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Analyst Attention, Institutional Investor Sentiment and IPO Pricing Efficiency

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Abstract: Against the backdrop of the continuous deepening of the registration-based reform and the emphasis on self-reliance and self-strengthening in science and technology in the 15th Five-Year Plan, the IPO pricing efficiency of the STAR Market, as a core board serving hard-tech enterprises, has become a key issue of concernin the capital market. This paper takes the listed companies on the STAR Market from 2019 to 2024 as the research sample and systematically examines the impact of analysts' concerns on the IPO pricing efficiency and its mechanism of action. Research has found that analysts' attention has reduced the efficiency of IPO pricing. Further research has revealed that analysts' attention, by enhancing the sentiment of institutional investors, has exacerbated the degree of IPO underpricing, verifying that analysts have a tendency to cater to institutional investors and amplify irrational market demands during the information transmission process. The research conclusions of this paper have certain theoretical significance and practical implications for regulating the professional conduct of analysts, improving the information disclosure system, and enhancing the IPO pricing efficiency under the registration system.

Keywords: Analyst Focus; IPO Pricing Efficiency; Institutional Investor Sentiment; Registration-Based Reform

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1. Introduction

The year 2026 marks the beginning of the 15th Five-Year Plan, and self-reliance and self-strengthening in science and technology have been established as a core national strategy. As a "test field" for serving scientific and technological innovation, the STAR Market has seen over 600 listed companies since its opening in 2019, becoming a gathering place for hard-tech enterprises. From the perspective of the market operation cycle, the current market is in the middle of the third stage of a complete upward cycle. Valuations are being reassessed, market divergence is increasing, and industry differentiation is significant. Sectors with high growth in performance will achieve excess returns. The technology sector has a significant performance advantage and may become a hot investment option. Meanwhile, the registration-based reform has been continuously deepened, the overall plan for the "1+6" reform of the STAR Market has been implemented, and the marketization degree of the IPO pricing mechanism has been constantly enhanced. Regulatory authorities have made it clear that institutional investors such as social security funds can participate in strategic placement, including institutional investors in the scope of strategic investors and strengthening their pricing power in new share issuance. Against this backdrop, how to enhance the pricing efficiency of IPOs on the STAR Market is an important issue that urgently needs to be addressed as

China's capital market gradually matures.

At present, the market pricing efficiency is mainly measured by the rate of return on issuance and listing (Rock, 1986), and the existing literature on pricing efficiency roughly starts from the following three aspects: The first aspect is how to solve the problem of "unclear value". Among them, analysts are important information intermediaries in the capital market and have a significant impact on market pricing. Analysts can significantly reduce the information friction between issuers and investors by unearth and "translate" the true value of a company through actions such as releasing research reports and conducting on-site investigations. Foreign scholars have pointed out that the coverage of analysts can enhance the reflection of IPO prices on the fundamentals of companies, thereby reducing the level of underpricing (Givoly and Lakonishok, 1979; Lys and Sohn, 1990). However, some studies have found that analysts colluded with institutional investors, leading to pricing deviations (Xu Nianxing et al., 2012; Shao Xinjian et al., 2018). Guan Feng et al. (2024) further discovered that the correlation between analysts and institutional investors is a key factor influencing the direction of their actions. The second aspect is to make "pricing more reasonable". Generally, from the institutional perspective, Guo Xuan et al. (2025), based on the pilot program of the registration-based reform of the Growth Enterprise Market, used the difference-in-differences method to study and found that the registration-based reform significantly improved the IPO pricing efficiency by enhancing the quality of information disclosure, verifying that high-quality information disclosure is a key factor in improving market pricing efficiency. The research by Lai Li et al. (2022) indicates that market-oriented reforms can enhance the pricing efficiency of the Chinese market, and the registration-based IPO reform has positive institutional effects. Wu Xihao and Zhang Chi (2022) found from the perspective of IPO underpricing rate that the registration-based reform has a significant impact on the pricing efficiency of the capital market. Xue Shuang and Wang Yu (2022) found through text analysis of responses to inquiry letters on the STAR Market that responses to inquiry letters can enhance the efficiency of IPO pricing, and their mechanism of action is related to the divergence in quotations among institutional investors. The third aspect is "how to influence pricing". Underwriter behavior, institutional and retail investor sentiment, corporate governance, and investor speculation all belong to important factors influencing pricing in the market. Among them, regarding the behavior of institutional investors, some scholars believe that institutions use their inquiry rights to make the issue price closer to the intrinsic value, and they also believe that an increase in the shareholding ratio of institutional investors can effectively play a supervisory and governance role and improve pricing efficiency (Gao et al. (2020). However, when the shareholding ratio is too high and there is a long-term business relationship with the underwriter, it is easy to have a supportive quote, believing that it will push up the issue price and increase the risk of long-term price breaking (Ljungqvist, A., Nanda, V., & Singh, R., 2006). The higher the proportion of institutional shareholding, the more significant the herd effect, which is prone to trigger buying high and selling low, leading to short-term overreaction in IPO pricing and reducing pricing efficiency (Gompers, P. A., & Metrick, A., 2001).

This paper mainly focuses on the first and third directions. Due to the differences in knowledge and information acquisition between investors and issuers, investors often find it difficult to fully and accurately assess the true value of IPO companies, resulting in pricing deviations. Under the traditional approval system, the issue price is often artificially depressed to attract investors to participate, resulting in a frequent sharp increase in the price of new stocks after their listing. Although the registration system has enhanced market transparency and analysts' attention has to some extent disclosed corporate information, information asymmetry and irrational market behavior still pose challenges to IPO pricing. Moreover, the impact of IPO underpricing by institutional investors in the primary market and individual investors in the secondary market is not the same. Therefore, research analysts' attention to the impact of institutional investors in the primary market on the efficiency of IPO pricing and its mechanism of action can not only provide valuable policy references for improving the quality of information disclosure in securities issuance, but also help reveal the deep mechanism of IPO pricing under the registration system, further enriching academic research on IPOs in China's stock market.

2. Theoretical Analysis and Research Hypotheses

2.1 Analyst Focus and IPO Pricing Efficiency

Under the registration system, the degree of information disclosure has gradually increased. Based on the value discovery hypothesis, analysts, through their professional information collection capabilities, can provide the market with incremental

information related to company value and reduce the degree of information asymmetry between investors and IPO companies (Givoly & Lakonishok, 1979; Lys & Sohn, 1990). In the context of IPOs where information asymmetry is particularly severe, companies listed on the STAR Market have characteristics such as short establishment time, novel business models, and a lack of comparable companies, making valuation and pricing more difficult (Guan Feng et al., 2024). At this point, the participation of more analysts means a greater supply of information and cross-validation, which helps to form more accurate price discoveries. Meanwhile, competition among analysts can also curb the extreme predictions of individual analysts, making market pricing more reasonable (Hong et al., 2000). Furthermore, analysts' attention can attract investors' attention, prompt more market participants to focus on IPO companies, and thereby enhance the information efficiency of market pricing (Bajo & Raimondo, 2017). However, based on the conflict of interest hypothesis, analysts are not completely independent information intermediaries, and their behaviors are influenced by multiple interest relationships (Mehran & Stulz, 2007; Ramnath et al., 2008). During the IPO issuance process, underwriters and issuers have a strong motivation to raise the issue price, while institutional investors hope to lower the issue price to obtain higher returns. The main service targets of analysts are institutional investors, and their income is directly linked to the transaction commission allocation of institutional investors and the New Fortune selection (Firth et al., 2013; Gu et al., 2013), thus there is a tendency to cater to the interests of institutional investors. Especially when analysts have alumni, same-location or commission relationships with institutional investors, they are more likely to issue biased forecast prices and collude with institutional investors to jointly depress the IPO issue price (Guan Feng et al., 2024). Shao Xinjian et al. (2018) found that analysts colluded to overestimate in IPO pricing. More analysts' attention means more possibilities of collusion, which may intensify the degree of IPO underpricing and undermine pricing efficiency.

H1: Under the condition that other factors remain unchanged, analyst attention is significantly positively correlated with the IPO underpricing rate, that is, the increase in analyst attention reduces the IPO pricing efficiency.

2.2 Analyst Focus, Institutional Investor Sentiment and IPO Pricing Efficiency

Under the institutional background of the registration-based reform in China's capital market, securities analysts, as key information intermediaries, are playing an increasingly important role in the IPO pricing process. Meanwhile, prospect theory holds that investors are more likely to prefer investing in lottery stocks with positive skewness in returns, just like the IPO stocks under the registration system implemented on the STAR Market: On the one hand, compared with listed stocks, a portion of the value of IPO stocks exists as call options, and their returns have a positive skewness, which is more attractive to investors (Green and Hwang, 2012; Chen and Zheng, 2021); On the other hand, compared with IPO stocks that have price fluctuation limits under the approval system, IPO stocks under the registration system have no price fluctuation limits in the first five days of listing, and their returns are more positively skewed, with a higher probability of achieving greater investment returns, which is more attractive to investors. In reality, the prevalence of IPO underpricing has led market investors to generally form a fixed perception that "subscribing to new shares guarantees profits", and analysts' attention has further magnified this market expectation, continuously stimulating investors to participate in new share subscriptions and secondary market transactions. First, as the core body of the offline allocation of the STAR Market, institutional investors, under the guidance of the optimistic value signals and high growth expectations continuously released by analysts, will not only significantly increase the offline subscription intensity in the face of the potential new share subscription returns of the STAR Market, but also make early arrangements for secondary market transactions to seize excess returns, thereby pushing up their own allocation ratio and optimistic sentiment. Meanwhile, most of the enterprises listed on the STAR Market are technology innovation companies with novel business models and high valuation difficulties. Institutional investors highly rely on professional research reports from analysts to judge their value. The higher the analysts' attention, the more concentrated the value information institutions can obtain, and their optimism also rises accordingly. Secondly, subsequent investors who enter the market will blindly follow the previous market trading heat and the trading behaviors of institutional and individual investors when making decisions on new share trading. This further promotes the continuous fermentation and rise of optimistic sentiment, ultimately driving the closing price of new shares on the first day of listing on the STAR Market to rise significantly, widening the gap between the issue price and the closing price, and intensifying the degree of IPO

underpricing. Based on the above analysis, this paper proposes the following assumptions:

H2: Under the condition that other factors remain unchanged, analysts focus on enhancing the sentiment of institutional investors, intensifying IPO underpricing, and reducing pricing efficiency.

3. Research Design

3.1 Sample Selection and Data Sources

This paper takes the listed companies on China's STAR Market from 2019 to 2024 as the initial research samples and conducts the following processing: (1) Exclude enterprises with abnormal trading such as ST and PT; (2) Exclude enterprises in the financial and real estate sectors; (3) Eliminate samples with missing values; (4) To control the influence of outliers, on the basis of eliminating missing values, the continuous variables were truncated by 1% above and below, and finally 567 pieces of observed data were obtained. The data is from the CSMAR database and Wind database.

3.2 Variable Selection and Model Design

3.2.1 Variable Selection

(1) IPO pricing efficiency (UP). When measuring the pricing efficiency of an IPO, in order to directly reflect investors' initial value perception bias of the enterprise and avoid long-term market noise interfering with the assessment of pricing efficiency, this paper refers to (Lai Li et al., 2022) and selects the IPO underpricing rate constructed based on the first-day window. The calculation formula is

$$\frac{P_1-P_0}{P_0}$$

and take the logarithm of it for processing, and P_0 is issue price, P_1 is closing price on the first day of listing.The larger the UP value is, the lower the issue price is compared to the market price on the first day, and the higher the degree of IPO underpricing.

(2) Analyst Focus Breadth (Analyst_Breadth). This article takes the IPO issuance date as the benchmark and counts the number of analysts who have released research reports within three months prior to the issuance date. The data is sourced from the Wind database.

(3) Institutional investor sentiment. This article refers to (Li Ke et al., 2023) and uses the shareholding ratio of institutional investors to measure the sentiment of institutional investors. The specific numerical calculation method is the ratio of the number of new shares allocated offline to the number of valid offline subscriptions.

(4) Control variables. The specific control variables are shown in Table 1.

Table 1. Variable Definition Table

Project	Variable name	Variable symbol	Variable definition
The explained variable	IPO pricing efficiency	UP	Ln (Closing price on the first day of listing/ Issue price-1)
Mediating variable	Institutional investor sentiment	Investors	The number of shares allocated through the offline placement of the IPO/The number of valid offline subscription shares×100%
Explanatory variable	The breadth of analysts' attention	Analyst_Breadth	The number of analysts paying attention to in the three months before an IPO
Control variable	Company scale	In_Size	The natural logarithm of total assets at the end of the year prior to listing (Unit: Ten thousand yuan)
	Retrun on net assets	ROE	Return on Net Assets for the Year Prior to Market Launch
	Whether it has been audited by the Big Four	Big4	Dummy variable: 1 if the auditor is one of the Big Four accounting firms; otherwise, 0

Project	Variable name	Variable symbol	Variable definition
	Asset-liability ratio	Leverage	The total liabilities at the end of the year prior to listing divided by the total assets at the end of the year
	Issuance pricing level	asinh_Pricing	Perform an inverse hyperbolic sine transformation on the diluted initial public offering price-earnings ratio
	Turnover rate on the first day of listing	Turnover	Trading volume on the first day of listing/Circulating share capital×100%
	Research and development investment	RD	Research and development expenses/Operating income
	The winning rate of online issuance	HitRate	The winning ratio for online IPO subscription
Virtual variable	Industry dummy variable	INDUSTRY	Set dummy variables for listed companies
	Year dummy variable	Year	Set dummy variables by year

3.2.2 Model Design

To test Hypothesis 1 of this paper, a regression model (1) is set up. Among them, the core explanatory variable is the number of analysts (Analyst_Breadth) who paid attention to the enterprises listed on the STAR Market in the three months prior to their IPOs.$CONTROL_M$ represent a collection of control variables，At the same time, the fixed effects of Year and INDUSTRY are added to the model. ε represents the random error term, and the standard error is adjusted by clustering at the enterprise level.

$$UP=\beta_0+\beta_1 Analyst\_Breadth+\sum \beta_m CONTROL_M+\sum \beta_i INDUSTRY_i+\sum \beta_j Year_j+\varepsilon \quad (1)$$

Analysts are concerned that the mechanism of enhancing institutional investors' sentiment can lead to an increase in IPO underpricing rates and a decline in pricing efficiency. Referring to the research of Li Ke et al. (2023), this paper constructs model (2) for mechanism testing.

$$Investors\_hold=\beta_0+\beta_1 Analyst\_Breadth+\sum \beta_m CONTROL_M+\sum \beta_i INDUSTRY_i+\sum \beta_j Year_j+\varepsilon \quad (2)$$

3.3 Descriptive Statistics

Table 2 reports the descriptive statistical results of the main variables. The results show that during the sample period, the average value of analyst attention was 4.490, the median was 2.000, and the standard deviation was 5.860, indicating that on average, approximately 4.49 analysts followed the sample companies during the IPO period, but there were significant differences among different companies. This distribution characteristic is basically consistent with existing studies and also provides a basis for us to test the heterogeneous impact that analysts are concerned about. The average value of the IPO underpricing rate was 1.235, the median was 0.874, the minimum was -0.298, and the maximum was 6.598. This indicates that during the sample period, there was a common phenomenon of high underpricing on the first day of listing of new stocks. However, there was a significant differentiation among different companies, and some companies even experienced price drops below the issue price. This feature provides sufficient variation for studying the influencing factors of pricing efficiency. The average value of institutional investor sentiment is 16.963, the median is 11.369, the standard deviation is 15.976, and the maximum value is 73.902. This indicates that the average shareholding ratio of institutional investors after an IPO is approximately 17%, but there are significant differences among different companies. Some companies have attracted a large number of institutional investors, while others have received almost no interest from institutions. This distribution feature provides a good data basis for us to examine the mechanism effect of institutional investor sentiment between analyst attention and pricing efficiency.

Table 2. Descriptive Statistics of Main Variables

	N	Sum	Mean	SD	Min	Max	Median	p75
Analyst Breadth	569	2555.000	4.490	5.860	0.000	27.000	2.000	6.000
UP	569	702.675	1.235	1.321	-0.298	6.598	0.874	1.762
Investors hold	569	9651.890	16.963	15.976	0.013	73.902	11.369	26.118
HitRate	569	22.570	0.040	0.016	0.024	0.150	0.037	0.045
RD	569	26552.284	46.665	93.140	0.000	421.780	9.330	18.340
In Size	569	11835.553	20.801	0.985	19.183	24.381	20.586	21.302
ROE	569	535.628	0.941	9.810	-52.890	22.411	2.355	5.949
Big4	569	61.000	0.107	0.310	0.000	1.000	0.000	0.000
Leverage	569	180.666	0.318	0.197	0.042	0.800	0.280	0.462
Asinh Pricing	569	2380.991	4.185	1.523	0.000	6.841	4.453	4.888
Turnover	569	12.577	0.022	0.019	0.002	0.094	0.017	0.027

4. Empirical Analysis

4.1 Benchmark Regression Results

Based on Model (1), this paper conducts regression calculations, and the results are shown in Table 3. The results show that the coefficient of analyst attention is 0.023 in column (3), which is significant at the 5% level. This indicates that after controlling for other factors and unobstructed heterogeneity, the higher the analyst attention, the higher the IPO underpricing rate, that is, the lower the IPO pricing efficiency. This result supports research hypothesis H1.

Table 3. Analyst Concerns and IPO Underpricing

	(1)	(2)	(3)
	UP	UP	UP
Analyst_Breadth	0.018**	0.015	0.023**
	(0.008)	(0.011)	(0.009)
In_Size		-0.259***	-0.200***
		(0.075)	(0.067)
ROE		0.014***	0.009**
		(0.005)	(0.005)
Turnover		-6.828***	-1.873
		(2.374)	(2.199)
Big4		0.379**	0.298**
		(0.186)	(0.150)
Leverage		1.657***	1.061***
		(0.313)	(0.264)
asinh_Pricing		-0.100**	-0.052
		(0.043)	(0.037)
HitRate		-8.272	-0.442
		(5.074)	(4.338)
RD		-0.001**	-0.001*
		(0.001)	(0.001)
Constants	-0.183***	5.557***	3.872***
	(0.055)	(1.494)	(1.353)
Industry Fixed	No	No	Yes
Year Fixed	No	No	Yes
Observed value	567	567	567
Adjusted R^2	0.280	0.107	0.306

Note: ***, ** and * represent significance levels of 1%, 5% and 10% respectively, with T values in parentheses. All coefficients have been corrected for robust standard errors.

4.2 Mediating Effect

This paper refers to the mediating effect analysis method proposed by Jiang Ting (2022) to examine the specific mechanism of the impact of enterprise digital transformation on stock price synchronicity. The core idea of this mediating effect test is to first conduct a regression test to examine the causal relationship between the explanatory variable and the mediating variable, and then explain the influence of the mediating variable on the explained variable through existing theoretical and literature research conclusions, thereby determining whether a mediating effect exists. The results show that after controlling for industry and year fixed effects, the coefficient of analyst attention in column (3) is 1.024, which is significantly positive at the 1% level, indicating that the higher the analyst attention, the higher the sentiment of institutional investors.

Regarding the impact of institutional investor sentiment on the IPO underpricing rate, existing research has provided solid theoretical support. The "Ownership dispersion Hypothesis" holds that IPO underpricing increases the number of shareholders and ownership dispersion by attracting more investors to subscribe and leading to proportional allocation during the placement process. That is, the underpricing rate is positively correlated with the breadth of ownership (Bouzouita et al., 2015). From the perspective of corporate governance, it has been proved that the issuer intentionally attracts institutional investors to hold shares by underpricing in exchange for its supervisory function after listing. Underpricing is a rational choice to attract institutional holdings (Stoughton and Zechner, 1998). In domestic research, for companies with a higher proportion of institutional investors' holdings, the market pricing efficiency is more significantly affected by the quality of interaction, indirectly confirming the important role of institutional holdings in the pricing process (Bian Shibo et al., 2022). The above theories jointly indicate that there is an inherent positive correlation between the shareholding ratio of investors and the IPO underpricing rate. Therefore, it is theoretically valid for analysts to focus on the transmission mechanism that boosts the sentiment of institutional investors, thereby increasing the underpricing rate of IPOs and reducing pricing efficiency. Based on the empirical results in Table 3 and Table 4, the core hypothesis H2 is thus supported.

Table 4. Intermediary Role of Institutional Investors' Shareholding Ratio

	(1)	(2)	(3)
	Investors_hold	**Investors_hold**	**Investors_hold**
Analyst_Breadth	0.949***	0.954***	1.024***
	(0.124)	(0.136)	(0.122)
In_Size		0.386	-1.530**
		(0.771)	(0.774)
ROE		0.029	0.083
		(0.066)	(0.062)
Turnover		48.935	12.692
		(39.765)	(38.983)
Big4		-3.797*	-2.036
		(2.212)	(2.014)
Leverage		-3.199	3.021
		(3.669)	(3.901)
asinh_Pricing		0.938*	0.955**
		(0.493)	(0.463)
HitRate		-114.253***	-49.305
		(41.067)	(37.601)
RD		0.016**	0.005
		(0.007)	(0.007)
Constants	12.724***	4.817	40.867***
	(0.745)	(15.133)	(15.113)

	(1)	(2)	(3)
	Investors_hold	**Investors_hold**	**Investors_hold**
Industry Fixed	No	No	Yes
Year Fixed	No	No	Yes
Observed value	567	567	567
Adjusted R^2	0.190	0.130	0.212

Note: ***, ** and * represent significance levels of 1%, 5% and 10% respectively, with T values in parentheses. All coefficients have been corrected for robust standard errors.

4.3 Robustness Test

(1) Other methods for measuring IPO underpricing. The measurement method of IPO underpricing has a significant impact on the analysis and final conclusion of this paper. To ensure the robustness of the results, this paper redefines IPO underpricing as: (the closing price of the 30th trading day of the new share listing - the issue price of the new share)/the issue price of the new share. The regression results show that the regression coefficient in Table5 (1) is significantly positive, indicating that the higher the analyst's attention, the more significantly the underpricing of new ipos on the STAR Market increases. After changing the measurement method of IPO underpricing, the empirical conclusion still remains robust and reliable.

(2) Replace the explanatory variable. The number of people analysts focus on is usually right-skewed. To avoid affecting the analysis results of this paper, the logarithmic processing method will be adopted. The results are shown in Table 5 (2), and the regression coefficient is significantly positive. At the same time, a dummy variable Analyst_Dummy is constructed. If an analyst releases a research report or conducts a survey, the value of Analyst_Dummy is 1, indicating that there is an analyst's concern. Otherwise, the value is 0, indicating that no analysts are paying attention. This variable only focuses on "whether there is" analyst tracking to test the impact of the analyst's attention to this behavior itself on the IPO pricing efficiency. The results are shown in Table 5 (3), and the regression coefficients are significantly positive. The empirical conclusion is consistent with the above benchmark regression.

Table 5. Robustness test results

	(1)	(2)	(3)
	UP_30	**UP**	**UP**
Analyst_Breadth	0.027***		
	(0.003)		
Analyst_Ln		0.164***	
		(0.021)	
Analyst_Dummy			0.207***
			(0.045)
Constants	2.333***	2.178***	1.727***
	(0.526)	(0.530)	(0.536)
Industry Fixed	Yes	Yes	Yes
Year Fixed	Yes	Yes	Yes
Observed value	567	567	567
Adjusted R^2	0.407	0.410	0.363

(3) Endogeneity test. Regression analysis shows that analysts' attention can significantly increase the IPO underpricing rate, and the increase in the IPO underpricing rate may in turn affect analysts' tracking decisions by attracting more investors' attention and stimulating market enthusiasm. It can be seen that there may be an endogeneity problem of mutual causality between analysts' attention and IPO pricing efficiency. Therefore, to address the endogenous bias caused by bidirectional causality, it is necessary to first control the interactive fixed effects between industries and years. Data statistics show that there are significant differences among IPO companies in different industries and years in China in terms of market

environment, regulatory policies, etc. Therefore, a fixed interaction effect between industries and years is set and controlled, and then a benchmark regression is conducted. The results are shown in column (3) of Table 3. The estimated coefficient is positive and significant at the 5% level, suggesting that even after excluding the interference of industry and annual macro factors, analysts' attention still has a positive effect on the IPO underpricing rate. This result remains robust.

Meanwhile, to further alleviate the possible endogeneity problem, this paper adopts the two-stage least squares method for regression and selects the average analyst attention of other companies in the same industry - quarter (IV_Analyst) as the instrumental variable. The construction logic of this instrumental variable lies in the fact that companies in the same industry and quarter face similar market environments and industry prosperity, and their analysts' attention is highly correlated, meeting the correlation requirements of the instrumental variable. Meanwhile, the attention paid by analysts from other companies will not directly affect the IPO pricing efficiency of this company, meeting the exogenous requirement. The regression results show that the F-statistic of the first stage of regression is 17.22, which is higher than the critical value of 16.38. Therefore, there is no need to consider the problem of weak instrumental variables. The estimation coefficient of the two-stage least squares method is positive and significant at the 1% level, indicating that on the basis of considering the endogeneity issue, the increase in analysts' attention does indeed lead to an increase in the IPO underpricing rate, that is, to reduce the IPO pricing efficiency. In conclusion, after controlling for the endogeneity issue, the core conclusion of this paper still holds true.

Table 6. Endogeneity Test

	(1)	(2)
	Analyst_Breadth	**UP**
IV_Analyst	0.452*** (0.109)	
Analyst_Breadth		0.161*** (0.044)
Controlled variable	Yes	Yes
Industry Fixed	Yes	Yes
Year Fixed	Yes	Yes
Kleibergen-Paap rk LM		22.8
Kleibergen-Paap rk Wald F		17.22
R^2	0.324	0.082

5. Conclusions and Suggestions

This paper takes the listed companies on the STAR Market of China's A-share market from 2019 to 2024 as the research object and systematically examines the impact of analysts' attention on the efficiency of IPO pricing and its mechanism of action. Research findings indicate that analyst attention is significantly positively correlated with the IPO underpricing rate, meaning that an increase in analyst attention significantly reduces the IPO pricing efficiency. Mechanism tests show that analyst attention boosts the IPO underpricing rate by increasing the shareholding ratio of investors. The above findings support that analysts' attention can influence IPO pricing by attracting investors' attention and stimulating irrational demand, rather than merely playing the role of information transmission. Therefore, based on the above test results, this paper puts forward the following policy suggestions for better leveraging the information intermediary function of analysts and enhancing the efficiency of IPO pricing under the background of the registration system:

(1) Strengthen the performance norms of analysts and other intermediary institutions, and solidify their market responsibilities. This paper's research indicates that analysts' attention has not enhanced pricing efficiency as expected by traditional theories; instead, it may intensify market speculation by attracting attention. Regulatory authorities should further clarify the boundaries of analysts' responsibilities during the research and release process and enhance their sense of diligence

and responsibility. At the same time, through appropriate institutional arrangements, analysts should be urged to better perform their functions of information mining and value discovery, rather than releasing inflammatory predictions to cater to market sentiment.

(2) Enhance the authenticity, relevance and readability of information disclosure during the process of new share issuance, and guide the market to return to value-driven. The information disclosure system should be investor demand-oriented, encouraging listed companies to proactively disclose relevant information that affects their decisions from the perspective of investors, and achieving a shift in the focus of information disclosure from “supervisor-oriented” to “investor-oriented”. In addition, information disclosure should highlight differentiation, with stratified disclosure based on the characteristics of different industries and enterprises of different scales, to enhance the readability and decision-making usefulness of information, and effectively reduce the behavioral tendency of investors to overly rely on the attention of analysts due to a lack of information.

(3) Strengthen the education and protection of investors and gradually optimize the structure of market investors. Under the premise of maintaining market stability, we will continue to expand and optimize the institutional investor team, give full play to its function as a market stabilizer, guide long-term funds to enter the market through institutional design, gradually optimize the structure of market participants, and enable professional institutions to play a greater role in price discovery. In addition, customized investor education programs can be implemented to enhance investment knowledge education for individual investors. Regular publicity activities on rational investment and risk prevention should be carried out to guide them to establish a long-term investment concept and reduce blind pursuit of short-term hotspots.

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The authors declare that there is no conflict of interest regarding the publication of this paper.

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