Does voluntary adoption of clawback provisions improve corporate social responsibility: Evidence from China

Donghua Zhou[a] Liu Yang[a] Yujie Zhao[b]*

[a] School of Accounting, Jiangxi University of Finance and Economics, Nanchang, Jiangxi, 330013, China

[b] School of Management, Shanghai University, Baoshan, Shanghai, 200444, China

Corresponding author:

Doctor Yujie Zhao

Email: yjzhao@shu.edu.cn

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ABSTRACT: Using manually collected data on the voluntary adoption of clawback provisions by China's listed companies, this study explores the impact of clawbacks on Corporate Social Responsibility (CSR). The results reveal that clawbacks significantly boost CSR by mitigating managerial short-termism and fostering risk-averse behaviors. Additionally, the effect is more pronounced in non-environmentally or non-consumption-sensitive industries, and firms led by management with lower career stability or a lesser sense of responsibility. Our study represents a pioneering exploration of the beneficial effects of clawback provisions in China.

Key words: clawback provisions; corporate social responsibility; short-termism; risk aversion; executive compensation

1. Introduction

Clawback provisions in executive contracts empower companies to reclaim compensation after events like accounting restatements or executive misconduct (Chan et al., 2012). Following the introduction in the Sarbanes-Oxley Act of 2002, there has been a rise in voluntary clawback adoptions, more closely linking executive pay to their actions (Chan et al., 2013). Notable instances include McDonald's former CEO Steve Easterbrook's clawback due to fraud and reputational damage, Gilead Sciences Inc.'s CFO faced a $4 million clawback for insider trading, and Hertz Corp.'s effort to recover $56 million in incentives. These cases underscore clawbacks' growing role in addressing executive malpractices and enhancing corporate governance.

In China, the connection between executive compensation and firm performance is weaker than in developed markets, largely due to concentrated ownership and weaker investor protection (Wang and Xiao, 2011). This became evident when WM Motor's CEO Hui Shen received 1.262 billion yuan in compensation in 2021, despite the company's 8.206-billion-yuan loss, which sparked significant debate in China. Responding to these concerns, China initiated reforms to promote the implementation of clawbacks to enhance executive compensation management, especially in state-owned enterprises. However, despite government efforts, the adoption of clawbacks has been limited, mainly in financial sectors. In non-financial firms, the adoption rate in our paper is a mere 3.72%, compared to 15.71% in U.S. companies (Chan et al., 2013), indicating a significant gap in corporate governance practices.

To enhance the adoption of clawbacks in China, our paper examines the impact of clawbacks on corporate social responsibility (CSR). We focus on CSR due to its underdevelopment in the

Chinese context (Xu and Yang, 2023). CSR, viewed as a long-term investment often conflicting with the immediate profit maximization goals of shareholders, tends to diminish in environments dominated by managerial short-termism (Callan and Thomas, 2011; Smulowitz et al., 2023). However, the role of CSR in building a positive corporate image and fostering stable stakeholder relationships is undeniable (Albuquerque et al., 2019; Ng and Rezaee, 2020). Our study, therefore, investigates how the adoption of clawbacks can potentially bolster CSR in China.

By manually checking multiple filings to identify the voluntary adoption of clawbacks, this paper uses data from China's A-share listed firms from 2010 to 2020 to examine the relationship between clawbacks and CSR. Our analysis reveals that clawbacks encourage enterprises to engage in CSR, a finding that holds up across various robustness tests. Further mechanism analyses indicate that clawbacks enhance CSR by curbing executive short-termism and boosting risk aversion. Moreover, the study finds a more pronounced link between clawbacks and CSR in non-environmentally and non-consumption-sensitive industries. Additionally, firms with lower career stability or a lesser sense of responsibility show a stronger positive association between clawbacks and CSR.

Our study makes two significant contributions. Firstly, our study addresses the relatively weaker link between executive compensation and firm performance in China, a situation attributed to factors like shareholder conflicts, concentrated and state ownership (Wang and Xiao, 2011; Conyon and He, 2011). We see implementing clawback provisions as a potential solution to enhance executive pay incentives, drawing from findings in the US market that indicate clawbacks can boost incentive structures in executive compensation (Kroos et al., 2018). In light of this, our paper utilizes manually collected clawback data to conduct a pioneering investigation into the positive impacts of clawback provisions on CSR. The findings provide critical insights for both listed companies and governmental entities, advocating for the integration and enhancement of clawback systems within corporate compensation strategies.

Secondly, our study contributes to the extensive literature on the effects of clawback provisions. Previous studies have largely focused on their influence on executive compensation (Kroos et al., 2018), financial reporting quality (Chan et al., 2012), firm risks and overinvestment (Chen and Vann, 2017; Babenko et al., 2023). However, by analyzing data from China's listed companies, our research reveals that clawback provisions significantly enhance CSR by addressing managerial short-termism and fostering risk aversion. These insights highlight the broader impacts of clawback provisions and extend the existing body of research in this domain.

2. Hypothesis development

CSR generally involves investments that yield benefits over an extended period, such as

environmental conservation, community engagement, and employee development, which do not typically translate into immediate financial gains (Becchetti et al., 2015; Smulowitz et al., 2023). The mismatch between the timing of costs and benefits created by CSR often leads myopic managers to underinvestment in these crucial areas (Fabrizi et al., 2014). Clawback provisions can effectively limit executive myopia by mandating the return of a portion of executives' bonuses and other short-term compensations if their actions harm the long-term value of the firm (Dehaan et al., 2013). This creates a traceable and enforceable mechanism that raises the personal cost of short-sighted decisions for executives and aligns their interests more closely with the long-term health of the company. Thus, clawbacks provisions are anticipated to improve CSR performance by fostering a culture that values long-term success and societal well-being over short-term gains.

Furthermore, agency theory posits that CEOs, with their wealth and human capital closely tied to their firms, are inherently risk-averse (Jensen and Meckling, 1976). Clawback provisions, requiring executives to return compensation in scenarios like earnings restatements or misconduct, further amplify this risk aversion, prompting managers to adopt conservative investment and financial strategies (Chan et al., 2012; Babenko et al., 2023). This shift in approach is in line with viewing CSR as an insurance against unique firm risks, as it encapsulates civic engagement and shared beliefs between firm and stakeholders (Godfrey, 2005). Clawback provisions, by discouraging risky behaviors and promoting a protective stance, may incentivize CEOs to invest in CSR as a strategy for fostering goodwill, enhancing political relationships, and mitigating risks, which can effectively safeguard against reputational damage and legal risks linked to irresponsible practices. Therefore, adopting clawbacks is likely to bolster CSR, enhancing the firm's commitment to responsible and sustainable business practices. From this reasoning, we propose the following hypothesis:

H1: Clawback provisions can enhance firm's CSR.

3. Data and research design

3.1 Data

We examine A-share nonfinancial companies listed on the Shanghai and Shenzhen stock exchanges from 2010 to 2020, with 2010 selected as the start year because it marked the first instance of a Chinese company including a clawback provision in its compensation plan. After excluding companies with special treatment status or missing data, we analyze 28,086 observations from 3,676 firms. We manually gather clawback data from corporate disclosures on the CNINFO website, a platform designated by the China Securities Regulatory Commission (CSRC). CSR data and other information are sourced from the Hexun CSR database, DIB database, and CSMAR database. Continuous variables are winsorized at both the 1% upper and lower levels.

3.2 Research design

To investigate the influence of clawbacks on CSR, we construct the following regression model:

$$CSR_{i,t} = \beta_1 + \beta_2 Clawback_{i,t} + \beta\ Controls + \sum Year + \sum Ind + \varepsilon \quad (1)$$

where *i* refers to the firm and *t* denotes the year. We follow Gong et al. (2021) and Miao et al. (2023) in measuring *CSR*, calculated measured based on the scores of corporate social responsibilities from the Hexun website, divided by one hundred for normalization. *Clawback* equal to one if the firm has clawbacks in the current or previous year; zero otherwise. Following Chen et al. (2020), control variables include firm size (*Size*), leverage ratio (*Lev*), return on assets (*ROA*), company growth (*Growth*), listing years (*Age*), the proportion of fixed assets (*PPE*), whether the board director is the CEO of the firm (*Dual*), the size of the board of directors (*Board*), the proportion of independent director (*Independent*), and state ownership (*SOE*). Definitions of these variables are provided in Appendix A. We further incorporate year and industry fixed effects in the regression to mitigate omitted variable bias.

3.3 Descriptive statistics

Table 1 provides statistical descriptions of the variables. The mean of *CSR* is 0.237 with a standard deviation of 0.159, indicating significant variability in corporate social performance among different firms. For the *Clawback* variable, the average is 0.037, indicating that approximately 3.7% of the firms in our sample have adopted clawback provisions. The descriptive statistics for other variables are consistent with prior studies (Chen et al., 2020).

[Insert table 1 about here]

4. Empirical results

4.1 Baseline regression

Table 2 presents baseline results, which consistently demonstrate a positive and significant relationship between *CSR* and *Clawback* across various models. In Column (1), a univariate regression is conducted, Column (2) includes additional control variables, and Column (3) adds year and industry effects. Notably, in Column (3), a standard deviation increase in *Clawback* results in a 1.35% rise in CSR, demonstrating the significant impact of clawbacks on enhancing a firm's social responsibility.

[Insert table 2 about here]

4.2 Robustness tests

4.2.1 Instrumental variable analysis

To address endogeneity, we employ the number of financial firms adopting clawbacks in the same city and year as an instrumental variable (*IV*). *IV* is associated with *Clawback* but does not have a direct effect on our dependent variable. The first-stage results in Table 3, Column (1), show a positive and significant impact of *IV*. The F-Statistic, significant at 1%, confirms the IV's strength. In the second stage, Column (2) results show a significantly positive coefficient of *Clawback*, aligning with our initial findings.

[Insert table 3 about here]

4.2.2 Propensity score matching

To further control for selection bias, we employ propensity score matching (PSM). We match the treatment group (*Clawback*=1) with the control group (*Clawback*=0) using nearest neighbor matching, based on control variables listed in Table 2. We then regress Eq. (1) using this matched sample. The results in Table 3, Column (3), show the coefficient of *Clawback* is significantly positive, validating the robustness of our initial results.

4.2.3 Other robustness tests

We conduct several other robustness checks. Firstly, we remove samples lacking detailed clawback information. Secondly, we introduce variable *LClawback* to account for lagged effects of clawback provisions on CSR. Thirdly, following Lin et al. (2015), we use ΔCSR as an alternative dependent variable. The coefficients are consistently positive and significant, affirming the robustness of our baseline findings.

4.3 Mechanism analysis

In the previous section, we discussed clawbacks can improve CSR by curbing executive short-termism and reinforcing risk-averse behaviors. To validate this, we first follow Brochet et al. (2015) in using textual analysis of the MD&A section to measure management's long-term thinking (*LT thinking*). Additionally, drawing from Lai et al. (2020), we use R&D spending (*R&D*) as another indicator of management myopia. Results in Table 4, Columns (1) and (2), show significant positive coefficients for *Clawback*, indicating its effectiveness in aligning executive actions with the company's long-term interests.

To assess executive risk aversion, we adopt the approach of Huang et al. (2012), examining whether firms have violated regulations set by the CSRC and stock exchanges (*Violation*), and

whether they have experienced a financial restatement (*Restatement*). Table 4's Columns (3) and (4) show negative *Clawback* coefficients, imply that clawback provisions reinforce firms' aversion to risk, evident in fewer regulatory violations and financial restatements. This trend towards risk aversion leads firms to progressively consider CSR as a strategic instrument for risk mitigation and corporate protection.

[Insert table 4 about here]

4.4 Heterogeneity analyses

4.4.1 Industry nature

Firms in environmentally sensitive industries often assume greater social responsibilities, largely due to their close ties with residents' living environments and increased public scrutiny. Similarly, companies in consumer-sensitive sectors actively participate in social responsibility efforts to enhance their public image, thereby attracting customers and expanding their market share (Bhattacharya et al., 2003). Therefore, firms in these sectors are naturally inclined to strengthen CSR, implying that clawbacks might exert a more noticeable influence in companies outside these two sectors.

To explore this hypothesis, we divide our sample into categories based on whether they belong to environmentally or customer-sensitive industries, detailed in Appendix A. Table 5, Panel A, illustrates that in industries outside these categories, clawback provisions significantly enhance CSR. This enhancement is further substantiated by the Chow Test, which indicates that the effectiveness of clawbacks is particularly heightened outside environmentally or customer-sensitive sectors.

4.4.2 Management's career stability

According to the upper echelon theory, the pivotal role of executives' cognitive traits and values is emphasized in shaping business strategies and guiding corporate decisions (Hambrick and Mason, 1984). Enhanced job stability among executives is found to foster a deeper commitment to CSR initiatives. Executives with secure tenures are more empowered to initiate and sustain comprehensive CSR initiatives, focusing beyond short-term gains towards sustainable, ethical practices. This self-driven dedication to CSR, nurtured by job stability, may reduce the reliance on external incentives like clawbacks. Therefore, it's proposed that in environments with stable executive leadership, the impact of clawback provisions on CSR engagement is less significant.

Following Crutchley et al. (2002), we employ management stability and shareholding as proxies for career stability. Our findings, as indicated in Columns (1) and (3) of Panel B in Table 5, reveal a significant correlation between *Clawback* and *CSR*, particularly in the context of less stable

management. This indicates that the beneficial effects of clawbacks on CSR are particularly marked in firms characterized by less stable management teams.

4.4.2 Management's sense of responsibility

In firms led by executives with a pronounced sense of responsibility, a deeper commitment to CSR is evident, driven by an inherent motivation to uphold ethical values. Such a commitment to CSR often diminishes the necessity for external governance mechanisms, such as clawback provisions. Conversely, in firms with less responsible management teams, the implementation of clawback provisions serves as an effective tool to strengthen CSR initiatives, compensating for a lack of inherent commitment towards responsible corporate practices.

To test this hypothesis, we assess management's sense of responsibility using education level and overseas experience as indicators. Columns (1) and (3), presented in Panel C of Table 5, show that the *Clawback* coefficients are significant for the subgroups with lower education levels and those without overseas backgrounds. Moreover, these differences are statistically significant, suggesting that the governance impact of clawbacks is more pronounced in firms where executive teams exhibit a lesser sense of responsibility.

[Insert Table 5 about here]

5. Conclusion

This study investigates the influence of clawback provisions on CSR in Chinese companies from 2010 to 2020. Our findings indicate that clawback provisions effectively encourage firms to actively engage in social responsibilities. The results are both economically and statistically significant and remain consistent across various robustness checks, including the use of instrumental variable analysis and propensity score matching to mitigate endogeneity issues, application of alternative measures for variables, and diverse sample selections. Our analysis shows that clawbacks significantly impact CSR by curbing managerial short-termism and enhancing risk aversion. Furthermore, this positive effect on CSR is notably stronger in firms from non-environmentally or non-consumption-sensitive industries, and those led by executives with lower career stability and a lesser sense of responsibility.

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Table 1 Descriptive statistics

This table presents the descriptive statistics for the key variables in our analysis. It includes measures such as the mean (*Mean*), standard deviation (*SD*), minimum (*Min*), 25th percentile (*Q1*), median (*Median*), 75th percentile (*Q3*), and maximum (*Max*). Detailed definitions of these variables can be found in Appendix A. To reduce the impact of outliers, continuous variables have been winsorized at the 1% and 99% levels.

Variables	*N*	*Mean*	*SD*	*Min*	*Q1*	*Median*	*Q3*	*Max*
CSR	28086	0.237	0.159	-0.184	0.159	0.216	0.273	0.909
Clawback	28086	0.037	0.188	0.000	0.000	0.000	0.000	1.000
Size	28086	21.490	1.451	18.190	20.500	21.350	22.350	25.480
Lev	28086	0.434	0.207	0.050	0.268	0.428	0.589	0.901
ROA	28086	0.034	0.065	-0.291	0.013	0.035	0.064	0.190
Growth	28086	0.175	0.447	-0.607	-0.029	0.104	0.267	2.918
Age	28086	2.326	0.659	1.099	1.792	2.398	2.890	3.332
PPE	28086	0.214	0.162	0.002	0.087	0.180	0.306	0.697
Dual	28086	0.267	0.442	0.000	0.000	0.000	1.000	1.000
Board	28086	2.131	0.200	1.609	1.946	2.197	2.197	2.708
Independent	28086	0.381	0.072	0.250	0.333	0.364	0.429	0.600
SOE	28086	0.371	0.483	0.000	0.000	0.000	1.000	1.000

Table 2 Clawbacks and CSR: baseline regressions

This table reports our baseline results of the impact of clawback provisions (*Clawback*) on corporate social responsibility (*CSR*). Our key independent variable, *Clawback*, is a binary indicator reflecting the voluntary adoption of clawbacks by a firm. The dependent variable, *CSR*, is quantified as corporate social responsibility scores divided by one hundred. In Column (1), we present a univariate regression analysis of *CSR* on *Clawback*. Column (2) adds control variables, while Column (3) incorporates year and industry effects. All variables are detailed in Appendix A. T-statistics, shown in parentheses, are based on robust standard errors clustered at the firm level. Significance levels are indicated by ***, **, and * for 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)
	CSR	*CSR*	*CSR*
Clawback	0.060***	0.014*	0.017**
	(12.00)	(1.77)	(2.40)
Size		0.021***	0.032***
		(17.29)	(26.14)
Lev		-0.001	-0.064***
		(-0.12)	(-7.80)
ROA		1.033***	0.909***
		(53.81)	(50.67)
Growth		-0.002	-0.007***
		(-0.88)	(-4.40)
Age		-0.010***	-0.006***
		(-4.32)	(-2.61)
PPE		-0.054***	-0.057***
		(-5.19)	(-5.40)
Dual		-0.006**	0.001
		(-2.00)	(0.25)
Board		0.054***	0.020***
		(6.66)	(2.73)
Independent		0.078***	0.063***
		(4.56)	(4.02)
SOE		0.036***	0.015***
		(8.77)	(3.94)
Constant	0.235***	-0.378***	-0.499***
	(243.56)	(-12.79)	(-17.72)
Year	*No*	*No*	*Yes*
Industry	*No*	*No*	*Yes*
N	28,086	28,086	28,086
Adj. R^2	0.005	0.272	0.378

Table 3 The results of robustness tests

This table presents the results of our robustness tests. Columns (1) and (2) display the two-stage least squares (2SLS) regression using an instrumental variable (*IV*), defined as the number of financial industry firms adopting clawbacks in the same year and same city. Column (1) presents the first-stage regression of *Clawback* on *IV*, with an F-statistic of 137.78, significantly exceeding the critical value of 10 at the 1% level, confirming *IV* as a strong instrument. Column (2) shows the second-stage regression of *CSR* on *Clawback*, using the predicted values from the first stage. Column (3) reports the Propensity Score Matching (PSM) analysis. Here, we use *Clawback* equal to 1 as the treatment group, and the remainder as the control group. We then employ the nearest neighbor matching principle based on covariates from Table 2 to create a matched sample. Subsequently, we conduct a regression of *CSR* on *Clawback* using the matched sample. Column (4) narrows the sample of clawbacks with detailed description. Column (5) conducts a regression of *CSR* on *LClawback*, where *LClawback* represents the lagged value of *Clawback*. Finally, Column (6) examines the impact of Δ*CSR* on *Clawabck,* where Δ*CSR* represent the change in *CSR*. All variables are detailed in Appendix A. T-statistics, shown in parentheses, are based on robust standard errors clustered at the firm level. Significance levels are indicated by ***, **, and * for 1%, 5%, and 10% levels, respectively.

	Instrumental variable analysis		*PSM*	*Alternative sample*	*The lag of Clawback*	*Alternative measures of CSR*
	(1)	(2)	(3)	(4)	(5)	(6)
	Clawback	*CSR*	*CSR*	*CSR*	*CSR*	Δ*CSR*
Clawback		0.251***	0.026***	0.018**		0.034**
		(2.83)	(3.24)	(2.51)		(2.08)
IV	0.004***					
	(3.28)					
LClawback					0.013*	
					1.81	
Constant	-0.656***	-0.285***	-0.589***	-0.499***	-0.475***	0.516***
	(-7.32)	(-3.40)	(-8.64)	(-17.75)	(-16.73)	(5.88)
Control	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Year	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
Industry	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
N	28,086	28,086	1,814	28,064	24,170	25,220
Adj. R^2	0.076	0.379	0.498	0.379	0.292	0.169
Wald F	137.78***					

Table 4 Mechanism analysis

This table reports the results of economic mechanism tests. Columns (1) and (2) focus on the mechanism of executive teams' short-termism. Column (1) displays the regression of *LT thinking* on *Clawback*, where *LT thinking* is the inverse of the frequency of myopic words in the Management Discussion and Analysis (MD&A) section of annual reports. Column (2) regresses *R&D* on *Clawback*, where *R&D* is defined as the ratio of R&D expense to total assets. Columns (3) and (4) assess the mechanism of management's risk aversion. We use *Violation* and *Restatement* to measure this, where *Violation* is a dummy variable indicating whether a firm engages in actions that breach regulations set by the CSRC and stock exchanges. *Restatement* is a dummy variable indicating an announcement of accounting error correction. Column (3) presents the regression of *Violation* on *Clawback*, and Column (4) focuses on the regression of *Restatement* on *Clawback*. All variables are detailed in Appendix A. T-statistics, shown in parentheses, are based on robust standard errors clustered at the firm level. Significance levels are indicated by ***, **, and * for 1%, 5%, and 10% levels, respectively.

	Executive teams' short-termism		Executive teams' risk aversion	
	(1)	(2)	(3)	(4)
	LT thinking	*R&D*	*Violation*	*Restatement*
Clawback	0.010***	0.009***	-0.242*	-0.199**
	(3.18)	(2.64)	(-1.83)	(-2.24)
Constant	-0.027	0.114***	-1.413***	-1.043***
	(-1.20)	(9.55)	(-2.83)	(-2.91)
Control	*Yes*	*Yes*	*Yes*	*Yes*
Year	*Yes*	*Yes*	*Yes*	*Yes*
Industry	*Yes*	*Yes*	*Yes*	*Yes*
N	28,051	28,086	27,836	28,059
Adj. R^2/ Pseudo R^2	0.117	0.301	0.068	0.041

Table 5 The results of heterogeneity analysis

This table presents the outcomes of our heterogeneity analysis. Panel A focuses on the moderating role of industry nature in the relationship between clawbacks and CSR. In Columns (1) and (2), we segment the samples into *Non-Enviro Sensitive* (not part of environmentally sensitive industries) and *Enviro Sensitive* (part of environmentally sensitive industries) groups, respectively. Likewise, Columns (3) and (4) classify the samples into *Non-Cust Sensitive* (not part of customer-sensitive industries) and *Cust Sensitive* (part of customer-sensitive industries) groups, respectively. The results from the Chow Test indicate significant differences between groups belonging to varying industry types. Comprehensive details on the classification of environmentally sensitive and customer sensitive industries can be found in Appendix A.

Panel B shows the results of moderating effects of management's career stability. We utilize *Stability* and *Shareholding* as proxies to assess this aspect. *Stability* is defined following Crutchley et al. (2002), while *Shareholding* represents as the total shareholding ratio of the executive team. The analysis segments the sample into groups based on these proxies: Columns (1) and (2) classify the sample into *Less Stable* (*Stability* below the year-industry median) and *More Stable* (*Stability* above the year-industry median) groups. Similarly, Columns (3) and (4) categorize the sample into *Low Share* (*Shareholding* below the year-industry median) and *High Share* (*Shareholding* above the year-industry median) groups. The Chow Test results suggest significant differences between groups categorized as less stable versus more stable in terms of executive teams. Panel C shows the results of moderating effects of management's sense of responsibility. We utilize *Education* and *Overseas* as proxies to gauge this attribute. *Education* is the average educational level of the executive team, representing their collective education. *Overseas* is defined based on whether any member of the executive team possesses overseas study or work experience. The analysis segments the sample into groups based on these proxies: Columns (1) and (2) segment the sample into *Low Edu* (*Education* below the year-industry median) and *High Edu* (*Education* above the year-industry median) groups. Meanwhile, Columns (3) and (4) classify the sample into *Domestic* (no overseas experience) and *Overseas* (with overseas experience) groups. The Chow Test results suggest significant differences between groups characterized as stronger versus weaker sense of responsibility.

All variables are detailed in Appendix A. T-statistics, shown in parentheses, are based on robust standard errors clustered at the firm level. Significance levels are indicated by ***, **, and * for 1%, 5%, and 10% levels, respectively.

Panel A Heterogeneity analysis of industry nature

	Non-Enviro Sensitive	*Enviro Sensitive*	*Non-Cust Sensitive*	*Cust Sensitive*
	(1)	(2)	(3)	(4)
	CSR	*CSR*	*CSR*	*CSR*
Clawback	0.027***	-0.006	0.017**	0.007
	(3.24)	(-0.53)	(2.30)	(0.44)
Constant	-0.485***	-0.543***	-0.490***	-0.543***
	(-14.85)	(-9.77)	(-16.05)	(-7.46)
Control	*Yes*	*Yes*	*Yes*	*Yes*
Year FE	*Yes*	*Yes*	*Yes*	*Yes*
Industry FE	*Yes*	*Yes*	*Yes*	*Yes*
N	20,211	7,875	23,960	4,126
Adj. R^2	0.392	0.353	0.371	0.419
Chow Test	4.35***		4.33***	

Panel B Heterogeneity analysis in terms of management's career stability

	Less Stable	*More Stable*	*Low Share*	*High Share*
	(1)	(2)	(3)	(4)
	CSR	*CSR*	*CSR*	*CSR*
Clawback	0.022**	0.014*	0.021**	0.014
	(2.18)	(1.90)	(2.03)	(1.51)
Constant	-0.539***	-0.472***	-0.526***	-0.449***
	(-14.68)	(-15.42)	(-13.14)	(-11.51)
Control	*Yes*	*Yes*	*Yes*	*Yes*
Year FE	*Yes*	*Yes*	*Yes*	*Yes*
Industry FE	*Yes*	*Yes*	*Yes*	*Yes*
N	9,800	18,286	12,585	15,501
Adj. R^2	0.390	0.372	0.371	0.389
Chow Test	1.31*		4.01***	

Panel C Heterogeneity analysis in terms of management's sense of responsibility

	Low Edu	*High Edu*	*Domestic*	*Overseas*
	(1)	(2)	(3)	(4)
	CSR	*CSR*	*CSR*	*CSR*
Clawback	0.022*	0.011	0.017**	0.012
	(1.77)	(1.24)	(2.14)	(0.86)
Constant	-0.477***	-0.550***	-0.490***	-0.532***
	(-10.72)	(-14.26)	(-15.47)	(-9.70)
Control	*Yes*	*Yes*	*Yes*	*Yes*
Year FE	*Yes*	*Yes*	*Yes*	*Yes*
Industry FE	*Yes*	*Yes*	*Yes*	*Yes*
N	12,673	12,241	22,482	5,601
Adj. R^2	0.351	0.403	0.374	0.407
Chow Test	4.78***		2.97***	

Appendix A Variable definitions

Variables	Definitions
Dependent variables	
CSR	Corporate Social Responsibility (CSR) scores as reported on the Hexun website, normalized by dividing by one hundred (Gong et al., 2021; Miao et al., 2023). These scores evaluate CSR performance across five dimensions: shareholder responsibility, employee responsibility, supply chain responsibility, environmental responsibility, and public welfare responsibility. Underlying these five primary indicators are 13 secondary indicators and 37 tertiary indicators, providing a comprehensive assessment of CSR activities. The overall CSR score is a weighted aggregate of these five primary indicators, with a maximum possible score of 100.
Independent variable	
Clawback	To ascertain the initial voluntary adoption and ongoing disclosure of the presence of clawback provisions, we conduct a thorough search of multiple filings on the CNINFO website. Our search target keywords such as “clawback (追索)”, “reclaim (扣回)”, and “retrieve (追回)” that pertain to clawbacks. Subsequently, each filing is manually reviewed to confirm the specific mention of a clawback provision, while filtering out irrelevant references, such as those related to "debt recovery." For our analysis, we define a binary variable *Clawback*, assigning a value of one if a firm has a clawback provision in either the current or the preceding year, and zero if not.
Control variables	
Size	Natural logarithm of total assets at the end of the fiscal year.
Lev	The ratio of total debt to total assets.
ROA	The ratio of net profits to total assets.
Growth	Total revenue growth rate.
Age	Natural logarithm of the number of years from listed.
PPE	The ratio of fixes assets to total assets.
Dual	A dummy variable that equals one if CEO is also the chairman of the board, and zero otherwise.
Board	Natural logarithm of total number of board members.
Independent	The ratio of the number of independent board directors to total board directors.
SOE	A dummy variable that equals one if the firm is a state-owned firm, and zero otherwise.
Additional variables (Table 3)	
IV	The number of financial industry firms that have implemented clawbacks in the same year and same city. The data is also obtained from CNINFO and is processed using the same method as *Clawback*.
Δ*CSR*	Change in *CSR*. Defined as the difference between the current and previous year's CSR scores for a company, calculated as $CSR_{i,t}$ - $CSR_{i,t-1}$.
LClawback	The lag of *Clawback.*
Additional variables (Table 4)	
LT thinking	To evaluate management's long-term thinking, we initially adopt the approach of Brochet et al. (2015) to create a lexicon designed to quantify the prevalence of short-term oriented words in the Management Discussion and Analysis (MD&A) section of annual reports. Following this, we employ the inverse of the frequency of such myopic words as a metric to assess the extent of management's long-term thinking.
R&D	The ratio of R&D expenses to total assets.
Violation	A dummy variable that equals one if a firm engages in actions that breach regulations set by the China Securities Regulatory Commission (CSRC) and stock exchanges. This includes instances of administrative penalties, initiation of investigations, imposition of fines, revocation of securities business licenses, or orders for closure.
Restatement	A dummy variable that equals one if firm issues an accounting error correction announcement.
Additional variables (Table 5)	
Non-Enviro Sensitive & Enviro Sensitive	We identify environmentally sensitive industries in accordance with the "Guidelines for Environmental Information Disclosure of Listed Companies" released by the Ministry of Environmental Protection of the People's Republic of China in 2010, and integrating the industry classification standards issued by the CSRC in 2012. These include thermal power, steel, cement, electrolytic aluminum, coal, metallurgy, chemical industry, petrochemicals, among 16 other industry types. This categorization is labeled as *Environment_sensitivity industry,* while industries that do not fall into this category are classified as *Non-environmentally sensitive industries*.
Non-Cust Sensitive & Cust Sensitive	We classify certain industries as consumption-sensitive based on their nature and market dynamics. These include the agricultural and sideline food processing industry (C13), food manufacturing industry (C14), liquor, beverage, and refined tea manufacturing industry (C15), pharmaceutical manufacturing industry (C17), textile and apparel industry (C18), leather, fur, feather and related products and footwear industry (C19), automotive manufacturing industry (C36), wholesale and retail trade (F), accommodation and catering industry (H), water conservancy, environmental and public facility management industry (N), and health and social work industry (Q). This categorization is labeled as *Customer_sensitivity industry,* while industries that do not fall into this category are classified as *Non- Customer sensitive industries*.

(continued on next page)

Appendix A Variable definitions (continued)

Variables	Definitions
Less Stable & More Stable	Following the methodology of Crutchley et al. (2002), we measure management stability using the following equation: $\mathrm{STMT_t} = \frac{(\mathrm{M_t} - \mathrm{S_{t,t+1}})}{\mathrm{M_t}} \times \frac{\mathrm{M_{t+1}}}{\mathrm{M_t} + \mathrm{M_{t+1}}} + \frac{(\mathrm{M_{t+1}} - \mathrm{S_{t+1,t}})}{\mathrm{M_{t+1}}} \times \frac{\mathrm{M_t}}{\mathrm{M_t} + \mathrm{M_{t+1}}}$ where $STMT_t$ represents management stability, denoted as *Stability* which ranges from 0 to 1. A higher value indicates greater stability in the executive team. $S_{t,t+1}$ represents the number of executive team resignations in year *t*, while $S_{t+1,t}$ represents the number of new executive team members in year *t*. M_t and M_{t+1} are the total number of the executive team in *t* and *t+1*, respectively. We then divide samples into *Less Stable* (*Stability* below year-industry median) and *More Stable* (*Stability* above year-industry median) groups, respectively.
Low Share & High Share	*Shareholding* refers to the aggregate shareholding ratio of the executive team. For our analysis, we categorize the samples into two distinct groups: *Low Share*, comprising cases where the shareholding is below year-industry median, and *High Share*, which includes instances where the shareholding exceeds the year-industry median.
Low Edu & High Edu	Initially, we classify educational qualifications into five tiers: secondary vocational school and below, junior college, bachelor's degree, master's degree, and doctoral degree, assigning values from 1 to 5 respectively for each category. The average education level of the executive team is calculated to gauge their collective educational attainment, referred to as *Education* in our analysis. Based on this, we then split the samples into two groups: *Low Edu*, comprising cases where the *Education* level is below the year-industry median, and *High Edu,* encompassing instances where *Education* is above the year-industry median.
Overseas & Domestic	We categorize the samples into two distinct groups: *Overseas*, including cases where at least one executive team member possesses overseas study or work experience, and *Domestic*, comprising instances where none of the executive team members have international experience.