ASYMMETRIC PAY-FOR-PERFORMANCE IN CHINESE ENTERPRISES: INSIGHTS FROM FIRM-SPECIFIC AND CROSS-SECTIONAL ANALYSES

Cindy Chen *, Dan He **, Jasmine Yur-Austin *, Qi Zhang ***

* California State University, Long Beach, USA
** *Corresponding author,* Southwestern University of Finance and Economics, Chengdu, China
Contact details: Southwestern University of Finance and Economics, Chengdu 611130, China
*** Southwestern University of Finance and Economics, Chengdu, China

Abstract

The study examines wage rigidity and its connection to the pay-for-performance sensitivity (PPS) of Chinese chief executive officers (CEOs). We find that Chinese CEOs are compensated for both recurring and non-recurring business gains but are shielded from losses. The asymmetrical effects of gains and losses are differentiated between state-owned enterprises (SOEs) and non-SOEs, as well as between central and local SOEs. By incorporating corporate governance mechanisms, we find that the CEO compensation is aligned with the efficient contracting hypothesis in SOEs, but fails to find evidence in non-SOEs. The data source is the China Stock Market & Accounting Research Database (CSMAR). Our research design involves cross-sectional analyses of 33,166 firm-year observations in Shanghai and Shenzhen stock exchanges from 2005 to 2021 and firm-specific regressions on a sub-sample of 841 firms with a tenure exceeding 15 years.

Keywords: Pay-for-Performance Sensitivity (PPS), Wage Rigidity, State Owned Enterprise (SOE), Corporate Governance, Asymmetric Gain and Loss, Firm Specific Regressions

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1. INTRODUCTION

Wage rigidity refers to the reluctance or resistance to reducing nominal wages, a phenomenon widely documented across various labor markets. While much of the existing literature focuses on unionized workers with strong collective bargaining power (Daly & Hobijn, 2014; Elsby et al., 2016), the concept also extends to executive compensation. Chief executive officers (CEOs), in particular, may experience wage rigidity due to their negotiation leverage with shareholders, especially in contexts where corporate governance is weak (Chen & Yur-Austin, 2018).

Previous research on executive compensation in China has identified a positive relationship between CEO pay and company performance (Buck et al., 2008), suggesting that boards in Chinese firms adjust executive compensation in response to financial outcomes. However, questions remain regarding the extent to which these adjustments account for both business gains and losses.

Specifically, do Chinese CEOs experience the same sensitivity in compensation reductions during business downturns as they do in pay increases during growth?

Studies in other contexts reveal an asymmetry in executive pay adjustments. For instance, prior literature documents that CEOs in the US are rewarded for any positive component of income and are partially shielded from negative non-recurring items such as restructuring charges (Dechow et al., 1994; Adut et al., 2003; Gaver & Gaver, 1998). More recent research highlights the growing role of non-Generally Accepted Accounting Principles (GAAP) earnings metrics, which exclude unusual items and one-time expenses, in performance evaluations. While such metrics can provide a clearer picture of operational success, they are also prone to manipulation, raising concerns about their reliability as a basis for CEO compensation (Curtis et al., 2021; Guest et al., 2022).

Building on these insights, this paper explores whether Chinese CEOs' compensation responds symmetrically to recurring and non-recurring business outcomes. We aim to address key questions:

RQ1: Does the causal relationship between firm performance and CEO pay differ during periods of profit versus loss?

RQ2: Are recurring and non-recurring earnings weighted differently in determining CEO compensation?

RQ3: How does this relationship vary between state-owned enterprises (SOEs) and non-SOEs?

RQ4: Is the design of executive compensation contracts in SOEs and non-SOEs aligned with the efficient contracting hypothesis or the managerial power hypothesis?

We employ a novel research design involving firm-specific regressions, analyzing data from 2005 to 2021 across 841 firms with over 15 years of tenure. By comparing SOEs and non-SOEs, as well as central and local SOEs, we identify significant variations in pay-for-performance sensitivity (PPS). Our findings reveal that CEOs in both SOEs and non-SOEs are rewarded for recurring and non-recurring gains but are largely shielded from losses. This wage rigidity underscores the asymmetric nature of compensation structures. Governance reforms have a more pronounced impact on central SOEs, where PPS is tied primarily to recurring gains, and non-recurring gains are de-emphasized. Local SOEs demonstrate greater sensitivity to non-recurring gains, often driven by government subsidies.

To complement the firm-specific regressions, we apply cross-sectional models to a larger sample, focusing on the role of governance quality. Specifically, we test PPS by examining the relationship between changes in CEO compensation and both positive and negative changes in earnings. Our findings reveal that CEOs in non-SOEs experience more substantial pay raises following increased earnings. In contrast, CEOs in SOEs receive comparatively smaller pay raises for increased earnings but face significant pay cuts when earnings decline. This pattern, combined with effective corporate governance in SOEs[1], aligns with the efficient contracting hypothesis. However, despite strong corporate governance, CEOs in non-SOEs tend to capitalize on growth (both recurring

and non-recurring earnings) while insulating themselves from the adverse effects of business downturns.

This study makes several contributions to the literature on executive compensation in emerging markets. First, it introduces firm-specific regressions as a robust method for examining PPS over extended periods. Second, it provides empirical evidence of wage rigidity in the Chinese context, shedding light on its implications for corporate governance. Finally, it highlights the evolving role of governance reforms in shaping executive pay structures, offering insights for policymakers and practitioners alike.

The paper proceeds as follows. Section 2 provides a literature review and develops testable empirical hypotheses. Section 3 presents the methodology and describes the variables. Section 4 provides sample selection and details the results. Section 5 elaborates on the key disputable issues identified in the study, and Section 6 concludes the current research.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Pay-for-performance sensitivity

The study of executive compensation has long revolved around its alignment with corporate performance. Research from the 1980s and 1990s emphasized the relationship between compensation and accounting metrics over market returns, aiming to shield executives from market volatility (Jensen & Murphy, 1990; Lambert & Larker, 1987; Sloan, 1993). Gaver and Gaver (1998) and Balsam (1998) documented compensation positively related to positive earnings or discretionary accruals but less responsive to losses, supporting the notion that executives are rewarded for gains but protected from downturns. Subsequent research (Jackson et al., 2008; Adut et al., 2003) emphasized the role of accounting fundamentals and nuanced treatment of restructuring charges in shaping executive pay. For example, Jackson et al. (2008) found that positive operating cash flow influenced bonus compensation even in the presence of negative earnings, indicating that boards use additional accounting measures to guide pay decisions. Adut et al. (2003) showed that restructuring charges were only partly penalized in CEO compensation, suggesting selective adjustments depending on the context.

More recent studies have introduced the role of non-GAAP earnings metrics, which exclude extraordinary or one-time items from financial reports. While proponents argue that these metrics provide a clearer picture of operational performance, critics highlight their potential for manipulation (Curtis et al., 2021; Kyung et al., 2021). For instance, Potepa (2020) documented reduced benefits for positive nonrecurring items and heightened penalties for negative special items over the past two decades. These findings suggest increased scrutiny in how compensation contracts respond to irregular earnings components. Although such adjustments may enhance CEO high pay legitimacy, they also raise concerns about executive opportunism (Guest et al., 2022). Drawing on these findings, we hypothesize that:

H1: Gains (both recurring and non-recurring) are positively associated with executive compensation, while losses (both recurring and non-recurring) have limited or no impact.

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[1] In 2009, the Guiding Opinions on Further Regulating the Salary Management of Persons in Charge of Central Enterprises was issued to strictly regulate the salary system of the management personnel of central SOEs and financial institutions (https://www.gov.cn/jrzg/2009-09/16/content_1419270.htm). In 2014, the Reform Plan of the Salary System for Employees focuses on imposing a high salary limit on the executives appointed by the central government and those in charge of some monopolistic high-income industries (https://www.gov.cn/xinwen/2014-08/29/content_2742373.htm).

2.2. SOEs vs. Non-SOEs

China's dual ownership structure — SOEs and non-SOEs — creates a unique context for examining executive compensation. SOEs, regulated by the State-Owned Assets Supervision and Administration Commission (SASAC), operate under vertically integrated structures and often pursue both commercial and social-political objectives. These objectives may include maintaining employment stability or supporting regional development. In contrast, non-SOEs are more transparent, governed by private stakeholders, and focused on profitability.

These structural differences lead to contrasting incentive mechanisms. SOEs historically exhibited weaker performance-pay alignment due to political objectives, but reforms since 2003, including performance-linked pay and a 2014 salary cap, aimed to enhance compensation governance. While these reforms may narrow the gap between SOEs and non-SOEs, ownership-based distinctions remain relevant. Thus, we propose that:

H2: CEOs' compensation is tied to firm performance but differentiated between SOEs and non-SOEs.

2.3. Efficient contracting vs. Managerial power

Two key theories explain executive compensation: the efficient contracting hypothesis, which assumes compensation is optimally designed to align managerial incentives with shareholder interests, thereby minimizing agency costs (Jensen & Meckling, 1976; Jensen & Murphy, 1990). The managerial power hypothesis posits that powerful managers can influence boards to secure favorable pay regardless of performance (Bebchuk & Fried, 2006b). These two perspectives offer contrasting views on the role of corporate governance in shaping pay structures.

Recent trends in non-GAAP performance measures have raised debates. While some view them as better aligning pay with performance (Black et al., 2018), others argue they allow managers to manipulate targets for personal gains (Kim & Yang, 2012). Kyung et al. (2021) demonstrated that strong governance supports efficient contracting, whereas weak governance enables managerial influence over pay. Their cross-sectional findings suggest that governance strength plays a crucial role in determining whether PPS reflects shareholder interests or executive opportunism.

The distinction between SOEs and non-SOEs suggests that SOE CEOs often hold greater power, as they are appointed by the government and may pursue broader policy goals beyond profit. Such structural features may reduce board independence and limit oversight. Managerial power theory (Bebchuk et al., 2002; Bebchuk & Fried, 2006a, 2006b) argues that powerful CEOs can influence boards to accept less performance-sensitive pay. In response, China has implemented governance reforms in SOEs, including a "five committees and one layer" governance structure to enhance transparency and accountability[2]. These developments aim to reduce excessive managerial influence and strengthen alignment between pay and performance. Compensation committees are now more common

across Chinese firms, contributing to better oversight of executive remuneration practices. Accordingly, we propose the following hypothesis to test whether stronger PPS and governance support the efficient contracting perspective in China:

H3: Stronger PPS correlated with stronger governance is consistent with the efficient contracting hypothesis.

3. RESEARCH METHODOLOGY

The conventional framework for modeling executive compensation defines pay as a function of firm size and performance: *Compensation = f (Size, Performance)*. In this study, we focus on the relationship between performance metrics and cash compensation, as previous research indicates that CEO cash pay is more closely linked to accounting performance than equity-based compensation (Bettis et al., 2018).

3.1. Firm-specific regressions

We employ firm-specific regressions to analyze the relationship between CEO pay and performance, building on the methodologies of Gaver and Gaver (1998), Nourayi and Krishnan (2006), and Potepa (2020). Our models use net income (*NI*) as a proxy for performance, which is further decomposed to capture the asymmetrical effects of gains and losses. Model 1 links cash compensation (*COMP*) to total net income (*NI*). Model 2 differentiates between positive (*NI_gain*) and negative (*NI_loss*) net income. Model 3 separates recurring earnings from non-recurring items, further decomposing each into gains and losses.

Model 1

$$COMP_{it} = \alpha + \beta_1 NI_{it} + Control\ variables + \varepsilon_{it} \quad (1)$$

Model 2

$$COMP_{it} = \alpha + \beta_1 NI\_gain_{it} + \beta_2 NI\_loss_{it} + Control\ variables + \varepsilon_{it} \quad (2)$$

Model 3

$$COMP_{it} = \alpha + \beta_1 BNRI\_gain_{it} + \beta_2 BNRI\_loss_{it} + \beta_3 NRI\_gain_{it} + \beta_4 NRI\_loss_{it} + Control\ variables + \varepsilon_{it} \quad (3)$$

where, *BNRI_gain* and *BNRI_loss* are recurring gains or losses before extraordinary items, *NRI_gain* and *NRI_loss* are gains or losses from non-recurring items.

We include several control variables to capture firm characteristics such as size, growth, and leverage. Larger firms tend to offer higher cash compensation to executives due to greater operational complexity, larger scale of responsibility, and competitive labor market demands. Firms with high leverage may be more constrained in cash flow and thus limit cash-based compensation, favoring equity-based alternatives like stock or options. In this study, total assets are used to represent the firm size effect, while the ratio of total debt to total assets serves as a measure of financial leverage. To proxy for the presence of growth, this study employs Tobin's Q. Firms with high growth potential often face greater uncertainty and information asymmetry. To align long-term incentives, such firms may shift away from cash compensation toward equity-based compensation.

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[2] "Five committees and one layer" consists of shareholders' meeting, party committee, board of directors, supervisory board, workers' representative meeting, and management.

This research draws inspiration heavily from earlier studies that utilized firm-specific regressions, such as Dechow et al. (1994), Gaver and Gaver (1998), and Nourayi and Krishnan (2006). These prior studies suggest that parameters of compensation regressions vary considerably across firms, so cross-sectional regressions of compensation on performance mis-specify the relationship within a firm but merely reflect the variations across firms. We estimate the above models for each firm in the sample. Firm-specific, rather than cross-sectional, regressions are used here because our hypothesis is to test the adjustment of pay for performance within a firm rather than between firms.

We compute t-statistics for each parameter in each sample firm. Then, the t-statistics are aggregated across sample firms to form a Z-statistic for each parameter, following earlier research (Dechow et al., 1994; Gaver & Gaver, 1998; Healy et al., 1987). The Z-statistics, distributed asymptotically as standard normal variates, are used to assess statistical significance. This Z-statistic is an adjusted aggregate of each firm's t-statistic, as follows:

$$Z = \frac{1}{\sqrt{N}} \sum_{j=1}^{N} \frac{t_j}{\sqrt{k_j/(k_j - 2)}} / \sqrt{1 + (N - 1)\bar{\gamma}} \qquad (4)$$

where, N = number of firms, t_j = value of t-statistic for a given independent variable for firm j, k_j = degrees of freedom for firm j, and $\bar{\gamma}$ = mean correlation among the firms' t-statistics.

Model 4

$$\Delta COMP_{it} = \alpha + \beta_1 \Delta NI\_gain_{it} + \beta_2 \Delta NI\_loss_{it} + Control\ variables + \varepsilon_{it} \qquad (5)$$

Model 5

$$\Delta COMP_{it} = \alpha + \beta_1 \Delta BNRI\_gain_{it} + \beta_2 \Delta BNRI\_loss_{it} + \beta_3 \Delta NRI\_gain_{it} + \beta_4 \Delta NRI\_loss_{it} + Control\ variables \\ + \varepsilon_{it} \qquad (6)$$

where, ΔNI_gain and ΔNI_loss are year-over-year changes in net income (positive or negative). $\Delta BNRI\_gain$ and $\Delta BNRI\_loss$ are year-over-year changes in recurring earnings, and ΔNRI_gain and ΔNRI_loss are year-over-year changes in non-recurring earnings.

Control variables are consistent with the firm-specific models and add CEO characteristics (e.g., ownership, tenure) and governance factors (e.g., board size, independent director ratio). Fixed effects for industry and year are included, with standard errors clustered at the firm level.

3.3. Governance factors

To measure the quality of governance, following Gompers et al. (2003) and Larcker et al. (2007), we adopt the principal component analysis (PCA) to create an index based on various factors. Specifically, we use the proportion of independent directors and the size of board to measure the control from the board; we use institutional investor ownership and share balance (the ratio of shareholdings of the second to fifth largest shareholder to the first largest shareholder) to measure the supervision from ownership structure; we use duality of chairman and CEO as a proxy of the power of CEO. The first principal component

The Z-statistic assumes $\bar{\gamma} = 0$, which is supported by the insignificance of the vast majority of the pairwise correlations among the sample firms' t-statistics.

3.2. Time-series cross-sectional regressions

Recall that our objective is to examine whether changes in CEO cash pay are more sensitive to gains than losses within the firm. If we apply the above ordinary least squares (OLS) models across firms, we assume that the estimated relationship of pay-for-performance is the same across all firms. However, this assumption may not be accurate because each firm's distribution may have its own means and variances. In addition to the level of compensation, another PPS computation is the change in compensation: $\Delta Pay = f(Size, \Delta Performance)$. Therefore, we modify the firm-level data by taking yearly differentials in both earnings and cash compensation. Subsequently, we propose the following models to estimate PPS in time series cross-sectional regressions: Models 4 and 5. We recommend this modified approach for analyzing firms without sufficient data over an extended period. This is particularly relevant in the context of emerging markets, where data availability could be a challenge (Chen et al., 2019).

The dependent variable, $\Delta COMP_{it}$, is the change in cash compensation of the CEO in firm i from t to $t - 1$. Model 4 captures the asymmetrical effects of changes in earnings on CEO pay. Model 5 further distinguishes the changes between recurring and non-recurring earnings.

obtained from PCA is taken as a comprehensive index reflecting the level of corporate governance (*GOVERNANCE*).

4. RESEARCH RESULTS

4.1. Sample selection and descriptive statistics

4.1.1. Sample selection

The evolution of executive compensation disclosure in China provides a rich dataset for examining PPS. In the early 1990s, despite regulatory requirements, most listed companies did not comply with securities regulations to disclose executive compensation. In 1999, the China Securities Regulatory Commission (CSRC) implemented a rule requiring disclosure of the lump sum of compensation for directors, supervisors, and senior officers. Limited information on individual executive compensation was provided. In 2001, the rules were amended to require companies to disclose pay for the top three compensated directors and officers separately. Additionally, in 2005, CSRC mandated and reinforced the disclosure of each executive's compensation, including cash, total compensation, and equity holdings.

Table 1. Sample extraction procedure

Panel A: Firm-year observations (cross)				
Process of dataset sampling				*Number*
Firm-year observations from 2005–2021				45033
Less observations:				
Financial and special treatment (ST) firms				3414
Missing CEO compensation data				5296
Missing accounting data				3157
Final sample for cross-sectional analysis (Large sample)				33166
Panel B: Distribution of firms with tenure from 1 to 17 years				
No. of years	*No. of observations*	*Percentage (%)*	*No. of specific firms*	*Percentage (%)*
1	558	1.49	558	12.45
2	804	2.14	402	8.97
3	600	1.6	200	4.46
4	528	1.41	132	2.95
5	2,220	5.91	444	9.91
6	1,428	3.8	238	5.31
7	1,414	3.77	202	4.51
8	1,160	3.09	145	3.24
9	774	2.06	86	1.92
10	2,340	6.23	234	5.22
11	3,729	9.93	339	7.57
12	3,588	9.55	299	6.67
13	2,132	5.68	164	3.66
14	2,758	7.34	197	4.4
15	3,450	9.19	230	5.13
16	5,024	13.38	314	7.01
17	5,049	13.44	297	6.63
Total	37,556	100	4,481	100
Final sample for firm-specific analysis (Firm-specific sample):				
> 15	13523	36.01	841	18.77
Panel C: Distribution of firm categories				
Large sample	*No. of observations*	*Percentage (%)*		*State ownership (%)*
SOEs	12,832	38.69		38.149
Non-SOEs	20,334	61.31		
Private	17,721	51.99		0.341
Foreign enterprises	1,035	3.12		0.761
Others	992	2.99		1.153
Total	33,166	100		
Firm-specific sample	*No. of firms*	*Percentage (%)*		*State ownership (%)*
SOEs	451	63.43		37.80
Non-SOEs	260	36.57		0.71
Private	227	38.96		0.68
Foreign enterprises	16	2.25		0.09
Others	13	1.83		0.19
Total	711	100		

The sample initially contained 45,033 firm-year observations from the China Stock Market & Accounting Research Database (CSMAR) starting from 2005. The annual financial reports of firms listed on the Shanghai and Shenzhen stock exchanges serve as the data source for CSMAR. Stringent multiple verifications have been performed to ensure coding accuracy and maintain the integrity of the overall dataset. Requiring non-missing data on CEO compensation and accounting items, and excluding financial industry and ST firms, our sample is reduced to 4,481 unique publicly traded firms. To estimate cross-sectional panel data models using a first-difference strategy, we require the firms to have at least two consecutive years of data. Overall, the selection procedure resulted in a final sample of 33,166 firm-year observations (38.69% of SOEs and 61.31% of non-SOEs, including private enterprises, foreign companies, and others).

Next, our study adds more data requirements for a subsample to perform firm-specific regressions. Building upon prior recommended research design (Gaver & Gaver, 1998; Potepa, 2020), it is crucial to obtain at least 15 years of compensation and accounting data with sufficient degrees of freedom to perform firm-level regressions and conduct other relevant empirical tests. Consequently, it limits our subsample to 841 firms with 13,523 firm-year observations. These mature firms account for over 36% of all firm-year observations from 2005

to 2021. Not surprisingly, the majority (451 firms) are SOEs (121 central SOEs and 271 local SOEs) and non-SOEs include 260 firms[3].

4.1.2. Descriptive statistics

The sample of firm-specific regressions (subsample: Firm-specific sample) is comprised of firms with a tenure exceeding 15 years and insinuates their ability to withstand various business challenges and remain operational. On average, they are larger in terms of assets and sales. The mean of assets in firm-specific sample is RMB 17,823 million and the mean is RMB 14,414 million in the large sample (time series cross sectional sample). The average firm in firm-specific sample has sales of RMB 11,937 million, and the average sales in large sample is RMB 9,564 million. Leverage ratio is higher in firm-specific sample (49.87%) than the large sample (43.93%), possibly due to their good creditworthiness and strong capital raising ability. While the profitability ratio (return on assets [ROA]) is lower in the firm-specific sample, the firms in the firm-specific sample exhibit higher stock returns and have a higher market-book ratio, indicating these big firms are prestigious and attract greater investor interest.

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[3] 70 firms change their status between SOEs and non-SOEs, or between central SOEs and local SOEs during the fifteen years.

Relatively speaking, the large sample includes more young firms, and the ratio of founder CEO is 8.1%, while the ratio is only 1.8% in the firm-specific sample. On average, CEO ownership is 4.69% in the large sample; in the firm-specific sample, CEOs own only 0.87% of their company stock. The youngest CEO is 33 years old, the oldest is 65 years old, and the average age is 49 years old. The average CEO tenure is around 4 years, but some CEOs have been in their positions for the sample period (174 months).

Mr. Wu Jinglian, the renowned economist for his expertise in market-oriented reform, mentioned that balancing the power and responsibility between the owner, board of directors, and management is the key to the success of corporate governance in China (Wu, 1994). Compared to the large sample, the board is bigger in the firm-specific sample (9.11 vs. 2.14). And the percentage of independent directors on the board is similar between the two

samples (36.64% vs. 37.31%). The majority of firms in the two samples have an independent compensation committee (83.3% vs. 78.8%). The duality of the CEO and the board director is higher in the large sample (26.2%) than firm-specific sample (15.4%). Institutional ownership is 51.72% in the firm-specific sample and 44.60% in the large sample. The detailed results are presented in Table A.1 in the Appendix.

4.2. Analyses of empirical results

Our study offers two approaches to study executive pay in response to firm gains and losses separately. We use firm-specific regressions to associate CEO compensation levels with gains (positive earnings) or losses (negative earnings). To test PPS between changes in compensation and changes in earnings (increased or decreased), we use time series cross-sectional models. The definitions and measures of variables in these models are listed in Table 2.

Table 2. Variable definition

Variable	Definition
Panel A: Firm-specific regressions (Models 1, 2, and 3)	
Dependent variable (Unit: 10,000 RMB)	
COMP	The total annual cash compensation of the CEO (including salary and bonus).
Independent variables (Unit: 1,000,000 RMB)	
NI	Net income in the year t – 1.
NI_gain	Net income in year t – 1 if the previous net income is greater than 0, otherwise 0.
NI_loss	Net income in year t – 1 if the previous net income is less than 0, otherwise 0.
BNRI_gain	Recurring profit in year t – 1 if the previous recurring profit is greater than 0, otherwise 0.
BNRI_loss	Recurring loss in year t – 1 if the previous recurring loss is less than 0, otherwise 0.
NRI_gain	Non-recurring profit in year t – 1 if the previous non-recurring profit is greater than 0, otherwise 0.
NRI_loss	Non-recurring loss in year t – 1 if the previous non-recurring loss is less than 0, otherwise 0.
Panel B: Cross-sectional regressions	
Dependent variable	
ΔCOMP	Change in cash compensation of CEO in firm i from t to t – 1.
Independent variables (Models 4 and 5)	
ΔNI_gain	Change in NI between t – 1 and t – 2 if the change is positive, zero if the change is negative.
ΔNI_loss	Change in NI between t – 1 and t – 2 if the change is negative, zero if the change is positive.
ΔBNRI_gain	Change in BNRI between t – 1 and t – 2 if the change is positive, zero if the change is negative.
ΔBNRI_loss	Change in BNRI between t – 1 and t – 2 if the change is negative, zero if the change is positive.
ΔNRI_gain	Change in NRI between t – 1 and t – 2 if the change is positive, zero if the change is negative.
ΔNRI_loss	Change in NRI between t – 1 and t – 2 if the change is negative, zero if the change is positive.
Panel C: Control variables	
Firm factors	
Leverage	The ratio of total debt to total assets in the year t – 1.
TobinQ	The ratio of the market value of stock plus book value of debt and then divided by total assets in year t – 1.
Asset	Natural logarithm of total assets in year t – 1.
Age	Number of years since the firm's establishment in year t – 1.
CEO characteristics	
CEOown	Shareholdings of the CEO.
FounderCEO	Dummy variable,1 if CEO is the founder, or 0 otherwise.
Corporate governance	
Independent_director	Proportion of independent directors to the total number of directors.
Institutional_ownership	Institutional investors' shareholding.
Board	Number of directors on the board.
Duality	Dummy variable,1 if the CEO also serves as the board director, otherwise 0.
Share_balance	Ratio of shareholdings of the second to fifth largest shareholder to the shareholdings of the first largest shareholder.
GOVERNANCE	Comprehensive index of corporate governance based on principal component analysis. The larger the index, the better of corporate governance.

4.2.1. Firm-specific regressions

Table 3 reports the statistics of 841 firm-specific regressions. In Model 1, the coefficient of NI is significantly positive, consistent with the findings in prior studies (Buck et al., 2008) that executive compensation in China has shown a positive relationship to company performance. The results of

Models 2 and 3 support our *H1* that both recurring and nonrecurring gains will flow through to CEOs' salary and bonus, while recurring and nonrecurring losses will be shielded. We also summarize the model results in Panel B of Table 3. Following this format, we report the summarized results of different business categories in Table 4.

Table 3. Firm-specific sample (all firms): The relationship between CEO cash compensation and earnings components

Panel A: Mean values of firm-specific regression coefficients			
	All firms		
Variable	*Model 1*	*Model 2*	*Model 3*
NI	0.031***		
	(13.226)		
NI_gain		0.042***	
		(16.201)	
NI_loss		-0.015	
		(-0.448)	
BNRI_gain			0.056***
			(18.319)
BNRI_loss			-1.326
			(-0.002)
NRI_gain			0.075***
			(7.435)
NRI_loss			3.992
			(0.859)
Control	Yes	Yes	Yes
N	841	841	841
Panel B: Summary of model results (All Firms)			
Variable	*No. of firms*	*Mean Coef.*	*Median Coef.*	*Z-stat*
NI	841	0.031	0.009	13.226***
NI_gain	840	0.042	0.014	16.201***
NI_loss	518	-0.015	0.000	-0.448
BNRI_gain	840	0.056	0.195	18.319***
BNRI_loss	590	-1.326	0.002	-0.551
NRI_gain	826	0.075	0.148	7.435***
NRI_loss	558	3.992	-0.859	-0.859
Mean No. of obs. per firm	16.08			
No. of firms	841			

*Note: Depend. = Cash-based compensation (COMP). Significance levels of 10%, 5%, and 1% are indicated by *, **, and ***, respectively.*

Table 4. Firm-specific sample: The relationship between CEO cash compensation and earnings components between different firm categories

Panel A: SOE and non-SOE							
	(1) SOE				(2) Non-SOE		
Variable	*No. of firms*	*Mean Coef.*	*Median Coef.*	*Z-stat*	*No. of firms*	*Mean Coef.*	*Median Coef.*	*Z-stat*
NI	451	0.039	0.011	12.936***	260	0.023	0.004	6.288***
NI_gain	451	0.058	0.019	13.415***	260	0.012	0.007	9.13***
NI_loss	268	-0.079	0.001	0.533	148	-0.101	0.000	-0.145
BNRI_gain	450	0.069	0.021	12.585***	260	0.003	0.018	13.376***
BNRI_loss	312	-0.386	0.004	1.481	169	-4.007	0.000	-1.398
NRI_gain	448	0.088	0.187	5.295***	252	0.062	0.009	4.979***
NRI_loss	296	3.067	-0.035	-0.707	171	9.515	-0.002	-0.572
No. of firms	451				260			
Panel B: Local SOE and central SOE							
	(1) Local SOE				(2) Central SOE		
Variable	*No. of firms*	*Mean Coef.*	*Median Coef.*	*Z-stat*	*No. of firms*	*Mean Coef.*	*Median Coef.*	*Z-stat*
NI	283	0.039	0.126	11.478***	125	0.043	0.006	4.021***
NI_gain	283	0.062	0.014	11.729***	125	0.047	0.019	4.467***
NI_loss	169	-0.147	0.001	1.055	73	0.041	-0.002	0.08
BNRI_gain	282	0.114	0.026	11.313***	125	0.034	0.008	4.083***
BNRI_loss	194	0.043	0.004	0.582	87	0.108	0.003	1.454
NRI_gain	282	0.106	0.018	4.639***	124	0.014	0.014	1.073
NRI_loss	186	4.728	-0.026	0.379	78	2.009	-0.029	-0.96
No. of firms	283				125			

*Note: Depend. = ΔCash-based compensation (ΔCOMP). Significance levels of 10%, 5%, and 1% are indicated by *, **, and ***, respectively.*

First, the CEOs in both SOEs (451 firms) and non-SOEs (269 firms) receive additional pay for the increase in their business earnings (*NI_gain*). PPS is higher in CEOs in SOEs (0.058, p < 0.01) than in CEOs in non-SOEs (0.012, p < 0.01), but there is no statistically significant change in their pay if the business *NI* drops, the coefficients of *NI_loss* are insignificantly negative. When we decompose earnings into recurring earnings and non-recurring earnings, the coefficient of *BNRI_gain* in SOEs (0.069, p < 0.01) is larger than that of non-SOEs (0.003, p < 0.01), implying that CEOs in SOEs receive more compensation for the increase in *BNRI*,

a measure of a company's main business performance. Both coefficients of *BNRI_loss* are insignificantly negative, implying the compensation of both SOEs and non-SOEs is somewhat shielded when the main business performance declines. While both are positively significant, the coefficient of *NRI_gain* in SOEs (0.088, p < 0.01) is also larger than that of non-SOEs (0.062, p < 0.01). Overall, the results indicate that PPS is stronger in SOEs than in non-SOEs, supporting *H2*.

Next, we explore whether there exists a stronger correlation between pay and performance in central SOEs vs. local SOEs. As we discussed

earlier, large Chinese non-financial SOEs are usually controlled under the SASAC. SASAC's control is typically organized as vertically integrated business groups, including the parent firm and its subsidiaries (e.g., publicly listed firms with the parent firm's controlling ownership, SOEs). There coexists both central SASAC and local SASAC coexist, with each overseeing a set of SOEs (central SOEs and local SOEs, respectively).

As shown in Panel B of Table 4, CEOs in both central SOEs (0.047, p < 0.01) and local SOEs (0.062, p < 0.01) receive additional pay when the business performs well (*NI_gain*), but they do not endure the pay cut when the business suffers losses (*NI_loss*). When we decompose earnings into recurring earnings and non-recurring earnings, we find more differentiations between central SOEs and local SOEs:

1) The coefficient of *BNRI_gain* in local SOEs (0.114, p < 0.01) is significantly larger than that of central SOEs (0.034, p < 0.01), insinuating that the SASAC's enforcement of executives' compensation cap might be more materialized at the central SOEs level[4]. The compensation design of CEOs in central SOEs can be seen as a significant bellwether of executive compensation reform.

2) Interestingly, *NRI_gain* is still significantly positively related to the CEO pay in local SOEs (0.106, p < 0.01) but becomes insignificant to central SOEs. A plausible interpretation is that SASAC may not administer local SOEs as closely as central SOEs, allowing CEOs in these organizations to adjust and benefit from nonrecurring income in a more favorable manner. In contrast to other countries, the largest source of non-recurring gains in Chinese companies is government subsidy, followed by gains/losses on the sale of assets.

We conjecture that the link between CEO pay and nonrecurring income in local SOEs may be attributable to the government subsidy. Given the special ownership structure in SOEs, the government subsidy serves as affirmation for rewarding CEO's work and effort to carry out the commitment to uphold social responsibilities and implement government policies (Lin et al., 2015).

4.2.2. Cross-sectional analysis

To unravel the myth of whether a stronger PPS is driven by self-interested compensation arrangements as the by-product of managers exerting influence over the boards, we aim to assess the impact of corporate governance in this context. To include firms with greater variations in corporate governance, we turn to cross-sectional models with a large sample. Compared to the sample of firm-specific regression, there are more young and small firms in the large sample. The results are reported in Tables A.2, A.3, and A.4 (see Appendix) and summarized here. Not reported here, for robustness check, we also run alternative cross-sectional models with a dummy variable to differentiate gains or losses. Results are available upon request.

Models 4 and 5 in Table A.2 test *H1*: an asymmetric association of cash pay with gains and losses; and *H2*: differentiation in the asymmetric associations between SOEs and non-SOEs.

CEOs in both SOEs and non-SOEs receive rewards for earnings improvement (*ΔNI_gain*) and are penalized when the earnings drop (*ΔNI_loss*). Noticeably, CEOs in SOEs receive a smaller scale of pay raise for earning improvement (0.006, p < 0.01) than CEOs in non-SOEs (0.013, p < 0.01). During business downturns, CEOs in SOEs experience a larger scale of pay cut (0.011, p < 0.01) compared to their counterparts (0.009, p < 0.01) in non-SOEs.

Building upon the same approach of decomposing the *NI* into recurring and nonrecurring earnings (losses), we discover comparable findings regarding asymmetrical changes in executives' compensation. CEOs in non-SOEs receive greater rewards for increasing recurring earnings (*ΔBNRI_gain*: 0.014, p < 0.01), while facing relatively less penalty for declining recurring income (*ΔBNRI_loss*: 0.009, p < 0.01). In contrast, CEOs in SOEs experience more substantial pay cuts compared to CEOs in non-SOEs when their businesses report declining recurring earnings. Taken together, our evidence suggests that previous reforms recommended by SASAC have played a crucial role in holding CEOs in SOEs accountable for fulfilling their commitment to advancing national economic development. Hence, CEOs in SOEs receive relatively smaller pay raises when business reports increasing earnings and face a large-scale pay cut when business reports declining earnings. In contrast to SOEs, CEOs in non-SOEs have a significant alignment of their cash pay with rising non-recurring earnings (*ΔBNRI_gain*: 0.012, p < 0.01).

In Table A.3, we separate the sample into two groups: strong corporate governance and weak corporate governance in SOEs.

CEOs in SOEs with strong governance mechanisms undergo a larger PPS associated with gains and losses in *NI* and *BNRI*, compared to those associated with weak corporate governance. The evidence suggests that recent regulatory mandates on executives' compensation contracts, coupled with effective governance mechanisms, align executives' incentives with shareholders' interests. Thus, efficient contracting dominates in this scenario.

In Table A.4, we direct our attention to examining how corporate governance mechanisms impact non-SOEs executives' pay. Our findings reveal asymmetrical effects on CEO pay in firms associated with strong corporate governance mechanisms. While awarded for gains in *NI* and *BNRI*, CEOs in non-SOEs are insulated from business loss, rejecting the efficient contracting hypothesis.

5. DISCUSSION

In our firm-specific sample, we include only firms with at least 15 years of data from 2005 to 2021. While conducting firm-level regressions over time (Models 1, 2, and 3), a common concern is the limited number of observations per firm, which may reduce statistical power and lead to unreliable coefficient estimates. However, as shown in Panel B of Table 1, we present both the dispersion of median coefficients and the mean of coefficients across firms. For each firm, we compute t-statistics for each regression parameter, which are then aggregated across all sample firms to form a Z-statistic for each parameter. These Z-statistics, which are asymptotically distributed as standard normal variates, are used to assess statistical significance.

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[4] The government has issued the Opinions on Further Standardizing the Cash Compensation of CEO in Central SOE (2009) and the Reform Plan for the Salary System of CEO in Central SOE (2014) for social fairness considerations. The two "pay cap" policies focused on executives' compensation appointed by SASAC.

The results are statistically robust and consistent with findings in US firms. Specifically, we find that cash compensation is positively related to net income, as well as recurring and non-recurring gains, but shows insignificant or negative relationships with losses. Our sample of 841 mature firms accounts for over 36% of all firm-year observations from the Shanghai and Shenzhen stock exchanges, lending strong representativeness and credibility to the results.

CEO compensation and firm performance in Chinese firms from 2005 to 2021 exhibit clear trends, reflecting the broader trajectory of China's economic development. We acknowledge that with firm-specific models, regressions on such non-stationary data can potentially yield spurious results. To address this concern, we complement the firm-specific analysis with cross-sectional regressions using a significantly larger sample of 33,166 firm-year observations. In these models (Models 4–6), we analyze the changes in compensation and performance rather than their levels, allowing for a more robust inference by mitigating trend-related biases.

From this broader analysis, we uncover new insights into the asymmetric pay patterns in Chinese firms. Specifically, SOEs in our study exhibit a larger pay cut in response to losses than pay increases in response to gains — a reversal of the asymmetric pattern documented in prior research by Balsam (1998) and Gaver and Gaver (1998), where executives were generally more rewarded for gains than penalized for losses. This reversal raises important questions: Does it reflect a deliberate and efficient contractual design, or is it a byproduct of regulatory interventions, such as China's 2014 executive salary cap?

Another disputable point centers on our conclusion that asymmetric pay in non-SOEs is inefficient because CEOs are insulated from losses while still rewarded for both recurring and non-recurring gains. As noted in prior literature (Gaver & Gaver, 1998; Jackson et al., 2008), asymmetric pay could be intentionally designed to promote long-term investment or to retain managerial talent in high-growth, high-risk environments. By categorically rejecting these pay arrangements as inefficient, we may overlook the strategic motivations that boards could have in designing such compensation contracts.

6. CONCLUSION

This study examines executive compensation in response to gains, losses, and changes in earnings in Chinese enterprises from 2005 to 2021. Our sample of firm-specific regressions includes 841 unique firms with 13,523 firm-year observations. These mature firms account for over 36% of all firm-year observations from the Shanghai and Shenzhen Stock Exchanges. The findings support the hypothesis of

downward wage rigidity, indicating that CEOs in SOEs and non-SOEs are paid for recurring and nonrecurring gains while insulating themselves from recurring and nonrecurring losses. Further, we use cross-sectional models to examine the adjustment of CEO compensation in response to changes in business performance (increased or decreased earnings) for a large sample of Chinese CEOs. Contrary to the prevailing impression that the interests of SOE executives are more closely aligned with government policy coordination than corporate profits, which could potentially limit the extent to adjust their pay in response to a business downturn, we find a more effective tie of pay to performance in SOEs than in non-SOEs. Compared to non-SOEs, CEOs in SOEs receive smaller pay raises for improving earnings and take a larger scale pay cut for declining earnings. On the contrary, efficient contracting is not supported by the empirical results of CEOs in non-SOEs, even when associated with strong corporate governance. Taken together, our evidence indicates that the policies, regulations, and various reform initiatives have profoundly transformed executives' compensation structure within SOEs. Recent corporate reforms led by SASAC, including the executive's compensation cap, stringent oversight, and rigorous regulatory enforcement, have played an instrumental role in holding CEOs in SOEs accountable for fulfilling their role in economic development.

Despite these insights, several limitations should be noted. First, our compensation measure is based on cash-based compensation, which does not fully capture the multidimensional nature of executive compensation. Other components, such as total compensation, stock options, deferred compensation, perquisites, or the average pay of top executives, might provide alternative perspectives. Second, our analysis centers on Chinese listed firms, particularly SOEs, which limits the external validity of our conclusion in different institutional or ownership contexts. In particular, the distinctive role of government subsidies — recognized as a key source of non-recurring gains in China — highlights a structural characteristic of local SOEs that may not be applicable in other contexts. Given the unique ownership structure of SOEs, such as subsidies may function as a mechanism to reward CEOs for advancing social objectives and implementing government policies (Lin et al., 2015), a rationale that may be less relevant or absent in private or non-Chinese institutional settings. Fourth, although our firm-specific regressions provide firm-level PPS estimates, which can be applied to other corporate finance research areas, including managerial risk-taking, capital raising, investment decisions, and earnings management, potential endogeneity concerns remain. Specifically, reverse causality and omitted variable bias may affect the interpretation of our results.

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APPENDIX

Table A.1. CEO compensation and firm characteristics (2005–2021)

Variable	Firm-specific sample					Large sample				
	Mean	*Std. dev.*	*N*	*Min*	*Max*	*Mean*	*Std. dev.*	*N*	*Min*	*Max*
Firm characteristics										
Asset (RMB million)	17,822.89	74,233.95	13,523	17.93	1,889,255.00	14413.56	72279.80	33166	0.949	2502533.00
Sales (RMB million)	11,937.29	80,832.47	13,523	0.23	2,966,193.00	9564.49	68078.49	33166	0.008	2966193.00
Leverage	49.87	20.13	13,523	5.05	96.72	43.93	21.14	33166	5.046	99.59
TobinQ	2.07	2.76	13,523	0.68	122.19	2.09	1.40	33166	0.873	9.20
ROA	0.03	0.06	13,523	-0.317	0.20	0.04	0.07	33166	-0.329	0.21
Stock return (%)	0.27	0.75	13,423	-0.691	3.06	0.22	0.68	32628	-0.691	3.07
Market value (RMB million)	18,577.07	35,408.07	13,523	707.18	228,000.00	15853.20	32358.50	33166	705.557	232000.00
Market-book ratio	0.66	0.26	13,523	0.11	1.15	0.61	0.25	33166	0.109	1.15
CEO characteristics										
FounderCEO	0.02	0.13	13,523	0.00	1.00	0.08	0.27	33166	0.00	1.00
CEOown (%)	0.87	4.40	13,523	0.00	51.65	4.69	10.78	33166	0.00	52.88
CEO age	49.03	6.34	13,520	33.00	65.00	49.43	6.57	33163	33.00	65.00
CEO tenure (months)	48.57	43.10	13,506	1.00	174.00	46.54	38.48	34131	1.00	174.00
Corporate governance										
Institutional_ownership (%)	51.72	19.09	13,498	33.00	93.09	44.60	24.40	33166	0.35	94.86
Board	9.11	1.83	13,523	5.00	15.00	2.14	0.20	33166	1.61	2.71
Independent_director (%)	36.64	5.08	13,523	30.00	57.14	37.31	5.26	33166	30.00	57.14
Dualty	1.85	0.36	13,262	1.00	2.00	1.74	0.44	33166	1.00	2.00
Share_balance	0.597	0.56	13,522	0.003	3.70	0.72	0.60	33166	0.02	2.81

Table A.2. Large sample (cross-sectional method 1): The relationship between CEO cash compensation and earnings components

Variable	Model 4									Model 5								
	All			SOE			Non_SOE			All			SOE			Non_SOE		
Intercept	-56.283***	-55.914***	-52.085***	-39.845***	-39.832***	-33.127***	-77.658***	-77.236***	-81.089***	-54.475***	-54.134***	-50.328***	-40.064***	-40.077***	-33.412***	-73.527***	-73.189***	-77.184***
	(-10.05)	(-9.97)	(-8.32)	(-5.20)	(-5.20)	(-4.11)	(-8.90)	(-8.87)	(-8.09)	(-9.56)	(-9.49)	(-7.91)	(-5.08)	(-5.08)	(-4.05)	(-8.24)	(-8.22)	(-7.48)
ΔNI_gain	0.009***	0.009***	0.009***	0.006***	0.006***	0.006***	0.013***	0.013***	0.013***									
	(8.43)	(8.43)	(8.37)	(4.38)	(4.38)	(4.43)	(7.84)	(7.83)	(7.80)									
ΔNI_loss	0.010***	0.010***	0.010***	0.011***	0.011***	0.011***	0.009***	0.009***	0.009***									
	(8.69)	(8.69)	(8.75)	(7.91)	(7.90)	(7.89)	(4.88)	(4.89)	(4.85)									
$\Delta BNRI\_gain$										0.010***	0.010***	0.010***	0.006***	0.006***	0.007***	0.014***	0.014***	0.014***
										(7.91)	(7.92)	(7.92)	(4.09)	(4.09)	(4.16)	(7.43)	(7.42)	(7.47)
$\Delta BNRI\_loss$										0.010***	0.010***	0.010***	0.012***	0.012***	0.012***	0.009***	0.009***	0.009***
										(8.16)	(8.14)	(8.12)	(7.59)	(7.59)	(7.53)	(4.36)	(4.35)	(4.25)
ΔNRI_gain										0.009**	0.009**	0.008**	0.006	0.006	0.006	0.012**	0.012**	0.011*
										(2.41)	(2.40)	(2.24)	(1.38)	(1.38)	(1.29)	(2.05)	(2.03)	(1.89)
ΔNRI_loss										0.006	0.006	0.007*	0.008	0.008	0.008*	0.003	0.003	0.004
										(1.62)	(1.63)	(1.83)	(1.63)	(1.63)	(1.83)	(0.47)	(0.49)	(0.64)
Asset	2.810***	2.792***	2.849***	2.035***	2.035***	2.012***	3.874***	3.848***	3.712***	2.728***	2.711***	2.785***	2.052***	2.054***	2.056***	3.683***	3.661***	3.531***
	(11.36)	(11.27)	(11.13)	(5.92)	(5.92)	(5.64)	(10.48)	(10.43)	(9.99)	(10.74)	(10.66)	(10.68)	(5.75)	(5.75)	(5.57)	(9.65)	(9.62)	(9.22)
Leverage	-0.020**	-0.021**	-0.019**	-0.011	-0.011	-0.012	-0.021	-0.021*	-0.021	-0.022**	-0.022**	-0.020**	-0.012	-0.012	-0.013	-0.023*	-0.023*	-0.022*
	(-2.21)	(-2.25)	(-2.03)	(-0.83)	(-0.84)	(-0.90)	(-1.60)	(-1.65)	(-1.57)	(-2.35)	(-2.39)	(-2.16)	(-0.94)	(-0.95)	(-1.00)	(-1.75)	(-1.79)	(-1.71)
TobinQ	1.398***	1.390***	1.348***	1.140***	1.142***	1.112***	1.400***	1.385***	1.300***	1.353***	1.346***	1.307***	1.087***	1.089***	1.065***	1.351***	1.337***	1.252***
	(8.29)	(8.20)	(7.94)	(3.83)	(3.84)	(3.73)	(6.91)	(6.79)	(6.32)	(8.03)	(7.95)	(7.69)	(3.69)	(3.69)	(3.59)	(6.63)	(6.52)	(6.05)
CEOown		-0.001	-0.020		-0.029	-0.126		-0.004	-0.015		-0.000	-0.020		-0.025	-0.123		-0.003	-0.013
		(-0.04)	(-0.97)		(-0.13)	(-0.55)		(-0.20)	(-0.67)		(-0.02)	(-0.96)		(-0.11)	(-0.54)		(-0.14)	(-0.59)
FounderCEO		-0.913	-1.302*		0.864	2.124		-1.379*	-2.168***		-0.895	-1.284*		1.896	3.206		-1.377*	-2.164***
		(-1.29)	(-1.72)		(0.17)	(0.43)		(-1.91)	(-2.74)		(-1.27)	(-1.70)		(0.35)	(0.62)		(-1.90)	(-2.73)
Independend_director			-0.088**			-0.162***			0.064			-0.092**			-0.167***			0.063
			(-2.10)			(-2.73)			(1.07)			(-2.20)			(-2.81)			(1.05)
Institutional_ownership			0.007			0.010			0.017			0.007			0.010			0.017
			(0.78)			(0.60)			(1.50)			(0.73)			(0.54)			(1.55)
Board			-1.405			-0.946			1.618			-1.460			-1.040			1.637
			(-1.23)			(-0.63)			(0.97)			(-1.28)			(-0.70)			(0.98)
Duality			1.414**			-0.479			1.642**			1.402**			-0.477			1.607**
			(2.46)			(-0.49)			(2.38)			(2.45)			(-0.48)			(2.33)
Share_balance			1.245***			2.240***			0.298			1.216***			2.199***			0.272
			(3.95)			(3.20)			(0.79)			(3.87)			(3.12)			(0.72)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-sq	0.033	0.033	0.034	0.038	0.038	0.04	0.038	0.039	0.039	0.033	0.033	0.034	0.038	0.038	0.040	0.038	0.039	0.039
N	33166	33166	33166	12832	12832	12832	20334	20334	20334	33166	33166	33166	12832	12832	12832	20334	20334	20334

Note: Depend. = ΔCash-based compensation (ΔCOMP). Significance levels of 10%, 5%, and 1% are indicated by *, **, and ***, respectively.

Table A.3. Large sample (cross-sectional method 1) of SOE: The relationship between CEO cash compensation and earnings components in weak and strong corporate governance

SOE	Model 4 GOVERNANCE				Model 5 GOVERNANCE			
	Weak		Strong		Weak		Strong	
Intercept	-34.278**	-35.242***	-33.722***	-33.517***	-35.267**	-36.092***	-31.498**	-31.291**
	(-2.54)	(-2.61)	(-2.70)	(-2.68)	(-2.55)	(-2.62)	(-2.38)	(-2.36)
ΔNI_gain	0.006***	0.006***	0.007***	0.007***				
	(3.13)	(3.13)	(3.48)	(3.48)				
ΔNI_loss	0.009***	0.009***	0.012***	0.012***				
	(4.97)	(4.99)	(5.43)	(5.41)				
ΔBNRI_gain					0.007***	0.007***	0.008***	0.008***
					(2.89)	(2.88)	(3.15)	(3.15)
ΔBNRI_loss					0.010***	0.010***	0.013***	0.013***
					(4.63)	(4.65)	(5.51)	(5.48)
ΔNRI_gain					0.007	0.007	0.007	0.007
					(1.14)	(1.16)	(0.80)	(0.80)
ΔNRI_loss					0.009	0.008	0.004	0.004
					(1.20)	(1.17)	(0.53)	(0.53)
Asset	2.156***	2.182***	1.510***	1.517***	2.208***	2.228***	1.401**	1.407**
	(4.19)	(4.25)	(2.61)	(2.63)	(4.09)	(4.13)	(2.28)	(2.30)
Leverage	-0.045**	-0.042**	0.027	0.025	-0.045**	-0.043**	0.027	0.024
	(-2.18)	(-2.06)	(1.28)	(1.16)	(-2.20)	(-2.08)	(1.24)	(1.12)
TobinQ	0.698	0.679	1.478***	1.530***	0.685	0.665	1.423***	1.473***
	(1.32)	(1.28)	(2.85)	(2.97)	(1.31)	(1.27)	(2.76)	(2.87)
CEOown		1.817***		-0.298		1.818***		-0.290
		(2.80)		(-1.42)		(2.80)		(-1.38)
FounderCEO		-36.480***		3.363		-36.167***		3.367
		(-2.73)		(0.57)		(-2.71)		(0.58)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-sq	0.042	0.043	0.049	0.049	0.042	0.043	0.050	0.050
N	6264	6264	5899	5899	6264	6264	5899	5899

*Note: Depend. = ΔCash-based compensation (ΔCOMP). Significance levels of 10%, 5%, and 1% are indicated by *, **, and ***, respectively.*

Table A.4. Large sample (cross-sectional method 1) of non-SOE: The relationship between CEO cash compensation and earnings components in weak and strong corporate governance

Non-SOE	Model 4 GOVERNANCE				Model 5 GOVERNANCE			
	Weak		Strong		Weak		Strong	
Intercept	-84.726***	-85.051***	-48.941***	-47.904***	-81.379***	-81.798***	-44.864***	-43.937***
	(-6.58)	(-6.63)	(-3.47)	(-3.39)	(-5.93)	(-5.98)	(-3.27)	(-3.20)
ΔNI_gain	0.015***	0.015***	0.015***	0.015***				
	(5.88)	(5.86)	(4.82)	(4.81)				
ΔNI_loss	0.013***	0.013***	0.003	0.003				
	(4.66)	(4.68)	(1.06)	(1.08)				
$\Delta BNRI\_gain$					0.016***	0.016***	0.016***	0.016***
					(5.86)	(5.83)	(4.53)	(4.53)
$\Delta BNRI\_loss$					0.013***	0.013***	0.002	0.002
					(4.44)	(4.45)	(0.75)	(0.75)
ΔNRI_gain					0.012	0.012	0.014	0.014
					(1.27)	(1.26)	(1.50)	(1.50)
ΔNRI_loss					0.003	0.003	0.008	0.008
					(0.26)	(0.27)	(0.82)	(0.86)
Asset	3.815***	3.822***	3.211***	3.156***	3.665***	3.676***	3.018***	2.967***
	(6.46)	(6.50)	(5.86)	(5.75)	(5.78)	(5.82)	(5.76)	(5.67)
Leverage	-0.025	-0.025	-0.004	-0.006	-0.027	-0.027	-0.006	-0.007
	(-1.13)	(-1.12)	(-0.21)	(-0.28)	(-1.25)	(-1.23)	(-0.29)	(-0.36)
TobinQ	2.103***	2.118***	0.836***	0.796***	2.067***	2.082***	0.781***	0.742***
	(6.14)	(6.20)	(3.04)	(2.88)	(6.01)	(6.07)	(2.81)	(2.65)
CEOown		0.018		-0.022		0.020		-0.022
		(0.45)		(-0.97)		(0.49)		(-0.97)
FounderCEO		-2.640*		-0.911		-2.594*		-0.933
		(-1.71)		(-1.10)		(-1.68)		(-1.12)
Industry	YES	YES	YES	YES	YES	YES	YES	YES
Year	YES	YES	YES	YES	YES	YES	YES	YES
R-sq	0.053	0.053	0.038	0.038	0.052	0.052	0.038	0.038
N	9981	9981	9436	9436	9981	9981	9436	9436

*Note: Depend. = ΔCash-based compensation (ΔCOMP). Significance levels of 10%, 5%, and 1% are indicated by *, **, and ***, respectively.*