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China's IPO Price Suppression Problem and Its Influencing Factors Analysis

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The IPO price suppression phenomenon is extremely common in both mature and emerging capital markets, and high price suppression can lead to an imbalance in the market supply and demand mechanism and affect the sustainable and healthy operation of the capital market. In the Chinese mainland market, the causes of IPO price suppression are mainly imperfect trading systems and information asymmetry. In this paper, we will use the survey method, literature analysis, and quantitative analysis to study the phenomenon of underpricing in the Chinese IPO market and its causes, comparing the Chinese IPO market with the U.S. IPO market. Using international and national statistics, we will propose the reasons affecting the IPO underpricing rate and compare the IPO underpricing difference between China and the US horizontally. Taking the Chinese A-share market as the main character, we analyze the impact of market transactions on IPO suppression and propose measures to improve IPO suppression in mainland China's stock market.

Keywords: IPO price suppression, U.S. and Chinese stock markets, equity initial public offerings

Introduction

IPO is the process of raising funds from public investors by issuing new shares to public investors in the stock market by private companies. An IPO is said to be underpriced when the stock dives sharply on the first day of trading. The concept of IPO underpricing has been frequently used as a research component by a wide range of scholars in the past decades. Different countries' IPO markets operate in different macro environments, which include the institutional structure and level of economic development, the degree of stock market development, the geographical environment in which the country is located, and so on. These differences may all be responsible for the varying degrees of marketization of IPO markets in different countries, which in turn determines the varying levels of average IPO price-suppression in various countries.

The root cause of the "IPO price suppression puzzle", that according to information economics, is the unevenness of information in the securities market. The less developed a country's or region's market, the less transparent the market, and thus the greater the disparity in information between different investors, resulting in a higher IPO price suppression rate in the market. Furthermore, differences in IPO regulatory policies and IPO listing systems between governments result in differences in IPO price suppression rates.

The concept of an initial public offering (IPO) is relatively new in China. Prior to the registration system's implementation, China's capital market practiced the confirmation and audit systems. The approval system

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contributed a lot to the economy in China's poor and backward planned economy era, but also neglected many outstanding enterprises; afterward, the audit system was introduced, and although more professionals were involved in the evaluation, the state regulators or state units could still have a substantial influence on the decision due to the IPO price suppression factor, which was also not conducive to the market-oriented operation of corporate stock offerings. China has now started to implement a registration system in the IPO market to strictly regulate and screen IPO listings and continuously improve the quality of information disclosure of initial public offerings, but due to the immaturity of the market and the fact that, for the time being, the registration system implemented in China has not undergone substantial changes on the basis of the approval system. Whether a company can go public, whether it meets the conditions for listing, the price and size of the new issue, and the timing of the issue are all determined by the regulator, resulting in an incomplete valuation of some outstanding companies. The institutional defects of the Chinese stock market have caused an imbalance of supply and demand in the market, and the stock market is dominated by individual investors and supplemented by institutional investors. These reasons have led to the existence of IPO price suppression in the Chinese market, and the phenomenon of IPO price suppression in the Chinese market is particularly obvious compared to the IPO markets of other countries.

The concept of IPO price suppression appears in almost all stock markets around the world (Figure 1), but the degree of IPO price suppression varies greatly between countries. According to relevant research data, the price suppression in developed markets is generally smaller than that in emerging markets, with Canada's IPO price suppression rate at 6.8%, France at 9.4%, Malaysia at 50.3%, and India at 84.0%. However, the price suppression rate is less prominent compared to the Chinese market, where the average price suppression rate of 4,648 IPOs issued from the birth of China's A-share market in 1991 to 2021 is as high as 170.7%. (see Figure 1)

By analyzing the IPO issuance in Shanghai, a representative market of the Chinese stock market, after the share reform, we find that the high price suppression rate in the Chinese stock market is due to the excessive concentration of speculative capital in the stock market and the lack of other investment products and channels. This paper compares the Chinese IPO market with the U.S. IPO market to analyze the differences in price suppression between China and the U.S. and the causes of IPO price-suppression in China.

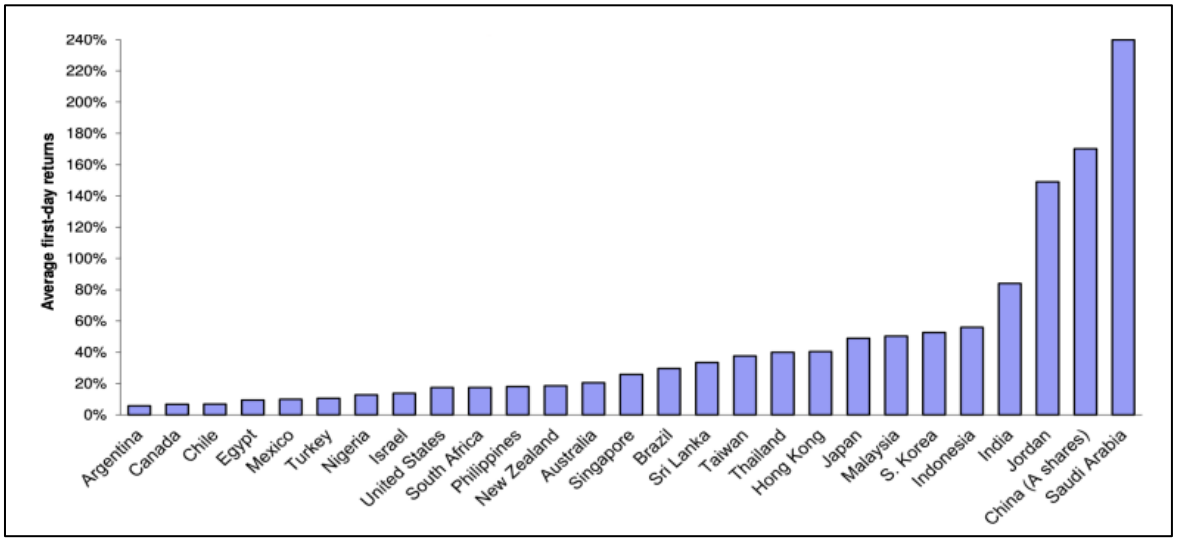

Figure 1. Graph of average underpricing around the world (2021).
Source: Site.warrington.ufl.edu. 2022 (https://site.warrington.ufl.edu/ritter/files/IPOs-Intemational-underpricing.pdf).

Background

Literature Collation

Scholars have been studying the phenomenon of IPO price suppression since the 1970s. Ibbotson (1975) finds that IPO firms usually offer at prices below the market price, which is referred to as IPO price suppression. Baron (1982) develops a model in which underwriters' profit from IPO price suppression, demonstrating the potential agency conflicts between underwriters and IPO issuers. Rock (1986) proposes a "winner's curse" theory based on retail investors' information asymmetry from the perspective of the inverse of uninformed investors, making the argument that IPO price suppression compensates uninformed retail investors. Beatty, and Ritter (1986) extend Rock's (1986) model by including ex-ante uncertainty of firm value as a measure of asymmetric information, and the level of IPO price suppression increases as ex-ante uncertainty increases. The higher the level of IPO price suppression, the greater the degree of uncertainty about the firm's value and the greater the degree of information asymmetry. Rock's "winner's curse" theory is strongly supported by Koh and Walter (1989), and Levis (1990). Beatty, and Ritter (1986) expand on Rock's ideas (1986). Loughran, and Ritter (2004) summarize theoretical explanations for IPO price suppression, including the "winner's curse" theory and the signaling hypothesis based on information asymmetry theory, both of which have gotten a lot of attention from IPO scholars. Bottenberg (2016) compared the IPO markets in China and the U.S., and their main finding is that the pricing of IPOs in China is much lower than that in the U.S. due to information asymmetry and the different regulatory environment.

Differences Between the U.S. and Chinese IPOs

China's average first-day return from 1990 to 2021 was as high as 170.7%, which means that the underpricing of IPOs led to high returns after the first day of IPOs. China's average first-day return from 1990 to 1996 was even higher at 388% (Figure 2), which was due to the fact that China's A-shares were in the early stages of creation and the approval system was used, thus leading to underpriced IPOs and high first-day returns. IPOs in the U.S. also went through the bubble economy in 2000, when the number of IPO offerings was 700 and the first-day yield reached an all-time high of 70% (Figure 3). As a result of the bubble economy, the profitability of a large number of companies was overvalued, and the bubble economy finally burst, the largest stock market crash in U.S. history after 1929. After the bubble economy, there are still many companies that choose to list in the U.S. This is because of the low time cost of listing in the U.S. The U.S. listing system is the registration system, although China has begun to implement the registration system, the essence is still the use of the SEC audit system, the average need to review the listing of enterprises for about 1.5 years. The second is the low IPO threshold, the U.S. stock market is concerned about the future development of the enterprise, while China is required to maintain profits in the past three years. The third is that the shareholder structure and trading system are different. More than 70% of the U.S. stock market is operated by institutions, which focus more on long-term investment, and investors are emotionally stable and do not pursue short-term investment or speculative investment. At the same time, the U.S. stock market is using T+0 trading rules and there is no limit on the amount of increase or decrease. In this environment, stock prices can quickly find a reasonable valuation range, which is conducive to the stable development of enterprises.

Therefore, I will examine what factors contribute to the depressed prices of Chinese IPOs and use U.S. IPOs as a comparison. I will examine the following factors: IPO size, IPO underwriter prestige, Price-Earnings ratio, first-day trading rate, and country differences.

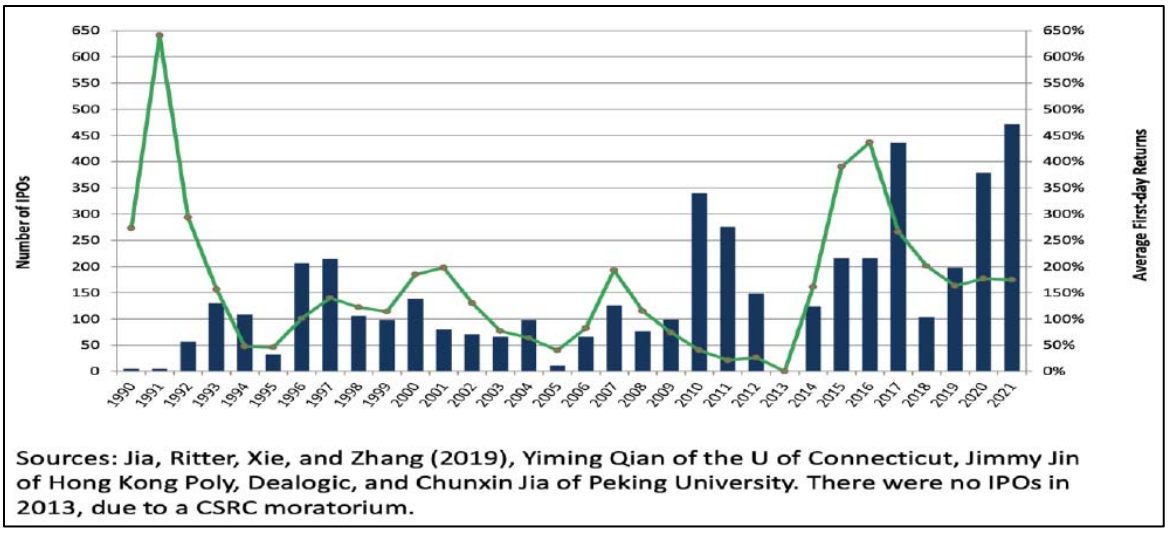

Figure 2. Number of offerings and average first-day returns on Chinese IPOs, 1990-2021.
Source: Site.warrington.ufl.edu. 2022 (https://site.warrington.ufl.edu/ritter/files/IPOs-China.pdf).

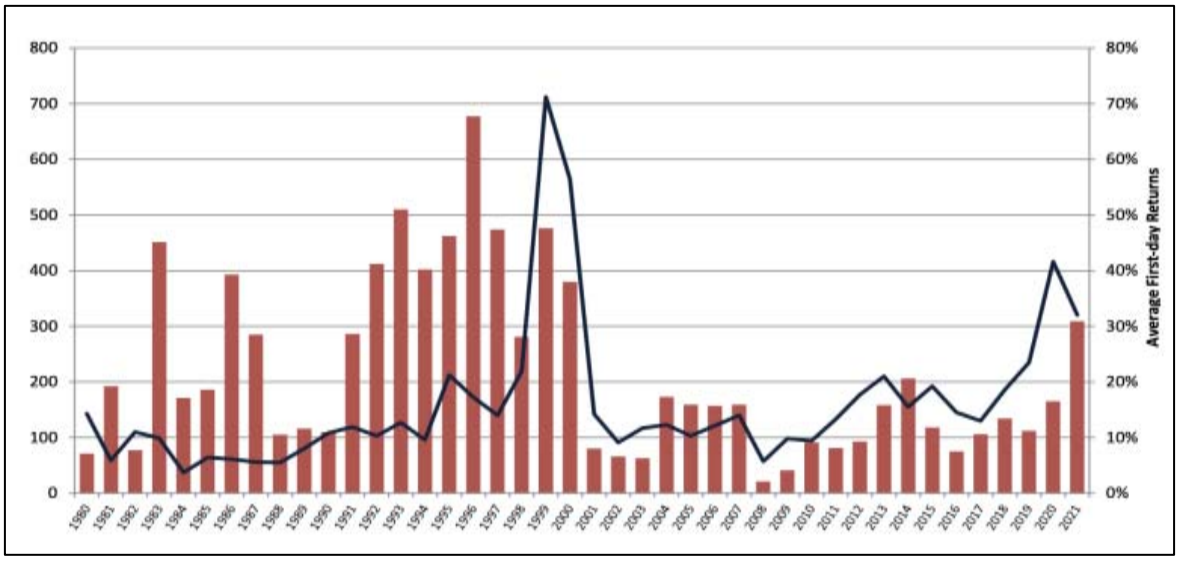

Figure 3. Number of offerings (bars) and average first-day returns (line) on US IPOs, 1980-2021.
Source: Site.warrington.ufl.edu. 2022 (https://site.warrington.ufl.edu/ritter/files/IPOs-US-since-1980.pdf).

Data and Methodology

Descriptive Statistics

The price suppression ratio is typically calculated as the difference between the closing price of the stock on the first day of trading and the issue price:

$$UP = \frac{P_t - P_0}{P_0}$$

where UP represents the IPO price suppression rate; P_t represents the first day closing price; and P_o represents the issue price.

With the rapid development of China's capital markets over the past 20 years, the first day return on IPO is significantly lower than it was between 1990 and 1996, but the first day return on IPO in China is still at a high

level compared to mature capital markets in Europe or the US. Many investors prefer to buy newly listed IPOs in the form of IPOs and sell them on the day of IPO for high returns, so many investors believe that IPOs will make big money. Since China's A-share adopts the T+1 system, investors who buy on the first day of the IPO can only sell the IPO bought on the first day after the opening of the next day, so it is necessary to consider the opening price of the IPO on the first day and the opening price of the next day for analysis so that it is realistic and informative for investors in China's A-share market.

$$UP = \frac{P_t - P_0}{P_0} - \frac{M_1 - M_0}{M_0}$$

M_1 is the stock market price index at the end of the first day of trading for a newly issued IPO, and M_0 is the stock market price index at the beginning of the first day of trading for the stock.

The dependent variable (UP) of this study is the first-day underpricing rate of IPO, and five explanatory variables are selected as follows: IPO issue Size (Size), underwriter's qualification (Rank), price-earnings ratio (P), first-day turnover rate (Turn), and COUNTRY (China and America). A linear regression model is established:

$$UP = \beta_0 + \beta_1 Size + \beta_2 Rank + \beta_3 P + \beta_4 Turn + \beta_5 COUNTRY + e$$

Considering the availability of data and the size of data capacity, select data from 1995 to 2021. Data sources include national data, the World Bank, the World Trade Organization database, China Listed Company Network, and other major financial websites.

First, descriptive statistics were performed on each variable in the model, and the results are shown in Table 1. The explained variable UP is the underpricing rate on the first day of IPO, with an average value of 0.3883, indicating that the average return on the first day of IPO investors is 38.83%, and the 25% quantile is 0.3306, indicating that more than 75% of the IPO companies in the sample first the daily closing price exceeds the issue price, indicating that there is a systematic underpricing of IPOs. Descriptive statistics for each explanatory variable, Rank represents the prestige of the underwriters, with a mean value of 0.6061, indicating that 60.61% of IPO companies are issued and listed by underwriters with higher prestige. A turn represents the turnover rate on the first day, with an average value of 0.2002, indicating that the average turnover rate on the first day of listing of the sample companies is 20.02%. P represents the price-earnings ratio, with an average value of 0.6791, indicating that the average price-earnings ratio of IPO companies is 67.91%. COUNTRY represents the country, set the country as a dummy variable. Dummy variables, also known as dummy variables, are usually represented by 0 or 1 to represent the state or category of qualitative data. This study examines the differences in IPO underpricing rates between China and the United States, setting the United States as 1 and China as 0 for analysis.

Table 1

Descriptive Statistics of Each Variable

	N	Mean	Median	std	Minimum	Maximum
UP (%)	54	38.83	38.30	8.97	18.43	52.35
Size	54	203.91	157.50	158.14	13.00	677.00
Turn (%)	54	20.02	17.45	11.61	5.70	71.20
P (%)	54	67.91	66.44	12.46	47.59	95.48
Rank (%)	54	60.61	60.53	4.54	45.98	69.45

Correlation Analysis

Correlation analysis was performed on all variables, and the results are shown in Table 2. Firstly, the correlation between the first-day underpricing rate of IPO and other explanatory variables is analyzed. The correlation coefficient between the underpricing rate on the first day and the issuance scale is 0.101, p = 0.469, which is relatively small and insignificant. The correlation coefficient between the underpricing rate on the first day and the turnover rate on the first day is -0.061, p = 0.663, and the correlation is small and insignificant. The correlation coefficient between the underpricing rate on the first day and the country was -0.366, p = 0.013, showing a significant negative correlation, with a moderate correlation. The correlation coefficient between the underpricing rate and the price-earnings ratio on the first day was -0.271, p = 0.048, which was significantly negatively correlated with a small degree of correlation. The correlation coefficient between the underpricing rate on the first day and the prestige of the underwriters is 0.158, p = 0.254, which is relatively small and insignificant.

By analyzing the correlation degree between the explanatory variables, it can be seen that the turnover rate on the first day and the issuance scale are significantly negatively correlated, and the correlation coefficient is 0.301, p = 0.027. The correlation coefficient between country and issuance size is 0.044, p = 0.754, which is small and insignificant. The correlation between country and the first-day turnover rate is 0, p = 0.998. The correlation coefficient between the price-earnings ratio and the issuance scale is -0.021, p = 0.881, which is relatively small and insignificant. The correlation coefficient between the price-earnings ratio and the turnover ratio on the first day is 0.219, p = 0.112, which is small and insignificant. The correlation coefficient between price-earnings ratio and country is -0.219, p = 0.112, the correlation is small and not significant. The correlation coefficient between the prestige of the underwriter and the issuance scale is -0.451, p = 0.001, which is significantly negatively correlated, and the correlation degree is moderate. The correlation coefficient between the underwriter's prestige and the turnover rate on the first day is -0.273, p = 0.046, which is a significant negative correlation, and the correlation coefficient is small. The correlation coefficient between underwriter prestige and the country is 0.224, p = 0.104, which is small and insignificant. The correlation coefficient between underwriter prestige and the price-earnings ratio is -0.01, p = 0.94, which is small and insignificant.

Table 2

Correlation Analysis of All Variables Correlation

	UP (%)	Size	Turn (%)	COUNTRY	P (%)	Rank (%)
UP (%)	1					
Size	0.101	1				
	0.469					
Turn (%)	-0.061	0.301*	1			
	0.663	0.027				
COUNTRY	-0.336*	0.044	0	1		
	0.013	0.754	0.998			
P (%)	-0.271*	-0.021	0.219	-0.219	1	
	0.048	0.881	0.112	0.112		
Rank (%)	0.158	-0.451**	-0.273*	0.224	-0.01	1
	0.254	0.001	0.046	0.104	0.94	

Notes: * At level 0.05 (two-tailed), the correlation was significant. ** At level 0.01 (two-tailed), the correlation was significant.

Regression Analysis

Taking first-day price reduction rate/UP of IPO as the dependent variable, Size of IPO, Rank of underwriters, price-earnings ratio/P, first day Turnover rate, and COUNTRY (China and America) were used as explanatory variables. Regression analysis was conducted for the model, and the results of variance analysis were shown in Table 3. F = 3.426, P = 0.01, indicating that the results of variance analysis are significant, indicating that the regression model is significant as a whole.

Table 3
Model Variance Analysis

	Model	Quadratic sum	DOF	Mean square	F	p
1	Regression[a]	1122.464	5	224.493	3.426	0.010[b]
	Residual	3144.842	48	65.518		
	Total	4267.306	53			

Notes: a. dependent variable: UP (%); b. predictive variable: (constant), Rank, Turn (%), COUNTRY, P (%), Size

Regression analysis results are shown in Table 4:

Table 4
Regression Analysis

Variables that enter the model	Model parameter				Model results
	B	t	Sig	VIF	
(constant)	-7.803	-0.414	0.681		
COUNTRY	-0.377	2.838	0.007	3.374	
Size	-0.166	1.153	0.055	3.645	R = 0.985
Turn (%)	-0.030	-0.217	0.029	5.672	R^2 = 0.962
P (%)	-0.365	2.778	0.008	8.563	adjusted R^2 = 0.932
Rank (%)	0.144	0.983	0.033	6.352	

B is the regression coefficient; Sig represents the significance of T-test. All P values in Table 4 are less than 0.05, indicating that the independent variable has a significant impact on the dependent variable. VIF is an indicator of collinearity diagnosis. All VIFs in Table 4 are less than 10, indicating that there is no possibility of multicollinearity. R represents the goodness of fit of the prediction model, R^2 represents the explanatory degree of the prediction model, and adjusting R^2 is a further modification of R^2, which can explain the results more accurately. The regression equation can be obtained by regression coefficient B:

$$UP = -0.166Size + 0.144Rank - 0.03Turn - 0.365P - 0.377COUNTRY - 7.803$$

Through the prediction model, it was found that the regression coefficient of the underwriter's prestige was 0.144, p = 0.033, indicating that the underwriter's prestige had a significant positive impact on the first-day underpricing rate. the higher. The main issuers of IPO companies are underwriters with higher prestige, so the higher the prestige of the underwriters, the easier it is to increase the underpricing rate on the first day of the IPO. The regression coefficient of IPO issuance size is -0.166, p = 0.025, indicating that issuance size has a significant negative impact on the first-day underpricing rate. The more IPO issuance, the lower the first-day underpricing rate. When there are more IPO offerings, merchants have more buying options, so the underpricing rate per company becomes lower. The regression coefficient of the first-day turnover rate is -0.03, p = 0.029, indicating that the turnover rate has a significant negative impact on the first-day underpricing rate. The higher the turnover

rate, the lower the IPO underpricing rate. When merchants are dissatisfied with an IPO company, they will change hands, so companies with higher turnover rates have lower IPO underpricing rates. The regression coefficient of the price-earnings ratio is -0.365, p = 0.008, indicating that the price-earnings ratio significantly negatively impacts the underpricing rate on the first day. The higher the price-earnings ratio, the lower the underpricing rate of IPOs. When the price-earnings ratio is high, it indicates that merchants can exchange lower costs for higher returns, and the underpricing rate of IPOs also decreases. The regression coefficient for the country is -0.377, p = 0.007, the country variable has a significant negative impact on IPO underpricing rate.

Conclusion

In conclusion, this paper examines the factors of excessive IPO price-suppression in China in the context of a market with excessive IPO price-suppression in China. In this paper, five factors, namely IPO issue size, IPO underwriters' prestige, P/E ratio, first-day trading rate, and country differences, were selected for the IPO price suppression study. The data analysis shows that all five factors have an impact on IPO price suppression. Except for underwriters' prestige, which has a positive effect on IPO price suppression, the other four factors have different degrees of negative effects on IPO price suppression.

Compared with the highly market-oriented IPO process in foreign countries, the listing system in the Chinese capital market contains more regulatory factors. Whether under the approval system or the existing registration system, the regulatory review has always been a special arrangement in the Chinese listing system. If China wants to reduce the price suppression rate of IPO in China, firstly, strengthen the information disclosure, moreover, ensure the authenticity and validity of information, which can reduce the turnover rate on the first day of listing; secondly, strengthen the level of audit, strictly control the threshold of audit, make a comprehensive judgment on the assets of enterprises, correctly estimate the value of enterprises, and reduce the price suppression rate of IPO by reducing the P/E ratio; thirdly, publish the prestige ranking of domestic trading institutions to strengthen investors' confidence and reduce speculative investment. This paper still has some shortcomings, and hope that future scholars can continue to study it.

References

Baron, D. (1982). A model of the demand for investment banking advising and distribution services for new issues. *Journal of Finance*, *37*(4), 955-976, https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1540-6261.1982.tb03591.x

Beatty, R. P., & Ritter, J. R. (1986, January). Investment banking, reputation, and the underpricing of initial public offerings. *Journal of Financial Economics*, *15*(1-2), 213-232, https://www.sciencedirect.com/science/article/pii/0304405X86900553

Bottenberg, M. (2016). What drives differences in underpricing between the US and China? https://www.diva-portal.org/smash/get/diva2:908740/FULLTEXT01.pdf

Ibbotson, R, (1975). Price performance of common stock new issues. https://ideas.repec.org/a/eee/jfinec/v2y1975i3p235-272.html

Koh, F., & Walter, T. (1989). A direct test of Rock's model of the pricing of unseasoned issues. *Journal of Financial Economics*, *23*(2), 251-272, https://www.sciencedirect.com/science/article/abs/pii/0304405X89900585

Levis, M. (1990, March 1). The winner's curse problem, interest costs and the underpricing of initial public offerings. *The Economic Journal*, *100*(399), 76-89, https://doi.org/10.2307/2233595

Loughran, T., & Ritter, J. (2004). Why has IPO underpricing changed over time? *Financial Management*, *33*(3), 5-37, https://www.jstor.org/stable/3666262

Rock, K. (1986). Why new issues are underpriced. *Journal of Financial Economics*, *15*(1-2), 187-212, https://www.sciencedirect.com/science/article/abs/pii/0304405X86900541