Exploring the Irrational Sentiment of Individual Investors in China's Secondary Stock Market

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***Abstract*—With the increase of individual investors in China, some phenomena in the stock market have also received widespread attention, such as IPO underpricing. Some scholars believe that the main reason for the recent stock underpricing in China's capital market is the irrational trading behavior of second-level market investors. To explore the causes of this new phenomena from the perspectives of individual investors, this paper analyzes information collected through questionnaires from individual investors to explore the cause of this recent underpricing phenomena. This research indicates that overconfidence, representativeness and herding are the causes of irrational emotions and causes of irrational emotions which lead investors to pursue new shares in the secondary market.**

***Index Terms*—Behavior finance, secondary market, individual investors, irrational emotions.**

I. Introduction

According to the latest data released by the China Settlement, as of the end of February 2021, the number of investors in Chinese securities market was 181,478,700, which exceeded 180 million for the first time after exceeding 170 million in July 2020. With this increase of individual investors, some phenomena in the stock market have received widespread attention, especially IPO underpricing. Initial public offering underpricing is referred to when a new stock closes its first day of trading and its market price is higher than the IPO price. This issue has been widely examined by scholars around the world, and researchers have articulated many hypotheses and theories to explain the cause of this phenomenon. Baron asserts that imperfect information between the issuer and underwriter is one of the reasons for IPO underpricing [1]. Baron thinks that underwriters have more information than issuing firms; therefore, the investment bankers can find a price low enough to ensure that all issues can be sold. Charalambides [2] states a different theory about investment bankers, arguing that investment bankers have monopoly power and the issuer has to accept unfavorable conditions. Another theory about underpricing is the Signaling Hypothesis, which describes underpricing as a way for a firm to signal its quality to the market. According to Ibbotson [3], high-quality firms use underpricing to distinguish themselves from low-quality firms. Only high-quality firms can bear the significant cost of underpricing. However, Welch [4] suggests that high-quality firms may use underpricing to help them obtain a higher price at seasoned offerings. Unlike low-quality firms that cannot continue operating seasoned offerings, a high-quality firm can get a lot of return from seasoned because it has enough money to support seasoned offerings. Nanda [5] argues from the aspect of behavioral finance, stating that, due to investor irrationality, there will be a discount when IPO stocks are overpriced, through which rational underwriters can get greater returns. Ritter [6] points out that although issuers may have suffered losses due to underpricing on the day of alaunch, the subsequent price increase will make them more profitable, which will give issuers a strong psychological satisfaction. Therefore, the issuers can use underpricing to obtain psychological satisfaction. Each of these scholars discuss a common reason for underpricing, but none of them focus on a particular market. China’s capital market has been established for a short time, but it has developed rapidly; therefore, the underpricing of stocks in China’s capital market has attracted widespread attention. Tianjia [7] argues that the reputation of the underwriter is irrelevant to the discount of the IPO. Liang Hong yun [8] claims that Chinese law and legislation requires companies to determine a company's capital when when it is established; A big difference between Chinese companies and foreign companies is that the issuance process and the IPO process are relatively independent, which means that the signal theory is not a suitable explanation for stock underpricing in the Chinese market. Additionally, since traditional financial theory cannot solve the discount problem in the Chinese market, Zheng Yunfei [9] proposes that Chinese underpricing is caused by the irrational mood of individual investors. It selected several corporate financial indicators and prestige indicators to analyze the discount phenomenon of new shares in China, ultimately finding that the phenomenon of new stock underpricing in China's capital market is the irrational trading behavior of second-level market actors. "This study found that individual investors who did not subscribe to the new shares in the primary market will enter the secondary market to buy the new shares irrationally, causing the price of the new shares to rise further and aggravating the IPO underpricing. Although Yunfei found the cause of underpricing, the reasons for investors' irrational trading behaviors in the second-level market have not been explored. Why do individual investors go into the secondary market to buy new shares in a frenzy when they have not applied for new shares in the primary market? Why do they have to buy new shares? This article explores the reasons for the irrational trading behaviors in second-level markets for individual investors.

II. Literature Review

A. Behavioral Finance

Under the theory of an efficient market, investors are

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rational and they objectively respond to market changes. In the real world, however, investors are often affected by emotions. Behavioral finance argues that when the market is ineffective, three areas should be considered when investigating an investor’s financial decisions: financial knowledge, economics, and cognitive psychology [10]. Behavioral finance mainly analyzes the impact of human psychology on decision-making to explain the shortcomings of the market efficiency theory in practical applications. A large number of behavioural studies have shown that an individual’s emotional state may have a huge impact on the decision-making process [11]. Many investors are often affected by psychological prejudice and emotions, which can cause significant damage to their investments [12]. Recognizing the psychological bias and taking appropriate actions to correct such biases can reduce their impact on investment decisions [12].

B. Overconfidence Bias

“Overconfidence” refers to a set of events that occurs when an investor overestimate probability [13]. “Wrong calibration" and "better than average" are two aspects of overconfidence in investment. "The wrong calibration " means investors think that they can evaluate things more carefully than other investors and "better than average" means investors believe that they have more advanced abilities than other investors [14]. According to Chu, Im & Jang [15], when price increases, people usually trade more because of overconfidence. These people prefer making short-term decisions and a little profit because they feel a greater feeling of pride when they gain return on investment.

C. Representativeness

“Representativeness” refers to seeing things the way other people see them, in other words, when people make decisions, they will be influenced by stereotypes. Thus, it is suggested that investors may use perceptions of patterns, which might have never existed, to make investment decisions [16]. The result is that investors may believe that recent trends will be repeated. Therefore, they tend to overreact to the results or profit [17].

D. Herding

The “Herd instinct” means that, rather than evaluating stocks based on the real situation, people make investment decisions based on whether many others do the same [18]. Herd instinct occurs because people often lack the ability for decision-making. Therefore, people will behave in the same pattern as those around them. Mankind built collectives, communities, and corporations through herd instinct for thousands of years, so it runs deep in the human gene [19].

E. Hypothesis

In this essay, our hypothesis is that the irrational emotions of people in the secondary market are caused by those biases: Overconfidence, Representativeness and Herding. This essay seeks to verify three biases causes irrational emotions which leads to investors pursuing secondary market shares.

III. Methodology

To find the reason for irrational emotion in the secondary market, this essay used quantitative methods, which is collect questionnaires on the internet, and focused on the target population of individual investors in China.

First, 67 people, aged between 30 and 50 from all over the country, were invited to complete questionnaires with 24 questions. The first six questions were a survey of the respondents’ basic information, including gender, age, education level, profession, and financial knowledge, all of which can help us get to know the respondent quickly. Then, questions 7 to 17 investigate the respondents’ investment strategies--including their applications for new shares, their self-evaluation methods, and some fixed thinking patterns and ideas--to analyze whether or not investors are biased during the process of their investment. The last seven questions tested the investor’s basic knowledge about stocks, which include basic terms of investment, use of technical indicators, basic laws of the market, and the use of stock analysis software. These questions provided an objective standard for investors’ investment knowledge. In this way, we compare investors’ self-evaluation of their own investment knowledge level with the test results of actual investment knowledge level to show whether investors’ evaluations of themselves deviate from reality, resulting in over-confidence or over-conservation.

Second, after collecting the information, we import the information collected from the questionnaire into excel. Count the people who chose various answers separately and draw them into a histogram. Finally, we analyzed the data according to the chart and drew a conclusion. One advantage of this quantitative method is that it provided well-founded information about results and made the results more intuitive and understandable through visualization. The method of publishing questionnaires online saves a lot of time for interviews with individual investors. Multiple investors from different provinces can complete questionnaires online at the same time, and it also saves money on travel expenses and printing paper questionnaires. Although collecting the questionnaire through the Internet can expand the scope of people who fill out the questionnaire and make the sample more representative of investors in China, we cannot control the number of people who fill out the questionnaire in each region.

IV. Result

A. The General Situation of Individual Investors

Those individual investors ages range from 25 to 50, and 83.58% of their education levels are above high school (Fig. 2). The largest number are undergraduates. Investors in the southeast coast fill out more questionnaires than other regions. From the perspective of financial knowledge mastered by individual investors, only 16.42 percent of participants are engaged in finance or related fields (Fig. 1) Sixty percent claimed to have some financial knowledge which they obtained through school, websites, books, and social media.

On the whole, individual investors in China have a wide age range, with more young investors, and fewer individual investors who have systematically learned investment knowledge, and there is no obvious gender bias.

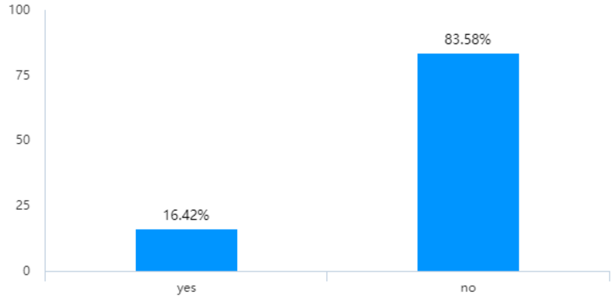

Fig. 1. Whether you are in a finance or finance-related profession.

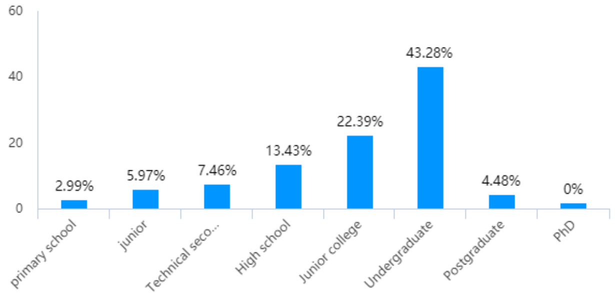

Fig. 2. Education level of respondent.

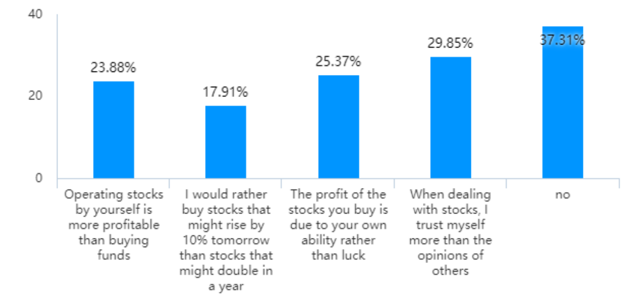

Fig. 3. "Do you have any of the ideas when investing?" a multiple choice.

Fig. 4. Investor's self-evaluation.

B. *Overconfidence Bias*

Our results indicated that when investors trade in the secondary market, they believed they could do better than others and beat the market. In the following mental description, 23.88% of people thought that operating their own stocks are more profitable than buying funds (Fig. 3). However, in the amateur cases, a fund manager is more professional than individual investors, so buying a fund will be less risky. Of the individual investors polled, 25.37% of people claimed that the stock they bought was profitable because of their ability rather than luck. Nearly 50% of investors said that they have good knowledge about the stock market and have made a lot of money in the stock market (Fig. 4). To compare people's self-evaluation with their real knowledge, participants were instructed to answer seven questions which assessed their basic stock knowledge. The results showed that just 8% of investors answered all the questions correctly. Moreover, 22% of the polled investors have little knowledge about economic laws, technical indicators, corporate fundamentals and investment software. Therefore, individual investors are not as knowledgeable as they said, and about 30% of investors are overconfident in market expectations and their abilities.

C. *Representativeness*

When asked if they will participate in the bidding for new stocks, 35% of investors said they would apply for new stocks because they felt that the new shares would make a profit. However, when the IPO ends, new stock enters the secondary market, only 3% of people said they would buy new shares because they think that even if they miss the IPO, the new shares will go up in the secondary market. Most people were still rational when buying new stock; more than 50% of investors said they would observe the new stocks within a few days after they enter the secondary market, waiting for the opportunity. Many investors seemed to be more interested in short-term investments. 46.27% of people mainly used short-term investment strategies (Fig. 5) and 17.91% of investors claimed that they would rather buy stocks that may rise 10% tomorrow than stocks that may double in a year. When asking why they want to use short-term strategy, most investors think that short-term strategy can make money quickly. Therefore, people may have stereotypes about new stocks and short-term investments.

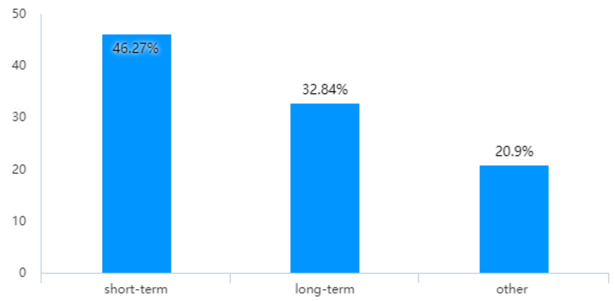

Fig. 5. Investment strategies.

D. *Herding*

The study found that investors have a herd effect. 50% of investors have had the experience of buying stocks following the trend and 8% of investors have experienced such things many times. 22% of people choose which stock to buy by listening to others. Among those investors, 55% think their friends are better in financial management than they do. Also, 8% of people think their friends' opinion is all right. 9% of people choose short-term strategies and apply them to buy new stocks because their friends choose them. Therefore, the ideas of people around investors can affect an investors' investment behaviors.

V. Discussion

In the project, we collect and examine the perspective of individual investors to explore the three behavioral biases that cause an investors' irrational emotions. Overconfidence has a wider impact than herding and stereotypes, and a large number of investors have overconfidence bias. While the data supports the main hypothesis, this project has several limitations. First, the limited sample data collected may not fully summarize individual investors in the Chinese market. Second, it has not explored possible other reasons for irrational emotions. In the past literature, people used indicators such as turnover to detect the emotional fluctuations of individual investors, but they did not explore what kind of emotional fluctuations individual investors are from a micro perspective. Therefore, the questionnaire approach was chosen because it can show the changes in the attitude and mood of real individual investors. This essay explores the ideas of real individual investors, and does not just speculate whether there are irrational emotions through some finical rates.

VI. Conclusion

In summary, this essay used a questionnaire to survey 67 interviewers and found Overconfidence, Representativeness and Herding will increase the irrational emotions of people in the secondary market. Unlike in an efficient market, where those biases will be offset, if a lot of people have those biases, they will affect the stock market and make the stock market abnormal. Therefore, this essay suggests that investors should improve their financial knowledge and learn to analyze a stock from multiple aspects. In the future, scholars should pay more attention to the study of individual investor psychology. Society should strengthen the supervision and education of individual investors to minimize the generation of irrational emotions.

Conflict of Interest

The authors declare no conflict of interest

Author Contributions

Yiyan Jin concuted the research, analyzed the data, wrote the paper. Yiyan Jin had approved the final version.

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