TARP members with clawback provisions.¹⁶

Our regression sample is restricted to non-TARP firms, but their members could be either TARP or non-TARP firms. Results are reported in Table 8. We find that a connection with TARP members increases firms' likelihood of clawback provision adoption. This suggests that a firm's decision to adopt clawback provisions is affected by its member firms' exogenous clawback provision adoption behaviour.

5.3 Traveling governance effect: Response to others' clawback adoption or others' fundamentals

Our previous analysis is mute about the channel through which the travelling governance operates. In particular, since clawback provision adoption is closely related to board governance, the proxy we use for peer pressure (i.e., average of peers' clawback provision adoption) may also capture variations in member firms' board governance or other fundamentals. Therefore, it is unclear about what the focal firms respond to—either member firms' governance or firm fundamentals in general, or member firms' clawback provision adoption. For example, a firm may adopt clawbacks simply because its peer firms generally have high board independence, which also leads to a larger fraction of peers adopting clawbacks.

In this section, we analyze the source of peer pressure with a two-stage approach: we first decompose peer pressure with a regression model into a predicted component (predicted by member firms' board governance and other fundamental variables of these member firms) and a residual component; in the second stage, we estimate the effect of residual peer pressure on the focal firm's clawback provision adoption. Since the residual of peer pressure is orthogonal to member firms'

¹⁶ Although firms that join TARP are required to adopt clawback provisions mandatorily, exceptions may apply if the firm can show that it would be unreasonable to adopt clawback provisions (74 Federal Register 28394, <https://www.gpo.gov/fdsys/pkg/FR-2009-06-15/pdf/E9-13868.pdf>).

board governance and other fundamentals by construction, we can use it to test whether the focal firm is reacting to member firms' clawback-specific variations or board governance-related variation in the second stage.

In the first stage, we regress peer pressure on peer members' board governance structure and other fundamental variables. The natural log number of peer members that have clawback provisions ($\text{Log}(P\text{clawback_num})$) and the fraction of peer members that have adopted clawbacks ($P\text{clawback_pct}$) are used as our proxies for peer pressure. The following estimation models are estimated in the first stage.

$$\begin{aligned} \text{Log}(P\text{clawback_num})_{i,t} = & a_0 + b_1PMTB_{i,t-1} + b_2PLEV_{i,t-1} + b_3PROA_{i,t-1} + b_4PSize_{i,t-1} \\ & + b_5PTotal\text{ Accruals}_{i,t-1} + b_6P\text{Restatement}_{i,t-1} + b_7P\text{Institutional Ownership}_{i,t-1} \\ & + b_8P\text{Activist Ownership}_{i,t-1} + b_9P\text{CEO Compensation}_{i,t-1} \\ & + b_{10}P\text{CEO Tenure}_{i,t-1} + b_{11}P\text{Board Size}_{i,t-1} + b_{12}P\text{Independence}_{i,t-1} \\ & + b_{13}P\text{Insider}_{i,t-1} + b_{14}P\text{CEO Duality}_{i,t-1} + e_{i,t-1}, \end{aligned} \quad (5)$$

$$\begin{aligned} P\text{clawback_pct}_{i,t} = & a_0 + b_1PMTB_{i,t-1} + b_2PLEV_{i,t-1} + b_3PROA_{i,t-1} + b_4PSize_{i,t-1} + b_5PTotal \\ & \text{Accruals}_{i,t-1} + b_6P\text{Restatement}_{i,t-1} + b_7P\text{Institutional Ownership}_{i,t-1} + b_8P\text{Activist} \\ & \text{Ownership}_{i,t-1} + b_9P\text{CEO Compensation}_{i,t-1} + b_{10}P\text{CEO Tenure}_{i,t-1} + b_{11}P\text{Board} \\ & \text{Size}_{i,t-1} + b_{12}P\text{Independence}_{i,t-1} + b_{13}P\text{Insider}_{i,t-1} + b_{14}P\text{CEO Duality}_{i,t-1} + e_{i,t-1} \end{aligned} \quad (6)$$

We estimate Eq. (5) and Eq. (6) in the first step and obtain two residual values of the dependent variables: $\text{Log}(P\text{clawback_num})_Residual$ and $P\text{clawback_pct_Residual}$. The control variables we use include the average of peer members' market-to-book ($PMTB$), leverage ($PLEV$), profitability ($PROA$), firm size ($PSize$), total accruals ($PTotal\text{ Accruals}$), restatement ($P\text{Restatement}$), institutional ownership ($P\text{Institutional Ownership}$), activist ownership ($P\text{Activist Ownership}$), CEO compensation ($P\text{CEO Compensation}$), CEO tenure ($P\text{CEO Tenure}$), board size ($P\text{Board Size}$), board independence ($P\text{Independence}$), insider ownership ($P\text{Insider}$), and CEO duality ($P\text{CEO Duality}$). The residual components, $\text{Log}(P\text{clawback_num})_Residual$ and $P\text{clawback_pct_Residual}$, represent the peer pressure driven by factors which are orthogonal to member firms' fundamentals and unobservable to researchers, but observable to firm managers (e.g., private communications or negotiations between a firm and common IABs).

In the second step, we estimate the following logit models.

$$\begin{aligned} \text{Clawback}_{i,t} = & a_0 + b_1\text{Log}(P\text{clawback_num})_Residual_{i,t-1} + b_2MTB_{i,t-1} + b_3LEV_{i,t-1} \\ & + b_4ROA_{i,t-1} + b_5Size_{i,t-1} + b_6Total\text{ Accruals}_{i,t-1} + b_7Restatement_{i,t-1} \\ & + b_8Institutional\text{ Ownership}_{i,t-1} + b_9Activist\text{ Ownership}_{i,t-1} \end{aligned}$$

$$\begin{aligned}
& + b_{10}CEO\ Compensation_{i,t-1} + b_{11}CEO\ Tenure_{i,t-1} + b_{12}Board\ Size_{i,t-1} \\
& + b_{13}Independence_{i,t-1} + b_{14}Insider_{i,t-1} + b_{15}CEO\ Duality_{i,t-1} + e_{i,t-1}, \tag{7}
\end{aligned}$$

$$\begin{aligned}
Clawback_{i,t} = & a_0 + b_1Pclawback_pct_Residual_{i,t-1} + b_2MTB_{i,t-1} + b_3LEV_{i,t-1} \\
& + b_4ROA_{i,t-1} + b_5Size_{i,t-1} + b_6Total\ Accruals_{i,t-1} + b_7Restatement_{i,t-1} \\
& + b_8Institutional\ Ownership_{i,t-1} + b_9Activist\ Ownership_{i,t-1} \\
& + b_{10}CEO\ Compensation_{i,t-1} + b_{11}CEO\ Tenure_{i,t-1} + b_{12}Board\ Size_{i,t-1} \\
& + b_{13}Independence_{i,t-1} + b_{14}Insider_{i,t-1} + b_{15}CEO\ Duality_{i,t-1} + e_{i,t-1}. \tag{8}
\end{aligned}$$

Results are presented in Table 9. In Panel A, we present the first stage results and in Panel B, we present the second stage results. *Log(Pclawback_num)_Residual* and *Pclawback_pct_Residual* are both positively associated with a firm's clawback provision adoption and the relation is significant. The marginal effect results suggest that an increase of 10 percent in residual of the fraction of member firms that have adopted clawback provisions will increase the focal firm's likelihood of adopting clawback provisions by 2% (=10%*0.20). This result suggests that the focal firm's clawback adoption is a response to member firms' clawback adoption, unexplained by member firms' fundamentals and their board governance. The residual of member firms' clawback provision adoption is due to unobservable factors, such as private communications and negotiations between firms and institutional blockholders, which also affect the focal firm's clawback adoption.

6. Relation with other governance mechanisms

In this section, we explore the relation between the traveling governance effect and other governance mechanisms. Ferreira, Ferreira, and Raposo (2011) find that board independence substitutes for the informativeness of a firm's stock price (a form of external governance). However, Cohn and Rajan (2013) argue that internal and external governance can be either substitutes for or complements to each other, depending on the strength of external governance. In our setting, pressure from common IABs can be viewed as a form of indirect external governance as implied by Cohn and Rajan (2013). It is therefore an empirical question whether this indirect external governance should work as a substitute for or complement to internal governance. We use board independence and historical restatement as proxies for incumbent internal governance and product market competition as a proxy for external governance. We then conduct traveling governance effect analysis with subsamples formed according to these governance mechanisms.

6.1 Traveling governance effect: Relation with board independence

To test board independence's conditional impact related to the traveling governance effect on clawback provision adoption, we partition our sample into low and high board independence groups on the basis of the median of board independence (*Independence*), and compare the marginal effect of *Log(Pclawback_num)* (*Pclawback_pct*) between low and high independence groups.

Table 10, Panel A presents the results of board independence's conditional impact on the traveling governance effect we document. We find that the traveling governance effect is more likely to be driven by the weak corporate governance group. The coefficients of *Log(Pclawback_num)* and *Pclawback_pct* are positive and significant for firms in the low board independence group, whereas the coefficients are positive but insignificant for firms in the high board independence group. We present marginal effects of *Log(Pclawback_num)* and *Pclawback_pct* in the last row, and we find that the marginal effects are greater for firms in the low board independence group. For example, the marginal effect of *Log(Pclawback_num)* is 0.019 (0.006) for firms in the low (high) board independence group. Overall, results suggest that when board independence is lower, firms' decision to adopt clawback provisions is more likely to be affected by clawback provision of their member firms sharing common IABs. This implies that for firms with weak corporate governance, external activist shareholders may have an enhanced role in monitoring through traveling governance and substituting internal corporate governance.

6.2 Traveling governance effect: Relation with historical restatement

In Table 10, Panel B, we present the results of the traveling governance effect on clawback provision adoption conditional to the impact of restatement. Our sample is partitioned into restatement groups and non-restatement groups according to whether firms have had an earnings restatement in the past three years. We find that while the coefficient of *Log(Pclawback_num)* is significant and positive for restatement groups (0.112, $z = 3.10$) with a marginal effect of 0.022, the coefficient of *Log(Pclawback_num)* in non-restatement groups is significantly positive (0.054, $z = 2.03$) with a marginal effect of 0.011. The coefficients of *Pclawback_pct* are positive and significant for both

restatement and non-restatement groups, and the marginal effect of *Pclawback_pct* is higher for the restatement group than for the non-restatement group. The findings above indicate that for firms having financial misstatement, their likelihood of adopting clawback provisions is more likely to be influenced by member firms that share common IABs with them.

6.3 Traveling governance effect: Relation with product market competition

To examine whether product market competition has a conditional impact on the traveling governance effect we find, we partition our sample into high and low product market competition groups on the basis of the median of market concentration, which is calculated using the Herfindahl Index based on Fama-French 48 industry classifications. High market concentration indicates low product market competition.

In Table 11, we report the coefficients of $\text{Log}(Pclawback_num)$ and *Pclawback_pct* for high and low product market competition groups identified based on Fama-French 48 industry classifications.¹⁷ We find positive and significant coefficients of $\text{Log}(Pclawback_num)$ and *Pclawback_pct* for firms in the high product market competition group, but the coefficients are less significant for firms in the low product market competition group. We present marginal effects of $\text{Log}(Pclawback_num)$ and *Pclawback_pct* in the last row, and we find that the marginal effects are greater for firms in the high product market competition group. For example, the marginal effect of $\text{Log}(Pclawback_num)$ is 0.022 (0.011) for firms in the high (low) product market competition group. This implies that when market competition is relatively intense, firms have greater incentive to cater to their shareholders, and their behavior is more likely to be influenced by common activist blockholder members.

7. Consequences of clawback provision adoption

Prior studies have documented several possible consequences of clawback provision adoption (Chan, Chen, and Chen, 2012; Dehaan, Hodge, and Shevlin, 2013; Iskandar-Datta and Jia, 2013; etc.);

¹⁷ We obtain qualitatively the same results using Herfindahl Index based on two-digit and four-digit SIC codes and Fama-French 12 industry classifications.

however, the results may suffer from causality concern. To deal with the causality concern and re-examine possible consequences of clawback provision adoption, we employ the two-stage least squares method and use a fraction of clawback provision adoption by peers as an instrument variable. In the first stage, we estimate the predicted likelihood of clawback provision adoption from Eq. (2). In the second stage, we use the predicted likelihood of clawback provision adoption (*Predict_Clawback*) as our independent variable and examine its impact on three possible consequence variables, which are earnings quality (*/DA/*, i.e., absolute value of discretionary accruals following Dechow, Sloan, and Sweeney (1995)), firm value (*Tobin's Q*), and R&D expenditure (*R&D*). The second-stage regression can be written as follows.

$$|DA|_{i,t} = a_0 + b_1 \text{Predict_Clawback}_{i,t-1} + b_i \text{Control variables} + e_{i,t-1}, \quad (9)$$

$$\text{Tobin's } Q_{i,t} = a_0 + b_1 \text{Predict_Clawback}_{i,t-1} + b_i \text{Control variables} + e_{i,t-1}, \quad (10)$$

$$R\&D_{i,t} = a_0 + b_1 \text{Predict_Clawback}_{i,t-1} + b_i \text{Control variables} + e_{i,t-1}. \quad (11)$$

Results are presented in Table 12. The first two columns present the impact of clawback provision adoption on firms' earnings quality. We use the absolute discretionary accruals as our proxy for earnings quality. Consistent with prior studies (Chan, Chen, Chen, and Yu, 2012; Chan, Chen, Chen, and Yu, 2015), our results show that clawback provision adoption is effective in reducing accrual-based earnings management, thus improving earnings quality.

Next we examine the consequence of clawback provision adoption in terms of firm value. In columns (3) and (4), we use Tobin's Q as our proxy for firm value. We find that the likelihood of clawback provision adoption is positively associated with firm value, suggesting that clawback provision adoption is beneficial to increasing firm value.

In columns (5) and (6), we report the impact of predicted likelihood of clawback provision adoption on R&D expenditures. We find that the likelihood of clawback provision adoption is positively associated with R&D expenditures. One possible explanation could be that clawback provision adoption is effective in reducing management myopia, so managers pay more attention to the long term after the adoption.

8. Conclusion

We examine the propagation of governance mechanisms across firms held by the same institutional activist blockholder. We focus on one of the most notable, recent governance mechanisms aimed at tightening the link between top management compensation and long-term performance: clawback provisions. As an important mechanism introduced to mitigate agency issues regarding CEO compensation, the clawback policy was adopted by 17 percent of firms in Russell 3000 Index as of 2009. Although recent years have witnessed a dramatic increase in the fraction of adopting firms (e.g., 53 percent of firms have adopted clawbacks as of 2014), the reason why firms voluntarily adopt clawback provisions is still under-studied. In this paper, we document a new source of corporate governance external to a firm's power structure: pressure from member firms sharing the same institutional activist blockholder. Specifically, we investigate how clawback provision adoption by one firm impacts adoption by other firms held by the same institutional activist blockholder.

We find that a firm is more likely to adopt clawback provisions when a larger fraction of other firms held by the same institutional activist blockholder have adopted clawback policies — an effect we call traveling governance. The effect is absent for firms held by passive blockholders, and it dominates other propagation effects based on industry affiliation, location, and board interlocks. This effect is stronger for firms with restatements, lower board independence, or higher product market competition. Our results are generally consistent with the notion that traveling governance influences clawback provision adoption, and traveling governance substitutes internal governance mechanisms, while complements other external governance mechanisms such as product market competition.

Our findings suggest that IABs play an important role in governing their portfolio firms through a less costly, indirect governance mechanism resulted from the spillover effect. In other words, the traveling governance effect documented in our paper indicates that institutional investors that are likely to be vocal about a firm's policy can influence behavior of other portfolio firms. This is a positive externality that has important implications for governance effectiveness in a world of cross ownership by institutional investors.

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Table 1: Variable definitions and sample construction

This table presents the definition of main variables, steps of get main sample used in our regression analyses, and sources of our data.

Panel A: Variable definitions

Variable	Definition
<i>Clawback</i>	Indicator variable that equals one if a firm has clawback provisions, and zero otherwise
<i>Log(Pclawback_num)</i>	Natural logarithm of number of member firms that adopt clawback provisions
<i>Pclawback_pct</i>	Fraction of member firms that have clawback provisions
<i>MTB</i>	Market to book ratio
<i>LEV</i>	Long-term debt divided by total assets
<i>ROA</i>	Income before extraordinary items divided by total assets
<i>Size</i>	Natural log of total assets
<i>Total Accruals</i>	Net income minus cash flow from operations
<i>Restatement</i>	An indicator variable that equals one if a firm has restatement in the past three years, and zero otherwise
<i>Institutional Ownership</i>	Aggregated shares owned by all institutional blockholders scaled by total shares outstanding
<i>Activist Ownership</i>	Aggregated shares owned by all institutional activist blockholders scaled by total shares outstanding
<i>CEO Compensation</i>	Natural log of CEO compensation
<i>CEO Tenure</i>	Natural log of CEO tenure
<i>Board Size</i>	Total number of directors on the board
<i>Independence</i>	Percentage of independent directors on the board
<i>Insider</i>	Percentage of shares held by managers and directors
<i>CEO Duality</i>	An indicator variable that equals one if the CEO serves as chairman of the board, and zero otherwise

Panel B: Steps to obtain the sample

	Num. of Obs.
Firm-year observations with valid clawback data from MSCI(GMI)	16,039
<i>Exclude:</i>	
Firm-year observations without IAB members	-3,440
Firm-year observations without financial information	-415
Firm-year observations without corporate governance and executive information	-1,488
Firms that are TARP recipients	-395
Firm-year observations used in main analysis	10,301

Panel C: Sources of data used

Data	Sources
Annual clawback provision adoption data	MSCI (formerly GMI)
Institutional investors' holdings	Thomson Reuters 13F filings (S34 dataset)
Institutional investors' activism records	AuditAnalytics - Shareholder activism
Firm restatement data	AuditAnalytics
Executive information and board information	MSCI (formerly GMI)
Financial accounting information	Compustat
Stock price information	CRSP
Information about TARP recipients	US Treasury Department's website

Table 2: Summary statistics

This table presents the summary statistics of our sample. Panel A provides descriptive statistics of variables used in our analyses. Panel B reports descriptive statistics of key variables for clawback adopters and non-clawback adopters. Panel C reports the distribution of clawback adopters by year. Panel D reports the number of IAB members for each firm, and fraction of a firm's IAB members that also share common same industry affiliation, headquarter location, or directors with the focal firm. *# of IAB members* of a firm is the number of firms that share common institutional activist blockholders (IABs) with the focal firm in a given year. *Mem_SameInd* is the fraction of IAB members in the same industry, *Mem_SameHQ* is the fraction of IAB members in the same state, *Mem_BoardInterlock* is the fraction of IAB members sharing same directors. The sample period is from 2009 through 2014 and covers firms in Russell 3000 index. We exclude firms that joined Troubled Asset Relief Program (TARP) and firms that do not have any institutional activist blockholders (IABs) in the previous year. All variables are defined in Table 1.

Panel A: Descriptive statistics for full sample

	N	Mean	Q1	Median	Q3	Std. Dev.
<i>Clawback</i>	10,301	0.329	0.000	0.000	1.000	0.470
<i>Pclawback_num</i>	10,301	244.730	44.000	161.000	385.000	224.638
<i>Pclawback_pct</i>	10,301	0.256	0.175	0.258	0.328	0.128
<i>MTB</i>	10,301	2.618	1.186	1.838	3.069	2.249
<i>LEV</i>	10,301	0.220	0.032	0.181	0.347	0.203
<i>ROA</i>	10,301	0.011	0.001	0.031	0.068	0.135
<i>Size</i>	10,301	7.259	6.105	7.204	8.316	1.535
<i>Total Accruals</i>	10,301	-0.064	-0.089	-0.048	-0.017	0.110
<i>Restatement</i>	10,301	0.343	0.000	0.000	1.000	0.475
<i>Institutional Ownership</i>	10,301	0.335	0.215	0.318	0.437	0.164
<i>Activist Ownership</i>	10,301	0.082	0.000	0.065	0.119	0.084
<i>CEO Compensation</i>	10,301	14.029	13.615	14.135	14.740	1.780
<i>CEO Tenure</i>	10,301	2.006	1.386	2.079	2.565	0.730
<i>Board Size</i>	10,301	2.247	2.079	2.197	2.398	0.217
<i>Independence</i>	10,301	0.701	0.600	0.727	0.833	0.168
<i>Insider</i>	10,301	0.119	0.025	0.053	0.130	0.169
<i>CEO Duality</i>	10,301	0.470	0.000	0.000	1.000	0.499

Panel B: Univariate comparison between clawback adopters and non-clawback adopters

	<i>Clawback=1</i>			<i>Clawback=0</i>			Diff. in Mean	<i>t</i> -value
	N	Mean	Median	N	Mean	Median		
<i>Pclawback_num</i>	3,386	304.367	282.000	6,915	215.550	139.000	88.818***	19.19
<i>Pclawback_pct</i>	3,386	0.305	0.322	6,915	0.233	0.213	0.072***	27.93
<i>MTB</i>	3,386	2.582	1.844	6,915	2.636	1.836	-0.054	-1.14
<i>LEV</i>	3,386	0.237	0.209	6,915	0.211	0.163	0.026***	6.24
<i>ROA</i>	3,386	0.029	0.033	6,915	0.003	0.029	0.027***	9.45
<i>Size</i>	3,386	7.939	7.899	6,915	6.926	6.817	1.013***	33.10
<i>Total Accruals</i>	3,386	-0.053	-0.043	6,915	-0.069	-0.050	0.016***	7.75
<i>Restatement</i>	3,386	0.345	0.000	6,915	0.342	0.000	0.002	0.25
<i>Institutional Ownership</i>	3,386	0.320	0.304	6,915	0.343	0.326	-0.022***	-6.49
<i>Activist Ownership</i>	3,386	0.074	0.061	6,915	0.086	0.066	-0.012***	-7.00
<i>CEO Compensation</i>	3,386	14.373	14.385	6,915	13.861	14.004	0.512***	13.84
<i>CEO Tenure</i>	3,386	1.938	1.946	6,915	2.040	2.079	-0.102***	-6.68
<i>Board Size</i>	3,386	2.324	2.303	6,915	2.210	2.197	0.114***	25.84
<i>Independence</i>	3,386	0.723	0.750	6,915	0.691	0.714	0.032***	9.09
<i>Insider</i>	3,386	0.079	0.035	6,915	0.139	0.067	-0.060***	-17.08
<i>CEO Duality</i>	3,386	0.471	0.000	6,915	0.470	0.000	0.001	0.12

Panel C: Statistics of clawback adoption by year

Year	# of firms	# clawback adopters	# non-adopters	Fraction of clawback adopters
2009	1,824	311	1,513	17.05%
2010	1,929	448	1,481	23.22%
2011	1,390	417	973	30.00%
2012	1,664	536	1,128	32.21%
2013	1,764	754	1,010	42.74%
2014	1,730	920	810	53.18%
2009-2014	10,301	3,386	6,915	32.87%

Panel D: Fraction of a firm's IAB members that also share common same industry affiliation, headquarter location, or directors with the focal firm

	N	Mean	Q1	Median	Q3	SD
# of IAB members	10,301	1,010	409	1,250	1,583	672
Mem_SameInd	10,301	0.065	0.011	0.040	0.082	0.111
Mem_SameHQ	10,301	0.083	0.015	0.037	0.133	0.120
Mem_BoardInterlock	10,301	0.005	0.000	0.001	0.002	0.050

Table 3: Clawback provision adoption and traveling governance effect

This table presents the results of travelling governance effect on clawback provision adoption. The dependent variable is *Clawback*, an indicator variable that equals one if a firm has clawback provisions, and zero otherwise. We identify all IAB members for each firm using institutional holdings in year $t-1$ and construct two main explanatory variables: $\text{Log}(P\text{clawback_num})$ is the natural logarithm of number of member firms that adopt clawback provisions in year $t-1$. $P\text{clawback_pct}$ is the fraction of member firms that have clawback provisions in year $t-1$. Definitions of other variables are provided in Table 1. All control variables are lagged by one year. z -statistics are presented in parentheses. The sample period ranges from 2009 through 2014. Standard errors are corrected for heteroscedasticity and are clustered at the firm level. *, **, and *** indicate significance levels at 10%, 5%, and 1%, respectively.

	(1)		(2)	
	Coefficients	Marginal effect	Coefficients	Marginal effect
<i>Log(Pclawback_num)</i>	0.074*** (3.52)	0.015		
<i>Pclawback_pct</i>			1.262*** (3.17)	0.254
<i>MTB</i>	-0.010 (-0.55)	-0.002	-0.013 (-0.69)	-0.003
<i>LEV</i>	0.102 (0.41)	0.021	0.085 (0.34)	0.017
<i>ROA</i>	0.755* (1.89)	0.152	0.791** (2.00)	0.159
<i>Size</i>	0.381*** (9.68)	0.077	0.360*** (9.18)	0.073
<i>Total Accruals</i>	-0.760** (-1.98)	-0.153	-0.782** (-2.06)	-0.158
<i>Restatement</i>	0.037 (0.43)	0.007	0.038 (0.44)	0.008
<i>Institutional Ownership</i>	0.274** (2.12)	0.055	0.291** (2.24)	0.059
<i>Activist Ownership</i>	-0.419 (-1.00)	-0.084	-0.383 (-0.95)	-0.077
<i>CEO Compensation</i>	0.118*** (3.48)	0.024	0.120*** (3.60)	0.024
<i>CEO Tenure</i>	-0.210*** (-3.89)	-0.042	-0.201*** (-3.73)	-0.041
<i>Board Size</i>	1.219*** (5.60)	0.245	1.219*** (5.64)	0.246
<i>Independence</i>	1.042*** (4.61)	0.210	1.112*** (4.95)	0.224
<i>Insider</i>	-0.995*** (-3.06)	-0.200	-1.114*** (-3.43)	-0.225
<i>CEO Duality</i>	0.001 (0.01)	0.000	-0.006 (-0.07)	-0.001
<i>Constant</i>	-8.161*** (-9.39)		-8.122*** (-9.67)	
Observations	10,301		10,301	
Pseudo-R ²	0.189		0.189	
Year FE	Yes		Yes	
Industry FE	Yes		Yes	

Table 4: Value-weighted fraction of clawback provision adoption by peer firms

This table presents the results with value-weighted fraction of clawback provision adoption by peer firms. The dependent variable is *Clawback*, an indicator variable that equals one if a firm has clawback provisions, and zero otherwise. We calculate value-weighted fraction of peer firms' clawback provision adoption, *Pclawback_pct_vw1*, *Pclawback_pct_vw2*, and *Pclawback_pct_vw3*, using three values measured between the focal firm and firms sharing common IABs as weights: (1) common activist shareholder ownership, (2) the number of years two peer firms are connected, (3) prior activism frequency by common IABs, respectively. Definitions of other variables are provided in Table 1. All control variables are lagged by one year. *z*-statistics are presented in parentheses. Standard errors are corrected for heteroscedasticity and are clustered at the firm level. *, **, and *** indicate significance levels at 10%, 5%, and 1%, respectively.

	(1)		(2)		(3)	
	Coefficients	Marginal effect	Coefficients	Marginal effect	Coefficients	Marginal effect
<i>Pclawback_pct_vw1</i>	1.733*** (4.30)	0.349				
<i>Pclawback_pct_vw2</i>			1.569*** (3.68)	0.316		
<i>Pclawback_pct_vw3</i>					1.570*** (3.78)	0.316
<i>MTB</i>	-0.011 (-0.58)	-0.002	-0.011 (-0.62)	-0.002	-0.011 (-0.57)	-0.002
<i>LEV</i>	0.085 (0.34)	0.017	0.089 (0.36)	0.018	0.086 (0.35)	0.017
<i>ROA</i>	0.778** (1.96)	0.157	0.787** (1.98)	0.158	0.797** (2.01)	0.160
<i>Size</i>	0.364*** (9.30)	0.073	0.362*** (9.23)	0.073	0.365*** (9.32)	0.074
<i>Total Accruals</i>	-0.778** (-2.05)	-0.157	-0.783** (-2.06)	-0.158	-0.790** (-2.08)	-0.159
<i>Restatement</i>	0.040 (0.47)	0.008	0.040 (0.46)	0.008	0.042 (0.49)	0.008
<i>Institutional Ownership</i>	0.290** (2.25)	0.058	0.291** (2.25)	0.059	0.295** (2.28)	0.059
<i>Activist Ownership</i>	-0.247 (-0.61)	-0.050	-0.286 (-0.71)	-0.058	-0.227 (-0.56)	-0.046
<i>CEO Compensation</i>	0.119*** (3.54)	0.024	0.119*** (3.54)	0.024	0.119*** (3.54)	0.024
<i>CEO Tenure</i>	-0.205*** (-3.79)	-0.041	-0.205*** (-3.80)	-0.041	-0.203*** (-3.76)	-0.041
<i>Board Size</i>	1.211*** (5.60)	0.244	1.211*** (5.60)	0.244	1.213*** (5.62)	0.244
<i>Independence</i>	1.084*** (4.83)	0.218	1.089*** (4.85)	0.219	1.100*** (4.90)	0.222
<i>Insider</i>	-1.036*** (-3.21)	-0.209	-1.055*** (-3.26)	-0.213	-1.064*** (-3.30)	-0.214
<i>CEO Duality</i>	-0.004 (-0.05)	-0.001	-0.004 (-0.04)	-0.001	-0.006 (-0.07)	-0.001
<i>Constant</i>	-7.999*** (-9.36)		-7.984*** (-9.13)		-8.005*** (-9.26)	
Observations	10,301		10,301		10,301	
Pseudo-R ²	0.190		0.190		0.190	
Year FE	Yes		Yes		Yes	
Industry FE	Yes		Yes		Yes	

Table 5: Clawback provision adoption and traveling governance effect – Controlling for other channels of propagation effect

This table presents the robustness test results of our main regression after controlling for other channels of propagation effect. The dependent variable is *Clawback*, an indicator variable that equals one if a firm has clawback provisions, and zero otherwise. The propagation channels we control for include (1) industry peer effect, (2) board interlock effect, and (3) geographic effect. Panel A reports results after controlling for the industry peer effect. *Log(Pclawback_num_Ind)* and *Pclawback_pct_Ind* are variables defined based on industry peers sharing the same two-digit SIC code. *Log(Pclawback_num_Ind)* is natural log of the number of industry peers that adopt clawback provisions in the prior year. *Pclawback_pct_Ind* is the fraction of industry peers that adopted clawback provisions in the prior year. Panel B reports results after controlling for the board interlock effect. *Log(Pclawback_num_Board)* is natural log of the number of board interlock peers that adopt clawback provisions in the prior year. *Pclawback_pct_Board* is the fraction of board interlock peers that adopt clawback provisions in the prior year. Panel C presents results after controlling for the geographic effect. *Log(Pclawback_num_State)* is natural log of the number of geographic peers that adopt clawback provisions in the prior year. *Pclawback_pct_State* is the fraction of geographic peers that adopt clawback provisions in the prior year, and geographic peers are defined as firms located in the same state. Variable definitions are provided in Table 1. *z*-statistics are presented in parentheses. Standard errors are corrected for heteroscedasticity and are clustered at the firm level. *, **, and *** indicate significance levels at 10%, 5%, and 1%, respectively.

Panel A: Controlling for industry peer effect

	(1)	(2)	(3)	(4)
<i>Log(Pclawback_num)</i>	0.074*** (3.52)	0.075*** (3.52)		
<i>Pclawback_pct</i>			1.254*** (3.15)	1.262*** (3.16)
<i>MTB</i>	-0.010 (-0.54)	-0.010 (-0.53)	-0.012 (-0.67)	-0.012 (-0.67)
<i>LEV</i>	0.099 (0.40)	0.095 (0.38)	0.081 (0.33)	0.078 (0.31)
<i>ROA</i>	0.745* (1.87)	0.733* (1.84)	0.783** (1.98)	0.771* (1.95)
<i>Size</i>	0.380*** (9.66)	0.381*** (9.69)	0.359*** (9.17)	0.360*** (9.19)
<i>Total Accruals</i>	-0.749* (-1.95)	-0.738* (-1.93)	-0.773** (-2.04)	-0.762** (-2.01)
<i>Restatement</i>	0.037 (0.43)	0.037 (0.43)	0.038 (0.44)	0.038 (0.44)
<i>Institutional Ownership</i>	0.275** (2.13)	0.273** (2.12)	0.292** (2.25)	0.290** (2.24)
<i>Activist Ownership</i>	-0.420 (-1.00)	-0.420 (-1.00)	-0.385 (-0.95)	-0.384 (-0.95)
<i>CEO Compensation</i>	0.118*** (3.48)	0.116*** (3.45)	0.121*** (3.60)	0.119*** (3.57)
<i>CEO Tenure</i>	-0.210*** (-3.90)	-0.211*** (-3.90)	-0.202*** (-3.73)	-0.202*** (-3.73)
<i>Board Size</i>	1.222*** (5.61)	1.222*** (5.61)	1.222*** (5.66)	1.222*** (5.66)
<i>Independence</i>	1.042***	1.045***	1.112***	1.115***

	(4.61)	(4.61)	(4.95)	(4.96)
<i>Insider</i>	-0.995***	-1.002***	-1.115***	-1.122***
	(-3.06)	(-3.08)	(-3.44)	(-3.46)
<i>CEO Duality</i>	0.001	0.002	-0.006	-0.005
	(0.01)	(0.02)	(-0.07)	(-0.06)
<i>Log(Pclawback_num_Ind)</i>	0.158		0.150	
	(1.50)		(1.43)	
<i>Pclawback_pct_Ind</i>		1.424**		1.417**
		(2.38)		(2.37)
<i>Constant</i>	-8.240***	-8.334***	-8.199***	-8.299***
	(-9.53)	(-9.74)	(-9.81)	(-10.05)
Observations	10,301	10,301	10,301	10,301
Pseudo-R ²	0.189	0.190	0.189	0.189
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes

Panel B: Controlling for board interlock effect

	(1)	(2)	(3)	(4)
<i>Log(Pclawback_num)</i>	0.073*** (3.45)	0.070*** (3.31)		
<i>Pclawback_pct</i>			1.250*** (3.14)	1.204*** (3.04)
<i>MTB</i>	-0.018 (-0.98)	-0.014 (-0.75)	-0.021 (-1.11)	-0.016 (-0.88)
<i>LEV</i>	0.123 (0.49)	0.106 (0.43)	0.108 (0.43)	0.090 (0.36)
<i>ROA</i>	0.750* (1.89)	0.654* (1.65)	0.784** (1.99)	0.688* (1.75)
<i>Size</i>	0.325*** (7.96)	0.356*** (9.01)	0.304*** (7.48)	0.336*** (8.53)
<i>Total Accruals</i>	-0.726* (-1.89)	-0.667* (-1.73)	-0.746** (-1.96)	-0.689* (-1.80)
<i>Restatement</i>	0.041 (0.47)	0.033 (0.38)	0.042 (0.48)	0.034 (0.39)
<i>Institutional Ownership</i>	0.265** (2.04)	0.274** (2.12)	0.282** (2.16)	0.290** (2.23)
<i>Activist Ownership</i>	-0.426 (-1.02)	-0.400 (-0.96)	-0.390 (-0.97)	-0.365 (-0.90)
<i>CEO Compensation</i>	0.108*** (3.32)	0.113*** (3.37)	0.111*** (3.44)	0.115*** (3.48)
<i>CEO Tenure</i>	-0.186*** (-3.43)	-0.202*** (-3.73)	-0.178*** (-3.27)	-0.194*** (-3.58)
<i>Board Size</i>	0.977*** (4.46)	1.105*** (5.09)	0.976*** (4.48)	1.104*** (5.11)
<i>Independence</i>	0.870*** (3.83)	0.944*** (4.18)	0.937*** (4.16)	1.008*** (4.49)
<i>Insider</i>	-0.928*** (-2.86)	-0.981*** (-3.02)	-1.045*** (-3.22)	-1.091*** (-3.37)
<i>CEO Duality</i>	-0.022 (-0.27)	-0.013 (-0.16)	-0.030 (-0.36)	-0.020 (-0.24)
<i>Log(Pclawback_num_Board)</i>	0.357*** (5.67)		0.358*** (5.70)	
<i>Pclawback_pct_Board</i>		0.808*** (6.34)		0.814*** (6.41)
<i>Constant</i>	-7.068*** (-7.80)	-7.603*** (-8.52)	-7.041*** (-8.13)	-7.577*** (-8.84)
Observations	10,301	10,301	10,301	10,301
Pseudo-R ²	0.194	0.195	0.194	0.194
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes

Panel C: Controlling for geographic peer effect

	(1)	(2)	(3)	(4)
<i>Log(Pclawback_num)</i>	0.076*** (3.62)	0.072*** (3.38)		
<i>Pclawback_pct</i>			1.279*** (3.21)	1.235*** (3.06)
<i>MTB</i>	-0.010 (-0.55)	-0.007 (-0.36)	-0.013 (-0.69)	-0.009 (-0.49)
<i>LEV</i>	0.117 (0.47)	0.072 (0.29)	0.098 (0.39)	0.056 (0.22)
<i>ROA</i>	0.802** (2.02)	0.625 (1.57)	0.836** (2.12)	0.660* (1.67)
<i>Size</i>	0.380*** (9.68)	0.378*** (9.61)	0.359*** (9.18)	0.357*** (9.12)
<i>Total Accruals</i>	-0.788** (-2.06)	-0.654* (-1.69)	-0.809** (-2.14)	-0.677* (-1.77)
<i>Restatement</i>	0.039 (0.45)	0.038 (0.44)	0.039 (0.46)	0.039 (0.45)
<i>Institutional Ownership</i>	0.265** (2.06)	0.287** (2.23)	0.283** (2.19)	0.304** (2.35)
<i>Activist Ownership</i>	-0.427 (-1.02)	-0.340 (-0.81)	-0.390 (-0.97)	-0.306 (-0.75)
<i>CEO Compensation</i>	0.117*** (3.50)	0.116*** (3.43)	0.120*** (3.63)	0.119*** (3.55)
<i>CEO Tenure</i>	-0.208*** (-3.85)	-0.209*** (-3.88)	-0.199*** (-3.69)	-0.201*** (-3.72)
<i>Board Size</i>	1.238*** (5.68)	1.158*** (5.28)	1.236*** (5.72)	1.158*** (5.32)
<i>Independence</i>	1.049*** (4.64)	1.031*** (4.54)	1.121*** (4.99)	1.099*** (4.87)
<i>Insider</i>	-1.006*** (-3.09)	-0.982*** (-3.09)	-1.129*** (-3.46)	-1.096*** (-3.47)
<i>CEO Duality</i>	0.005 (0.06)	-0.015 (-0.19)	-0.002 (-0.03)	-0.022 (-0.27)
<i>Log(Pclawback_num_State)</i>	0.048 (1.24)		0.044 (1.14)	
<i>Pclawback_pct_State</i>		2.271*** (4.69)		2.290*** (4.74)
<i>Constant</i>	-8.341*** (-9.39)	-8.070*** (-9.34)	-8.287*** (-9.68)	-8.043*** (-9.74)
Observations	10,301	10,301	10,301	10,301
Pseudo-R ²	0.190	0.193	0.189	0.193
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes

Table 6: Clawback provision adoption and traveling governance effect – Two Placebo Tests

This table presents the results of two Placebo tests. The dependent variable in both Panels is *Clawback*, an indicator variable that equals one if a firm has clawback provisions, and zero otherwise. Panel A reports the travelling governance effect after controlling for the influence of clawback adoption by firms that have common non-activist blockholders with the focal firm. $\text{Log}(P\text{clawback_num_Non-Activist})$ is natural log of the number of firms connected by common non-activist blockholder that adopt clawback provisions. $P\text{clawback_pct_Non-Activist}$ is the fraction of peer firms, formed by connections via non-activist blockholders, that have clawback provisions. In Panel B, we report results of travelling governance effect by including influence from past common IAB members. Past member firms refer to member firms that share common IABs with the focal firm in year $t-3$, but the relation has been discontinued since year $t-2$. $\text{Log}(P\text{clawback_num_past})$ is natural log of the number of past members that adopt clawback provisions. $P\text{clawback_pct_past}$ is the fraction of past members that have clawback provisions. Variable definitions are provided in Table 1. Control variables are lagged by one year. z -statistics are presented in parentheses. Standard errors are corrected for heteroscedasticity and are clustered at the firm level. *, **, and *** indicate significance levels at 10%, 5%, and 1%, respectively.

Panel A: Common ownership by IABs vs. Common ownership by non-activist blockholders

	(1)		(2)	
	Coefficients	Marginal effect	Coefficients	Marginal effect
<i>Log(Pclawback_num)</i>	0.072*** (3.43)	0.015		
<i>Log(Pclawback_num_Non-Activist)</i>	0.027 (1.37)	0.005		
<i>Pclawback_pct</i>			1.263*** (3.17)	0.255
<i>Pclawback_pct_Non-Activist</i>			0.145 (0.32)	0.029
<i>MTB</i>	-0.010 (-0.57)	-0.002	-0.013 (-0.69)	-0.003
<i>LEV</i>	0.104 (0.42)	0.021	0.084 (0.34)	0.017
<i>ROA</i>	0.740* (1.86)	0.149	0.792** (2.00)	0.160
<i>Size</i>	0.377*** (9.56)	0.076	0.359*** (9.17)	0.072
<i>Total Accruals</i>	-0.753** (-1.96)	-0.152	-0.784** (-2.06)	-0.158
<i>Restatement</i>	0.036 (0.41)	0.007	0.038 (0.44)	0.008
<i>Institutional Ownership</i>	0.272** (2.11)	0.055	0.291** (2.24)	0.059
<i>Activist Ownership</i>	-0.399 (-0.95)	-0.080	-0.381 (-0.94)	-0.077
<i>CEO Compensation</i>	0.117*** (3.47)	0.024	0.120*** (3.60)	0.024
<i>CEO Tenure</i>	-0.210*** (-3.89)	-0.042	-0.201*** (-3.73)	-0.041
<i>Board Size</i>	1.221***	0.246	1.219***	0.246

	(5.60)		(5.64)	
<i>Independence</i>	1.026***	0.207	1.113***	0.224
	(4.52)		(4.96)	
<i>Insider</i>	-0.983***	-0.198	-1.113***	-0.224
	(-3.03)		(-3.43)	
<i>CEO Duality</i>	0.001	0.000	-0.006	-0.001
	(0.02)		(-0.08)	
<i>Constant</i>	-8.106***		-8.121***	
	(-9.33)		(-9.67)	
Observations	10,301		10,301	
Pseudo-R ²	0.189		0.189	
Year FE	Yes		Yes	
Industry FE	Yes		Yes	

Panel B: Impact from current member firms vs. past member firms

	(1)		(2)	
	Coefficients	Marginal effect	Coefficients	Marginal effect
<i>Log(Pclawback_num)</i>	0.069*** (3.00)	0.014		
<i>Log(Pclawback_num_Past)</i>	-0.031 (-1.31)	-0.006		
<i>Pclawback_pct</i>			1.182** (2.48)	0.244
<i>Pclawback_pct_Past</i>			-0.327* (-1.73)	-0.068
<i>MTB</i>	-0.010 (-0.49)	-0.002	-0.013 (-0.67)	-0.003
<i>LEV</i>	0.078 (0.28)	0.016	0.068 (0.24)	0.014
<i>ROA</i>	0.593 (1.39)	0.122	0.630 (1.49)	0.130
<i>Size</i>	0.391*** (8.69)	0.081	0.369*** (8.28)	0.076
<i>Total Accruals</i>	-0.603 (-1.45)	-0.124	-0.616 (-1.49)	-0.127
<i>Restatement</i>	0.037 (0.39)	0.008	0.040 (0.42)	0.008
<i>Institutional Ownership</i>	0.245* (1.74)	0.051	0.263* (1.86)	0.054
<i>Activist Ownership</i>	-0.449 (-0.98)	-0.093	-0.397 (-0.88)	-0.082
<i>CEO Compensation</i>	0.130*** (3.33)	0.027	0.135*** (3.50)	0.028
<i>CEO Tenure</i>	-0.217*** (-3.63)	-0.045	-0.209*** (-3.49)	-0.043
<i>Board Size</i>	1.165*** (4.85)	0.240	1.169*** (4.87)	0.242
<i>Independence</i>	1.043*** (3.95)	0.215	1.085*** (4.15)	0.224
<i>Insider</i>	-0.913** (-2.52)	-0.188	-1.016*** (-2.80)	-0.210
<i>CEO Duality</i>	-0.003 (-0.03)	-0.001	-0.008 (-0.09)	-0.002
<i>Constant</i>	-5.967*** (-7.45)		-5.998*** (-6.76)	
Observations	7,975		7,975	
Pseudo-R ²	0.179		0.179	
Year FE	Yes		Yes	
Industry FE	Yes		Yes	

Table 7: Clawback provision adoption and changes in traveling governance effect

This table presents impact of a change in clawback provision adoption by peer firms on focal firm's adoption. The dependent variable is $Clawback_{i,t}$, an indicator variable that equals one if firm i has clawback provisions in year t , and zero otherwise. We report the change in clawback provision adoption by peer firms using changes in $Log(Pclawback_num_{t-1})$ and in $Pclawback_pct$. Variable definitions are provided in Table 1. Control variables are lagged by one year. z -statistics are presented in parentheses. Standard errors are corrected for heteroscedasticity and are clustered at the firm level. *, **, and *** indicate significance levels at 10%, 5%, and 1%, respectively.

	(1)	(2)
$\Delta Log(Pclawback_num_{t-1})$	0.067*** (3.33)	
$Log(Pclawback_num_{t-2})$	0.084*** (3.43)	
$\Delta Pclawback_pct_{t-1}$		1.140*** (2.96)
$Pclawback_pct_{t-2}$		1.560*** (3.22)
<i>MTB</i>	-0.010 (-0.54)	-0.013 (-0.69)
<i>LEV</i>	0.102 (0.41)	0.082 (0.33)
<i>ROA</i>	0.748* (1.88)	0.785** (1.98)
<i>Size</i>	0.382*** (9.71)	0.360*** (9.18)
<i>Total Accruals</i>	-0.751* (-1.95)	-0.774** (-2.04)
<i>Restatement</i>	0.037 (0.43)	0.038 (0.44)
<i>Institutional Ownership</i>	0.269** (2.08)	0.286** (2.21)
<i>Activist Ownership</i>	-0.411 (-0.98)	-0.396 (-0.98)
<i>CEO Compensation</i>	0.117*** (3.46)	0.120*** (3.57)
<i>CEO Tenure</i>	-0.211*** (-3.90)	-0.201*** (-3.72)
<i>Board Size</i>	1.220*** (5.60)	1.219*** (5.65)
<i>Independence</i>	1.043*** (4.61)	1.114*** (4.96)
<i>Insider</i>	-0.977*** (-3.00)	-1.099*** (-3.39)
<i>CEO Duality</i>	0.001 (0.01)	-0.007 (-0.08)
<i>Constant</i>	-8.120*** (-9.35)	-8.098*** (-9.67)
Observations	10,301	10,301
Pseudo-R ²	0.189	0.189
Year FE	Yes	Yes
Industry FE	Yes	Yes

Table 8: Traveling governance effect – Connecting to peers in TARP

This table presents the impact of peers that are TARP participants. The dependent variable is *Clawback*, a dummy variable that equals one if a firm has clawback provisions, and zero otherwise. TARP participants are required to adopt clawback provisions mandatorily. $\text{Log}(P\text{clawback_TARP})$ is the natural log number of TARP members that adopt clawback provisions in prior year. $P\text{clawback_pct_TARP}$ is the fraction of TARP members with clawback provisions in prior year. The regression sample is restricted to non-TARP firms, but their peers could be either TARP or non-TARP participants. Variable definitions are provided in Table 1. Control variables are lagged by one year. z-statistics are presented in parentheses. Standard errors are corrected for heteroscedasticity and are clustered at the firm level. *, **, and *** indicate significance levels at 10%, 5%, and 1%, respectively.

	(1)	(2)
<i>Log(Pclawback_num_TARP)</i>	0.086*** (3.24)	
<i>Pclawback_pct_TARP</i>		0.322*** (2.69)
<i>MTB</i>	-0.010 (-0.57)	-0.012 (-0.63)
<i>LEV</i>	0.091 (0.37)	0.096 (0.39)
<i>ROA</i>	0.750* (1.89)	0.785** (1.98)
<i>Size</i>	0.387*** (9.95)	0.377*** (9.68)
<i>Total Accruals</i>	-0.694* (-1.83)	-0.723* (-1.91)
<i>Restatement</i>	0.019 (0.22)	0.020 (0.23)
<i>Institutional Ownership</i>	0.302** (2.35)	0.309** (2.40)
<i>Activist Ownership</i>	-0.426 (-1.03)	-0.377 (-0.92)
<i>CEO Compensation</i>	0.102*** (3.30)	0.104*** (3.34)
<i>CEO Tenure</i>	-0.174*** (-3.23)	-0.171*** (-3.18)
<i>Board Size</i>	1.298*** (5.99)	1.303*** (6.01)
<i>Independence</i>	1.051*** (4.61)	1.071*** (4.70)
<i>Insider</i>	-0.999*** (-3.11)	-1.061*** (-3.31)
<i>CEO Duality</i>	-0.018 (-0.21)	-0.019 (-0.23)
<i>Constant</i>	-8.009*** (-9.55)	-7.925*** (-9.41)
Observations	10,185	10,185
Pseudo-R ²	0.189	0.189
Year FE	Yes	Yes
Industry FE	Yes	Yes

Table 9: Clawback provision adoption and traveling governance effect – Alternative Measures

This table presents results of travelling governance effect on clawback provision adoption using alternative measures to capture number and fraction of portfolio members that have adopted clawback provision. We first obtain residuals of number and fraction of portfolio members that have adopted clawback provision from the following regression models: the dependent variables are *Pclawback_pct* and *Log(Pclawback_num)*, respectively, and we control for equally-weighted average of fundamentals across all member firms that are connected to the focal firm. In Panel A, we present results in the first stage using the following specifications:

$$\begin{aligned} \text{Log}(Pclawback_num)_{i,t} \text{ (or } Pclawback_pct_{i,t} \text{)} = & a_0 + b_1PMTB_{i,t-1} + b_2PLEV_{i,t-1} + b_3PROA_{i,t-1} + \\ & b_4PSize_{i,t-1} + b_5PTotal\ Accruals_{i,t-1} + b_6PRestatement_{i,t-1} + b_7PInstitutional \\ & Ownership_{i,t-1} + b_8PActivist\ Ownership_{i,t-1} + b_9PCEO\ Compensation_{i,t-1} \\ & + b_{10}PCEO\ Tenure_{i,t-1} + b_{11}PBoard\ Size_{i,t-1} + b_{12}PIndependence_{i,t-1} + \\ & b_{13}PInsider_{i,t-1} + b_{14}PCEO\ Duality_{i,t-1} + \text{Log}(Pclawback_num)_Residual_{i,t-1} \text{ (or} \\ & Pclawback_pct_Residual_{i,t-1}) \end{aligned} \quad (1)$$

In Panel B, we explain a firm's clawback status using residual terms, *Log(Pclawback_num)_Residual* and *Pclawback_pct_Residual*, obtained from the previous step as the main explanatory variable:

$$\begin{aligned} Clawback_{i,t} = & a_0 + b_1\text{Log}(Pclawback_num)_Residual_{i,t-1} \text{ (or } Pclawback_pct_Residual_{i,t-1}) + \\ & b_2MTB_{i,t-1} + b_3LEV_{i,t-1} + b_4ROA_{i,t-1} + b_5Size_{i,t-1} + b_6Total\ Accruals_{i,t-1} + \\ & b_7Restatement_{i,t-1} + b_8Institutional\ Ownership_{i,t-1} + b_9Activist\ Ownership_{i,t-1} \\ & + b_{10}CEO\ Compensation_{i,t-1} + b_{11}CEO\ Tenure_{i,t-1} + b_{12}Board\ Size_{i,t-1} \\ & + b_{13}Independence_{i,t-1} + b_{14}Insider_{i,t-1} + b_{15}CEO\ Duality_{i,t-1} + e_{i,t-1}, \end{aligned} \quad (2)$$

The dependent variable, *Clawback*, is an indicator variable that equals one if a firm has clawback provisions, and zero otherwise. Variable definitions are provided in Table 1. Control variables are lagged by one year. *z*-statistics are presented in parentheses. Standard errors are corrected for heteroscedasticity and are clustered at the firm level. *, **, and *** indicate significance levels at 10%, 5%, and 1%, respectively

Panel A: First-step regressions to obtain residual

Dependent Variable=	<i>Pclawback_pct</i>	<i>Log(Pclawback_num)</i>
	(1)	(2)
<i>PMTB</i>	-0.010 (-0.55)	-0.000 (-0.05)
<i>PLEV</i>	-7.551*** (-11.44)	-0.143*** (-3.02)
<i>PROA</i>	5.546*** (6.39)	0.000 (0.00)
<i>PSize</i>	0.254** (2.34)	0.034*** (4.42)
<i>PTotal Accruals</i>	-1.360 (-1.18)	-0.019 (-0.33)
<i>PRestatement</i>	-0.492 (-1.03)	0.087** (2.32)
<i>PIstitutional Ownership</i>	3.009*** (6.82)	-0.032 (-1.07)
<i>PActivist Ownership</i>	-4.048*** (-6.21)	-0.036 (-0.73)
<i>PCEO Compensation</i>	-0.089 (-0.46)	0.000 (0.02)
<i>PCEO Tenure</i>	2.730*** (12.15)	-0.048** (-2.30)
<i>PBoard Size</i>	0.563 (0.74)	0.327*** (4.90)
<i>PIndependence</i>	1.973 (1.58)	0.288*** (2.82)
<i>PInsider</i>	-10.685*** (-11.91)	-0.105 (-1.30)
<i>PCEO Duality</i>	-0.671 (-1.36)	0.079** (2.10)
<i>Constant</i>	-3.636 (-1.22)	-0.933*** (-4.40)
Observations	10,908	10,908
R-squared (Pseudo-R ²)	0.57	0.74
Year FE	Yes	Yes
Industry FE	Yes	Yes

Panel B: Second-step regressions

Dependent Variable=	<i>Clawback</i>			
	(1)		(2)	
	Coefficients	Marginal effect	Coefficients	Marginal effect
<i>Log(Pclawback_num)_Residual</i>	0.073*** (2.70)	0.015		
<i>Pclawback_pct_Residual</i>			1.005** (2.31)	0.203
<i>MTB</i>	-0.010 (-0.55)	-0.002	-0.012 (-0.67)	-0.002
<i>LEV</i>	0.121 (0.48)	0.024	0.114 (0.46)	0.023
<i>ROA</i>	0.784** (1.97)	0.159	0.816** (2.06)	0.165
<i>Size</i>	0.382*** (9.74)	0.077	0.367*** (9.40)	0.074
<i>Total Accruals</i>	-0.747* (-1.96)	-0.151	-0.770** (-2.03)	-0.156
<i>Restatement</i>	0.047 (0.55)	0.010	0.050 (0.58)	0.010
<i>Institutional Ownership</i>	0.292** (2.25)	0.059	0.307** (2.36)	0.062
<i>Activist Ownership</i>	-0.534 (-1.28)	-0.108	-0.448 (-1.10)	-0.091
<i>CEO Compensation</i>	0.116*** (3.47)	0.023	0.118*** (3.54)	0.024
<i>CEO Tenure</i>	-0.187*** (-3.44)	-0.038	-0.180*** (-3.31)	-0.036
<i>Board Size</i>	1.230*** (5.67)	0.249	1.241*** (5.73)	0.251
<i>Independence</i>	1.065*** (4.70)	0.215	1.103*** (4.87)	0.223
<i>Insider</i>	-1.090*** (-3.31)	-0.220	-1.180*** (-3.60)	-0.239
<i>CEO Duality</i>	-0.051 (-0.62)	-0.010	-0.053 (-0.65)	-0.011
<i>Constant</i>	-7.980*** (-9.23)		-8.045*** (-9.47)	
Observations	10,260		10,260	
R-squared (Pseudo-R ²)	0.189		0.189	
Year FE	Yes		Yes	
Industry FE	Yes		Yes	

Table 10: Traveling governance effect and internal governance

This table reports the impact of internal governance on travelling governance effect on clawback adoption. The dependent variable is *Clawback*, an indicator variable that equals one if a firm has clawback provisions, and zero otherwise. We use board governance and historical restatement as proxies for internal governance. In Panel A, we report sub-sample results by board independence. Low and High board independence groups are identified based on the median of board independence. In Panel B, we report sub-sample results by whether a firm has restated earnings in the past 3 years. Variable definitions are provided in Table 1. *z*-statistics are presented in parentheses. Control variables are lagged by one year. Marginal effects of *Log(Pclawback_num)* and *Pclawback_pct* are reported in the last row. Standard errors are corrected for heteroscedasticity and are clustered at the firm level. *, **, and *** indicate significance levels at 10%, 5%, and 1%, respectively.

Panel A: Sub-sample by board independence

	(1)	(2)	(3)	(4)
	Low	High	Low	High
<i>Log(Pclawback_num)</i>	0.109*** (3.87)	0.027 (0.93)		
<i>Pclawback_pct</i>			1.465*** (3.34)	0.977 (1.40)
<i>MTB</i>	-0.044* (-1.78)	0.017 (0.69)	-0.049* (-1.95)	0.016 (0.65)
<i>LEV</i>	0.183 (0.54)	0.010 (0.03)	0.107 (0.31)	0.020 (0.06)
<i>ROA</i>	0.841* (1.66)	0.637 (1.12)	0.901* (1.81)	0.652 (1.15)
<i>Size</i>	0.395*** (7.55)	0.376*** (7.00)	0.370*** (7.09)	0.364*** (6.82)
<i>Total Accruals</i>	-0.833 (-1.63)	-0.556 (-1.03)	-0.825 (-1.64)	-0.578 (-1.07)
<i>Restatement</i>	0.016 (0.14)	0.036 (0.33)	0.023 (0.20)	0.036 (0.33)
<i>Institutional Ownership</i>	0.338* (1.84)	0.235 (1.47)	0.382** (2.07)	0.240 (1.50)
<i>Activist Ownership</i>	-0.421 (-0.76)	-0.344 (-0.61)	-0.431 (-0.83)	-0.312 (-0.56)
<i>CEO Compensation</i>	0.125*** (3.41)	0.093 (1.52)	0.130*** (3.60)	0.093 (1.52)
<i>CEO Tenure</i>	-0.172** (-2.44)	-0.233*** (-3.26)	-0.159** (-2.25)	-0.229*** (-3.22)
<i>Board Size</i>	1.123*** (3.83)	1.331*** (4.61)	1.098*** (3.84)	1.338*** (4.64)
<i>Independence</i>	0.762** (2.27)	1.027 (1.39)	0.850** (2.56)	1.016 (1.37)
<i>Insider</i>	-0.537 (-1.57)	-2.044*** (-2.95)	-0.702** (-2.07)	-2.075*** (-3.00)
<i>CEO Duality</i>	-0.100 (-0.90)	0.072 (0.69)	-0.120 (-1.07)	0.072 (0.69)
<i>Constant</i>	-8.267*** (-7.64)	-7.290*** (-4.70)	-8.265*** (-8.32)	-7.193*** (-4.65)
Observations	5,070	5,181	5,070	5,181
Pseudo-R ²	0.197	0.193	0.196	0.193
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Marginal effects	0.019	0.006	0.255	0.220

Panel B: Sub-sample by whether a firm has restated earnings or not in the past 3 years

	(1)	(2)	(3)	(4)
	Restate	Non-restate	Restate	Non-restate
<i>Log(Pclawback_num)</i>	0.112*** (3.10)	0.054** (2.03)		
<i>Pclawback_pct</i>			1.832*** (2.82)	0.897* (1.71)
<i>MTB</i>	0.032 (1.00)	-0.022 (-0.96)	0.025 (0.79)	-0.023 (-1.01)
<i>LEV</i>	-0.352 (-0.83)	0.185 (0.59)	-0.354 (-0.83)	0.168 (0.54)
<i>ROA</i>	0.718 (1.00)	0.864* (1.83)	0.791 (1.11)	0.896* (1.91)
<i>Size</i>	0.366*** (5.15)	0.413*** (8.52)	0.332*** (4.70)	0.399*** (8.25)
<i>Total Accruals</i>	-1.012 (-1.51)	-0.637 (-1.31)	-1.074 (-1.60)	-0.656 (-1.36)
<i>Institutional Ownership</i>	0.306 (1.32)	0.343** (2.11)	0.336 (1.46)	0.353** (2.17)
<i>Activist Ownership</i>	-0.052 (-0.07)	-0.846 (-1.55)	-0.095 (-0.13)	-0.800 (-1.52)
<i>CEO Compensation</i>	0.088 (1.55)	0.127*** (3.06)	0.100* (1.84)	0.127*** (3.09)
<i>CEO Tenure</i>	-0.100 (-1.06)	-0.228*** (-3.44)	-0.092 (-0.97)	-0.220*** (-3.32)
<i>Board Size</i>	1.332*** (3.31)	1.177*** (4.40)	1.389*** (3.43)	1.168*** (4.41)
<i>Independence</i>	0.662 (1.63)	1.201*** (4.34)	0.697* (1.72)	1.276*** (4.63)
<i>Insider</i>	-1.535*** (-2.88)	-0.904** (-2.19)	-1.747*** (-3.31)	-0.984** (-2.39)
<i>CEO Duality</i>	-0.190 (-1.32)	0.035 (0.35)	-0.177 (-1.24)	0.025 (0.25)
<i>Constant</i>	-6.970*** (-4.82)	-8.904*** (-8.11)	-7.450*** (-5.38)	-8.712*** (-7.96)
Observations	3,498	6,761	3,498	6,761
Pseudo-R ²	0.216	0.196	0.214	0.196
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Marginal effects	0.022	0.011	0.370	0.179

Table 11: Traveling governance effect and external governance –product market competition

This table reports the impact of market competition on the travelling governance effect on clawback provision adoption. The dependent variable is *Clawback*, an indicator variable that equals one if a firm has clawback provisions, and zero otherwise. High and low product market competition groups are identified based on the median of market concentration. Market concentration is defined as the Herfindahl Index using Fama-French 48 industry classifications. Variable definitions are provided in Table 1. z-statistics are presented in parentheses. Marginal effects of *Log(Pclawback_num)* and *Pclawback_pct* are reported in the last row. Control variables are lagged by one year. Standard errors are corrected for heteroscedasticity and are clustered at the firm level. *, **, and *** indicate significance levels at 10%, 5%, and 1%, respectively.

	(1)	(2)	(3)	(4)
	High competition	Low competition	High competition	Low competition
<i>Log(Pclawback_num)</i>	0.097*** (3.16)	0.059** (2.12)		
<i>Pclawback_pct</i>			1.642*** (3.01)	0.831 (1.50)
<i>MTB</i>	0.028 (1.17)	-0.041 (-1.57)	0.025 (1.02)	-0.043* (-1.65)
<i>LEV</i>	0.075 (0.22)	0.215 (0.62)	0.072 (0.22)	0.186 (0.54)
<i>ROA</i>	0.970* (1.84)	0.565 (1.11)	1.024** (1.96)	0.602 (1.18)
<i>Size</i>	0.361*** (7.00)	0.408*** (7.25)	0.341*** (6.64)	0.387*** (6.88)
<i>Total Accruals</i>	-1.018* (-1.89)	-0.467 (-0.90)	-1.042** (-1.97)	-0.495 (-0.96)
<i>Restatement</i>	-0.031 (-0.27)	0.116 (0.99)	-0.033 (-0.29)	0.118 (1.00)
<i>Institutional Ownership</i>	0.064 (0.34)	0.462*** (2.80)	0.092 (0.49)	0.472*** (2.84)
<i>Activist Ownership</i>	-0.522 (-0.87)	-0.387 (-0.68)	-0.453 (-0.76)	-0.374 (-0.69)
<i>CEO Compensation</i>	0.179*** (3.82)	0.056 (1.42)	0.180*** (3.82)	0.061 (1.54)
<i>CEO Tenure</i>	-0.220*** (-2.92)	-0.210*** (-2.83)	-0.206*** (-2.74)	-0.204*** (-2.74)
<i>Board Size</i>	1.225*** (4.28)	1.203*** (3.93)	1.200*** (4.30)	1.216*** (3.97)
<i>Independence</i>	1.372*** (4.35)	0.657** (2.09)	1.484*** (4.74)	0.706** (2.26)
<i>Insider</i>	-0.944** (-2.05)	-1.153*** (-2.69)	-1.068** (-2.31)	-1.266*** (-2.96)
<i>CEO Duality</i>	-0.029 (-0.26)	0.050 (0.45)	-0.042 (-0.37)	0.046 (0.41)
<i>Constant</i>	-11.498*** (-11.31)	-7.321*** (-7.49)	-11.229*** (-11.08)	-7.297*** (-7.52)
Observations	5,045	5,186	5,045	5,186
Pseudo-R ²	0.191	0.196	0.190	0.195
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Marginal effects	0.020	0.012	0.334	0.166

Table 12: Consequences of clawback provision adoption

This table presents the consequence of clawback provision adoption after using peer firms' clawback provision adoption as an instrument variable for focal firm's clawback provision adoption. The dependent variable in Columns (1) and (2) is absolute value of discretionary accruals based on the modified Jones model, in Columns (3) and (4) *Tobin's Q*, and in Columns (5) and (6) *R&D* expenditure. The independent variable, *Predicted_Clawback*, is the predicted likelihood of clawback provision adoption from the first stage. We estimate the following regression to obtain *Predicted_Clawback* in the first stage:

$$\begin{aligned} \text{Clawback}_{i,t} = & a_0 + b_1 P\text{clawback_pct}_{i,t-1} + b_2 \text{MTB}_{i,t-1} + b_3 \text{MTB}_{i,t-1} + b_4 \text{LEV}_{i,t-1} + b_5 \text{ROA}_{i,t-1} + b_6 \text{Size}_{i,t-1} \\ & + b_7 \text{Total Accruals}_{i,t-1} + b_8 \text{Restatement}_{i,t-1} + b_9 \text{Institutional Ownership}_{i,t-1} \\ & + b_{10} \text{Activist Ownership}_{i,t-1} + b_{11} \text{CEO Compensation}_{i,t-1} + b_{12} \text{CEO Tenure}_{i,t-1} \\ & + b_{13} \text{Board Size}_{i,t-1} + b_{14} \text{Independence}_{i,t-1} + b_{15} \text{Insider}_{i,t-1} + b_{16} \text{CEO Duality}_{i,t-1} + e_{i,t-1}. \end{aligned} \quad (1)$$

Standard errors are corrected for heteroscedasticity and are clustered at the firm level. *, **, and *** indicate significance levels at 10%, 5%, and 1%, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	DA/	DA/	<i>Tobin's Q</i>	<i>Tobin's Q</i>	<i>R&D</i>	<i>R&D</i>
<i>Predicted_Clawback</i>	-0.517*	-0.875*	0.537**	1.553***	0.042***	0.076***
	(-1.94)	(-1.87)	(2.45)	(3.00)	(3.37)	(2.94)
<i>MTB</i>	0.284**	0.289**	0.100	0.102	-0.043***	-0.043***
	(2.12)	(2.13)	(0.74)	(0.70)	(-6.33)	(-5.93)
<i>LEV</i>	-0.007	-0.007	0.094***	0.094***	0.001***	0.001***
	(-1.08)	(-1.04)	(10.90)	(10.49)	(3.93)	(3.73)
<i>ROA</i>	0.407	0.363	1.164***	1.234***	-0.174***	-0.170***
	(1.26)	(1.09)	(3.70)	(3.76)	(-11.77)	(-11.03)
<i>STDROA</i>	-0.139	-0.094	1.174***	1.023***	0.123***	0.118***
	(-0.43)	(-0.29)	(4.56)	(3.56)	(6.85)	(6.39)
<i>LOGSALE</i>	0.103***	0.130***	-0.234***	-0.312***	-0.012***	-0.015***
	(3.19)	(3.16)	(-8.27)	(-6.70)	(-7.14)	(-6.25)
<i>Total Accruals</i>	-0.482*	-0.457*	-1.208***	-1.313***	0.082***	0.078***
	(-1.84)	(-1.74)	(-4.55)	(-4.61)	(6.12)	(5.41)
<i>LOSS</i>	-0.141**	-0.148**	-0.121***	-0.139***	0.003	0.003
	(-2.06)	(-2.12)	(-3.07)	(-3.02)	(1.20)	(0.90)
<i>CEO Compensation</i>		-0.022		0.007		0.001*
		(-1.29)		(0.63)		(1.78)
<i>Board Size</i>		0.217		-0.315**		-0.005
		(1.32)		(-1.98)		(-0.64)
<i>Independence</i>		0.092		-0.468***		-0.013
		(0.54)		(-2.70)		(-1.40)
<i>Constant</i>	-1.417***	-1.565***	2.063***	2.772***	0.063***	0.068***
	(-5.06)	(-3.70)	(16.78)	(6.37)	(3.88)	(2.73)
Observations	6,745	6,745	10,265	10,265	10,287	10,287
R-squared	0.30	0.28	0.37	0.13	0.51	0.41
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes

Appendix: Table A1: Robustness test: Regression results with firm fixed effect

This table presents the robustness test results of our main regression with firm fixed effect included. In this sample, we restrict our analysis to firms that have changed their clawback adoption status once during our sample period (i.e., we delete firms that have never adopted clawback during our sample whole period and firms that have adopted it every year). The dependent variable is *Clawback*, an indicator variable that equals one if a firm has clawback provisions in year t , and zero otherwise. $\text{Log}(P\text{clawback_num})$ is the natural logarithm of number of member firms that adopt clawback provisions in year $t-1$. $P\text{clawback_pct}$ is the fraction of member firms that have clawback provisions in year $t-1$. Definitions of other variables are provided in Table 1. All control variables are lagged by one year. z -statistics are presented in parentheses. Standard errors are corrected for heteroscedasticity and are clustered at the firm level. *, **, and *** indicate significance levels at 10%, 5%, and 1%, respectively.

	(1)	(2)
<i>Log(Pclawback_num)</i>	0.092** (1.98)	
<i>Pclawback_pct</i>		2.352** (2.54)
<i>MTB</i>	0.056 (0.95)	0.051 (0.86)
<i>LEV</i>	-0.744 (-0.82)	-0.727 (-0.81)
<i>ROA</i>	-0.429 (-0.41)	-0.398 (-0.38)
<i>Size</i>	0.679** (2.33)	0.668** (2.30)
<i>Total Accruals</i>	-0.182 (-0.19)	-0.237 (-0.25)
<i>Institutional Ownership</i>	-0.235 (-0.55)	-0.215 (-0.50)
<i>Activist Ownership</i>	0.034 (0.04)	0.117 (0.14)
<i>CEO Compensation</i>	-0.087 (-1.38)	-0.085 (-1.36)
<i>CEO Tenure</i>	0.190* (1.66)	0.196* (1.71)
<i>Board Size</i>	0.598 (1.05)	0.570 (1.00)
<i>Independence</i>	-0.345 (-0.69)	-0.312 (-0.63)
<i>Insider</i>	0.641 (0.73)	0.865 (0.98)
<i>CEO Duality</i>	0.061 (0.28)	0.075 (0.34)
Observations	4,138	4,138
Number of firms	871	871
Pseudo-R ²	0.497	0.498
Year FE	Yes	Yes
Firm FE	Yes	Yes