The Value of Rational Investor Decision Criteria in Determining the Significance and Compensation Amount of False Statements in Securities

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Abstract. Although price sensitivity standards provide a quantitative basis for determining materiality, they are difficult to fully reflect market complexity, and there is a lack of unified standards for systemic risk deduction, resulting in differences in judicial rulings. This article analyzes the problems in judicial practice, explores the value of rational investor decision-making standards, and proposes a 'Dual Track' path that organically combines them with price sensitivity standards. In terms of materiality determination, reference should be made to relevant provisions of the Securities Law for explicit processing, and specific quantitative standards should be set by combining with the DuPont analysis method; It is recommended to use scientific methods to eliminate the impact of systemic risks in determining the amount of compensation. The research aims to improve the mechanism for protecting the legitimate rights and interests of investors and listed companies, and provide theoretical and practical references for building a healthy and orderly securities trading market.

Keywords: False statements in securities, Materiality determination, Rational investor decision-making criteria, systemic risk deduction.

1. Introduction

1.1. Research Background

The price sensitivity standard provides a quantifiable standard for determining the significance of false statements in judicial practice, but prices are not sufficient to reflect the complexity of the securities market. However, the standard of a 'rational person' who is always careful and cautious is often difficult to quantify in reality [1].

At the same time, there is no clear and unified standard for the assessment of systemic risk deduction, and the assessment methods and sentencing results vary among courts and institutions. This is detrimental to protecting the legitimate rights and interests of investors and listed companies.

1.1.1 Judicial Basis and Disputes for Materiality determination

False information in misstatements can lead to changes in investors' decisions, thereby causing stock price fluctuations, and this fact is essential for determining materiality [2].

According to Article 10 of the "Several Provisions of the Supreme People's Court on the Trial of Civil Compensation Cases for False Statement Torts in the Securities Market" issued by China in 2022, the defendant's listed company may raise a defense by submitting sufficient evidence to prove that false statements did not cause significant changes in securities trading volume and prices [3].

For the price standard to become an important element, it refers to the effectiveness of the HALLIBURTON II case in maintaining market fraud theory, allowing the defendant to overturn the presumption of 'collective reliance [4]. However, there are also criticisms of the HALLBURTON case in the United States, among which some scholars believe that the case ignored the protection of the legitimate rights and interests of the plaintiff investors and the application of legal principles is also illogical [5]. Some scholars also believe that in the theory of behavioral finance, there are multiple types of information that can affect investor decisions, and insignificant false information is not enough to cause market price fluctuations [6].

1.1.2 Theoretical basis and controversy of systemic risk deduction

Article 31 of the "Several Provisions" clearly stipulates that if the defendant listed company can provide evidence to prove that the plaintiff's losses were partially or entirely caused by manipulation by others, systemic risks in the securities market, overreaction of the securities market to specific events, internal and external business environment of the listed company, and other factors, the court shall determine the corresponding exemption from or reduction of liability based on the magnitude of the causative force [7]. But there is no clear standard or scientific determination method for determining the magnitude of causal force.

It is also extremely necessary to protect the legitimate rights and interests of listed companies. As important participants in social and economic life, the importance of listed companies is self-evident. If, under changes in the macroeconomic environment, securities prices are affected by market panic, and the content of false statements leads to a significant drop in securities market prices beyond normal levels, it will result in excessive compensation liability for listed companies.

In recent years, it has become mainstream for Chinese courts to entrust professional institutions to assess case losses. Currently, there are various types of risk deduction assessment methods [8]. In previous years, the more mainstream methods of "relative proportional method" and "relative proportionality" were criticized for their simplicity and roughness. In recent years, emerging methods such as index comparison, modeling, and event analysis have had to entrust professional institutions to provide opinions due to their high professional requirements for adjudicators. Various institutions have different evaluation methods, and there is no unified standard stipulated by relevant laws and regulations.

1.2. Research Significance

The rational investor decision-making criteria have unique value in determining the significance of false statements and the amount of civil compensation. Herding behavior, psychological factors, and other interfering factors can indeed affect the decisions of some investors, but there are also truly rational investors in the market, and it is necessary to treat rational investors reasonably.

Similarly, the economic losses caused to shareholders by changes in the macro environment should not be borne by listed companies. It is necessary to establish a rational, scientific, and unified method to determine the proportion of civil liability borne by listed companies.

This article aims to study the significance and value of rational investor decision-making criteria in determining compensation amounts in securities misrepresentation cases.

2. Summary of Practical Problems

2.1. Overtolerance in the Securities Market

After the implementation of the "Several Regulations" in 2022, the core elements for determining the significance of false statements in securities in China are changes in price and trading volume. However, under the influence of some investors' preferences and delayed information transmission, securities prices often have delayed responses and inadequate transmission, resulting in no significant changes in stock prices and trading volumes after the disclosure or implementation date. In the above situation, mechanically applying price standards will allow malicious false statements to escape legal sanctions.

Meanwhile, there are significant differences in judgments in practice. In the case of Liu et al. v. a certain Company et al. regarding securities false statement liability dispute, the defendant argued that the determination of materiality did not cause significant fluctuations in the securities price due to false statements [9]. The court did not adopt the defense opinion and found that the false statements made by both companies were sufficient to cause a change in investors' decisions. However, in the Cefc Anhui International case, the situation is even more serious than the above two cases, and the financial data is severely distorted [10]. Cefc Anhui Company argued that the false statement did not affect the price and trading volume, and should not be deemed significant. The court adopted the defense opinion.

The three cases have similar circumstances, but the court holds different attitudes towards the determination of the significance of false statements, which shows the degree of confusion in the court. Some cases refer to rational investor decision-making standards, while others refer to price sensitivity standards. The dilemma faced by the court during the judgment process has not been improved after the implementation of the "Several Provisions".

2.2. Overreaction in the Securities Market

Macro market changes and fluctuations in the securities market are inevitable, such as the Great Depression in the United States in 1929, the financial crisis in 2008, and the tightening of policies in the Chinese securities market in 2015, all of which have had varying degrees of impact on the securities market. In the above situation, the impact of market panic will amplify the stock price decline caused by false statements of listed companies. In such cases, listed companies often receive excessive penalties.

For example, the case of Shanghai Great Wisdom Co., Ltd. occurred in the macro context of policy tightening in 2015, and the court only deducted 30% of the systemic risk at its discretion [11]. However, comparing the data of industry fluctuations during the same period, it was found that although the price decline of Great Wisdom was higher than that of its peers during the same period, the deduction of only 30% did indeed impose excessive responsibility on Great Wisdom Company. According to the comparison with peers during the same period, as shown in Table 1.

Table 1. Comparison of the rise and fall of the same period in the same industry after the disclosure of false statements by Shanghai Great Wisdom

Name	Annual Highest	Year-end closing	Price decline
Flush	187.87	71.05	-155.97%
East Money	102.84	52.03	-97.66%
Great Wisdom	35	12.82	-173.01%

Unit: Yuan

A similar case also occurred in the Founder Technology Group case, but the court adopted a relatively more scientific "simultaneous index comparison method" in the systemic risk deduction ratio, comparing the individual stock decline during each investor's holding period with the average decline of the reference index, and using the comparative example method to deduct the impact of systemic risk [12]. Finally, the systemic risk deduction ratios for the four defendants were determined.

In the Founder Technology case, investors also advocated for a method of uniformly deducting a certain percentage at the court's discretion, but the court found that this method did not take into account the specific market fluctuations during different trading periods of investors and lacked rationality, so it was not adopted [12]. The time and circumstances of the two cases are similar, and even the courts hearing the cases are consistent. However, there are significant differences in the calculation method of the systemic risk deduction ratio. Referring to Article 31 of the "Several Provisions", there is indeed no specific provision for the calculation method of related losses. Without a unified evaluation standard, it is easy to result in inconsistent judgments, which has a negative impact on the unity and predictability of the judiciary and the establishment of a barrier to protect the legitimate rights and interests of investors and listed companies.

3. Improvement Direction for the Dilemma of Rational Investor Decision-Making Criteria

3.1. Theoretical Dilemma and Necessity for Improvement

The rational investor decision-making criteria represent unclear and non-specific regulations in practice, which puts legal professionals lacking financial related professional knowledge in a dilemma when making judgments. There is also a significant gap in determining the significance of securities false statements and the amount of civil compensation. Some scholars argue that the rational investor decision-making criteria are merely rhetoric, and some scholars argue that there are no truly rational investors in reality, and they do not have any substantive role in practical guidance [13]. But the author believes that the number of rational investors will inevitably increase with the improvement of the national education level, and legal rationality is necessary. We cannot give up legal rationality just because we need to "solve" problems. Relying solely on criteria to determine the significance of false statements in securities may lead to inaccurate judgments and inadequate penalties may occur. In such a situation, by combining rational investor decision-making criteria with price sensitivity criteria, we first rationally examine whether the content of false statements will induce rational investors to make investment decisions. Secondly, we determine whether the disclosure of false statements will cause losses to investors' interests. Finally, we rationally penalize the false statements of listed companies based on price criteria.

3.2. Theoretical Improvement Direction - Explicit Processing

The rational investor decision-making standard has its unique value in determining the materiality of false statement information, but it needs to be clearly defined in accordance with Article 81 Paragraph 2 of the Securities Law of the People's Republic of China, making the judgment of the materiality of events concrete and digitized under the rational investor decision-making standard.

3.2.1 Clarify fault and intent

A distinction needs to be made between "negligent" false statements caused by minor negligence and "intentional" false statements caused by large, deliberate actions.

Financial adjustments caused by errors should not be deemed significant if their magnitude does not exceed 0.5%.

3.2.2 Determination of Penalty Red Line - Based on DuPont Analysis Method

The DuPont analysis method is:

Return on Equity (ROE) = Net Profit Margin on Sales × Total Asset Turnover × Equity Multiplier

The return on equity can comprehensively reflect the performance of a company's income statement, balance sheet, and financial leverage. The higher the return on equity, the stronger the company's profitability. Changes in these indicators will affect the decisions of rational investors.

For making false statements in financial statements, according to the formula:

Net Profit Margin on Sales = (Net Profit ÷ Sales Revenue) × 100%

Total Asset Turnover = (Sales Revenue ÷ Total Assets) × 100%

Equity Multiplier = Total Assets ÷ Shareholders' Equity

Determine key indicators, and if there are false statements that the net profit and net assets account for 15% or more of the original amount of the current period, they should be deemed significant.

If false statements are made regarding the concealment of significant related information, or if the amount of concealed significant related transactions accounts for 10% of the net assets at the end of the previous year, or if the concealment of significant changes in equity will cause changes in equity structure and shareholder ranking, it shall be deemed significant.

If there are false statements in major business information, such as false statements of significant technological breakthroughs or cooperation contracts with leading enterprises, “and the contract amount accounts for more than 25% of the current operating income, such false statements should be recognized as significant.

If there are similar false statements made for two consecutive years or more that do not meet the above judgment criteria, they should also be deemed significant.

3.2.3 Scientific Application

In the determination of civil compensation amounts, the impact of systemic risks should be excluded. Listed companies are an important pillar of the national economic system, creating a large number of job opportunities and contributing a significant amount of tax revenue. They are a key factor in stabilizing finance and improving people's livelihoods. If a listed company collapses due to excessive penalties caused by systemic risks, it is detrimental to the long-term stability and prosperous development of the national economy, and the additional losses caused by market systemic risks to investors are not causally related to the false statements made by the listed company.

From a rational perspective, it is inevitable for the stock market to experience turbulence in the context of changes in the macro market policy environment. More scientific analysis methods should be adopted to determine the proportion of systemic risk deduction. At present, the mainstream evaluation methods in China include the synchronous index comparison method, model, and event analysis method.

The so-called synchronous index comparison method uses a "3+X" approach to select a set of reference indices that can comprehensively reflect market risks (including the overall market index, the Shenwan Tier 1 Industry Index and the Shenwan Tier 3 Industry Index), determine the normal range of rise and fall of the industry and the overall market during the same period, and then compare it with the range of rise and fall of individual stocks to determine the proportion of systemic risk deduction.

The multi-factor model suggests that the volatility of individual stock prices is not only influenced by the overall trend of the market, but may also be driven by multiple systemic factors such as macroeconomic indicators, industry policies, market interest rates, and exchange rates. The model uses statistical methods to screen for "factors" that have a significant impact on individual stock prices, and calculates the contribution of each factor to individual stock returns during the period from the date of false statement disclosure to the benchmark date. Finally, the total impact of these systemic factors is deducted as "systemic risk".

The more scientific event analysis method was initially applied in the financial field, which can separate the "abnormal returns" caused by the event itself by studying the impact of the event on organizational value [14]. In the determination of the amount of compensation for securities false statements, this portion of income changes is considered as losses directly related to false statements. However, the event analysis method also has limitations, asit is difficult to accurately distinguish the impact of each piece of information on stock prices when there is interference from multiple pieces of information [15].

Neither of the first two methods can effectively separate the "abnormal returns" caused by false statement events, like event analysis. The synchronous index comparison method is more efficient, while the event analysis method is more accurate but time-consuming and labor-intensive. Given that China is currently in the early stages of the securities market, the synchronous index comparison method can better combine efficiency and rationality.

4. Conclusion

The healthy development of the securities market cannot be separated from the precise regulation of false statement behaviors, and the determination of materiality and the deduction of systemic risk ratio are the core links of regulatory fairness. The rationality and scientificity of their standards are directly related to the protection of investors' rights and the maintenance of market order. In 2022, the "Several Regulations" established price sensitivity standards as a key element for determining materiality. Although it has played a positive role in improving judicial efficiency and providing a quantitative basis, the limitations of a single standard cannot be ignored. The interference of market noise and market failure caused by multiple hedging factors may make it difficult for standards to accurately determine the essence of whether false statements are significant or not, resulting in insufficient protection of the legitimate rights and interests of small and medium-sized investors.

The determination of significance and the proportion of systemic risk deduction in determining the amount of civil compensation should refer to the rational investor decision-making standards. Large and malicious false statements should be deemed significant and cannot be overturned solely based on price sensitivity criteria; In determining the amount of compensation, the opinions of professional institutions should be fully considered, and market risks should be reasonably and legally deducted to avoid listed companies bearing losses that are not caused by their false statements and to safeguard their legitimate rights and interests.

At the same time, factors should not be completely eliminated to avoid the occurrence of excessive litigation.

The rational investor decision-making standard takes the core needs of investor decision-making as the starting point, which can better judge the importance of information in the investment market and effectively compensate for the shortcomings of standards. It is not only an important weight to balance market efficiency and fairness, but also an institutional barrier to protect the legitimate rights and interests of listed companies, as well as the right to know and the right to make decisions of small and medium-sized investors.

In the future, the construction of the rule of law in China's securities market should continue to deepen along the path of "dual track integration". The dual track experience of "rational investor judgment+market reaction verification" should be practiced, and based on the characteristics of the local market, the content of false statements should be judged rationally to determine whether they are significant, and the proportion of civil compensation liability should be judged based on the calculation opinions of professional institutions. Only by truly combining the decision-making standards of rational investors with price sensitivity standards can a more scientific securities market protection mechanism be constructed

References

[1] Guo, F. Recognition and Compensation of False Statement Tort . China Legal Science, 2003 (2), 95-99.

[2] Fan, J. The Price Impact Theory in Civil Liability for Securities Misrepresentation: Theoretical Reflection and Practical Disputes. Financial Law Review, 2023, (5), 35-50.

[3] Supreme People's Court of the People's Republic of China. Several Provisions of the Supreme People's Court on the Trial of Civil Compensation Cases for False Statement Torts in the Securities Market Misrepresentation Torts (Article 10). 2022. National Database of Laws and Regulations. Retrieved August 29, 2025, from https://flk.npc.gov.cn/index.

[4] Halliburton Co. et al. v. Erica P.John Fund, Inc., fka Archdiocese of Milwaukee Supporting Fund, Inc., 2014. No. 13-317 [U.S.]. Supreme Court of the United States. Retrieved August 29, 2025, from FindLaw: https://caselaw.findlaw.com/court/us-supreme-court/13-317.html.

[5] Lipton, A. M. Halliburton and the Dog That Didn't Bark. 10 Duke J. Const. L. & Pub. Pol'y. 2015.

[6] Dunbar, F. C., & Heller, D. Fraud on the Market Meets Behavioral Finance. 2006. 31 DEL. J. CORP. L., 455.

[7] Supreme People's Court of the People's Republic of China. Several Provisions of the Supreme People's Court on the Trial of Civil Compensation Cases for False Statement Torts in the Securities Market Misrepresentation Torts (Article 31). National Database of Laws and Regulations. 2022. Retrieved August 29, 2025, from https://flk.npc.gov.cn/index.

[8] Chen, G. H. Path Selection for Determining Losses from Securities Misrepresentation Torts. Tribune of Political Science and Law, 2023. 41(6), 100-111.

[9] Liu, M. 1, et al. v. XX Company 1, et al. Hu 74 Min Chu No. 800 [Civil Ruling] [C]. Shanghai Financial Court. 2023. Retrieved August 29, 2025, from China Judgments Online: https://wenshu.court.gov.cn (Ruled on May 27, 2025).

[10] Ke, Z. C., et al. v. Anhui Huaxin International Holdings Co., Ltd., et al. Hu 74 Min Chu No. 1895 [Civil Ruling]. Shanghai Financial Court. 2021. Retrieved August 29, 2025, from China Judgments Online: https://wenshu.court.gov.cn (Ruled on May 13, 2022).

[11] Shanghai DZH Limited, Lixin Certified Public Accountants v. Cao, J. R., Wu, M. W., et al. Hu Min Zhong No. 147 [Civil Ruling]. Shanghai Higher People's Court. 2018. Retrieved August 29, 2025, from China Judgments Online: https://wenshu.court.gov.cn (Ruled on September 29, 2018).

[12] Founder Technology Group Co., Ltd. v. Lu, Y. B., Yang, J. P., Cai, Z. Q., Pan, X. F. Hu Min Zhong No. 263 [Civil Ruling]. Shanghai Higher People's Court. 2019. Retrieved August 29, 2025, from China Judgments Online: https://wenshu.court.gov.cn (Ruled on September 4, 2019).

[13] Geng, L. H., & Zhu, X. Y. Price Impact in Civil Liability for Securities Misrepresentation. Legal Forum, 2023. (6), 84-95.

[14] Wang, L., & Zhu, Z. H. Research Innovation and Application Progress of Event Study Methodology. Foreign Social Sciences, 2012. (1), 138-144.

[15] Fisch, J. E., et al. The Logic and Limits of Event Studies in Securities Fraud Litigation. 96 Tex. L. Rev., 2018. 553.