Controlling Shareholder's Equity Pledge and Share Repurchase Preview

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ABSTRACT

With the growth of equity pledge scale, enterprises are constantly exploring risk resolution methods. After the revision of the company law in 2018, the conditions for share repurchase were gradually relaxed, and the number of listed companies announcing the implementation of share repurchase increased rapidly. The pledge of controlling shareholders' equity will not only change the behavior of controlling shareholders, but also affect the share repurchase behavior of listed companies.This paper uses controlling shareholders' equity pledges as a perspective to explore whether the demands of major shareholders to maintain the security of control of listed companies in China affect the probability of listed companies to issue share repurchase forecasts. Using Chinese A-share listed companies from 2012 to 2019 as a sample, the conclusions of this paper are as follows: controlling shareholder equity pledges significantly increase the probability of listed companies issuing share repurchase forecasts, and that the above relationship is affected by the quality of company information disclosure and power balance with shareholder structure

Keywords: *Equity Pledge; Share Repurchase Forecast; Disclosure Quality; Power Balance with Shareholder Structure*

1.INTRODUCTION

At the sixth meeting of the Standing Committee of the 13th National People's Congress (NPC) in 2018, it voted to adopt the (Draft) Company Law of the People's Republic of China, which simplifies the share repurchase resolution process, transfers part of the decision-making power to the board of directors, expands the circumstances under which share repurchases are permitted and extends the period during which the company holds the repurchased shares. After the new policy, there was a spurt in the number of A-share companies issuing share repurchase notices. Companies use share repurchase announcements to signal to the outside world that their shares are undervalued and to boost the company's share price (Stephens and Weisbach, 1998)[15]. However, the widespread agency problem in turn makes share repurchase forecasts potentially alienating as a tool for insiders to manipulate share prices. In order to maintain control security, does pledging of major shareholders' equity enhance the probability of listed companies to issue share repurchase plans?

Using Chinese A-share listed companies from 2012 to 2019 as a sample, this paper finds that controlling shareholder equity pledges are motivating factors that prompt listed companies to issue share repurchase forecasts. The probability of listed companies issuing share repurchase announcements increases significantly when controlling shareholders have equity pledges or a higher percentage of equity pledges. The above relationship is affected by the transparency of company information or power balance with shareholder structure: the relationship between controlling shareholders' equity pledges and company announcements of share repurchases is more significant when both company information transparency is lower or power balance with shareholder structure are higher. This paper extends the research related to the motivation of issuing share repurchase announcements by listed companies from the perspective of major shareholders' maintenance of control security, and enriches the discussion of the economic consequences of major shareholders' equity pledges.

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2.THEORETICAL ANALYSIS AND RESEARCH HYPOTHESIS

Controlling shareholders face the risk of increased margin or even loss of control during the period of equity pledges. When a pledge is created, the lender usually sets an early warning line based on the market value of the stock at the time of the pledge in order to protect its rights and interests. When the company's share price falls below the warning price, the lender has the right to require the shareholder to increase the margin. If the shareholder is unable to increase the margin, the pledge is deemed to be in default and the lender has the right to sell the pledged shares. The sale of shares will bring enormous price pressure on the stock and have a certain impact on the control of the controlling shareholder. The control of the listed company may be transferred after the forced liquidation, and the controlling shareholder will lose the control gain (Ma Lianfu and Zhang Xiaoqing, 2020)[13]. Obviously, the controlling shareholder's equity pledge will motivate the controlling shareholder to pay attention to the company's share price, and the higher the pledge ratio, the more obvious the above motivation.

The equity structure of listed companies in China is more concentrated, and controlling shareholders can use surplus management, stock dividends, information disclosure, "high transfer", capital operation and charitable donations to maintain the company's share price after equity pledges (Xie Deren and Liao Ke, 2018; Lu Rong and Lan Yuan, 2021; Ma Hong and Liu Xinyi, 2020. Huang Denshi et al, 2018; Hu Jun et al, 2020) [6][7][12][14][19]. The share repurchase forecasts can have a significant impact on the company's share price, and it has great advantages in helping controlling shareholders to mitigate the risk of equity pledges: Firstly, the share repurchase forecasts can quickly pull up the share price in the short term, and the announcement of share repurchase by listed companies will signal to the outside world that the company's share price is undervalued, and listed companies can achieve a significant positive announcement effect (Ikenberry et al, 1995)[8], thus reducing the pledge risk of bursting and being closed out; Secondly, it is low cost and relatively easy for enterprises to issue share repurchase forecasts. Under the current legal and regulatory system, listed companies only need a board resolution to pass the share repurchase advance notice; Thirdly, the concentrated shareholding ratio gives controlling shareholders the ability to influence the behavior of the company with the help of control, and controlling shareholders can influence the business decisions of listed companies through the board of directors. As a result, this paper proposes hypothesis 1.

Hypothesis 1:Under certain other conditions, the pledge of controlling shareholders' equity will significantly increase the probability of listed companies issuing share repurchase forecasts, and the higher the pledge ratio the stronger the positive relationship between the two.

This paper argues that the quality of information disclosure of listed companies affects the relationship between controlling shareholders' equity pledges and company share repurchases. On the one hand, information asymmetry is an important reason why a company's share price does not correctly reflect the intrinsic value of the company (Xu Shoufu and Xu Longbing , 2015) [17]. On the one hand, the higher the degree of information asymmetry, the more difficult it is for external investors to be informed of the true information inside the company. When a listed company releases a stock repurchase preview, investors are unable to identify whether the company's stock repurchase behavior is influenced by the controlling shareholder's equity pledge due to information asymmetry, and are unable to interpret the real motive of the stock repurchase preview, and are prone to simply interpret the company's repurchase preview as a signal that the listed company is sending to the outside world that the stock price is undervalued, and thus blindly purchase the company's stock. The Chinese capital market has a strong speculative atmosphere, and a large number of retail investors lack the ability to identify the potential risks of the company, and the phenomenon of "following" is obvious. Under the influence of "herding effect", the impact of share repurchase forecast on investors will be magnified to a certain extent. On the other hand, information asymmetry is an important influencing factor for controlling shareholders to obtain control rights for personal gain. In the context of a concentrated shareholding structure and an imperfect regulatory system, controlling shareholders may provide favorable conditions for their control privations by inducing companies to reduce the quality of information disclosure (Bens et al, 2003; Li Changqing and Xingwei, 2017; Ma Hong and Liu Xinyi, 2020) [1][11][14]. Given that share repurchases are an effective method to boost a company's share price, when controlling shareholders have equity pledges, they have an incentive to use their influence on the company to push the company to issue share repurchase proposals to mitigate the risk of loss of control from falling share prices, and the poorer quality of information disclosure facilitates the acquisition of the aforementioned control self-interest by controlling shareholders. This leads to hypothesis 2 of this paper.

Hypothesis 2: Under certain other conditions, the poorer the quality of information disclosure, the stronger the positive relationship between controlling shareholders' equity pledges and listed companies' issuance of share repurchase forecasts.

Share repurchase forecasts as a tool to boost share prices can raise share prices in a short period of time but fail to produce long-term market effects. There is no significant improvement in corporate operating performance after repurchase, and the level of investment

is instead reduced (He Ying et al., 2016) [5], leading to the possibility that share repurchases may be alienated as a way for controlling shareholders to gain control for personal gain. The controlling shareholders of China's listed companies have a high percentage of shareholding and have strong influence on corporate decision-making, but controlling shareholders may be subject to checks and balances from other shareholders when influencing corporate decisions. Taking share repurchase as an example, the share repurchase plan can form a share repurchase notice only after passing the resolution of the board of directors. Minority shareholders may oppose the stock repurchase proposal proposed by the controlling shareholders, and the plan of the controlling shareholders to use the share repurchase notice to maintain the security of control may be blocked by the minority shareholders. Existing studies point out that power balance with shareholder structure can effectively inhibit the emptying behavior of major shareholders and have a governance effect on controlling shareholders' self-interest (Jiao Jian et al., 2017) [9]. The controlling shareholders' decision to implement share repurchases requires resolutions passed by the board of directors or the general meeting, and when the board of directors' motions may harm the interests of small and medium shareholders, the representatives of small and medium shareholders' directors will be more inclined to vote against these motions to protect the interests of small and medium shareholders (Zhu Jigao et al., 2021; Wang Yuting, 2020) [16][20]. Therefore, when controlling shareholders issue share repurchase previews for their own interests, the higher the power balance with shareholder structure, the stronger the motivation and ability of non-controlling shareholders to defend their own interests, the more difficult it is for controlling shareholders to manipulate the share repurchase resolution by influencing the board of directors, and the lower the probability that the company announces a share repurchase. As a result, hypothesis 3 is proposed in this paper.

Hypothesis 3: Other things being equal, the lower power balance with shareholder structure, the more significant the relationship between controlling shareholders' equity pledges and the company's declaration of share repurchases.

3.RESEARCH DESIGN

3.1 Sample and data source

As the company's repurchase decision was restricted before 2012 and the repurchase sample was small, this paper uses the A-share listed companies in the CSMAR database from 2012 to 2019 as the research sample. This paper refers to the classification of stock repurchase purposes in the wind database to classify the stock repurchase forecasts into the following six categories: market value management, equity incentive, equity incentive cancellation (including equity incentive cancellation due to the failure of corporate performance during the equity incentive plan and the departure of employees of the original equity incentive plan), earnings compensation, termination of equity incentive plan, and restructuring. Therefore, this paper treats the above data as follows: ① exclude the samples of stock repurchase announced by the cancellation of equity incentive; ② exclude the samples of stock repurchase announced by the profit compensation; ③ exclude the samples of stock repurchase announced by the termination of equity incentive plan; ④ exclude the samples of stock repurchase announced by the termination of equity incentive plan. ;⑤ exclude the sample of companies in the financial industry and companies in ST and *ST; ⑥exclude the sample of missing main variables. Among them, the data related to stock repurchase forecasts are collected and supplemented by hand, while all other data are obtained from the CSMAR database. In order to reduce the influence of extreme values, this paper shrinks the tails of the main continuous variables at the 1% and 99% quartiles, and finally obtains 17687 observations.

3.2 Definition and description of variables

3.2.1 Stock repurchase forecast (Rp)

In this paper, we refer to the study by Huang Jinchun and Wang Jian (2014) and others, and use a dummy variable to measure the announcement of corporate stock repurchase teasers. Rp is 1 if the firm publishes a stock repurchase forecast in the current year, and 0 otherwise.

3.2.2 Controlling shareholder equity pledge (PLD, PLR)

Referring to the definition of Xie Deren et al. (2016) [18]and others, this paper constructs the dummy variable PLD and the continuous variable PLR to measure the controlling shareholder equity pledge. PLD is 1 if the controlling shareholder of the firm has equity pledges, otherwise it is 0. PLR is equal to the ratio of the number of shares pledged by the controlling shareholder to the number of shares held by him in the listed company.

3.2.3 Information disclosure quality

Referring to the study by Xu Shoufu and Xu Longbing (2015) and others, model (1) is used to calculate the KV index. The better the quality of information disclosure of listed companies, the easier it is for investors to assess the value of listed companies based on information disclosure (both mandatory and voluntary disclosure), the lower the reliance on stock trading volume, and the weaker the relationship between stock trading volume and investor returns. Conversely, the poorer the quality of information disclosure, the more

investors need to judge the investment value of listed companies with the help of stock trading volume, the stronger the investors' reliance on stock trading volume, and the stronger the relationship between stock trading volume and investors' return. the larger the KV index, the worse the information disclosure.

$$Ln|(P_t - P_{t-1})/P_{t-1}| = \lambda_0 + \lambda(Vol_t/Vol_0 - 1) + \varepsilon \quad (1)$$

3.2.4 Power balance with shareholder structure

Referring to studies such as Chen De Ping and Chen Yong Sheng (2011) the ratio of the sum of the second to fifth largest shareholder's shareholding divided by the first largest shareholder's shareholding (BLC) is used to measure the degree of equity checks and balances[2].

3.2.5 Control variables

This paper controls for firm size (Size), Asset-liability ratio (Lev), return on equity (ROE), book to value ratio (BM), first largest shareholder ownership ratio (Shrcr1), the revenue growth rate (Growth) ,dividend distribution ratio (DIV), degree of dual ownership (Dual), corporate free cash flow (FCF),industry fixed effects (Ind), and annual fixed effects (Year) based on studies such as Huang Jinchun, Wang Jian (2014) [4], Lin Min (2007)[10] , and Dittmar (2000)[3]. The variables are specifically defined in Table 1.

Table 1. Variable definitions

Variable type	Variable symbol	Variable name	Variable interpretation
Dependent variable	Rp	Share repurchase notice	Matute variable, if the company issued a share repurchase notice, Rp is 1, otherwise it is 0
Independent variable	PLD	Majority shareholder pledge of stock right	Dummy variable, if the controlling shareholder of the company has equity pledge is 1, otherwise it is 0
	PLR	majority shareholder Equity pledge ratio	Equal to the ratio of the number of shares pledged by the controlling shareholder to the number of shares held by him in the listed company.
Moderator variable	KV	Information disclosure quality	Referring to the study by Xu Shoufu and Xu Longbing (2015) and others,
	BLC	Equity checks and balances	The ratio of the sum of the second to fifth largest shareholder's shareholding divided by the first largest shareholder's shareholding
Control variable	Size	Enterprise Size	Natural logarithm of the total company assets at the end of the term
	Lev	Asset-liability ratio	Total liabilities / total assets
	ROE	ROE	Net profit / Total equity
	BM	Book market value ratio	Total assets / Company market capitalization
	Shrcr1	Equity concentration	The company holds the largest shareholder
	Growth	The revenue growth rate	Ratio of the difference between the total main business income of this year and the total main business income of last year
	DIV	Dividend payout ratio	Dividend / Earnings per share
	Dual	Duality of chairman and	Dummy variable. If the chairman of the company

		general manage	concurrently serves as the general manager, dual is 1, otherwise it is 0.
	FCF	Corporate free cash flow	Corporate free cash flow / Total assets
	Ind	trade	Dummy variable
	Year	year	Dummy variable

3.3 Model design

In order to test the impact of the controlling shareholder equity pledge on the release of stock repurchase notice by listed companies, this paper, a regression model is constructed (2). Rp is the dependent variable, whether the controlling shareholder has any equity pledge and the ratio of equity pledge is the independent variable, and Controls represents all control variables.Expected β_1 in model (2) are significantly positive.

$$Rp_{i,t} = \beta_0 + \beta_1 PLD_{i,t} / PLR_{i,t} + Controls_{i,t} + \sum Year + \sum Ind + \varepsilon_{i,t} \quad (2)$$

In order to test the regulatory effect of the quality of information disclosure, we constructed a model (3). KV is a measure of the quality of information disclosure. The higher the KV, the lower the quality of information disclosure. When β_3 are significantly positive, and assumption 2 is valid.

$$Rp_{i,t} = \beta_0 + \beta_1 PLD_{i,t} / PLR_{i,t} + \beta_2 KV_{i,t} + \beta_3 KV_{i,t} \times PLD_{i,t} / PLR_{i,t} \quad (3)$$
$$+Controls_{i,t} + \sum Year + \sum Ind + \varepsilon_{i,t}$$

In order to test the regulatory effect of equity checks and balances, we constructed a model (4). BLC is a measure of equity balance. When β_3 are significantly negative, and assumption 3 is valid.

4. EMPIRICAL RESULTS

$$Rp_{i,t} = \beta_0 + \beta_1 PLD_{i,t} / PLR_{i,t} + \beta_2 BLC_{i,t} + \beta_3 BLC_{i,t} \times PLD_{i,t} / PLR_{i,t} \quad (4)$$
$$+Controls_{i,t} + \sum Year + \sum Ind + \varepsilon_{i,t}$$

4.1 Descriptive statistics

Table 2 presents the descriptive statistical table of the main variables.It can be seen from Table 2 that the average value of share repurchase preview Rp is 0.043 and the variance is 0.202. The sample size of companies issuing share repurchase notice only accounts for 4.3% of the total sample. There are great differences in the release of share repurchase notice between different companies.There is also a large gap in control variables such as Siz e enterprise size, book market value ratio BM and enterprise free cash flow FCF.The average Shrcr1 shareholding ratio of the largest shareholder of the enterprise is 14.790, and the maximum value is as high as 75.000, indicating that the company may have a "dominant share" phenomenon.

Table 2. Descriptive statistics

Variable Name	N	Mean	Variance	Max	Min
Rp	17687	0.043	0.202	1	0
PLD	17687	0.387	0.487	1	0
PLR	17687	18.77	31.190	100.000	0.000
BLC	17687	0.722	0.608	2.883	0.029
KV	17687	0.492	0.188	1.046	0.132
Size	17687	22.25	1.287	25.95	19.25
Lev	17687	0.415	0.201	0.987	0.050
ROE	17687	0.085	0.061	0.312	0.000
BM	17687	0.621	0.245	1.126	0.123
Shrcr1	17687	35.05	14.790	75.000	8.975
Growth	17687	0.205	0.475	3.541	-0.629

DIV	17687	0.295	0.303	1.776	0.000
Dual	17687	0.269	0.443	1	0
FCF	17687	0.012	0.098	0.269	-0.461

The regression results are shown in Table 3.Since stata deleted the samples with all 1 independent variables and all 0 dependent variables during the binary selection model estimation, the regression sample here is 17630. The regression coefficient of controlling shareholder equity pledge (PLD, PLR) is significantly positive at 1%, indicating that the company with controlling shareholder equity pledge is more likely to declare share repurchase, and the higher the controlling shareholder pledge ratio, the company is more likely to declare share repurchase.Empirical results support the hypothesis of 1.The PLD (PLR) and KV are significantly positive at the level of 5% and 10% respectively, which verifies the assumption 2 that the lower the quality of information disclosure, the higher the probability of the company issuing stock repurchase notice. Column (5) (6) shows the results of regression analysis on assumption 3. The cross product of controlling shareholder equity pledge (PLD, PLR) and equity check and balance (BLC) is significantly negative at the 1% level. Assumption 3 is verified, that is, the higher the equity check and balance, the weaker the relationship between controlling shareholder equity pledge and the company's announcement of share repurchase.

Table 3. Regression results

	(1)	(2)	(3)	(4)	(5)	(6)
	Rp	Rp	Rp	Rp	Rp	Rp
PLD	0.897***		0.465**		1.408***	
	(10.446)		(2.010)		(9.092)	
PLR		0.011***		0.006*		0.016***
		(9.325)		(1.802)		(8.303)
KV			-0.653*	-0.406		
			(-1.766)	(-1.301)		
PLD×KV			0.842**			
			(1.964)			
PLR×KV				0.010*		
				(1.686)		
BLC					0.178	0.051
					(1.611)	(0.500)
PLD×BLC					-0.580***	
					(-4.342)	
PLR×BLC						-0.007***
						(-3.591)
Size	0.453***	0.433***	0.471***	0.448***	0.459***	0.437***
	(10.532)	(10.131)	(9.720)	(9.227)	(10.032)	(9.571)
Lev	-2.046***	-1.940***	-2.084***	-1.968***	-2.086***	-1.972***
	(-7.539)	(-7.271)	(-7.426)	(-7.153)	(-7.424)	(-7.170)
ROE	2.581***	2.724***	2.686***	2.818***	2.609***	2.788***
	(3.668)	(3.932)	(3.535)	(3.758)	(3.498)	(3.793)
BM	0.430**	0.340*	0.370	0.283	0.430*	0.335
	(2.060)	(1.655)	(1.582)	(1.226)	(1.920)	(1.522)
Shrcr1	-0.024***	-0.023***	-0.024***	-0.023***	-0.028***	-0.027***

	(-7.742)	(-7.503)	(-6.643)	(-6.451)	(-5.332)	(-5.247)
Growth	-0.145	-0.126	-0.143	-0.123	-0.129	-0.109
	(-1.333)	(-1.187)	(-1.321)	(-1.157)	(-1.156)	(-1.007)
DIV	0.366***	0.417***	0.371***	0.419***	0.348***	0.401***
	(3.087)	(3.480)	(2.981)	(3.341)	(2.784)	(3.143)
Dual	0.145	0.177**	0.147	0.179*	0.140	0.183*
	(1.633)	(1.994)	(1.584)	(1.923)	(1.508)	(1.954)
FCF	2.380***	2.205***	2.381***	2.206***	2.340***	2.150***
	(4.484)	(4.132)	(4.514)	(4.184)	(4.416)	(4.070)
Ind	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes
_cons	-15.005***	-14.474***	-15.088***	-14.611***	-15.289***	-14.577***
	(-14.145)	(-13.855)	(-12.720)	(-12.421)	(-12.664)	(-12.344)
N	17630	17630	17630	17630	17630	17630
WaldChi2	1054.65***	1045.56***	887.37***	899.78	874.79***	888.24***
PseudoR^2	0.244	0.238	0.245	0.239	0.248	0.241

Note: The t-statistic is shown in parentheses.*** is significant at 1%; * * is significant at 5%; * is significant at 10%.

4.2 Robustness test

4.2.1 Instrument variable method

In order to reduce the impact of endogenous problems on the regression results, the industry average pledge rate (PLIP) of the province where the company was selected as the instrumental variable using a two-stage regression model to test the empirical results. The regression results are shown in Table 4.As shown from Table 4, both the AR test and the Wald test were significant at the 1% level, so there was considered no weak instrumental variable problem.In the second stage of regression, PLD and PLR are significantly positive at the 1% level, indicating that the equity pledge of the controlling shareholder will indeed increase the probability of listed companies issuing a share repurchase notice.

Table 4. Regression results of instrumental variable method

	(1)	(2)	(3)	(4)
	first	Second	first	Second
	RLD	Rp	PLR	Rp
PLIP	0.012***		0.981***	
	(65.666)		(94.771)	
PLD		0.582***		
		(6.233)		
PLR				0.007***
				(6.064)
Controls	Yes	Yes	Yes	Yes
_cons	0.613***	-7.706***	14.332***	-7.386***
	(7.991)	(-14.693)	(3.172)	(-14.375)
Ind	Yes	Yes	Yes	Yes
YEAR	Yes	Yes	Yes	Yes
N	17687	17630	17687	17630
AR	38.73***		36.72***	
Wald	38.85***		36.78***	

Note: The t-statistic is shown in parentheses.*** is significant at 1%; * * is significant at 5%; * is significant at 10%.

4.2.2 Heckman two-stage estimate

To reduce the adverse effects of sample self-selection, the heckman two-stage model was used to test hypothesis.Table 5 is the regression result of heckman two-stage regression.The regression results are in consistent with the previous conclusions.

Table 5. Regression results of heckman two-stage estimate

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	PLD	Rp	Rp	Rp	Rp	Rp	Rp
PLD		0.892***		0.467**		1.395***	
		(10.409)		(2.059)		(9.885)	
PLR			0.011***		0.006*		0.016***
			(9.310)		(1.884)		(8.667)
KV				-0.658*	-0.418		
				(-1.813)	(-1.361)		
PLD×KV				0.827**			
				(1.973)			
PLR×KV					0.010*		
					(1.707)		
BLC						0.180*	0.058
						(1.748)	(0.610)
PLD×BLC						-0.570***	
						(-4.544)	
PLR×BLC							-0.007***
							(-3.636)
Size	-0.111***	0.782***	0.797***	0.798***	0.812***	0.706***	0.746***
	(-9.117)	(2.983)	(3.035)	(3.027)	(3.076)	(2.728)	(2.850)
Lev	0.636***	-3.919***	-4.009***	-3.939***	-4.028***	-3.492**	-3.727**
	(9.792)	(-2.591)	(-2.656)	(-2.601)	(-2.667)	(-2.341)	(-2.477)
ROE	-0.507***	4.006***	4.304***	4.103***	4.399***	3.677***	4.124***
	(-2.762)	(2.926)	(3.136)	(2.972)	(3.176)	(2.715)	(3.020)
BM	-0.259***	1.190*	1.180*	1.119*	1.115*	1.001	1.048
	(-4.113)	(1.855)	(1.844)	(1.741)	(1.741)	(1.579)	(1.643)
Shrcr1	-0.004***	-0.013	-0.011	-0.014	-0.011	-0.020**	-0.016*
	(-5.048)	(-1.466)	(-1.212)	(-1.478)	(-1.219)	(-1.998)	(-1.652)
Growth	0.207***	-0.709	-0.752	-0.701	-0.745	-0.553	-0.639
	(9.803)	(-1.468)	(-1.550)	(-1.454)	(-1.538)	(-1.159)	(-1.323)
DIV	0.048	0.229	0.264*	0.235	0.267*	0.245	0.271*

	(1.433)	(1.444)	(1.649)	(1.482)	(1.667)	(1.548)	(1.680)
Dual	0.348***	-0.845	-0.919	-0.833	-0.911	-0.605	-0.748
	(15.513)	(-1.065)	(-1.155)	(-1.050)	(-1.146)	(-0.771)	(-0.941)
FCF	-0.285***	3.231***	3.149***	3.223***	3.145***	2.981***	2.954***
	(-2.781)	(3.721)	(3.631)	(3.711)	(3.633)	(3.435)	(3.391)
IMR		-4.377	-4.844	-4.333	-4.819	-3.291	-4.113
		(-1.256)	(-1.389)	(-1.243)	(-1.383)	(-0.954)	(-1.180)
Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes
_cons	1.579***	-16.115***	-15.708***	-16.199***	-15.854***	-16.119***	-15.629***
	(6.384)	(-11.851)	(-11.588)	(-11.662)	(-11.416)	(-11.778)	(-11.397)
N	17687	17630	17630	17630	17630	17630	17630
WaldChi2	1908.43***	1059.59***	1052.85***	1062.93***	1053.66***	1064.35***	1052.71***
PseudoR^2	0.081	0.244	0.239	0.245	0.239	0.248	0.241

Note: The t-statistic is shown in parentheses.*** is significant at 1%; * * is significant at 5%; * is significant at 10%.

4.2.3 Replace the regression model

In this paper, probit model is used to test the robustness of the empirical results. The regression results are basically consistent with the above, and the research hypothesis is verified.

5.CONCLUSION

With the gradual relaxation of the conditions for share repurchase, the listed companies that announced the implementation of share repurchase showed a rapid growth. As an important method of market value management for listed companies, whether the controlling shareholders' attention to market value will increase the probability of the company issuing the stock repurchase plan. Based on the background of high equity concentration of Listed Companies in China and the rapid development of equity pledge of controlling shareholders, this paper takes A listed company from 2012to 2019 as a research sample to explore the relationship between the equity pledge of controlling shareholders and the corporate stock repurchase notice. The conclusions of this paper are as follows: companies with pledge of controlling shareholders are more likely to announce repurchase of shares, and the above relationship will be affected by the degree of information asymmetry and equity structure of the company. In the companies with higher degree of information asymmetry or lower level of equity balance, the relationship between the controlling shareholder's equity pledge and the company's announcement of share repurchase is more significant.

The research conclusion of this paper has a certain reference value for regulators and external investors. For the regulatory authorities, how to supervise the stock repurchase behavior of listed companies and prevent enterprises from manipulating the stock price by using the stock repurchase notice, so as to damage the interests of investors will be an important work in the next stage. While actively encouraging listed companies to repurchase shares, the regulatory authorities should also constantly improve relevant regulatory policies. For investors, we should take a rational view of the company's stock repurchase notice and blindly regard the company's announcement of stock repurchase as good news, which may fall into the trap of major shareholders and suffer huge losses.

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