

# *The Impact of Public Opinion Response of Beauty Listed Companies on Stock Prices*

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**Abstract.** With the development of the Internet and online shopping, the existing research mainly focuses on the stock price changes after the emergence of public opinion, but the impact of the company's public opinion response on the stock price has not been fully considered. This paper selects six typical beauty listed companies as research samples and applies the event study method to collect stock price data before and after public opinion events, as well as corporate responses. Through the short-term event study method, the results show that the quality of the company's public opinion response has a significant impact on the stock price. Among them, the average cumulative abnormal rate of return in the high-quality response group within 7 trading days after the response is 0.302, while the average in the low-quality response group is 0.023, and the average difference between the two groups is 0.279, which has obvious economic significance. The findings expand relevant theoretical research on crisis communication and capital market reactions and provide quantitative references for listed beauty enterprises to optimize public opinion response strategies.

**Keywords:** beauty listed companies, public opinion response, stock price

## **1. Introduction**

With internet penetration and booming online shopping, beauty products mainly rely on e-commerce for sales. Characterized by fast product iteration and high consumer brand sensitivity, listed cosmetic firms easily fall into brand crises once hit by negative news about product defects or inappropriate executive remarks, as negative information spreads rapidly across social media [1]. A firm's official public opinion replies shape online word-of-mouth and public sentiment and further drive stock volatility via shifting investor expectations [2]. Most existing studies examine stock fluctuations triggered by public opinion outbreaks or discuss corporate CSR strategies from a macro perspective [3]. Against such a context, this paper targets unanswered questions concerning how reply timing, content, and patterns affect abnormal share volatility and identifies optimal response schemes to mitigate adverse market shocks.

The existing research on the interaction between public opinion and the capital market has formed a relatively rich achievement system. Early studies mostly focused on the market shock effect of negative public opinion events themselves, and network public opinion had a significant short-term impact on the stock prices of listed companies during the crisis [4]. Major negative public

events will trigger sharp fluctuations in the share prices of related enterprises [5]. With the popularity of social media, scholars began to pay attention to the role of online sentiment in stock price transmission [6]. Using deep learning and data mining technology, the literature has confirmed that social media sentiment can effectively improve the accuracy of stock market forecasting [7]. Public emergencies affect the internal mechanism of stock price synchronization through public opinion transmission [8]. Existing literature has discussed the efficiency of governmental new media replies and the brand-building function of social platforms, yet few studies focus on corporate active response behaviors [9].

Previous scholars have analyzed the market consequences of negative public sentiment from three dimensions: event severity, corporate social responsibility performance, and social media atmosphere, but few empirical analyses target the beauty industry, an industry extremely vulnerable to online criticism. To fill this research gap, this paper selects six typical listed cosmetic enterprises and applies the event study method based on the market model. It collects stock data surrounding public incidents and corporate replies to calculate CAR values and unpack how multiple response features affect share volatility. The findings extend crisis communication research from consumer attitudes to capital market feedback theoretically and supply reliable quantitative evidence for cosmetic firms to design targeted emergency response strategies in practice, helping stabilize corporate market value amid sudden public risks.

## 2. Research design

### 2.1. Data sources and model setting

Required data are collected from two categories: public opinion information and capital market transaction data. In terms of the public opinion data layer, the study collected relevant discussion content from social media platforms and news reports released by mainstream news media [10]. These data reflect the emotions, concerns, and information dissemination characteristics of market participants. In the capital market data layer, the research obtained stock price and trading data, specifically from Yingwei Finance, including daily frequency trading data of individual stocks and market indices, as well as related price derivatives. By integrating the above public opinion data with capital market transaction data, this paper constructs an empirical data set for analyzing the interactive relationship between market sentiment and stock price. This paper uses the market model to carry out event research, and the market model is set as follows:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \quad (1)$$

Among them is the actual return of stock  $i$  on day  $t$ ,  $R_{mt}$  is the return of the market portfolio on day  $t$ ,  $\alpha_i$  and  $\beta_i$  are the estimation parameters, and it is the random error term. The normal rate of return is calculated through the estimation window, and the abnormal rate of return is obtained by the difference between the actual rate of return and the normal rate of return in the event window, and then the cumulative abnormal rate of return is calculated to test the short-term impact of public opinion events on stock prices.

## 2.2. Sample acquisition

The sample acquisition for each company is as follows: First, the public opinion incident involving Shanghai Shangmei Cosmetics Co., Ltd. occurred on December 25, 2025. CCTV-2's "Economy Half Hour" reported that third-party testing revealed two Hanxue facial masks contained the banned ingredient epidermal growth factor, sparking strong public concerns about product safety. On December 27, 2025, the company firmly denied adding EGF through its official Weibo statement, stating that it had initiated a self-inspection and presented testing reports from the Shanghai Medical Products Administration's Inspection Bureau and SGS to prove that it was "not detected". However, the results of the CCTV inspection contradicted the official self-inspection results. At the same time, the media revealed that the R&D expense rate of Shangmei Corporation was only 2.51%, and the sales expense rate was as high as 58%, further exacerbating external doubts about the "heavy marketing, light R&D" model.

Secondly, the public opinion incident of Juzi Biotechnology Holdings Limited occurred on May 24, 2025. The blogger "Dr. Big Mouth", who holds a PhD in chemistry, posted a document directly pointing out that the labeling of the recombinant collagen content of its "collagen rod" product was suspected to be fake, with a detection value of only 0.0177%, far below the labeled 0.1%. The company responded multiple times through Weibo on May 24, June 1, 2025, and June 14, 2026, insisting that the product had passed the triple verification of "raw material feeding, production quality control, finished product testing" and claiming that the blogger's testing methods and samples had limitations and loopholes.

Thirdly, the public opinion incident of Huaxi Biotechnology Co., Ltd. occurred on May 17, 2025. The company's official WeChat account posted late at night, directly pointing out that the "outdated theory of hyaluronic acid" is a theme illusion constructed by impetuous capital, and specifically criticizing multiple securities firms' research reports for being the "platform" of Juzi Biotechnology and criticizing hyaluronic acid. On the day of the incident, the company stated its official WeChat account and subsequently accepted interviews with media such as Times Finance, refuting the "outdated theory" and emphasizing the irreplaceable core position of hyaluronic acid in the anti-aging field. At the same time, it countered that the company promoting the safety of recombinant collagen lacked three types of medical device certificates, and its safety demonstration lacked a basis.

Fourth, the public opinion event of Pelaia Cosmetics Co., Ltd. occurred on March 13, 2025. When the new evening news and other media reported that consumers complained about purchasing ruby essence, they only received 137.5ml of "182.5ml received" and found that the merchants had modified the propaganda page afterwards. The company responded by denying the modification of the page, arguing that consumers did not clearly distinguish the complex capacity options, and insisting that they only optimized and improved the text description to avoid misunderstandings.

Fifth, the public opinion incident of Aimeike occurred on August 14, 2025. 21st Century Business Herald reported that Jiangsu Wuzhong claimed 1.6 billion yuan from Aimeike due to the agency rights issue of "Tongyan Needle", triggering a commercial reputation crisis. In July 23 and around August, the company responded through Beike Finance and the Economic Observer, strongly condemning its partners as "counterfeiters" and emphasizing that termination of contracts is based on sufficient legal and contractual basis, and resolutely does not go with dishonest individuals.

Sixth, the public opinion incident of Shuiyang Corporation occurred on March 15, 2025. Shandong Business Daily reported that consumers experienced severe allergies and itching after using Yunifang products and questioned whether there were differences between the live broadcast

display and the physical standards. The brand explained the differences between live streaming and physical products, but failed to completely quell consumers' doubts about the consistency of quality control and promotion.

### 3. Empirical research

For the response efficiency, attitude, and consumer feedback after public opinion, the six companies are divided into a high-quality response group and a low-quality response group. Among them, the high-quality response group was Juzi biology, Huaxi biology, and Aimeike, while the low-quality response group was Peleya, Shangmei stock, and Shuiyang stock. Through Yingwei's financial information, the stock price data of each company 30 trading days before and after the event day, 30 trading days before and after the response day, and the historical data of the Shanghai Stock Exchange Index in the same period were obtained. Daily individual stock return is calculated as the change in closing price relative to the prior trading day's closing price. After integrating the above data, the short-term event study method was used to calculate the actual return rate, market return rate, and abnormal return rate of each company in sequence. The market return  $R_{mt}$  is calculated using the same method based on the Shanghai Composite Index. The abnormal rate of return  $AR_{it}$  is the difference between the actual rate of return and the normal rate of return estimated based on market models. The cumulative abnormal return rate  $CAR_{it}$  is the sum of abnormal returns within the event window. Based on the empirical observation of the seven-day propagation cycle formed under the background of frequent changes in network hotspots, this article extracts the cumulative abnormal returns of each group in the seven trading days after the response date and compares them with the mean.

The results show that within seven trading days after the public opinion response of beauty-listed companies, the average cumulative abnormal rate of return of the high-quality response group is 0.302, the average cumulative abnormal rate of return of the low-quality response group is 0.023, and the average difference between the two groups is 0.279. This difference is more obvious in the economic sense, indicating that the quality of public opinion response has a substantial impact on the short-term performance of stock prices. However, it should be pointed out that due to the sample size, this difference is not enough to make robust statistical inferences, only suggesting that there may be significant differences between the groups. The estimated results of the market model of each company are shown in Table 1.

Table 1. Rules to format sections

Company name	Model	Nonstandard coefficient		Standard coefficient	t	Sig.
		B	Standard error	Trial		
Aimeike	Constant	-0.002	0.002		-0.911	0.366
	Rmt	1.67	0.316	0.564	5.291	0
Huaxi biology	Constant	0	0.003		0.04	0.968
	Rmt	1.611	0.244	0.659	6.606	0
Juzi biology	Constant	-0.006	0.005		-1.257	0.214
	Rmt	2.096	1.015	0.273	2.066	0.044

Table 1. (continued)

Peleya	Constant	-0.002	0.001		-1.22	0.227
	Rmt	0.999	0.113	0.76	8.823	0
Shangmei stock	Constant	-0.004	0.004		-0.857	0.395
	Rmt	0.346	0.569	0.082	0.609	0.545
Shuiyang stock	Constant	0.001	0.003		0.493	0.624
	Rmt	1.44	0.26	0.617	5.54	0

Short-term cumulative abnormal return fluctuations for sampled firms are displayed in Figure 1, and the way of public opinion response has a significant impact on the stock price: the differences in the positive response group were higher than those in the negative response group. This shows that in the short term, after the occurrence of public opinion, the market is highly sensitive to the company's response behavior. Timely response, active communication, and other positive response methods can effectively alleviate the uncertainty of investors, reduce panic selling, and even attract short-term funds. The negative response of silence and avoidance will magnify market doubts, thus putting short-term pressure on stock prices. From a slightly long-term perspective, with analysis before and after seven days, the difference between the two groups widened further. In the positive response group, the car difference between Aimeike and Juzi biology continued to widen, and the market assigned a higher premium to positive-response companies after obtaining more information. In contrast, the negative response group data show that the market has made a negative correction for a little longer.

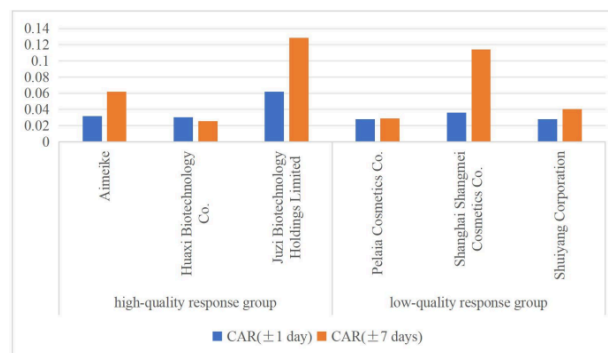


Figure 1. Comparison of cumulative abnormal returns (picture credit: original)

There are two main reasons for the difference. First, there is a time difference between information confirmation and fact exposure. The short-term market mainly prices the "response mode", while in the slightly long-term, more facts, such as the authenticity of public opinion and the impact on the company's fundamentals, are gradually becoming clear, so companies that respond positively and have favorable facts receive double rewards, while companies that respond negatively, even if the facts are neutral, the market is disappointed by information asymmetry. Secondly, in terms of the trust mechanism and the reputation effect. Positive response has established a short-term trust window, and investors are willing to wait for further verification of information. Negative responses trigger negative inferences, and the market assumes that the

company is "hiding something", so it will choose to continue avoiding or selling on subsequent trading days. Overall, public opinion responses affect short-term stock prices and determine market judgment of information credibility, further influencing long-term stock price recovery potential.

#### 4. Conclusion

This paper selects six typical listed cosmetic enterprises and adopts the event study method for empirical analysis. Empirical results confirm that public opinion response quality exerts remarkable influence on short-term stock performance. Within seven trading days after responses, the average CAR gap between high-quality and low-quality response groups reaches 0.279 with prominent economic implications. Timely, transparent and positive replies effectively ease investors' panic selling and lift share prices, while evasive or perfunctory responses trigger market doubts and bring downward stock pressure. The price impact differentiates across time horizons: the CAR divergence gradually widens from one day to seven days. In the short run, the market mainly prices corporate reply manners, whereas more factual information emerges over the medium term. Driven by information confirmation and reputation mechanisms, firms with sincere replies gain extra market premiums, and those with negative responses suffer persistent stock corrections.

Focusing on the public-opinion-sensitive cosmetic sector, this study fills existing research gaps that overlook firms' active public opinion intervention effects and only concentrate on original public opinion incidents. It expands the application scope of crisis communication theory in capital market research and enriches practical event-study literature on public opinion management, offering quantitative references for cosmetic firms to formulate scientific response plans. Restricted by a small sample of six listed companies, this research fails to thoroughly explore the mediating effect of social media sentiment. Future studies can expand sample coverage and introduce mediation models to further clarify the complete transmission path of public opinion responses on stock prices.

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