

# Property right nature, pledge of equity and change of performance forecast

Qingqing Sun<sup>1,\*</sup>

<sup>1</sup>School of Economics and Management, Nanjing University of Science and Technology, Nanjing, China

\*2311490048@qq.com

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**Abstract:** The performance forecast disclosure system effectively alleviates the problem of information asymmetry between enterprises and investors. However, at the same time, it also brings some problems. In recent years, the performance forecast "change face" occurs frequently, and investors, as a weak party, are often harmed in their interests. This paper selects a-share main-board listed companies that have disclosed their annual performance announcement from 2012 to 2018 as the research object to study the relationship between equity pledge and performance announcement change, and on this basis, further discuss the influence of property right nature on the relationship between equity pledge and performance announcement change.

## 1. Introduction

As one of the information disclosure system arrangements in China's capital market, the performance forecast alleviates the information asymmetry between listed enterprises and investors to a large extent (Lang and Lundholm, 2000) <sup>[10]</sup>. For listed companies, the increase of corporate information transparency lowered the financing cost (Diamond and Verrecchia, 1991) <sup>[11]</sup>, For investors, the increase of investors' understanding of the operating conditions of the companies helped them safeguard their own rights and interests, but just as a daily puts it, "everything has double sex", The performance forecast and its change system also bring some problems. The change of the performance forecast means that the enterprise has issued the performance forecast, when the actual situation and the expected performance are greatly different, it is necessary to change the previously disclosed performance forecast and disclose the new performance forecast. Admittedly, the performance forecast is a kind of estimate, with the actual situation there is no right difference, but in recent years, listed companies frequently "face", and even in some cases, the range of performance changes is particularly large, it is not unsuspectable. Mei Luo et al. (2012) <sup>[1]</sup> and Ting Liu et al. (2012) <sup>[5]</sup> all found that investors had a strong reaction to the earnings forecast and the revised earnings forecast market. On this basis, Jiaxian Shu et al. (2019) <sup>[2]</sup> found that enterprises can make profits for shareholders by reducing holdings by issuing proactive performance forecast. In addition, other literatures mostly focus on studying the influencing factors of performance forecast and modified performance forecast (Yu He et al., 2018; Zhonggao Lin et al., 2019) <sup>[3][4]</sup>, it can be seen that the performance forecast and the change of the performance forecast are closely related to the stock price.

Equity pledge is the act of corporate shareholders pledging equity to obtain funds, which is widely favored by shareholders of listed companies due to its simple procedures. Controlling shareholder equity pledge is personal behavior, but because of the controlling shareholder have a special status in the listed company, it is easy to conduct the behavior of the individual to the listed companies, which affect the behavior of the listed companies, there have been many literatures show that the controlling shareholder equity pledge guild for the company's performance, innovation, stock repurchases, etc have a significant impact (Bin Wang et al., 2013; Ruijun Zhang et al., 2017; Konan Chan et al., 2018) <sup>[6][7][8]</sup>. According to the regulation, when share prices to open line, if the pledge cannot redeem or margin, is likely to be forced to unwind positions, to avoid being forced to unwind, controlling shareholders use controlling shareholder identity to influence company decisions, such as Changqing Li (2017) <sup>[9]</sup>, the study found that when the enterprise has the controlling shareholder

equity pledge, tend to release news and hide the bad news. Based on this, combined with the performance notice system, when the enterprise has the pledge of controlling shareholders, will the enterprise use the performance notice to support the stock price to avoid the risk of control transfer? Based on the above, this paper brings the pledge of shares of controlling shareholders and the change of performance forecast into the same framework, to explore whether the pledge of shares of controlling shareholders affects the change of performance forecast of listed companies, and on this basis, to study the difference between state-owned enterprises and non-state-owned enterprises.

## **2. Theoretical analysis and Research hypothesis**

### **2.1 Equity pledge and performance forecast change**

Equity pledge is a kind of financing behavior in which shareholders pledge their own equity in order to obtain funds and then redeem them with funds. Shareholders of listed companies who pledge their shares include controlling shareholders, senior executives and other shareholders. Among them, controlling shareholders have an absolute say in the decision-making of listed companies. Therefore, our research focuses on the pledge behavior of controlling shareholders. According to the regulations of the stock exchange, when the stock price of the listed company reaches the liquidation line but cannot obtain funds from other sources to pay back the money or cover the position, the company accepting the pledge will make forced liquidation for its own interests without loss, which will directly affect the absolute control right of the controlling shareholder, namely, there is the risk of control transfer. Due to the scarcity of shell resources of listed companies in China, controlling shareholders are often unwilling to give up their control over listed companies, and the occurrence of forced liquidation is greatly related to the level of the stock price. Therefore, it is likely to use the status of controlling shareholders to influence the company's decision and ultimately influence the stock price to avoid the transfer of control.

Performance forecast, is the enterprise in the annual financial statements before disclosure, disclose to investors ahead of the enterprise the management status, facilitate the market reaction of the early release of the annual financial statements, the disclosure of the business situation is good or bad will produce more obvious market reaction, if the disclosure is in good operating conditions will lead to positive market reaction, effective support enterprise shares, the opposite will reduce the price. In combination with the above mentioned risks of the transfer of control rights under pledge of equity, Controlling shareholders have a clear incentive to use earnings guidance to support share prices.

However, according to the regulations of the exchange, the difference between the annual earnings forecast and the annual financial report should not be too large, otherwise the enterprise needs to change the earnings forecast and re-disclose it. Based on this, if the enterprise uses the earnings forecast to support the stock price, it is more likely to change the earnings forecast later. In addition, according to the regulations of the exchange, performance forecast are supposed to be released before January 31 of next year, but the data show that corporate annual results are mainly released in October and January of next year. It seems to me that companies that disclosed their annual earnings guidance in October might have expected to use the period from October to January to improve their business, even if their forecasts were poor, may tend to release good performance forecast to prop up share prices, If the following fails to improve the business condition, the performance forecast can only be changed, which also increases the possibility of the enterprise to change the performance forecast under this background.

Therefore, based on the above contents, hypothesis 1 is made: when listed companies have equity pledge of controlling shareholders, the companies tend to change the performance forecast.

### **2.2 Nature of property rights, pledge of stock rights of controlling shareholders and change of performance forecast**

In our country, according to the different property right nature, our country enterprise state-owned enterprise and non-state-owned enterprise. Compared with non-state-owned enterprises, state-owned enterprises have obvious differences in financing ability and forced liquidating policy when the stock

price reaches the liquidation line. First of all, generally speaking, state-owned enterprises can easily obtain financing funds by virtue of their unique political advantages, even when the stock price is approaching the liquidation line. They can obtain additional guarantee by virtue of their strong financing ability to reduce the risk of control transfer. Secondly, in order to prevent the loss of asset of the state, China has strict examination and restrictions on the transfer and auction of state-owned shares, which directly leads to the state-owned shares are not easy to be forced to liquidate. Therefore, in general, compared with state-owned enterprises, non-state-owned enterprises are more likely to be forced to liquidate positions, that is, the risk of control transfer of non-state-owned enterprises is greater.

Therefore, based on the above contents, hypothesis 2 is made: in non-state-owned enterprises, there is a positive relationship between the pledge of shares of controlling shareholders and the change of performance notice, while in state-owned enterprises, the relationship between the pledge of shares of controlling shareholders and the change of performance notice is not obvious.

### 3. Empirical analysis results

#### 3.1 Sample selection

This paper takes a-share main-board listed companies issuing annual performance forecast from 2012 to 2018 as research samples, and excludes ST,\*ST, financial companies, insolvency and data missing samples. Finally, 4,517 samples are obtained. The data in this paper comes from CSMAR database, and some of the supplementary data can be obtained through manual search of enterprise annual reports.

#### 3.2 Model construction and variables

##### 3.2.1 Build the model

To verify hypothesis 1, model 1 is constructed :  $Revit = \alpha_0 + \beta_1 * pledgeit + control\ variable + \epsilon_{it}$

To verify hypothesis 2, model 2 is constructed:  $Revit = \alpha_0 + \beta_1 * pledgeit + \beta_2 * pledgeit * govit + control\ variable + \epsilon_{it}$

##### 3.2.2 Set variables

(1) Explained variable

Change the annual performance notice of a listed company for at least one time as 1, otherwise it is 0.

(2) Explanatory variables.

Based on the hypothesis, the mortgagor needs to play an absolute dominant role in the company's decision-making. Therefore, when the equity pledge of the controlling shareholder of the listed company exists at the end of the year, we make it 1, otherwise it is 0.

(3) Control variables

In the robust test, the proportion of pledged shares in the total number of shares is used as explanatory variable for the variable replacement test. Property right nature, if it's a state-owned enterprise, it is 1, otherwise it is 0. The control variables are as follows:

Table.1. Definition of control variables

Control variables	Roa	Return on total assets = net profit/total assets
	Lev	Asset-liability ratio = total liabilities/total assets
	Size	Size=ln(asset)
	Top1	The proportion of the largest shareholder
	Invrate	The sum of the percentages of various institutional investors
	Auditor	If the auditor is from a Big Four accounting firm, then 1; otherwise 0
	ddr	directors
	lnpay	The logarithm of the sum of the top three executive salaries

## 4. Empirical analysis

### 4.1 Descriptive statistical analysis

Table 2 lists the descriptive statistical results for each variable. The average change of performance forecast is 0.0615, with the maximum value being 1 and the minimum value being 0, which generally indicates that many enterprises do have the change of performance forecast at present. The average value of equity pledge is 0.3124, indicating that nearly 31.24% of listed companies have the situation of controlling shareholders' equity pledge, which indicates that the situation of controlling shareholders' equity pledge of listed companies is relatively common.

Table.2. Descriptive statistics

The variable name	observations	mean	The standard deviation	max	min
Rev	4517	0.0615	0.2403	0.0000	1.0000
pledge	4517	0.3124	0.4635	0.0000	1.0000
size	4517	22.4669	1.4767	17.6413	28.5200
lev	4517	0.5212	0.2146	0.0156	0.9961
roa	4517	0.0167	0.0784	-0.8166	0.4296
top1	4517	0.3519	0.1570	0.0220	0.8999
auditor	4517	0.0580	0.2338	0.0000	1.0000
gov	4517	0.5918	0.4916	0.0000	1.0000
ddr	4517	8.8844	1.8861	3.0000	18.0000
invrate	4517	0.0562	0.0697	0.0000	0.7384
lnpay	4517	14.2585	0.7357	9.0384	18.0490

### 4.2 Univariate test

Table 3 shows that, without considering other variables, the mean difference between the pledge group and the non-pledge group is 0.0259, which is significant at 1% level, preliminarily proving the positive relationship between the pledge of shares of controlling shareholders and the change of the performance notice.

Table.3. Univariate test statistics

group	observations	mean	The standard deviation	t
pledge group	1411	0.0794	0.2704	3.1419
no-pledge group	3106	0.0534	0.2250	
The mean difference		0.0259***		

### 4.3 Regression analysis

Table 4 shows that when no other variables are added, in the case of control industry and year, the estimated coefficient of equity pledge is positive and significant at 1% level, which to some extent proves the positive relationship between equity pledge and performance forecast change.

On the basis of univariate regression, other control variables are added to carry out multiple regression. The results show that the estimated coefficient of equity pledge is still significantly positive, which effectively verifies that the listed companies are more inclined to change the performance forecast when there is a situation of equity pledge of controlling shareholders. The estimated value of return on total assets coefficient is significantly negative, because the higher the return on total assets of an enterprise, it indicates that the profitability of the enterprise is strong, the controlling shareholder is under relatively small pressure to be forced to close, and the possibility of final change of performance forecast is small; The first big shareholder's holding proportion and performance forecast change was significantly negative relationship, this is because when the first big shareholder holds shares of listed companies, the more it tend to be more consistent with the interests of the enterprise, more optimistic about the long-term value of the enterprise, does not take immediate

interests at the expense of long-term benefits for the way to influence the corporate image, because of frequent performance forecast change can damage the reputation of the listed companies, in turn affect the enterprise long-term value; The estimated coefficient of the number of directors is negative at the significance level of 10%, because the more the number of directors, the more likely it is to supervise the behavior of major shareholders, thus reducing the possibility of the change of performance forecast. The sum coefficient of the first three high management salaries is significantly negative on the level of 10%, reflecting the company's executive supervision, governance utility.

Table.4. Regression test statistics

	Univariate regression	Add control variables regression	Explained variables lag one - stage regression
pledge	0.4724***	0.5328***	0.5622***
size		0.012	0.0252
lev		0.5184	0.4903
roa		-3.9524***	-1.9783***
top1		-1.6674***	-2.2314***
auditor		0.3739	0.1436
invrate		-1.1836	-4.4319***
ddr		-0.0751*	-0.0491
lnpay		-0.1880*	-0.1709
Industry/year	control	control	control
constant	-2.3734***	0.8685	0.6132
Pseudo R <sup>2</sup>	0.0417	0.0763	0.0713

#### 4.4 Robustness test

##### 4.4.1 The explained variable lagged one-stage regression test

Considering the endogeneity problem, the explained variables are treated with a lag of one stage and then multiple regression is carried out, the results in Table 4 show that the estimated coefficient of equity pledge is still significantly positive at the 1% level, which strongly increases the reliability of the above results.

##### 4.4.2 Replace explanatory variables

In order to get the regression results more reliable, the use of equity pledge equity loan-to-value ratio as a binary variable substitution variable regression, univariate and multivariate regression results in table 5 shows, you can see, only the size of the equity pledge coefficient estimate has changed, but the positive and negative and significant, did not change obviously, visible to the above results have good robustness.

Table.5. Robustness test

	Univariate regression	Add control variables regression
pledge	0.8930**	1.4324***
size		0.0233
lev		0.4616
roa		-3.8677***
top1		-2.0046***
auditor		0.3389
invrate		-1.1873
ddr		-0.0774*
lnpay		-0.1817*
Industry/year	control	control
constant	-2.3356***	0.7432
Pseudo R <sup>2</sup>	0.0377	0.0732

## 4.5 Further inspection

In order to verify the difference between the soe group and the non-soe group in the relationship between equity pledge and performance forecast change, regression was conducted for the soe group and the non-soe group respectively, and the regression results were shown in Table 6. Results show that both the equity of the binary variables or equity pledge loan-to-value ratio as explanatory variables, coefficient estimates are in non-state-owned enterprises group at 5% significance level is positive, that in the state-owned enterprise, when there are controlling shareholders of listed companies equity pledge, the more likely it is to carry on the preliminary results change, but in the middle of the state-owned enterprises, this kind of relationship is not obvious, effectively prove the hypothesis 2.

Table.6. Regression tests of different property rights

	State-owned enterprises group	Non-state-owned enterprises group	State-owned enterprises group	Non-state-owned enterprises group
pledge	-0.0652	0.4943**		
pledgerate			-2.2447	1.3555**
size	-0.0029	0.0989	-0.0002	0.1129
lev	0.8083	0.8804*	0.8874	0.7867*
roa	-4.5204***	-4.3724***	-4.4326***	-4.2527***
top1	-1.1653	-1.7374**	-1.1014	-2.2693**
auditor	0.2741	0.8824	0.2314	0.8779
invrate	-1.7258	-0.3015	-1.7100	-0.3798
ddr	-0.0508	-0.0540	-0.0490	-0.0545
lnpay	-0.0528	-0.3941***	-0.0664	-0.3765***
Industry/year	control	control	control	control
constant	-1.2488	2.2316	-1.1930	1.9676
Pseudo R <sup>2</sup>	0.081	0.1121	0.0829	0.1098

## 5. Conclusion

This paper takes a-share main-board listed companies that have issued annual earnings announcement from 2012 to 2018 as research objects to examine the impact of equity pledge of controlling shareholders on the change of earnings announcement and the impact of property right nature on the relationship between equity pledge and change of earnings announcement. Results show that when the listed companies is the controlling shareholder equity pledge, based on the control of risk, the enterprise will use earnings forecast a system arrangement to prop up share prices, but the follow-up for the verification of the annual financial statements, which increases the likelihood of earnings forecast changes directly, in addition, the non-state-owned enterprises are state-owned enterprises, the financing ability weak, forced to unwind policy restriction little and face more severe control of risks, and thus more motivated to use performance forecast support share prices, is more likely to eventually change performance forecast.

Performance forecasting system is designed to alleviate the information asymmetry, the early release information published financial statements in order to avoid bring strong market reaction, but the policy is not perfect, such as the calculation of earnings forecast results based on does not have specific provision, the enterprise performance appraisal has the "optional" (Zhonggao Lin, 2019) <sup>[4]</sup>, and the interests of the enterprise to make tools, misleading investors, obviously deviates from its establishment original intention. So, for investors, to see clearly the true purpose of the corporate earnings forecast; On the other hand, the supervisory level can start from the system itself and improve the defects of the current system. For example, on the basis of the original performance forecast system, enterprises can be required to disclose the performance calculation basis while

disclosing the performance forecast, so as to reduce the available space for enterprises and make China's capital market develop towards a stable and healthy road.

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