



# An Empirical Research on the Impact of Corporate Governance on Executive Compensation Stickiness

## ----Based on the Data of State-owned Listed Companies

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**Abstract:** The negative impact of executive compensation stickiness problems is very serious. How to effectively control executive compensation stickiness is imminent. During the empirical research, the paper chooses A-shares listed companies and timely using 2010-2014 data as the study sample in order to study how the corporate governance affects the executive compensation stickiness. The findings are as follows: There is a significant feature of executive compensation stickiness in the state-owned listed companies. Further, executive compensation stickiness can be significantly weakened by increasing the ownership concentration and the proportion of directors who did not receive remuneration. Moreover, executive compensation stickiness can be strengthened by the larger board size but it doesn't significant. Lastly, the increasing of the proportion of independent directors and the separation of chairman and general manager has no obvious effect on executive compensation stickiness.

**Keywords:** Corporate governance, Executive compensation stickiness, Proportion of directors not receive compensation, State-owned listed companies executive

## 1 Introduction

The financial crisis of the United States in 2008 made the top five investment banks in Wall Street face an unprecedented crisis of survival, the stock markets were buckling market capitalization leading to instantaneous value shrinkage. Bear Stearns and Lehman Brothers collapsed, Merrill was acquired, and Stanley Morgan risked huge losses. However, the compensation of chief executive officers in the five major investment banks still hit a record high under such a crisis. Such astronomical compensation was denounced as "extremely irresponsible" by President Obama. Coincidentally, Sinosteel Tianyuan's net profit in 2013 decreased by 161.31%, but its executive compensation increased by 66.28%. Shenyang Chemical Industry's net profit in 2013 decreased by 118.42% over the same period of the previous year, but its executive compensation only decreased by 10.5%. All the above is just the tip of the iceberg of the phenomenon that the sensitivity of

compensation and company performance is asymmetric. The stickiness of executive compensation is becoming more and more serious. The detailed performances of the negative effects on the stickiness of executive compensation are: (1) Weaken the effectiveness of contracts on executive compensation; (2) Erode shareholders' interests. (3) Aggravate the phenomenon of over-investment of the companies.

In summary, the negative impact of executive compensation stickiness is very serious. Under such negative impact, how to effectively control the executive compensation stickiness? How to reduce the harm of executive compensation stickiness so as to improve the effectiveness on the system of executive compensation incentive? As the institutional arrangement to solve principal-agent problem, perfect corporate governance can improve the sensitivity of executive compensation and company performance, in order to help the system of executive compensation incentive work effectively. But in our country, compared with private enterprises, the state-owned listed companies show higher executive compensation stickiness<sup>[1]</sup>. Solving the problem of executive compensation stickiness in state-owned listed companies is more imminent.

## 2 Literature review

According to the principal-agent theory, in order to alleviate the agency problem, a set of compensation incentive system should be established. Domestic and foreign scholars have never stopped studying their relationship. Kevin selected 280 companies that listed on the New York Stock Exchange affected by the Sarbanes Oxley Act and the SEC approval of the corporate governance rules, it found there is a significantly positive correlation between CEO compensation and company performance<sup>[2]</sup>. Elizabeth Krauter studied the data of 79 companies of Brazil in 2008, used monthly salary, variable salary and three indices that were created—benefits, career and development as a measure of executive compensation, and used sales growth, ROE and ROA as the metrics of company performance, also draw the conclusion that executive salary and company

performance are significantly positive correlated<sup>[3]</sup>. Domestic scholars have also carried out related research, Du Xingqiang intercepted 1999-2005 listed companies<sup>[4]</sup>, Wu Yuhui inspected 2004-2008 listed companies<sup>[5]</sup>, Xia Yu select 666 listed companies from 2006 to 2008. Both confirmed the significantly positive correlation between executive compensation and corporate performance<sup>[6]</sup>.

As a governance mechanism to solve the agency problem, the effectiveness of executive compensation incentive system is also affected by the corporate governance mechanism.

Canyon and Lerong He focused from American companies to Chinese; they mostly studied the relationship between corporate governance and executive compensation in Chinese listed companies. The study showed that executive pay and CEO incentives are lower in state controlled companies and companies with concentrated ownership structures. They also found that companies with more independent directors on the board have a higher pay-for-performance link. They made a comparison and documented that US executive compensation is about seventeen times higher than in China even after controlling for economic and governance factors<sup>[7]</sup>. On the domestic front, Lai Puqing's research found that the governance mechanism of China's listed companies has a significant impact on executive pay. The largest shareholder's ownership and the size of the board of directors were both negatively related to executive compensation, while the proportion of independent directors has a significantly positive relationship<sup>[8]</sup>. In Wang Yufen's empirical research, the principal component analysis was used to construct the comprehensive performance index of listed company, found the number of independent directors is positively related to the executive compensation of state-owned listed companies<sup>[9]</sup>. Jin Lei studied the executive compensation system of listed banks in China from the perspective of corporate governance; research results showed that the greater the control of large shareholders of listed banks in China, the higher the executive pay, major shareholders did not play a supervisory role. There is no significant correlation between the executive pay and proportions of independent directors<sup>[10]</sup>.

Although China's listed companies have begun to show a trend of pay-performance sensitivity, but in recent years, the frequency the phenomenon that the sensitivity of executive compensation and company performance is asymmetric, that is executive compensation stickiness. Foreign scholars first to study this stickiness, Gaver&Gaver found that with the growing of companies' performance, the American listed companies' CEO compensation was also growing, but did not appear to decline when the companies' performance was decline<sup>[11]</sup>. Shaw found that the sensitivity of CEO monetary compensation and poor company performance is significantly lower than that of better performance<sup>[12]</sup>. On the domestic front, Fang Junxiong was also based on 2001-2007 listed companies

data, documented that there is a stickiness characteristic in executive compensation. He further studied the influence of stock ownership and other factors on the stickiness of executive compensation, results showed that the stickiness was less in private companies compared to state-owned companies and the independence of board would weaken the stickiness<sup>[11][12]-123</sup>. Li Yinong used listed companies' 2003-2008 data as the research sample to explore the factors influencing the stickiness of executive compensation. It showed that the higher the proportion of independent directors, the greater the degree of stickiness of executive compensation, which reflected the independent directors of listed companies in our country have the vase effect<sup>[13]</sup>. Li Wen in-depth studied the influence of the remuneration committee on the executive compensation stickiness. She pointed out when remuneration committee contains the female members, and the more proportion of independent directors; the older the average age of members; the higher the average salary of members, the greater significant effect of remuneration committee<sup>[14]</sup>. Chen Dexiu pointed out the stickiness of CEO compensation existed, but it only existed in companies which has serious losses<sup>[15]</sup>.

Although the literature also involves how to control executive compensation stickiness, but they are fragmented governance way, it has not been systematic analysis, when it comes to state-owned companies, the research are less and less. This paper will discuss the influence of the state-owned listing company's governance structure on executive compensation stickiness, thus more targeted control it.

### **3 The theoretical analysis and research hypothesis**

#### **3.1 The future of stickiness exists in executive compensation of state-owned listed companies**

According to the division of human capital in the human capital theory of Schultz, corporate executives, as idiosyncratic human capital, play a key role in the increase of company's performance and the growth of firms. Becker thinks that human capital also has the same equal rights for return as financial capital and physical capital. In modern enterprises, executives can obtain the homological income in return from the enterprises according to their investment in human capital. So in order to avoid the adverse selection behavior of executive and moral risk, the owner of the enterprise must motivate the executives reasonably. As a general form of incentive, compensation incentive has become means for the owner of the enterprise to motivate executives, to make full use of their skills and to improve company's performance.

When the company's performance rises, the business owners usually improve executive compensation to motivate them to continue efforts. When the company's performance declines, executive compensation should

also decline. But it usually means that the employer feels confused and dissatisfied with the executives as professional managers. This will also make the occupation manager market think that their practicing ability decline, leading to a decline in their market value. Therefore, executives are not willing to accept a decline in their compensation for the personal future development. And the state-owned listed companies have the same tendency that "award good but not punish bad". The SASAC's management on state-owned listed companies is relatively extensive; many take administrative or financial ideas. The shareholders of such characteristic like SASAC adapt the method of indirect management, post management and classification management on the state-owned listed companies which makes the power of the leadership in China is bigger<sup>[16]</sup>. Adding to the common phenomenon of two duties syncretic, unmatched payment for performance happens. Based on the above analysis, this paper puts forward a general hypothesis:

H1: In certain conditions, the executive compensation of state-owned listed companies has future of stickiness.

In the general assumption, the following hypotheses are put forward respectively:

### **3.2 Impact of state-owned listed companies' governance on executive compensation stickiness**

#### **3.2.1 Ownership concentration**

According to the degree of ownership concentration, ownership structure can be divided into decentralized and centralized. In the structure of the dispersed ownership, on the one hand, individual shareholders share less; small shareholders will weigh on the cost of executive supervision and benefit from company's performance which is more important. This trade-off cause power shortage of small shareholders actively carries out internal supervision. On the other hand, small shareholders only have a small proportion shares, even if they want to supervise the behavior of managers, but limited to they don't have voting rights, the supervision effect is greatly weakened. Small shareholders would be a "free rider"<sup>[17]</sup>. In this mentality, the dispersed ownership structure company's executives under a non-regulatory state, is likely to appear the problem of "insider control". Company executives are likely from their own interests, self-pay and damage the benefit of shareholders. While in the concentrated ownership structure, large shareholders will take the initiative to supervise the executives, timely modify the unreasonable of the executive compensation incentive system, safeguard the interests of the shareholders. In China, the major shareholder of the state-owned listed companies is government in general. They have the right and motivation to control the executive compensation, establish reasonable salary incentive system, improve the sensitivity of pay-performance and weaken the executive compensation stickiness. Based on the above analysis,

put forward the following hypothesis:

H2: The state-owned listed companies with higher ownership concentration will weaken executive compensation stickiness.

#### **3.2.2 Board size**

As an important organization of China's state-owned listed companies governance structure, the board of directors can effectively supervise and control executives' behavior. And as a necessary part of the characteristics of the board, the board size determines whether the board can effectively play its own role. Most scholars believe that when the number of the board size is huge, each of the director's power will become smaller, at the same time allocated to each director's duty will become blurred. It will lead the decline of the members' cooperation and team cohesion, the supervision on executives and limitation of pay level will also weaken. In addition, it will be very difficult to hold a board meeting when it has a huge board size. Because it needs to coordinate each director's time thus reduces the number of the meeting. Moreover, when faces different views, a large-scale of board of directors will cost amount of time to coordinate. It also go against the board effectively play its own role. Sometimes the executive as one of the coordinators, when coordinate the directors' opinion, they are very likely to start from their own interests, lobby the directors to make the decisions in their favor. On the contrary, small size of the board of directors has more flexibility and high efficiency, can better supervise executives. Based on the above analysis, put forward the following hypothesis:

H3: The state-owned listed companies with greater board size will strengthen executive compensation stickiness.

#### **3.2.3 Board Independence**

The SASAC issued Notice on the central enterprises to establish and perfect the pilot work of the board of directors of state-owned companies in June 2004. It requested the number of the pilot central enterprises' outside directors were not less than two and gradually increase in later stage. Obviously, the independent directors undertakes an important role in the supervision, they have no direct interest links with company shareholders and executives, thus can better maintain the independence in theory, to make a fair decision, maintain the interests of the majority of shareholders. So in the high proportion of independent directors of state-owned listed companies, the supervision of executive larger thus can alleviate the "more rewards, less punishment" phenomenon in a certain extent. Based on the above analysis, put forward the following hypothesis:

H4: The state-owned listed companies with greater proportion of independent directors will weaken executive compensation stickiness.

#### **3.2.4 The proportion of directors not receive compensation**

Fama and Jensen suggested that directors used the board of director as a tool to improve their expert's reputation, when the directors took salaries from the appointment of the company, the objectivity and independence of the board of directors would be damaged, the directors couldn't express themselves on corporate executive oversight [18]. Li Yanxi also showed that the damage of the independence of the board of directors mainly came from the stress related with remuneration. Because they took remuneration from the appointment of the company, so the board of directors under pressure, they usually made comments not independently. On contrary, if directors didn't take salary from the appointment of the company, they might maintain their independence in terms of executive supervision. Based on the above analysis, put forward the following hypothesis:

H5: The state-owned listed companies with greater proportion of directors who did not receive remuneration will weaken executive compensation stickiness.

### 3.2.5 Chairman separates from general manager

The principal-agent theory pointed out that the responsibilities of chairman and general manager are different. The chairman, as the highest representative of the interests of shareholders, in terms of their duties, has the nature of organization and coordination. While the general manager responsible for the specific business, be responsible to the board. So we can see that between them is a kind of supervision and supervision by relationship, two jobs must be separated, can't held by the same person. But in the state-owned listed companies, because of the shortcomings of joint-stock reform legacy, the phenomenon of chairman concurrently acts as a general manager still exists. When a person both a chairman and a general manager, he is both manager and supervisor, formed a "monitor themselves" situation, this is the invalid supervision. The executive power has been strengthened; compensation stickiness also will be strengthened. Based on the above analysis, put forward the following hypothesis:

H6: The state-owned listed companies with chairman separates from general manager will weaken executive compensation stickiness.

## 4 Sample selection and model building

### 4.1 The future of stickiness exists in executive compensation of state-owned listed companies

Select the data of Shanghai and Shenzhen A shares state-owned listed companies from 2010 to 2014 as the research sample, the research data mainly comes from CSMAR. Statistical software used for the empirical analysis includes EXCEL2010, Spss22.0 and Stata12.0. The samples were treated as follows: (1) Eliminate the state-owned listed companies which are ST or PT. (2) Eliminate the state-owned listed companies which deal with the financial insurance industry. (3) Eliminate the state-owned listed companies which miss some data on

executive compensation, company performance and corporate governance. (4) Because this paper researches on executive compensation stickiness with the model of logarithmic way, eliminate the corporation whose net profit is negative. (5) In order to control the influence of extreme values, use Stata12.0 to dispose all continuous variables with 1%winsorize up or down. After the screening, finally get a total of 2591 sample observations.

### 4.2 Model building

In order to test H1, which is the future of stickiness exists in executive compensation of state-owned listing companies. Use Sun Zheng and Fang Junxiong's model for reference; construct model 3-1:

$$LnPay = \alpha + \beta_1 \times LnNI + \beta_2 \times D + \beta_3 \times D \times LnNI + \beta_4 \times Size + \beta_5 \times Lev + \beta_6 \times \sum Industry + \beta_7 \times \sum Year + \varepsilon \quad (3-1)$$

Model 3-1 uses the dummy variable D to represent the decline in performance, and uses D and the performance of the company's cross term to verify the existence of state-owned listed companies' executive compensation stickiness future. When the performance of the company rises (D=0),  $\beta_1$  is the sensitive coefficient of pay-performance. When the performance of the company declines (D=1),  $\beta_1 + \beta_3$  is the sensitive coefficient of pay-performance. According to the definition of executive compensation stickiness, if  $\beta_1 + \beta_3 < \beta_1$ , that is  $\beta_3$  significantly negative, the future of stickiness exists in executive compensation of state-owned listed companies.

Next, in order to test H2 to H6, that is the impact of state-owned listed companies' governance structure on executive compensation stickiness, construct model 3-1 to 3-6:

$$LnPay = \alpha + \theta_1 \times LnNI + \theta_2 \times D + \theta_3 \times D \times LnNI + \theta_4 \times Lshare \times LnNI + \theta_5 \times Lshare \times D \times LnNI + \theta_6 \times Size + \theta_7 \times Lev + \theta_8 \times \sum Industry + \theta_9 \times \sum Year + \varepsilon \quad (3-2)$$

$$LnPay = \alpha + \theta_1 \times LnNI + \theta_2 \times D + \theta_3 \times D \times LnNI + \theta_4 \times Board \times LnNI + \theta_5 \times Board \times D \times LnNI + \theta_6 \times Size + \theta_7 \times Lev + \theta_8 \times \sum Industry + \theta_9 \times \sum Year + \varepsilon \quad (3-3)$$

$$LnPay = \alpha + \theta_1 \times LnNI + \theta_2 \times D + \theta_3 \times D \times LnNI + \theta_4 \times Indd \times LnNI + \theta_5 \times Indd \times D \times LnNI + \theta_6 \times Size + \theta_7 \times Lev + \theta_8 \times \sum Industry + \theta_9 \times \sum Year + \varepsilon \quad (3-4)$$

$$\begin{aligned} LnPay = & \alpha + \theta_1 \times LnNI + \theta_2 \times D + \theta_3 \times D \times LnNI \\ & + \theta_4 \times Unpay \times LnNI + \theta_5 \times Unpay \times D \times LnNI \\ & + \theta_6 \times Size + \theta_7 \times Lev + \theta_8 \times \sum Industry + \\ & \theta_9 \times \sum Year + \varepsilon \end{aligned} \quad (3-5)$$

$$\begin{aligned} LnPay = & \alpha + \theta_1 \times LnNI + \theta_2 \times D + \theta_3 \times D \times LnNI \\ & + \theta_4 \times Dual \times LnNI + \theta_5 \times Dual \times D \times LnNI \\ & + \theta_6 \times Size + \theta_7 \times Lev + \theta_8 \times \sum Industry + \\ & \theta_9 \times \sum Year + \varepsilon \end{aligned} \quad (3-6)$$

Based on model 3-1, model 3-2 to 3-6 furtherly adds the variables of corporate governance, dummy variable D and the performance of the company's, uses the three cross term to study the impact of state-owned

listed companies' governance structure on executive compensation stickiness. Like the model 3-1, this impact mainly reflected by the three cross term's coefficient  $\theta_5$ .

For example, if the state-owned listed companies' ownership concentration (Lshare) influences the executive compensation stickiness, according to H2, the state-owned listed companies with higher ownership concentration will weaken executive compensation stickiness. Then similar to  $\beta_3$ ,  $\theta_5$  should significantly positive, H2 is confirmed. If significantly negative, this corporate governance variable will strengthen stickiness. Again, H3 to H6 are similar.

The definitions of relevant variables in the model are shown in Tab.1.

**Tab.1 Definition and description of variables**

Type	Name	Symbol	Definition
Explained variable	Executive compensation	LnPay	The natural logarithm of total compensation of the top three executives average
Explanatory variable	Ownership concentration	Lshare	Proportion of the first largest shareholder
	Board size	Board	Board's total membership
	Board independence	Indd	The ratio of independent directors and the total number of directors
	The proportion of directors not receive compensation	Unpay	The ratio of directors not receive compensation from listed companies and the total number of directors
	Chairman separates from general manager	Dual	When chairman and general manager are separated, value 1, otherwise 0
	Companies performance	LnNI	The natural logarithm of the net profit of the company
Control variable	Declining performance	D	When net profit of this year is less than that of the previous year, value 1, otherwise 0
	Company size	Size	The natural logarithm of total assets
	Asset-liability ratio	Lev	Total liabilities / total assets at the end of the year
	Industry control variables	Industry	According to the 19 industries classified by CSRC in 2012, take the integrated industry as a benchmark, when belonging to an industry, value 1, otherwise 0
	Annual control variable	Year	Take the year 2010 as a benchmark, when belonging to a year, value 1, otherwise 0

## 5 Results

### 5.1 Descriptive analysis

Except the corporate governance variables, first carries out descriptive statistical analysis, as shown in Tab. 2.

**Tab.2 Descriptive statistics**

Variable	Min	Max	Mean	Median	Std.
LnPay	11.47	15.88	13.87	13.92	0.81
LnNI	14.93	23.19	18.95	18.93	1.69
D	0.00	1.00	0.34	0.00	0.47
Size	19.84	26.48	22.5	22.3	1.34
Lev	8.39%	89.47%	52.57%	54.25%	0.20

In Tab.2, due to carry the natural logarithm and winsorize treatment on the variable of executive

compensation and companies' performance, the difference is small, median and mean very close. But it also noted that the standard deviation of companies' performance indicators of net profit margin is 1.69, significantly higher than the standard deviation of the executive compensation, which is 0.81, almost 2 times. It reflected that in the state-owned listed companies, the performance gap is greater than the compensation gap, also from one side to highlight the future of the executive compensation stickiness.

In order to understand the situation of corporate governance variables, the samples are grouped, the specific basis for grouping: The arithmetic mean of each corporate governance variable is A, when the sample's arithmetic mean is greater than or equal to A, the sample equals 1, and 0 otherwise. Specially, Dual equals 1 if chairman separates from general manager and 0 otherwise. The descriptive statistical results are shown in Tab.3 and Tab.4.

**Tab.3 The descriptive statistics of corporate governance variables**

Variable	Min	Max	Mean	Median	Std.
Lshare	12.04%	76.95%	40.65%	40.78%	0.15
Board	5.00	15.00	9.42	9.00	1.86
Indd	30.77%	57.14%	36.84%	33.33%	5.50%
Unpay	0.00%	62.50%	29.86%	33.33%	18.58%

**Tab.4 The descriptive statistics of corporate governance dummy variables**

Variable	Equals 0		Equals 1	
	Frequency	Percent	Frequency	Percent
Lshare	1292	49.86%	1299	50.14%
Board	1842	71.09%	749	28.91%
Indd	1799	69.43%	792	30.57%
Dual	237	9.15%	2354	90.85%
Unpay	1175	45.35%	1416	54.65%

In Tab.3 and Tab.4, the mean of the largest shareholder's ownership is 40.78%, which means the state-owned listed companies' equity is more concentrated. The mean of board size is 9.4238, which means there are 9 directors in the state-owned listed companies. About 71.09% state-owned listed companies' board size less than 10 people, it means smaller boards account for a big proportion. The mean of the proportion of independent directors is 36.84%, the minimum value reached 30.77%. All reached the requirements that *Code of Corporate Governance for Listed Companies in China* mentioned the proportion of independent directors not less than 1/3. There are 90.85% state-owned listed companies realize the chairman separates from general manager.

## 5.2 Correlation analysis

The paper used Pearson correlation coefficient to analyze the relevance on main variables, as shown in Tab.5 and Tab.6.

**Tab.5 Pearson correlation matrix (1)**

Variable	LnPay	LnNI	D	Lshare	Board
LnPay	1				
LnNI	0.452**	1			
D	-0.029	-0.154**	1		
Lshare	-0.016	0.220**	-0.014	1	
Board	0.098**	0.201**	0.026	0.011	1
Indd	-0.050*	0.029	0.002	0.015	-0.102**
Dual	-0.051**	0.033	-0.009	0.077**	0.016
Unpay	-0.197**	-0.012	-0.007	0.058**	0.023
Size	0.385**	0.750**	0.014	0.221**	0.247**
Lev	0.053**	0.056**	0.028	0.028	0.042*

**Tab.6 Pearson correlation matrix (2)**

Variable	Indd	Dual	Unpay	Size	Lev
LnPay					
LnNI					
D					
Lshare					
Board					

Indd	1				
Dual	-0.039*	1			
Unpay	-0.141**	0.066**	1		
Size	0.080**	0.051**	-0.034	1	
Lev	0.046*	0.014	-0.058**	0.402**	1

In Tab.5 and Tab.6, the significantly positive correlation of 0.452 between the LnPay and LnNI at the 1% level suggests that China's listed companies have begun establishing mechanism of executive compensation based on the performance of company. The correlation between the LnPay and Board is significantly positive at the 1% level, which means the larger the board size is, the lower operating efficiency of the board, thus weaken the power of executive supervision. The correlation between the LnPay and Indd is significantly negative at the 5% level, significantly negative at the 1% level between the LnPay and Dual. Both suggest that the increase of proportion of independent directors and the separation of chairman and general manager are able to form effective supervision of executives. The significantly negative correlation between the LnPay and Unpay at the 1% level suggests that with strengthen of directors' objectivity and independence, the supervision of executive compensation has also been strengthened. The correlation between the LnPay and Size is significantly positive at the 1% level because the greater the size of the company, the more executives need to pay, the corresponding compensation is higher.

All correlations in Tab.5 and Tab.6 are less than 0.8 suggest that the explanatory variables does not exist a serious multicollinearity problem.

## 5.3 Multiple regression analysis

### 5.3.1 Regression analysis on the future of stickiness exists in executive compensation of state-owned listed companies

To test H1, conducts multiple regression analysis on the model 3-1, as shown in Tab.7.

**Tab.7 Regression results of the state-owned listed companies' executive compensation stickiness future**

Variable	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	8.769	0.433		20.252	0.000
LnPay	0.210	0.016	0.439	13.313	0.000
D	1.264	0.325	0.741	3.888	0.000
D*LnNI	-0.070	0.017	-0.715	-3.784	0.000
Size	0.077	0.020	0.128	3.943	0.000
Lev	-0.140	0.088	-0.034	-1.573	0.116
Industry			Control		
Year			Control		
Adj R <sup>2</sup>			0.271		
F			44.685(0.000)		
N			2951		

In Tab.7, Adjust R<sup>2</sup> is 27.1%, the regression model has a good fit degree. The coefficient of cross term D\*LnNI is -0.065 and significant at 1% level suggests that the state-owned listed companies' pay-performance sensitivity significantly decreases. When performance increases, the growth rate of executive compensation is 1.45 times than the decline rate when performance declines (0.210/ (0.210-0.065)).

It reflects the executive compensation of

state-owned listed companies have future of stickiness.

### 5.3.2 Regression analysis on the impact of state-owned listed companies' governance on executive compensation sickness

To test H2 to H6, conducts multiple regression analysis on the model 3-2 to model 3-6, as shown in Tab.8.

**Tab.8 Regression results of the impact of state-owned listed companies' governance on executive compensation sickness**

Variable	H2		H3		H4		H5		H6	
	B	Sig.	B	Sig.	B	Sig.	B	Sig.	B	Sig.
(Constant)	12.447	0.000	12.726	0.000	12.736	0.000	12.790	0.000	12.823	0.000
LnNI	0.208	0.000	0.21	0.000	0.211	0.000	0.210	0.000	0.215	0.000
D	0.008	0.788	0.033	0.293	0.029	0.345	0.028	0.366	0.116	0.229
D*LnNI	-0.071	0.000	-0.068	0.000	-0.064	0.000	-0.062	0.000	-0.059	0.001
Lshare*D*LnNI	0.217	0.049								
Board*D*LnNI			-0.006	0.429						
Indd*D*LnNI					-0.352	0.205				
Unpay*D*LnNI							0.245	0.005		
Dual*D*LnNI									-0.005	0.331
Size	0.092	0.000	0.078	0.000	0.078	0.000	0.075	0.000	0.080	0.000
Lev	-0.180	0.042	-0.142	0.110	-0.137	0.122	-0.133	0.132	-0.139	0.116
Industry					Control					
Year					Control					
Adj R <sup>2</sup>		0.276		0.270		0.272		0.272		0.274
F		42.197(0.000)		40.971(0.000)		41.390(0.000)		41.377(0.000)		41.756(0.000)

In Tab.8, the Adjust R<sup>2</sup> from H2 to H6 are both almost 27%, the regression model has a good fit degree. When adds variable of ownership concentration, the coefficient of Lshare\*D\*LnNI is 0.217 and significant at 5% level suggests that H2 is verified. When adds variable of board size, the coefficient of Board\*D\*LnNI is -0.006 suggests that large board size will strengthen stickiness. While the coefficient isn't significant which means this impact isn't stable, H3 isn't verified. P.ZreLand thought the greater the board size is, the tougher the executives to manipulate it. Thus the board plays a restricted role of executives and control executives' unreasonable behavior<sup>[19]</sup>.

When adds variable of the proportion of independent directors, the coefficient of Indd\*D\*LnNI is -0.352 but the coefficient isn't significant, H4 isn't verified. It reflects the independent directors of the state-owned listed companies have "vase" effect. When adds variable of Unpay, the coefficient of Unpay\*D\*LnNI is 0.245 and significant at 1% level suggests that H5 is verified. When adds the variable of Dual, the coefficient of Dual\*D\*LnNI is -0.005 but the coefficient isn't significant, H6 isn't verified. The empirical results of Fang Junxiong and Chen Shengjun<sup>[20]</sup> also didn't support the H6. Although the results doesn't consistent with the expected, it points that the actual influence of the state-owned listed companies' board on corporate governance is limited, it should be adjusted urgently.

### 5.4 Robustness test

In order to further test the robustness of the empirical results, the paper selects the top three directors disclosed in the annual report as executives of state-owned listed companies, and then uses the natural logarithm of their average salaries to measure executive compensation, conducts regression again to test the results of model 3-1, as shown in Tab.9.

**Tab.9 Robustness test——model 3-1**

Variable	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	8.399	0.330		25.483	0.000
LnPay	0.184	0.012	0.471	15.368	0.000
D	0.645	0.247	0.462	2.605	0.009
D*LnNI	-0.033	0.013	-0.439	-2.497	0.013
Size	0.089	0.015	0.179	5.951	0.000
Lev	-0.264	0.067	-0.079	-3.925	0.000
Industry			Control		
Year			Control		
Adj R <sup>2</sup>			0.369		
F			69.953(0.000)		
N			2951		

In Tab.9, the Adjust R<sup>2</sup> is 36.9%, the regression model has a good fit degree. The coefficient of cross term D\*LnNI is -0.033 and significant at 5% level; this result is consistent with Tab.7. It means the regression results of model 3-1 are robust. Next test the robustness of the results of model 3-2 to model 3-6, as shown in

Tab.10.

Tab.10 Robustness test—model 3-2 to model 3-6

Variable	H2		H3		H4		H5		H6	
	B	Sig.	B	Sig.	B	Sig.	B	Sig.	B	Sig.
(Constant)	11.595	0.000	11.887	0.000	11.87	0.000	11.921	0.000	11.867	0.000
LnNI	0.182	0.000	0.183	0.000	0.185	0.000	0.186	0.000	0.185	0.000
D	0.005	0.820	0.021	0.369	0.023	0.324	0.05	0.492	0.024	0.295
D*LnNI	-0.039	0.003	-0.031	0.020	-0.032	0.014	-0.031	0.025	-0.035	0.008
Lshare*D*LnNI	0.199	0.017								
Board*D*LnNI			0.004	0.544						
Indd*D*LnNI					-0.091	0.668				
Unpay*D*LnNI							0.135	0.018		
Dual*D*LnNI									-0.002	0.699
Size	0.104	0.000	0.089	0.000	0.090	0.000	0.09	0.000	0.089	0.000
Lev	-0.306	0.000	-0.266	0.000	-0.263	0.000	-0.264	0.000	-0.257	0.000
Industry					Control					
Year					Control					
AdjR2	0.378		0.369		0.370		0.370		0.370	
F	66.592(0.000)		64.111(0.000)		64.429(0.000)		64.264(0.000)		61.862(0.000)	

In Tab.10, the results of robustness test are consistent with Tab.8. The results reflect that the regression results of model 3-1 to model 3-6 are robust.

## 6 Conclusion

Analyze the impact of the state-owned listed companies' governance on executive compensation stickiness. The paper has drawn the following conclusions:

(1)The future of stickiness remarkably exists in executive compensation of state-owned listed companies; (2)The state-owned listed companies with higher ownership concentration weakens executive compensation stickiness. The state-owned listed companies with greater proportion of directors who did not receive remuneration will weaken the stickiness (3) The state-owned listed companies with greater board size will strengthen executive compensation stickiness but this effect is not remarkable;(4) The state-owned listed companies with greater independence and a separation of chairman and general manager has no effects on executive compensation stickiness.

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