

Analysis of the influencing factors of IPO break under the background of registration system Reform: Evidence from China

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Abstract. This article mainly uses data from October 2009 to September 2022 of the gem board as research samples. Through empirical analysis to explore the implementation of the registration system's influence on IPO first-day break probability, at the same time, will appear on the market after the former market sentiment, listing market sentiment, and other indicators on introducing the model studies the influence factors of IPO first-day break and effect mechanism. The results show that the implementation of the registration system can significantly improve the probability of IPO breaking on the first day of listing. The winning rate is significantly positively correlated with the probability of IPO breaking on the first day of listing. The turnover rate on the first day of listing is significantly negatively correlated with the probability of IPO breaking on the first day of listing. The turnover rate on the first day of listing has a mediating effect on the impact of the winning rate and the registration system on the IPO break.

Keywords: IPO; The first day of the market break; Turnover rate; A success rate; Registration system.

1. Introduction

As an important component of China's financial market and an important vane to guide investors to invest, an initial public offering (IPO) has always attracted much attention. On March 13, 2019, and August 24, 2020, the Science and Technology Innovation Board and GEM board respectively bid farewell to the previous approval system of stock issuance and formally implemented the registration system. The registration system for securities issuance means that enterprises that want to issue securities disclose all information and materials related to the issuance of securities in accordance with the law and send them to the competent authorities for examination and approval. After confirming that the information and materials provided by the applicant are complete and meet the requirements for information disclosure, the competent authority may submit the information to the CSRC for registration and listing. For some small and medium-sized enterprises that are currently in the development stage, difficult to make profits but extremely high growth; the implementation of the registration system reduces the threshold of listing these enterprises, undoubtedly opens a breakthrough for their financing and improves financing efficiency.

After the implementation of the registration system, its IPO on the first day of listing by much strong attention. On the one hand, China's securities market implemented an approval system before the implementation of a registration system, IPO is a scarce resource, and information disclosure is not standard; there is a lot of over-hyped IPO phenomena, but moderate breaks can effectively reduce the over-hyped; But on the other hand, too much IPO on the first day of listing will have an adverse impact on the process of enterprise listing and financing, damage the rights and interests of investors, and have a negative impact on market sentiment.

2. Literature Review

At present, there have been some studies on the factors affecting IPO bust at home and abroad: Shi Xinxiang and Zhong Wei et al. (2013) [1] used the stochastic cost boundary model to study the new shares that were broken during 2010-2011, and believed that the sentiment of investors in the secondary market was the only factor affecting IPO bust. Zhang Wei and Zhai Xiaopeng et al. (2015) [2] studied the stocks of China's main board and small and medium-sized board enterprises from 2010 to 2012 and concluded that market sentiment and investor concern had a significant impact on the IPO breakage. Quan Xiaofeng and Yin Hongying et al. (2015) [3] took listed companies on GEM as research samples and concluded that media reports had a significant impact on IPO breakage by influencing investor sentiment. Wang Shuyu and Yang Yang (2017) [4] took the GEM-breaking stocks from 2009 to 2013 as the research samples and used the random boundary analysis method to draw the conclusion that IPO breaking was highly correlated with the excessive pricing in the primary market and the pessimistic sentiment of investors in the secondary market. To sum up, we can find that abundant results have been obtained in research on the influencing factors of IPO breaking on the first day of listing, and relevant researches mainly focus on the discussion of market sentiment factors, investors' concerns, and relevant price indicators. These studies verify the universal applicability and effectiveness of behavioral finance in terms of market sentiment and investor concern and provide a reference for the continuous reform and improvement of China's IPO system, as well as a decision-making basis for the risk control of investors participating in an IPO.

In addition, the internal conditions of the company, such as profitability and ownership structure, have also been introduced by some scholars to explore whether they have a significant impact on the IPO. Chen Dongdong (2011) [5] used stepwise linear regression to study the IPO data of the A-share market in 2010 and found that the corporate profitability index was significantly positively related to IPO breaking. Xie Hanchang and Wang Jinbo (2013) [6] took Chinese A-share listed companies from 2009 to 2011 as research samples, explored the relationship between ownership structure and IPO bust, and concluded that the proportion of managerial ownership was significantly negatively correlated with IPO bust.

The impact of China's registration system reform on IPO breaking has always been a concern. Yang Chen (2021) [7] took the science and Technology innovation board enterprises after the implementation of the registration system as the research object, taking the issue price-earnings ratio of companies in the same industry as the starting point, explored the IPO pricing problems under the registration system of the science and technology innovation board, analyzed the causes of overpricing and put forward corresponding countermeasures. The relationship between the registration system and the IPO still needs further discussion and research.

3. Research Design

3.1 Research Hypothesis

3.1.1 Registration system and IPO break

With the evolution of the capital market and the change of national policy orientation, China's stock issuance system has experienced an administrative examination and approval system, approval system, and registration system. On August 24, 2020, the registration system was fully implemented on the GEM. The implementation of the registration system is conducive to helping enterprises in the early stage of development develop better and promote the full play of the capital market. During the fifth session of the 13th National People's Congress, Premier Li Keqiang mentioned the need to fully implement the registration system for stock issuance to promote the smooth operation of the capital market.

Different from the approval system, the registration system reduces the threshold for enterprises to go public and simplifies the listing process. Enterprises can go public as long as they complete the relevant information submitted to the securities authority and meet the requirements. Under the

approval system, it is not only necessary for listed enterprises to disclose relevant information, but also to conduct substantive audits, including a judgment of investment value to judge whether they meet the issuance conditions. The registration system objectively increases the number of listed stocks and makes the funds more dispersed. This paper proposes a hypothesis: The registration system increases the probability of IPO breaking on the first day of listing.

3.1.2 The direct factors of IPO breaking on the first day of listing

IPO performance on the first day of a listing is dominated by market sentiment, which can be subdivided into pre-IPO sentiment and post-IPO sentiment. The market sentiment before the IPO listing is mainly reflected by the winning rate, and the market sentiment after the IPO listing is mainly reflected by the turnover rate. And registration system, mainly through the first day of IPO IPO break factors exert a direct impact to improve the break rate. The low winning rate can reflect that the IPO is sought after by investors but, in short, supply, corresponding to optimistic market sentiment; Otherwise, it can reflect the depressed market sentiment. The turnover rate on the first day of IPO listing can directly reflect the market sentiment. Because the IPO listing time is very short and the capital stock composition is relatively simple, the high turnover rate can directly reflect the active trading and optimistic market sentiment. The low turnover rate reflects less attention on the first day of the IPO, weak trading, and depressed market sentiment. We believe the registration system solves the problem of over-hyped an IPO and makes investors more rational, so the turnover rate will decrease. At the same time, the registration system provides a more relaxed financing environment, so the success rate will be increased accordingly. Based on the above analysis, we put forward the hypothesis that a higher turnover rate can correspondingly reduce the probability of a break. A higher winning rate can increase the probability of breaking.

3.2 Sample selection and data sources

Compared with the main board, GEM has relatively loose listing conditions and a relatively small enterprise scale. At the same time, it has witnessed the reform of the IPO system from an approval system to a registration system, which is of great significance for the study of IPO IPO breaking on the first day of listing after the implementation of the registration system. This paper selected GEM enterprises listed from 2009 to 2022 as the research sample, and a total of 985 enterprises with missing data were excluded. Data were obtained from the CSMAR database.

3.3 Definition of Variables

3.3.1 Explained variables

The explained variable in this paper is IPO break (Stbre), which refers to the situation when a company's closing price on the first day of a listing is lower than the issue price. In the Logistic model below, the probability of IPO breaking on the first day of a listing is taken as the dependent variable. If the IPO breaks, it is defined as 1, and if there is no breaking, it is defined as 0.

3.3.2 Explanatory variables

Based on the research hypothesis, referring to the existing literature on the analysis of factors affecting IPO breaking (Zhang Wei, Zhai Xiaopeng, et al. (2015) [2], Chen Dongdong (2011)) [5], and considering the availability of indicator data, This paper selects registration system (Regsys), first-day turnover rate (Tnovfstd), win rate (Winrate), issue price (Issprc), the fully diluted post-issue price-to-earnings ratio (Pedlt), the total amount of actual funds raised (Grsprc), number of actual public offerings (Tnumiss), and offline cumulative oversubscribed subscriptions Osmoffl, online cumulative oversubscription (Osmonl), effective offline subscription (Nvsoffl) and effective online subscription (Shldvsonl) as indicators to study. In order to reduce the influence of extreme values, the sample data of each variable were Winsorize with 1% and 99%.

3.3.3 Model Construction

In order to test the above research hypotheses, this paper constructed a Logistic multiple regression model for analysis:

$$\begin{aligned} Stbre = & \alpha_0 + \alpha_1 Regsys + \alpha_2 Tnovfstl + \alpha_3 Winrate + \alpha_4 Issprc + \alpha_5 Pedlt \\ & + \alpha_6 Grsprc + \alpha_7 Tnumiss + \alpha_8 Osmoffl + \alpha_9 Osmonl \\ & + \alpha_{10} Nvsoffl + \alpha_{11} Shldvsonl + \varepsilon_i \end{aligned}$$

Where P_i represents the probability of a listed company breaking, which is 1 if it breaks, and 0 if it does not.

4. Empirical Analysis

4.1 Descriptive statistics and correlation analysis of variables

The following table is a descriptive analysis of the selected indicators, from which it can be seen that there is a large gap between the maximum value and the minimum value of indicators, such as turnover rate and winning rate on the first day of listing and the variance is also large. Therefore, under the premise of existing research hypotheses, it is necessary to explore the impact of these variables with large changes on the IPO break rate.

Table 1. Descriptive analysis of variables

Variable	Obs	Mean	Std. Dev.	Min	Max
Regsys	985	0.1340102	0.3408363	0	1
Tnovfstl	985	0.3554865	0.3674229	0.00007	0.96
Winrate	985	0.5648954	1.17313	0.009038	18.6914
Issprc	985	23.43741	17.03601	2.82	168
Pedlt	985	35.59039	21.56781	3.06	150.82
Grsprc	985	56990.28	65721.65	10320	1393349
Tnumiss	985	2773.548	2547.916	867	43524.74
Osmoffl	985	3345.745	5399.346	1.5	34436.07
Osmonl	985	2570.239	2796.915	5	11064.09
Nvsoffl	985	1818.575	2720.919	0	9055
Shldvsonl	985	6403165	6198778	10311	1.55e+07

To preliminarily judge the correlation between independent variables, correlation analysis was carried out. From the analysis results, except for the pairwise correlation coefficient between the four variables of online cumulative oversubscription, offline cumulative oversubscription, online effective subscription number and offline effective subscription number, the other explanatory variables have little correlation, indicating that the selection of explanatory variables is feasible.

4.2 Regression results and analysis

Since the dependent variable in this paper does not conform to normal distribution but is a dichotomous variable, binary Logistic regression model is used for regression, and the regression results are shown in the table below.

Table 2. Logistic regression results

Stbre	Coef.	Std. Err.	z	P>z
Regsys	3.507848	0.8679359	4.04	0.000
Tnovfst	-3.421553	0.4782479	-7.15	0.000
Winrate	0.4058396	0.2089254	1.94	0.052
Issprc	-0.0114412	0.0127005	-0.90	0.368
Pedlt	0.023142	0.007629	3.03	0.002
Grspc	-2.46e-06	2.75e-06	-0.89	0.371
Tnumiss	0.0001468	0.0001162	1.26	0.207
Osmoffl	0.0000308	0.0000352	0.87	0.382
Osmonl	0.0002779	0.0003304	0.84	0.400
Nvsoffl	0.0004692	0.0001429	3.28	0.001
Shldvsonl	-3.83e-07	1.39e-07	-2.76	0.006
_cons	-1.832324	0.4307097	-4.25	0.000

From the results of Logistic regression, it can be concluded that among the influencing factors of IPO breaking, the significant ones at the 1% level are: the registration system, a turnover rate on the first day of listing, fully diluted P/E ratio after issuance, the number of effective online and offline subscribers; The winning rate is significant at 5% level; The non-significant performance is the offering price, the actual total amount of funds raised, the actual number of shares in the public offering, the accumulated offline oversubscription ratio and the accumulated online oversubscription ratio. Combined with the coefficient symbol, the following conclusions are drawn: the implementation of the registration system will increase the probability of breaking the growth enterprise market to about 3.5 times the original; The higher the turnover rate on the first day of the market, the more effective online subscription, the lower the probability of the IPO break; The higher the full diluted P/E ratio, the more effective offline subscription and the higher the winning rate, the greater the probability of the IPO. However, the influence coefficient of the number of effective online subscriptions and offline subscriptions is very small and can be ignored.

4.2.1 Signing rate, turnover rate (market sentiment) and IPO break

According to the data of GEM, it is concluded that the turnover rate and the winning rate are highly correlated with the first day of IPO. In order to improve the universality of this conclusion, we decided to test the relationship between these two indicators in science innovation edition and IPO breakthrough regression. The registration system has been implemented since the listing of the science and Technology Innovation Board. Therefore, the variable "registration system" was eliminated when the data of the science and technology Innovation board was used as the sample analysis, and the remaining independent variables were used for Logistic regression. In this part, a total of 467 enterprises listed on the Science and Technology Innovation Board from July 22, 2019, to September 23, 2022, are selected as the research samples, and the data source is the database of China National Tai 'a (CSMAR).

When "whether to break bread" is taken as the explained variable, First-day turnover rate (Tnovfst), Win Rate (Winrate), Issue Price (Issprc), Post-Issue Fully Diluted Price-to-earnings Ratio (Pedlt), Total Actual funds Raised (Grspc), Actual number of public Shares Offered (Tnumiss), Osmoffl (Osmoffl), online cumulative oversubscription (Osmonl), offline effective subscription number (Nvsoffl) and online effective subscription number (Shldvsonl) were used as explanatory variables in binary Logistic regression, and the regression results showed that "Note: 390 failures and successes 34 completely determined. "there is no return data. There are two possibilities for this to happen: one of the explanatory variables is strongly explanatory, or multicollinearity is a problem. Through the multicollinearity test, the mean VIF of the whole model was 10.53, indicating that the model had severe multicollinearity. By eliminating the variables affecting collinearity, three main variables affecting the factors of breaking stock are obtained: the turnover rate on the first day of listing, the issue price, and the total amount of actually raised capital (the three explanatory variables

can explain 95.33% of the variation of the explained variables). The regression results are shown in the following table:

Table 3. Regression results of science and technology innovation board

Stbre	Coef.	Std. Err.	z	P>z
Tnovfstd	-208.645	66.63829	-3.13	0.002
Issprc	-0.0234812	0.0122932	-1.91	0.056
Grsprc	-0.0000261	8.89e-06	-2.94	0.003
_cons	136.9839	43.69863	3.13	0.002

Through the results, we draw a conclusion: the increase in turnover rate will significantly reduce the probability of new shares breaking; The increase in the total amount of actually raised capital will significantly reduce the probability of enterprise break; The increase in the issue price will significantly reduce the probability of enterprise breaking, but the significance is lower than the previous two. Compared with the GEM, the winning rate has no significant impact on the first day of IPO breaking.

A high turnover rate means that the stock is actively traded and has greater liquidity. For IPO on the first day of trading, a high turnover rate can reflect the high optimism of individual investors and their willingness to participate in the transaction. However, the company's equity is mainly held by institutions and original shareholders, who make use of the optimism of individual investors to sell a large number of new shares to obtain profits [8]. The high turnover rate can indicate that a large number of bullish individual investors participate in the trading of the stock on the first day of listing, and the stock price will be constantly pushed up by the optimism of a large number of individual investors so as not to break the market. However, when the overall sentiment of individual investors towards IPO is low, the relevant institutions and individuals holding a large number of allocated shares will not choose to hold them for a long time but prefer to sell them quickly to obtain short-term profits. However, since a large number of individual investors have low sentiment and most of them have a speculative attitude towards IPO, individual investors in the IPO prices fall will choose to wait, to reduce or avoid admission, which can result in a low turnover rate, and the related organizations and individuals for short-term selling for the purpose of profit will continue to reduce prices, lower prices will further weaken the outside investor optimism, so when the turnover rate is low when the probability of break.

The winning rate can reflect the scarcity of IPO. Theoretically, the higher the scarcity of IPO (the lower the winning rate), the more optimistic investors are about IPO. After listing, IPO will be sought after by investors, and the price will also rise significantly. On the contrary, the lower the scarcity of IPO (the higher the success rate), the lower the scarcity of IPO, and the more depressed the sentiment of investors towards IPO. Since IPO cannot be recognized by investors after listing, the probability of price breaking is greater.

The turnover rate mainly reflects the market sentiment after the IPO listing, while the winning rate mainly reflects the expected sentiment before the IPO listing after the IPO listing. This leads to the author's new thinking about the relationship between the two: the correlation between expected sentiment and actual market sentiment. Namely, to explore whether turnover rate, as a mediating variable, has a mediating effect between the winning rate and IPO break.

In the first step, the regression of model (1) is conducted to test whether the impact of the winning rate on IPO breakage is significant; that is, the significance of coefficient a_1 is tested. If it is significant, the mediation effect is established; otherwise, the hiding effect is established.

In the second step, the coefficient b_1 of equation (2) is tested; that is, the influence of the success rate of the explanatory variable on the turnover rate of the intermediary variable is tested.

In the third step, model (3) is introduced, and the winning rate and turnover rate are taken as explanatory variables. The influence coefficient of the winning rate on enterprise financing efficiency

is c_1 , and the influence coefficient of the turnover rate on enterprise financing efficiency is c_2 . Test the significance of c_2 .

In the second and third steps, if b_1 and c_2 are significant, the indirect effect is significant, and the fourth step is carried out. If at least one of them is insignificant, Bootstrap test $H_0: ab=0$ is performed. If it is significant, the indirect effect is significant, and the fourth step is carried out. If it is not significant, the analysis is stopped.

The fourth step is to test the coefficient c_1 in the model (3). If it is not significant, the direct effect is not significant, and only the mediating effect is. If significant, the direct effect is significant, proceed to step 5.

Step 5: Compare the signs of b_1 , c_2 , and c_1 . If the same number, it is part of the mediation effect; If different, it belongs to the cover effect.

$$\begin{aligned} Stbre &= a_0 + a_1Winrate + a_2Regsys + a_3Issprc + a_4Pedlt + a_5Grsprc + a_6Tnumiss \\ &\quad + a_7Osmoffl + a_8Osmonl + a_9Nvsoffl + a_{10}Shldvsonl + \varepsilon_i \\ Tnovfstd &= b_0 + b_1Winrate + b_2Regsys + b_3Issprc + b_4Pedlt + b_5Grsprc + b_6Tnumiss \\ &\quad + b_7Osmoffl + b_8Osmonl + b_9Nvsoffl + b_{10}Shldvsonl + \varepsilon_i \\ Stbre &= c_0 + c_1Winrate + c_2Tnovfstd + c_3Regsys + c_4Issprc + c_5Pedlt + c_6Grsprc \\ &\quad + c_7Tnumiss + c_8Osmoffl + c_9Osmonl + c_{10}Nvsoffl + c_{11}Shldvsonl + \varepsilon_i \end{aligned}$$

The regression results of the three models are shown in the following table:

Table 4. Regression results of model (1)

Stbre	Coef.	Std. Err.	z	P>z
Winrate	0.2886603	0.1478483	1.95	0.050
Regsys	1.867199	0.6911827	2.70	0.007
Issprc	-0.0031422	0.0108814	-0.29	0.773
Pedlt	-0.003018	0.0053587	-0.56	0.573
Grsprc	-2.14e-06	2.30e-06	-0.93	0.352
Tnumiss	0.0000975	0.0000896	1.09	0.276
Osmoffl	0.0000448	0.0000331	1.35	0.176
Osmonl	-0.0000666	0.0002702	-0.25	0.805
Nvsoffl	0.0003211	0.0001341	2.39	0.017
Shldvsonl	-1.66e-07	1.18e-07	-1.40	0.162
_cons	-2.077389	0.3770082	-5.51	0.000

Table 5. Regression results of model (2)

Tnovfstd	Coef.	Std. Err.	t	P>t
Winrate	-0.0128274	0.0063309	-2.03	0.043
Regsys	0.0423745	0.1211051	0.35	0.727
Issprc	0.0013243	0.0007556	1.75	0.080
Pedlt	0.0010877	0.0005357	2.03	0.043
Grsprc	-7.27e-07	2.56e-07	-2.84	0.005
Tnumiss	-2.50e-06	6.78e-06	-0.37	0.712
Osmoffl	-2.37e-06	5.07e-06	-0.47	0.641
Osmonl	-0.0000202	0.0000282	-0.72	0.474
Nvsoffl	0.0000218	0.000029	0.75	0.454
Shldvsonl	6.00e-08	4.11e-08	1.46	0.145
_cons	0.0714875	0.220645	0.32	0.746

Table 6. Regression results of model (3)

Stbre	Coef.	Std. Err.	z	P>z
Winrate	0.4058396	0.2089254	1.94	0.052
Tnovfst	-3.421553	0.4782479	-7.15	0.000
Regsys	3.507848	0.8679359	4.04	0.000
Issprc	-0.0114412	0.0127005	-0.90	0.368
Pedlt	0.023142	0.007629	3.03	0.002
Grspc	-2.46e-06	2.75e-06	-0.89	0.371
Tnumiss	0.0001468	0.0001162	1.26	0.207
Osmoffl	0.0000308	0.0000352	0.87	0.382
Osmonl	0.0002779	0.0003304	0.84	0.400
Nvsoffl	0.0004692	0.0001429	3.28	0.001
Shldvsonl	-3.83e-07	1.39e-07	-2.76	0.006
_cons	-1.832324	0.4307097	-4.25	0.000

The regression results of three models show that $a_1=0.2887$ and is significant at 5% level, $b_1=-0.013$ and is significant at 5% level, $c_1=0.406$ and is significant at 10% level, and $c_2=-3.422$ and is significant at 1% level. b_1c_2 and c_1 have the same sign, indicating mediating effect.

From the above, it can be concluded that the turnover rate on the first day of listing plays a partial mediating effect in the process of the impact of the winning rate on the IPO break. In other words, the winning rate is negatively correlated with the turnover rate on the first day of listing. The decrease in the winning rate can improve the turnover rate on the first day of listing of enterprises; while the decrease in the turnover rate will reduce the probability of IPO breaking on the first day of listing, and otherwise it will increase the probability of IPO breaking on the first day of listing. The author believes that the statistical data can be explained from two aspects: 1. If the IPO is recognized and sought after by the market before listing, it can be reflected that the number of applicants will be correspondingly higher, and the winning rate will be correspondingly lower. After its listing, the market will continue to continue the previous optimistic investment sentiment (the nature and fundamental conditions of the company will not change significantly in a short period of time), so the turnover rate is high. 2. The low winning rate will increase the market attention in a certain probability, and enhance the investors' mentality of "rare goods are available," thus boosting the market sentiment after listing, and the turnover rate will increase accordingly.

4.2.2 Fully diluted price-earnings ratio and IPO break

The stock price of a listed company on the first day after listing can reflect investors' expectations of its development prospects, which are closely related to the company's per-share profitability, so the per-share profitability of listed companies is a matter of great concern to investors. Compared with the post-issue P/E ratio, the fully diluted P/E ratio after the issue can more truly and intuitively reflect the company's earnings status in the period after listing on the basis of the relevant changes in the share capital status, which enables investors to predict the specific price changes of the IPO through the fully diluted market earnings. Therefore, High fully diluted P/E will reduce investors' confidence in the IPO and price expectations, resulting in a break. Before registration system implementation, caused by the stock higher fully diluted earnings feel broken damp conditions, serious and even reversed transmission distribution companies to reduce the p/e ratio [9], this paper fully diluted earnings on such evidence and data show that in the regression equation fully diluted multiples and the IPO break rate have greater relevance and positively correlated.

4.2.3 Registration system and IPO break and its influencing mechanism

According to the data in the table, the correlation between the registration system and IPO breakage is extremely significant and positive. Compared with the approval system, the probability of IPO breakage in the registration system period is 350% of the original one. In order to verify whether the registration system really has an impact on the market sentiment on the first day of IPO

listing (an important factor affecting the first day of IPO IPO breaking), the author decided to regression the registration system and related indicators affected by it.

Table 7. Effect of registration system on break

Stbre	Coef.	Std. Err.	z	P>z
Regsys	1.95561	0.6900538	2.83	0.005
Winrate	0.2794606	0.1413816	1.98	0.048
Issprc	-0.0035788	0.0105929	-0.34	0.735
Pedlt	-0.0028739	0.0054089	-0.53	0.595
Grsprc	-1.84e-06	2.15e-06	-0.86	0.391
Tnumiss	0.0000777	0.0000829	0.94	0.348
Osmoffl	0.0000442	0.0000331	1.34	0.181
Osmonl	-0.0001185	0.0002689	-0.44	0.659
Nvsoffl	0.0003219	0.0001349	2.39	0.017
Shldvsonl	-1.48e-07	1.18e-07	-1.26	0.209
_cons	-2.050641	0.3664064	-5.60	0.000

Table 8. Effect of registration system on the turnover rate on the first day of listing

Tnovfst	Coef.	Std. Err.	t	P>t
Regsys	-0.4273043	0.0611705	6.99	0.000
Winrate	0.0150009	0.007529	1.99	0.047
Issprc	-0.0020126	0.0009261	-2.17	0.030
Pedlt	0.0071716	0.0004875	14.71	0.000
Grsprc	-7.54e-08	2.36e-07	-0.32	0.750
Tnumiss	0.0000126	7.94e-06	1.58	0.114
Osmoffl	-6.51e-06	2.68e-06	-2.43	0.015
Osmonl	0.0001164	0.0000251	4.64	0.000
Nvsoffl	0.0000498	0.00001	4.97	0.000
Shldvsonl	-7.76e-08	9.00e-09	-8.62	0.000
_cons	0.2095193	0.0320128	6.54	0.000

Table 9. The total effect of registration system and first day turnover rate on break

Stbre	Coef.	Std. Err.	z	P>z
Regsys	3.602547	0.8613905	4.18	0.000
Tnovfst	-3.382218	0.4798841	-7.05	0.000
Winrate	0.3902283	0.2002587	1.95	0.051
Issprc	-0.0117394	0.0121548	-0.97	0.334
Pedlt	0.0228703	0.0076974	2.97	0.003
Grsprc	-2.13e-06	2.48e-06	-0.86	0.391
Tnumiss	0.0001244	0.0001039	1.20	0.231
Osmoffl	0.0000307	0.0000352	0.87	0.383
Osmonl	0.0002115	0.0003235	0.65	0.513
Nvsoffl	0.0004676	0.0001434	3.26	0.001
Shldvsonl	-3.61e-07	1.37e-07	-2.64	0.008
_cons	-1.788136	0.4046231	-4.42	0.000

Model 1 tests the direct effect of the registration system on the first-day IPO break, and the results show that the coefficient is positive and significant at 1% level. Model 2 tests the effect of the registration system on a turnover rate on the first day of listing, and the results show that the coefficient is negative and significant at 1% level. In Model 3, the first-day turnover rate was added to the direct effect model to test the total effect. The results showed that the coefficient of the registration system was positive and significant at 1% level, while the first-day turnover rate was negative and significant at 1% level. It indicates that the first-day turnover rate has a mediating effect

between the registration system and the first-day IPO break; that is, the registration system increases the probability of a first-day IPO break by reducing the first-day turnover rate.

Its influence mechanism mainly includes two aspects: 1. In essence, the registration system determines the allocation of capital by the market through the sound information disclosure mechanism; that is, the allocation of stocks is determined by market means and rules [10]. This means that the problem of information asymmetry in the approval system period has been effectively solved, and investors will not blindly participate in the IPO subscription and trading on the first day after listing, thus directly reducing the turnover rate. 2. In the early stage of the registration system, underwriters still had irregularities in IPO pricing, and the relevant regulatory measures were not in place. Under the framework of the registration system, the underwriter, as the bridge between the issuer and the investor, is responsible for coordinating the relationship between the two, enabling the issuer to obtain the expected raised funds, providing the investor with an objective and accurate IPO price, so as to protect the rights and interests of both the investor and the issuer. The offering price is directly proportional to the underwriting amount and the underwriter's commission, and some private venture capital firms use the high first-day IPO returns to earn a reputation. Therefore, the underwriter violates the moral principle and makes the issue price deviate from the actual value. At present, the regulation of underwriters in China is too heavy and too light on principles [11], which is easy for underwriters to avoid punishment for irregular behaviors. And after the effective date of the registration system, investors pay more attention to the underwriter reputation [12], but at the moment, China has not formed a set perfect registration system matching with underwriters' credit evaluation system, and the unreasonable phenomenon of underwriters priced strengthen disclosure of information in the registration system under the background of being exposed constantly, this will increase investors' mistrust of the underwriters priced, Avoid participating in the financial activities related to the IPO, thereby weakening the market sentiment and reducing the turnover rate accordingly.

5. Conclusions and suggestions

From the empirical results, the implementation of the registration system, the success rate, and the full diluted price-earnings ratio on the first day of listing is significantly positively correlated with the first day of IPO breakage on the GEM, while the turnover rate is significantly negatively correlated with the first day of IPO breakage on the GEM. However, there is a significant negative correlation between the registration system and the turnover rate, which is similar to the views of some scholars in the literature review. By improving the information disclosure system and relaxing the listing threshold, the registration system effectively solves the excessive speculation on the first day of IPO listing, which is manifested in the significant reduction of the turnover rate after the implementation of the registration system. At present, the registration system has not been fully implemented in China's securities market, and to realize the comprehensive implementation of the registration system, the most important things to improve at present are: 1. Strengthen the correct guidance of market sentiment by referring to the turnover rate and other sentiment indicators. Establish a credit evaluation mechanism for underwriters mainly based on information disclosure.

5.1 Refer to the turnover rate and other sentiment indicators to strengthen the correct guidance of market sentiment

According to the empirical analysis, the turnover rate is significantly correlated with the first-day IPO break. Different from European and American countries, China's securities market has a large number of retail investors, and the market sentiment is susceptible to accidental factors and has a large fluctuation range. Taking these two points into consideration, Chinese regulatory agencies should give full play to the advantages of the socialist market economy with Chinese characteristics, play the leading role of regulatory agencies, and strengthen the guidance of market sentiment. Sentiment indicators such as turnover rate, as an important factor affecting the IPO market break on

the first day of listing, can provide a clear reference for Chinese regulatory authorities. Through sentiment indicators, regulatory authorities can timely detect excessive high or low market sentiment on the first day of IPO listing and timely issue announcements to warn investors of risks or eliminate panic. At the same time, regulators can also crack down on illegal speculation and insider trading through abnormal market sentiment on the first day of IPO listing and protect the legitimate rights and interests of investors and enterprises.

5.2 Establish an underwriter reputation evaluation mechanism based mainly on information disclosure

The essence of the registration system is too perfect and mature the information disclosure system, and currently, the underwriter is mainly responsible for information disclosure as the "middleman." At present, China does not have a perfect credit evaluation mechanism for underwriters, which leads to the imperfect information disclosure mechanism of China's registration system. The establishment of the underwriter reputation evaluation mechanism mainly based on information disclosure can improve the information disclosure mechanism, and at the same time, it can force underwriters to formulate a more reasonable IPO price, reduce the behavior of underwriters taking advantage of poor information to make improper profits, so that enterprises can choose underwriters according to the reputation of underwriters when they go public. Moreover let investors participate in the company's IPO-related activities, have a greater right to know, and promote underwriters to act as a good bridge between the company's listing and investors.

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