

The Impact of Investor Psychology on Investment Decisions

Jiarui Xie^{1,a,*}

¹Department of Finance, Shanghai Lixin University of Accounting and Finance, Caolu Town,
Shanghai, China

a. 221910405@stu.lixin.edu.cn

*corresponding author

Abstract: This article aims to explore the significant impact of investor psychology on investment decisions, taking overconfidence and risk tolerance theories as examples to analyze their influence on decision-making. The examination of the investment psychology during the China's 2018 A-share crash highlights that investors are susceptible to psychological biases and emotional reactions in the face of market changes. These biases include representativeness bias, where investors may rely too heavily on stereotypes, leading to misjudgments; panic, which can trigger impulsive and irrational selling; overconfidence, causing investors to overestimate their abilities and knowledge; and catastrophic thinking, where investors focus excessively on potential worst-case outcomes. These psychological factors contribute to increased market volatility and can lead to irrational judgments and behaviors among investors. Such behavior is detrimental to the market's stable development, as it can result in mispricing of assets and increased risk of misinvestment. The article emphasizes the critical role of investor psychology in rational decision-making and market efficiency. By recognizing the personal and environmental drivers of these biases, investors can adopt strategies to counteract their influence. This includes improving self-awareness, seeking a variety of perspectives, and employing tools to regulate emotional reactions to market shifts. Policymakers can further contribute by fostering market transparency and educating investors, which can diminish the impact of psychological biases on investment choices. In conclusion, a concerted effort to comprehend and tackle investor psychology is essential for cultivating a more stable and efficient investment landscape.

Keywords: Investor psychology. Investment decisions. Risk tolerance. Market volatility. Psychological biases.

1. Introduction

Investors' decisions wield considerable influence over the dynamics of the financial market, affecting not only the fluctuations in their personal wealth but also significantly impacting the market's stability. Thus, maintaining rationality is of paramount importance for investors. However, empirical evidence has consistently shown that investor behavior is swayed by a myriad of psychological factors, which in turn can distort their investment decisions. This article is dedicated to unraveling the impact of investor psychology on these decisions. It begins by dissecting the key theories underpinning investment psychology, namely overconfidence theory, risk aversion theory, and psychological account theory. Subsequently, it delves into the psychology and conduct of investors, highlighting

the ramifications of the aforementioned biases on their decisions and offering a case study of the China's 2018 A-share crash to illustrate these points. The discussion then shifts to elucidate the origins of these psychological factors, categorized into personal and environmental influences. The article culminates by suggesting measures to mitigate the biases stemming from investor psychology.

2. Research Background and Significance

In the realm of financial markets, the psychological factors at play among investors—overconfidence, risk preference, and risk aversion, among others—hold substantial sway over their investment decisions. These factors, in turn, have a profound bearing on the market's stability and efficiency. Delving into this phenomenon sheds light on the psychological underpinnings of market volatility, offering a pathway to guide investors toward more rational decision-making. This, in essence, is aimed at enhancing the overall stability and efficiency of financial markets. For investors, gaining an understanding of how their psychology influences investment choices is invaluable. It empowers them to recognize and amend any psychological biases, to manage their mental state effectively, and to bolster both the efficiency and quality of their decision-making processes. As a result, they are better equipped to make more rational and balanced investment decisions.

2.1. Main Theories of Investment Psychology

2.1.1. Overconfidence

The overconfidence theory emerges from the field of behavioral finance, introduced in the late 20th century. Stemming from cognitive psychology research, the concept of "overconfidence" is recognized as a prevalent psychological phenomenon. Extensive literature in cognitive psychology indicates a tendency among individuals to be overconfident in the precision of their own knowledge. This tendency is characterized by a systemic underestimation of certain information types coupled with an overestimation of one's own information. Overconfidence is intricately linked to the degree of bias or perception regarding an individual's comprehension of their capabilities and the boundaries of their knowledge. This notion is corroborated by Shefrin [1], who asserts that overconfidence represents a bias concerning the self-assessment of one's abilities and the scope of one's knowledge. Further insights are provided by Adiputra [2], who discusses the influence of overconfidence, alongside representative bias and risk tolerance, on investment decision-making, drawing evidence from stock investors in Indonesia.

2.1.2. Risk Theory

Risk tolerance is defined as the degree to which an individual is willing to undertake less favorable risks in pursuit of more favorable outcomes [3]. In the investment field, investors' attitudes towards risk are typically divided into two categories: risk aversion and risk preference. Risk aversion is the attitude of investors who prefer to avoid risk, commonly believed to be the stance of the majority when facing risks. These investors tend to select investments that can provide stable returns, steering clear of those with the potential for significant losses due to higher risk. Risk preference, in contrast, refers to the willingness of investors to accept risk in pursuit of higher potential returns. Investors with a preference for risk are more likely to choose investments with higher volatility and uncertainty, acknowledging the associated risks but also the potential for greater rewards.

3. The Psychology and Behavior

3.1. Analysis of the Behavioral Effects of Investor Psychology

3.1.1. Overconfidence

For investors, overconfidence may manifest as stubbornness, an overestimation of their investment prowess, and a disregard for a thorough analysis of market information. Such investors are inclined to embrace information that aligns with their pre-existing beliefs while disregarding data that challenges their views. This selective perception can impair cognitive processes, thereby affecting their capacity to make sound investment decisions. Moreover, overconfidence can lead to an overestimation of the potential returns on certain investments, an underestimation of the risks involved, and an overly optimistic approach to investing, which may culminate in substantial losses. Additionally, overconfident investors might be drawn to frequent trading or the concentration of all their capital in a single investment target, increasing transaction costs and the risk of incurring significant one-time losses.

3.1.2. Risky Tolerance

Risk-averse investors typically opt for low-risk investments, including bonds, funds, or savings accounts, strategically avoiding the volatile nature of high-risk stocks or derivatives. Their investment approach is generally more conservative, and to mitigate exposure to risk, they often diversify their portfolios across various fund categories. This strategy aims to minimize potential losses that could result from a single investment's poor performance. Additionally, risk-averse investors show a preference for long-term investments, recognizing that such investments are generally more stable and less susceptible to the whims of market fluctuations compared to their short-term counterparts. On the other hand, investors with a risk preference are drawn to high-yield products and are willing to shoulder the associated high risks. Unlike their risk-averse counterparts, they may choose to concentrate their capital in a single or a few investments with the potential for significant returns. Furthermore, they exhibit a propensity for short-term investments, attracted by the possibility of rapid capital appreciation, despite the heightened risk that such investments entail.

3.2. Case Analysis

3.2.1. Case Outline

In 2018, the global economy experienced a slowdown in growth, and the escalating trade tensions between China and the United States intensified market apprehensions, significantly affecting the A-share market [4]. Initially, the A-share index demonstrated an upward trajectory; however, from April onwards, it shifted to a volatile downward trend. The market's decline gained momentum in October, particularly towards the end of the month, when the A-share index suffered a sharp decline, signaling the onset of the A-share crash event. In terms of policy, the trade friction between China and the United States saw a continuous escalation throughout 2018, with the United States imposing successive rounds of tariffs on Chinese products. In April of that year, the Federal Reserve's decision to further raise interest rates compounded the situation by heightening expectations of a tightening in market liquidity. Macroeconomic indicators painted a mixed picture as well: China's GDP growth rate slowed, and the CPI rose, indicating that economic growth was facing headwinds while inflationary pressures were on the rise, both of which took a toll on market confidence [5].

Regarding price indices, during the initial half of 2018, both the Shanghai Composite Index and the Shenzhen Component Index exhibited a fluctuating upward trend. However, upon entering

October, the A-share index initiated a swift downturn. Specifically, from October to December, the Shanghai Composite Index plummeted by nearly 22%, the Shenzhen Composite Index saw a roughly 30% decline, and the Shenzhen Component Index also faced a nearly 20% decrease. This period denoted an extended bear market for the A-share market, underscoring the intensity of the A-share crash. The pronounced decline in A-shares profoundly affected market confidence and investor sentiment, further intensifying the market's bearish outlook and downward trajectory.

3.2.2. Behavioral Bias Analysis

Representative bias denotes the inclination to place excessive trust in recent information or specific instances when making judgments and decisions, often to the neglect of the broader context, which can lead to erroneous conclusions. Prior to the A-share market's precipitous downturn in 2018, the index had displayed an initial upward trajectory. This early movement fostered unwarranted optimism among numerous investors who anticipated its continuation, indicative of a representative bias influencing their assessments.

Under the sway of representativeness bias, investors are inclined to make forecasts that are excessively optimistic or pessimistic regarding future market trends, based on the latest market movements. The ascent of the A-share index in the initial half of 2018 engendered a misconception among many that the upward trend was set to persist, neglecting macroeconomic and policy changes as well as the stock market's cyclical nature. This overreliance on recent market shifts led to a quintessential display of representativeness bias. Such bias can trigger strong emotional responses from investors in the face of market shifts. When the A-share index began to decline in 2018, the unexpected turn led to widespread surprise and panic, prompting a sharp and negative pivot in market sentiment and intensifying the downturn. Representativeness bias also means that investors are often unprepared for market changes, increasing the likelihood of succumbing to negative emotions and irrational behavior following a market reversal.

Representative bias can lead people to overlook basic probability and sample size, as well as to misunderstand randomness, insensitivity to predictability, and the concept of mean regression. Among these, misunderstandings of randomness, predictability, and mean regression are particularly common errors among investors. The misunderstanding of randomness is evident in many investors' approaches; they assume that by probability, there will always be one good stock among many. Despite experiencing a drop and poor performance with their initial stock selections, they continue to invest in new stocks, hoping for a different outcome. However, the future performance of these stocks does not inevitably align with investors' expectations. This flawed decision-making, driven by a misjudgment of randomness, can worsen an already unfavorable situation and negatively affect both investor sentiment and market dynamics. The insensitivity to predictability is particularly evident in the realm of securities investment, where investors, despite being cognizant of the elevated risks and the possibility of incurring significant losses, continue to engage with a sense of enjoyment. When making forecasts about certain stocks, investors often rely on the principle of representativeness. They are inclined to project higher profits for companies that are favorably described, whereas for those portrayed as mediocre or even poor, they tend to forecast average or minimal profits. This approach is driven by a reliance on the familiar information they encounter, leading them to forgo a deeper understanding and to overlook other potentially valuable information, which could result in the critical oversight of key data.

The misunderstanding of mean regression is seen when investors predict and infer the future linearly, making "non-regression" forecasts, without accounting for the natural tendency of real-world developments to revert to the mean. Mean regression theory represents a significant advancement in the understanding of stock return predictability, particularly for long-term investors. Over time, a company's operational status and stock price are expected to revert to the mean, a reality that can

diverge from investors' expectations and which they must come to terms with. Thus, leading up to the China's 2018 A-share crash, many investors were unduly optimistic, expecting the A-share index to continue its upward trajectory, influenced by a representative bias in their assessments and overlooking the risks inherent in market shifts. However, when the A-share index did indeed fall, the resulting disappointment led to considerable emotional turmoil among investors. This reaction illustrates the profound psychological repercussions that representativeness bias can have on market sentiment.

3.2.3. Emotional Response Analysis

The A-share crash induced panic among numerous investors, primarily due to their intense apprehension about further market declines [6]. In the face of a significant stock market downturn, the illusion of an imminent market collapse can seize many investors, compelling them to engage in panic-driven, irrational behaviors such as hastily selling off their stocks to exit the market. Nonetheless, some investors maintain an overly optimistic stance towards the A-share market, erroneously perceiving a market crash as an opportunity to purchase stocks that are now "cheaper" and supposedly offer greater potential for appreciation. This mindset reflects the emotional bias of overconfidence [7]. Post-market downturn, this overconfidence can lead some investors to view the situation as a "buying opportunity," increasing their stock purchases, which is an irrational decision driven by excessive optimism. In addition, some investors may develop a "catastrophic" mindset when faced with a significant market decline, foreseeing the potential for an even more severe collapse. This mindset has the potential to further fuel market panic and exacerbate the downturn. When investors are inclined heavily towards the negative, their emotional state can correspondingly deteriorate, prompting them to take drastic measures, such as the frantic sale of stocks to avert greater losses. However, such actions can, in essence, intensify the market's negative emotions and decline.

4. Reasons for the Emergence of Investor Psychology

4.1. Personal Reasons

Firstly, varying personality traits, including impulsive or stable behavior, risk aversion, and personal preferences, can significantly influence an investor's risk tolerance and strategic approach to investing. Some investors have a natural propensity for risk-taking, whereas others exhibit a more cautious disposition. For instance, impulsive investors are prone to swift reactions to market news, often leading to hasty decisions made without comprehensive analysis. In contrast, investors with a stable temperament are more likely to adopt a deliberate approach, meticulously weighing all relevant factors before committing to any investment action.

Secondly, inaccurate self-awareness contributes to the psychological biases among investors. Overconfidence often arises from an overestimation of one's cognitive and information processing capabilities. Investors might view themselves as proficient in analyzing market trends and stock values, which can lead to overconfidence. Such overconfidence may manifest in excessive trading, an underestimation of risks, and ultimately, a degradation in investment performance. Moreover, investors might take pride in their experience and past successes, potentially causing them to overlook and underestimate the inherent uncertainty and risks in the market [8]. For instance, an investor with a history of correctly predicting market movements may grow overly confident in their abilities, not realizing that past achievements do not ensure future outcomes. This misjudgment can result in substantial financial losses when market conditions shift unexpectedly.

Thirdly, an investor's education level and the channels through which they acquire information can significantly shape their psychological biases. Investors with higher education often have a more profound understanding of market dynamics and risk management principles. This understanding

enables them to make more informed and rational decisions, thereby mitigating the influence of psychological biases. Moreover, accessing information from a variety of sources allows investors to gain a broader market perspective, which helps to minimize biases. For instance, investors who consult a range of financial news, industry analyses, and investment seminars are better positioned to comprehend the overall market context and to sidestep the limitations associated with narrow or prejudiced information [9].

Continuous learning and exposure to diverse information sources are instrumental in keeping investors abreast of current market trends and in facilitating well-grounded decision-making [10].

4.2. Environmental Reasons

During periods of robust economic growth, investors might cultivate overconfidence fueled by an optimistic economic outlook, which can precipitate overly aggressive investment strategies. The prevailing positive sentiment in an expanding economy can lead investors to anticipate a continued market upswing, encouraging them to assume greater risks than they typically would. In contrast, during economic downturns, a shift towards excessive caution may take hold due to a pessimistic view of the economy, causing investors to forgo potential opportunities. The apprehension about incurring additional losses can incapacitate investors, prompting them to either retreat completely from the market or abstain from initiating new investments, potentially causing them to miss out on gains as the market rebounds [11].

Also, Market emotions like panic or excessive optimism can swiftly affect the actions of many investors. For instance, an abrupt market decline may spark widespread panic, causing a flurry of sell-offs that can further depress prices. In the same vein, during a market boom, an overabundance of optimism can result in inflated asset prices, as investors, driven by the fear of missing out, rush to purchase. Additionally, the uncertainty and volatility inherent in the market can take a toll on the psychological state of investors. High market volatility, for example, might amplify investor unease and anxiety, thus impacting their investment decisions [12].

Furthermore, market emotions, including panic or excessive optimism, can swiftly spread and significantly influence the actions of a broad range of investors. For instance, an abrupt market decline can incite widespread panic, prompting a flurry of sell-offs that can exacerbate the drop in prices. In a parallel vein, during periods of market exuberance, a surge of buying activity fueled by a fear of missing out can result in the overinflation of asset prices. Moreover, the inherent uncertainty and volatility of the market can take a toll on the psychological well-being of investors. High market volatility, for example, may amplify investor anxiety and stress, consequently impairing their investment decisions [12].

Finally, changes in government and regulatory policies, such as interest rate adjustments and tax policy revisions, can significantly influence investor psychology. For instance, a government's decision to lower interest rates is often perceived as an encouragement to invest in equities, which can result in heightened market activity. On the contrary, tax policy changes that impose a heavier burden on capital gains may deter investment in certain assets. These policy shifts have the potential to change investors' expectations for the market's trajectory, thus impacting their investment decisions [13]. Such changes can either instill a sense of uncertainty or present new opportunities, causing investors to reevaluate and adjust their strategies to aim for maximizing returns or minimizing potential losses.

5. Strategies to Address Investor Psychological Biases

5.1. Psychological Aspects

Investors must objectively and rationally assess the market, dissecting trends and investment opportunities. They should delve into market fundamentals—economic data, industry conditions, and company performance—and also account for market sentiment and technical factors. This approach prevents overly optimistic or pessimistic attitudes. A robust understanding of these elements aids investors in making informed decisions and curbs the propensity for emotional reactions to incomplete or biased information [14].

Recognizing and understanding one's own psychological biases is the initial step in sidestepping their influence. Investors should not only be cognizant of prevalent biases, including overconfidence, risk tolerance, and representativeness bias, but also grasp their profound effects on decision-making. Overconfidence, for instance, can result in an inflated assessment of one's judgment capabilities, and risk tolerance bias might drive investors to be excessively conservative or take on undue risk in the face of losses. To counteract this, investors are advised to uphold a serene mindset and equilibrium in emotions, steering clear of knee-jerk reactions like panic or overconfidence triggered by investment setbacks or market volatility [8]. Preserving this calm demeanor is instrumental in guiding rational judgments and choices amidst market instability, thus avoiding hasty moves that may intensify financial losses.

Herd mentality, a prevalent pitfall in investment behavior, can lead investors to follow market trends blindly, sidelining their own judgment. To counteract this tendency, it's crucial for investors to hone their independent thinking skills and to formulate investment strategies that align with their financial objectives, risk profiles, and thorough market analysis. Moreover, investors should be encouraged to challenge the prevailing market consensus, rather than accepting others' views at face value. Instead, they should ascertain the validity and reliability of information through diligent research [12].

Investing is inherently a long-term endeavor that demands a significant degree of patience and self-control from investors. It is essential for investors to retain their composure and exercise restraint when confronted with market volatility, thus preventing the abandonment of their core strategies due to fleeting market influences. Fostering patience is instrumental in navigating through short-term market oscillations and adhering to long-term investment plans. By concentrating on long-term objectives and upholding a disciplined approach, investors can sidestep the common traps associated with overreacting to immediate market shifts—a behavior that can culminate in less-than-ideal investment choices [11].

5.2. Behavioral Aspects

Investors should actively stay in contact with market information, as obtaining timely and accurate market information is crucial in the field of investment. They should adopt various methods to collect market data and analyze reports, such as subscribing to financial news, reading industry reports, attending investment seminars, and using professional market analysis tools. Understanding macroeconomic indicators, industry trends, company financial conditions, and policy changes are key factors in making wise investment decisions [15]. Additionally, investors should learn how to analyze this information to identify market trends and potential investment opportunities. By regularly evaluating market conditions, they can adjust their portfolios to adapt to market changes, reduce risks, and seek optimal returns.

Investors can glean further information through communication channels not immediately accessible. Effective dialogue and exchange serve as vital avenues for securing high-quality

investment counsel. Engaging in profound discussions with seasoned investment advisors can endow investors with expert market insights and tailored strategies. Interaction with fellow investors or peers is equally advantageous, offering a wealth of diverse viewpoints and experiences. Through active participation in investment communities, networks, and both online and offline forums, investors can exchange experiences, draw lessons from others' triumphs and setbacks, and acquire fresh perspectives. Such multifaceted communication aids investors in expanding their understanding and discovering a range of approaches and solutions amidst intricate and fluctuating market conditions. Moreover, investors ought to engage in critical thinking, rigorously evaluate the advice received, align it with their investment objectives and risk appetite, and thereby craft the most fitting investment decisions [13].

To stabilize their investments, investors must keep abreast of new developments, actively acquire investment knowledge and skills, and continuously refine their abilities and judgment. They can bolster their expertise through routine engagement with financial literature and articles, staying updated with financial news, dissecting research reports, assimilating risk management principles and theoretical insights, and becoming proficient in analytical tools. Regular self-assessment of investment behavior, followed by prompt adjustments and corrections, is equally essential [16]. This commitment to ongoing education ensures that investors stay well-versed in emerging market trends and strategies, thus equipping them to make astute decisions and adapt nimbly to the market's ever-changing landscape.

6. Conclusion

The investment landscape is significantly shaped by the psychology of investors, whose decisions can heighten market volatility and impact its overall efficiency. This article has shed light on the personal and environmental factors that contribute to such psychological biases, offering strategies to foster a rational view of the market and to maintain emotional stability. It also warns of the pitfalls of following the crowd without independent thought, advocating instead for patience and self-control. Furthermore, the paper highlights the necessity for investors to stay informed and to engage in ongoing education. By keeping abreast of market trends and continuously refining their knowledge and skills, investors can make more informed choices. The practice of diversifying investments over the long term is also encouraged as a prudent approach to managing risk and enhancing the stability of financial markets. In conclusion, by recognizing and addressing their psychological biases, investors can refine their decision-making process. This not only leads to better personal outcomes but also contributes to a more balanced and efficient market. It is through such individual efforts that the collective health of the financial markets can be improved, promoting stability and prosperity for all.

References

- [1] Shefrin, H. *Beyond Greed and Fear: Understanding Behavioral Finance and the Psychology of Investing*. Harvard Business School Press, Boston, 2000
- [2] Adiputra, I. G. *The Influence of Overconfidence, Representative Bias, and Risk Tolerance in Investment Decision Making: Evidence on Stock Investors in Indonesia*. *Journal of Hunan University Natural Sciences*, 2021, 48(4).
- [3] Roszkowski, M. J., Snelbecker, G. E., & Leiberg, J. (1993) *The impact of framing on risk tolerance: Financial planners are not immune*. *Journal of Behavioral Economics*, 9(3), 237-246.
- [4] Jin, Y. (2019). *Will the A-shares rise in 2019?* *Financial Weekly*.
- [5] Dong, Y. A., & Wu, Y. F. (2020) *Equity concentration, media reporting, and the risk of stock price crashes: Empirical evidence from the A-shares between 2014 and 2018*. *Friends of Accounting*, (19), 8.
- [6] Chen, G. Y. (2017) *Discussing psychological biases in investment*. *Sichuan Provincial Affairs*, (4), 1.
- [7] Wu, J.-T., & Yuan, Z.-J. (2019) *The relationship between investor sentiment, macroeconomic factors, and the returns of China's A-shares*. *Innovation and Management*, 15(1), 1-28.

- [8] Kahneman, D., & Riepe, M. W. (1998) *Aspects of investor psychology*. *Journal of Portfolio Management*, 24(4), 52-
+.
- [9] Barberis, N., & Thaler, R. (2003) *A survey of behavioral finance*. In G. M. Constantinides, M. Harris, & R. M. Stulz
(Eds.), *Handbook of the Economics of Finance* (pp. 1053-1128). Amsterdam: Elsevier Science.
- [10] Shefrin, H. (2002) *Beyond Greed and Fear: Understanding Behavioral Finance and the Psychology of Investing*.
Oxford: Oxford University Press.
- [11] Shiller, R. J. (2000) *Measuring bubble expectations and investor confidence*. *The Journal of Psychology and
Financial Markets*, 1(1), 49-60.
- [12] Odean, T. (1998) *Are investors reluctant to realize their losses?* *The Journal of Finance*, 53(5), 1775-1798.
- [13] Benartzi, S., & Thaler, R. H. (1995) *Myopic loss aversion and the equity premium puzzle*. *The Quarterly Journal of
Economics*, 110(1), 73-92.
- [14] Barberis, Nicholas, and Richard Thaler. "A survey of behavioral finance." *Handbook of the Economics of Finance*,
1 (2003): 1053-1128.
- [15] Daniel, K., Hirshleifer, D., & Subrahmanyam, A. (1998) *Investor psychology and security market under-and
overreactions*. *The Journal of Finance*, 53(6), 1839-1885.
- [16] Baker, M., & Wurgler, J. (2007) *Investor sentiment in the stock market*. *Journal of Economic Perspectives*, 21(2),
129-151.