

The Impact of Behavioral Bias on Investment Decision-Making

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Abstract. Behavioral finance is an emerging discipline that integrates theories from psychology with finance. Robert Shiller, a professor of economics at Yale University, is the originator of behavioral finance and was awarded the Nobel Prize in economics in 2013 for his successful prediction of the Internet bubble crisis and the subprime mortgage crisis. The major difference between behavioral finance and traditional finance is the difference in the underlying assumptions of the two. Behavioral finance attempts to explain how decision-makers make financial decisions in real life, and why their decisions may not be rational every time. This is in contrast to many traditional theories that assume that investors make rational decisions. Behavioral finance suggests that individuals may not make decisions based on rational analysis of all information. This may cause the stock prices of individual companies to deviate from a fair price and cause the stock prices of the entire market to collectively be at very high or very low levels over a period of time. Therefore, the different behaviors and differences that people generate when investing has an important impact on their investment decisions. This paper focuses on promoting a deeper understanding of behavioral finance and helping people to better analyze their investment decisions by reviewing the four more common types of behavioral finance: loss aversion, noise trading, momentum effect, and the endowment effect.

Keywords: Irrational investors; noise trading; loss aversion; momentum effects; endowment effects.

1. Introduction

An important assumption of traditional finance theory is the definition of all people involved in market transactions as rational economic agents. That is, every rational individual will have rational cognition and exercise his or her own utility-maximizing decisions and preferences. Subsequently, the stochastic behavior among individuals and the utility-maximizing decisions and preferences work together in portfolio rationing and point to the efficient market theory along with the effectiveness of arbitrage.

Eugene Fama proposed the theory of efficient markets in 1970 by deepening the theoretical and empirical studies of his predecessors and with the help of Samuelson's analytical approach and the three efficient forms proposed by Roberts, which is one of the core elements of traditional financial theory. He assumed that all investors are rational and classified markets into three categories: weak form efficient markets, semi-strong form efficient markets, and strong form efficient markets according to the information available to investors. The efficient market hypothesis assumes that in a market full of information exchange and information competition, a particular piece of news can be quickly digested by investors in the stock market. Competition in the stock market then causes the price to fully reflect the degree to which the information is intended to drive, such that there is no abnormal payoff for trades made on that set of information, and only the average payoff reflected in the market as a whole can be earned. It can be argued that the efficient market theory is the result of the ideal state.

Rational expectations and arbitrage are two important premises of traditional financial theory and EMH, and thus two of the theoretical challenges to EMH. The first focus is on the assumption of "perfect rationality". The first point of contention is the "perfect rationality" assumption, which is intuitively unconvincing, and Kahneman and Riepe, find that investor decision-making behavior does not conform to the assumption of rational maximization in the vast majority of cases [1]. Kahneman and Riepe find that investor decision-making behavior does not conform to the assumption of rational maximization in the vast majority of cases [1]. In several aspects, such as risk attitudes and the

formation of non-Bayesian expectations, investor behavior exhibits characteristics that are clearly contrary to rational expected utility. Shleifer and Vishny propose the "arbitrage limit" argument, which argues that arbitrage is risky in reality and therefore its usefulness is very limited.

A more serious challenge for EMH comes from empirical studies. In terms of general market characteristics, Shiller identified the "volatility puzzle", where stock prices fluctuate much more than can be explained by traditional discounting models. This was an important early and historically significant finding that directly challenged the EMH. In terms of individual investor behavior, deviations from rational decision-making by traders in financial markets are not individual phenomena, but systematic and herd-based, and such deviations cannot be eliminated by statistical averaging. The results of many empirical tests on the historical predictability of stock markets also make it difficult for EMH to justify itself. Thus, the applicability of traditional finance is drastically reduced.

The origins of traditional financial theory can be traced directly back to neoclassical economics. The efficient market hypothesis is considered to be the most central part of traditional financial theory and has a lasting influence. When the efficient market theory was increasingly challenged by both theoretical and empirical tests, the development of finance finally returned from rationality to psychology, reintroducing the "human" factor and organically combining psychology, behavioral theory, and finance. The theme of behavioral finance can be summarized as follows: markets are not efficient. It can be said that behavioral finance theory reintroduces the "human" factor as the key factor dominating financial markets, penetrating from investor behavior to investor psychology and emotions, effectively explaining numerous abnormal behaviors and market anomalies. Behavioral finance theory reveals the role and status of investors' psychological factors in investment decisions and market pricing, arguing that the market price of securities is largely influenced by the behavior of the participants, rather than just by some intrinsic factors contained in the securities themselves. In reality, investors often show an irrational state when investing in the capital market due to external disturbances or their own psychological conditions. In other words, they exhibit certain psychological biases, which usually lead to differences in investors' beliefs, resulting in irrational or incorrect decisions. As a result, the study of behavioral finance is gradually gaining attention.

2. Loss Aversion

Loss Aversion was first proposed in "Prospect theory: An analysis of decision under risk". In behavioral economics, loss aversion refers to people's preferences to avoid in behavioral economics, loss aversion refers to people's preferences to avoid losing compared to gaining the equivalent amount. In layman's terms, it refers to the fact that some investors may be loss averse, and they will avoid investing in projects with the risk of loss, even if they will make significant capital gains in the long run. Loss-averse investors may prefer to invest in companies that appear to deliver stable but low profits rather than companies that may deliver higher profits in some years but may lose money in other years.

Barberis et al. used linear value functions to study investors' asset allocation under psychological account framing of stock returns and dynamic loss aversion on the basis of prospect theory; Fortin et al. constructed linear and quadratic loss aversion models using the lower bias moment approach and studied the differences between mean-variance models, CVaR models, and linear loss aversion portfolio models using empirical comparisons of U.S. and European market data [2]. Jinsu et al. constructed dynamic loss aversion portfolio models based on linear loss aversion utility functions and compared investment performance. Cumova et al. constructed portfolio models based on upper and lower bias moments, integrating the loss aversion model and the mean-variance model into a unified framework to study the impact of changes in different risk attitudes on the portfolio frontier; Zexiong Zhan and Zongfa Wu empirically developed that behavioral investors who make decisions based on the linear loss aversion model pay more attention to the downside loss risk, and behavioral investors

with a multi-psychological account framework pay more attention to potential seeking and ambition realization while they also pay more attention to the safety of investment [3].

In February 1995, Risen's futures trading in Bahrain was a complete failure. The Nikkei fell to 17,885, while Risen was long 60,000 contracts in Nikkei futures. Meanwhile, the price of Japanese government bonds had been rising and his short exposure had reached 26,000 contracts. Risen's huge losses of £860 million for Bahrain brought an end to the fate of the old bank, Bank of Bahrain. The Singapore report on the collapse of the Bank of Bahrain and Risen's autobiography expresses his regret that the Bank of Bahrain was not able to avoid losses in time. "If Bahrain had acted in time before February 1995, it could still have avoided bankruptcy." By the end of January 1995, the losses, if significant, would have been only a quarter of what they ended up being," the report concludes in one paragraph. If Bahrain's management did not know much about the "88888" account before the bankruptcy, it can only be said that they were hiding the truth all along. "There were a group of people in the know who could have exposed it and prevented me from doing so, but they didn't," Risen lamented. I don't believe I would have had the opportunity to make this kind of mistake consistently at any other bank. "

When people face the same amount of gain and loss, they find loss more unacceptable, which reflects their inconsistent risk preferences, i.e., loss aversion [4]. When faced with a gain, people show an aversion to risk; when faced with a loss, they show an aversion to risk. Risen's misjudgment of the Nikkei's trend led to widening losses, and due to his loss aversion, he intentionally expanded his futures trading to try to make up for his previous losses, which then grew larger and larger. Risen's behavior reflects the psychological tendency to seek risk rather than avoid it in the face of losses.

3. Noise Trader

Noise trading is an important branch of research in behavioral finance theory. Black defines noise traders as investors who do not have access to inside information and irrationally use noise as information to trade. Noise in capital markets refers to information that is used as the basis for investors' decisions but is not related to fundamental values. A trade based on noise is a noise trade, and an investor who trades on noise is a noise trader [5]. There is evidence that some so-called "professionals" in the stock market often make decisions that are not based on rational analysis. Thus, noise trading is a "double-edged sword" in the capital markets, providing the necessary liquidity while reducing market efficiency.

Quite a number of scholars at home and abroad have conducted theoretical studies on noise-trading behavior. Early Chinese scholars focused on the introduction and analysis of noise trading models into the Chinese market. Liu Li was the first to introduce the debate between behavioral finance theory and efficient market theory. Shiru Zhang first analyzed the noise situation in the Chinese stock market, arguing that the primary stock market is a noise-making stock market, the secondary stock market is a stock market dominated by stockholders, and the solution to the noise problem should start from the administrative system. Tang and Ni propose the optimal capital structure under the conditions of noisy trading. Xue, Gang et al. studied the ability of noise trading theory to explain the phenomenon of discount trading of closed-end funds in China. Zhang Yichun chose noise trading theory to study the effectiveness of China's stock market [6]. Li used noise trading theory to analyze the "hunger for money" of listed companies in China. Zhao, Tao and Zheng, Zuxuan studied institutional noise trading under the condition of information asymmetry. Weidong Zhang first verified the application of behavioral asset pricing model in Chinese securities market. These early studies of noise trading models laid the theoretical foundation for later empirical studies. Later, scholars focused more on how noise trading affects the market and whether it coexists with the market in the long run. Lee et al., Rajan and Servaes and Baker and Stein demonstrated that noise traders are widely present in the market. Kogan et al. also demonstrate the existence of noise trading and its possible domination of the entire market. Haiyan Xiang and Pingxin Wang also show that investors' irrational behavior can cause noise to be generated and persist over time [7]. Yi Liu and Jing-Hua Li use an evolutionary

game approach to combine the behavioral characteristics of noise traders and rational traders to develop a theoretical model based on the DSSW model and show that the game outcome may converge to the co-existence of both, which theoretically proves the long-term existence of noise traders [8].

With regard to the empirical analysis of noise trading, there are many phenomena in the capital market that cannot be explained by pricing models, collectively known as "stock market anomalies". The "stock market anomalies" corroborate the existence of noisy trading and have been confirmed as follows:

One is the calendar effect. The calendar effect is an important research topic in the field of behavioral finance, which focuses on whether stock returns are affected by a specific trading day or month, and the proven calendar effects are the Monday effect, the early month effect, and the holiday effect [9]. The Monday effect refers to the fact that stock returns are much lower on Mondays than on other days of the week. Keim and Stambaugh studied the calendar effect in the U.S. capital market and found that there is a significant Monday effect. YoungHyun Cho finds that the Monday effect also exists in the UK and Japanese capital markets. Jones et al. find that the Monday effect is exacerbated by IPO on Monday. Ding, R. Y. and Zhang, B. confirm that there is also a significant Monday effect in the Chinese capital market, but the Monday effect gradually decreases with the reform of the disclosure system. The early-month effect refers to the phenomenon that, on average, stock returns are significantly higher in the first few trading days of each month [10]. Feng Licheng finds that there is a significant "beginning-of-month effect" in the Chinese stock market, which is limited to the last trading day of the previous month to the sixth trading day of the month. GAO, and Fangfang also reached a similar conclusion. The holiday effect is divided into a pre-holiday effect and a post-holiday effect, which means that the average return is significantly different between the trading day before and the trading day after the holiday. Coutts et al. find that the pre-holiday effect is more significant in the U.S. stock market. Lu, Lei, and Liu, S. F. find that there is a significant pre-holiday effect in the Chinese stock market, but the post-holiday effect is not significant, with positive pre-holiday effects for New Year's Day, Chinese New Year, and Labor Day, positive post-holiday effects for Chinese New Year and Labor Day, and insignificant holiday effects for National Day [11].

The other one is the natural effects. From the pricing model, it is clear that natural factors do not affect systematic risk and corporate fundamentals, and therefore cannot affect stock prices. Empirical studies, however, find that natural phenomena have a significant effect on stock returns by affecting investor sentiment. Keef and Roush studied the effect of wind direction and wind speed on the capital market with a sample of listed companies in New Zealand and find that southward wind and wind speed have a significant negative effect on stock returns. L.W. Shan studied the effect of the Wenchuan earthquake on stock returns and found that distance from the epicenter was positively related to stock returns one year after the earthquake, a phenomenon that did not exist before the earthquake. Wan, Hsiaoyuan, and Chen, Xin find that haze has a negative effect on the daily returns of Chinese stock market indices, and that small-capitalization firms and highly speculative stocks are more vulnerable to haze.

Baker and Wurgler argue that traditional financial theory does not consider investor sentiment and therefore does not agree with the hypothesis that traditional theory explains the relationship between stock market liquidity and stock returns. Using stock liquidity instead of investor sentiment, they investigate how investor sentiment affects stock returns using data from 1961 to 2002. The empirical results show that when starting stage investor sentiment is low, later stock returns are lower for small stocks, new stocks, stocks with higher volatility, stocks with poor profitability, stocks that do not pay dividends, and stocks with faster growth. When starting stage investor sentiment is high, returns for the above stocks are higher in the next stage.

Noise trading theory suggests that when there is a large proportion of noisy traders in financial markets, the uncertainty of the asset increases due to psychological. It is also difficult for rational traders to eliminate the influence of such traders on the deviation of market value by their arbitrage behavior. This risk, formed by the deviation of assets from their normal state due to the change of

psychological factors of noise traders, is called noise trader risk. In this paper, noise trader risk is chosen as a measure of the level of noise trading in stocks. On the one hand, noise trading gives rise to noise trading risk, which reflects the attitude and influence of noise traders on a certain stock and can better explain the phenomenon of large differences in the prices of stocks with the same basic value; on the other hand, momentum profits come from the compensation of returns for the excess risk, and noise trading risk causes pricing bias in stocks, which means that investors can construct specific portfolios that take advantage of the predictability of returns for active investment management.

4. Momentum

The momentum effect, also known as the inertia effect, refers to the tendency of stock returns to continue in their original direction of movement, i.e., following the law of "the strongest are stronger and the weakest are weaker". This means that stocks that perform well will continue to perform better in the future, and stocks that perform poorly will continue to perform poorly in the future. First proposed by Jegadeesh and Titman, investors can construct portfolios based on the momentum effect. A period of rising stock prices may lead to a general optimism that investors will prefer to invest in stocks with rising prices and that stock returns have a tendency to continue in the original direction of movement. If there is a momentum effect, then it may prolong the cycle of a stock market boom or bust. Nowadays, the interpretation of the momentum effect is a hot issue in behavioral finance.

Relying on the pivotal role of noise trading in securities investment strategies, theories related to noise trading have also begun to guide momentum strategy practice. Wu Jen and Liang-Yuh argue that noise traders have an impact on market liquidity and stock price formation, and stocks that obtain excess returns need to focus on noise traders [12]. Shi et al use the rational traders and feedback traders' behavioral functions and found that stock trading activity has a more profound impact on stocks with higher information uncertainty, and stocks exhibiting positive feedback trading activity earn higher momentum return returns in momentum strategy practice [13]. Lu Changping and Chen Dahe construct a virtual asset price formation mechanism based on a noise trading model and point out that the use of momentum strategy by noise traders exacerbates the volatility of virtual asset prices; Li Fujun et al rank the winning and losing portfolios in momentum strategy according to investors' heterogeneous beliefs, overconfidence and disposition effect, respectively, and the empirical results show that the disposition effect accelerates the reversal of stock price trend The empirical results show that the disposition effect accelerates the reversal of stock price movements, while the high heterogeneous belief portfolio and the high overconfidence portfolio obtain higher momentum returns than the traditional JT momentum portfolio.

Lu et al. analyzed through an empirical study that lottery-type stock preferences affect the performance of momentum strategies [14]. In past studies, lottery stock preferences have resulted in short-lived reversals, with overvaluation of stock prices not lasting long and subsequent declines being relatively rapid. In the case of lottery stocks, a rapid rise in the stock price is equivalent to a "lottery draw", which continues to attract the attention of lottery-oriented investors and further pushes up the stock price. This reversal of overvaluation may affect the performance of the monthly momentum strategy when the sustained upward movement affects the monthly returns of the stock.

Linking the two seemingly unrelated phenomena of lottery stock preference and momentum effect through the high returns of lottery-type stocks during their formation period, we try to explain the insignificant monthly momentum effect in the A-share market. If the overvaluation of lottery-type stocks persists for a longer period of time, the gains during this period will give the stocks a higher probability of entering the winning portfolio of the monthly momentum strategy; even if the reversal occurs in the short term, the unusually high monthly returns will give the stocks a higher probability of entering the winning portfolio of the momentum strategy as long as the stocks are overvalued enough in a single month. If the winning portfolio of the momentum strategy overlaps heavily with lottery-type stocks, then stocks screened based on cumulative returns alone are actually overreacting

rather than underreacting (the momentum strategy is caused by investor underreaction), which can lead to lower returns in the winning portfolio of the momentum effect, which in turn affects the performance of the overall momentum strategy [15].

Kahneman & Tversky elaborated the psychological origin of lottery preference in their famous prospect theory, which argues that people always overestimate the probability of a small probability event, and when faced with a possible small probability high yield stock, investors will overestimate the probability of its occurrence and make a buying decision. Barberis & Huang derive the effect of lottery-type preferences on asset pricing from a prospect-theoretic model, arguing that individual investors overestimate the probability of tail returns in the asset return distribution and therefore give higher prices to highly skewed assets in equilibrium. Such highly skewed assets, also known as lottery-type stocks, are currently overvalued and have lower future returns. Domestic studies on lottery-type stocks have also focused on the relationship between lottery-type stocks and asset pricing, and obtained similar results to foreign studies. The findings of. Among them, Zheng, Zhen-Long and Sun, Qing-Quan and Li, Pei-Xin et al., similar to Kumar, identify lottery-type stocks by three indicators and demonstrate that there is also a negative impact of lottery-type stock preferences on asset prices in China [16]. Chen, Wenbo et al., on the other hand, try to identify other factors affecting the pricing of lottery-type stock preferences based on the perspective of profit-and-loss status and investor sentiment, and they find that investors will be reluctant to buy or continue to hold lottery-type stocks when they are in a profitable state. Compared with previous studies, this paper finds that the impact of lottery stock preferences on stock prices in China's A-share market shows some differences from foreign countries. This is mainly reflected in the fact that the overvaluation of stock prices due to lottery-type preferences in foreign countries mainly occurs in the short run, and Kumar & Bali et al. both confirm that the lottery-type stock factor is negatively related to the momentum factor. In contrast, this paper finds that the lottery-type stock factor in China's A-share market is positively correlated with the momentum factor, which is consistent with the research of Peixin Li et al., suggesting that the overvaluation of stock prices due to lottery-type stocks persists for longer or larger periods, perhaps due to the stronger short-selling constraints in China. Meanwhile, overvalued lottery-type stocks subsequently fall more and exhibit reversal characteristics, which in turn weakens the returns of the momentum strategy.

As discussed earlier, both behavioral and rational explanations generally theorize that investors underreact to information, which in turn causes the momentum effect. The momentum effect uses historical cumulative returns as a proxy variable, which implicitly challenges the "efficient market hypothesis": cumulative returns are a proxy variable for historical information, and current prices underreact to historical information, leading to the subsequent return continuation phenomenon. In China's stock market, there is a lot of noisy trading and excessive trading, and the reversal effect is more pronounced than the inertia effect. Noisy trading reduces the information content of cumulative returns. At the same time, there are a large number of systematically overvalued lottery stocks in the market, which are highly skewed and attract individual investors with lottery-type preferences to buy them, and the stock prices are overvalued and then fall [17]. The winning portfolio of the momentum strategy selected by return ranking contains not only stocks that underreact to positive information, but also those stocks that overreacted to the large prior increase. Therefore, it is speculated that if the effect of lottery-type stocks is excluded, the monthly momentum effect, which is widespread in global markets, may also exist in the Chinese market.

Based on the above hypotheses, the relationship between lottery-type stocks and momentum effects in China's A-share market is studied in depth using A-share trading data from 1997-2019. It is found that (1) the momentum effect is largely absent in lottery-type stocks, while it is very strong in non-lottery-type stocks. (2) The momentum effect is widely present in strategies with multiple formations and holding periods in the non-lottery stock group. In the non-lottery stock group, significant momentum returns are observed for momentum strategies with both formation and holding periods greater than 3 months; (3) The momentum factor in China's A-share market is positively correlated with the lottery stock factor, which is consistent with the results of Pei-Xin Li et al.'s paper

but opposite to the results of Kumar and Bali et al.'s paper, reflecting the domestic and international differences in the market. (4) Further study finds that the winning portfolios of traditional momentum strategies overlap heavily with lottery-type stocks, and the lower future returns of these stocks significantly reduce the returns of the winning portfolios, which in turn attenuates the momentum effect.

5. Endowment Effect

The endowment effect is an important and pervasive effect in behavioral economics and consumer psychology. Specifically, the endowment effect is the tendency for individuals to estimate the value of an item as a function of whether or not they own the item, i.e., to estimate the value of the item more highly when they own it than when they do not own it, and to keep the item they already own. It can provide some reference for merchants to develop marketing strategies. Understanding the endowment effect can help consumers avoid irrational consumption due to merchants' marketing tactics.

Richard Thaler, a renowned behavioral economist, behavioral financier, decision psychologist, and 2017 Nobel Laureate in Economics, was awarded the Nobel Prize in Economics in 1980. The "endowment effect", which has been influential to this day, was introduced in 2001. Since its introduction, many scholars have designed studies to verify the effect, which has proven its validity from the side. Gintis introduces the endowment effect into the Hawk-Dove game model to explain the origin of property rights, turning Smith's assumption of different valuations of first- and later-owners into a fact that can be justified by the endowment effect. It seems that when people acquire something, they immediately gain additional value, as if out of nowhere, from the mere fact of ownership. As a result of this endowment effect, then the first mover will invest more in defending possession relative to the later mover due to the high valuation so that property rights can be established based on the first mover. Eswaran & Neary attempt to integrate the endowment effect theory of property rights into the previous framework of first mover and labor endowment theory. They emphasize that pre-emption, labor endowment, and their interactions are such that the ownership rights acquired by the pre-occupiers provide incentives for productive investment and thus maximize "fitness", and thus the pre-occupation of property rights is the result of evolutionary natural selection. However, the asymmetry of the occupier's high valuation in their model ultimately relies on its incumbency advantage or productive investment, otherwise, both the property rights equilibrium and the inverse property rights equilibrium are stable solutions. Dong & Zhang and Dong and Zhang Yongjing criticize Eswaran & Neary's paper for invoking preemption and labor endowment to argue for the precariousness and incompleteness of property rights formation. Eswaran & Neary invoke prior appropriation and labor endowment to argue for the preconditions and foundations of natural property rights formation, arguing that the endowment effect is an inherent psychological tendency of evolved individuals and that people can obtain additional value simply by relying on the abstract concept of ownership of goods.

The endowment effect in "try before you pay" and "seven-day no-questions-asked returns". Today, online shopping has become an integral part of many people's lives, but because it is an online purchase, consumers cannot directly contact the product and can only determine if it meets their expectations after seeing it in person, and may need to return it if it differs too much from their expectations. Many businesses offer "try before you pay" and "seven-day, no-questions-asked returns" to dispel consumers' doubts. These services greatly increase the likelihood that consumers will "try it first. Some consumers may not be fully satisfied with the product they receive, but may still choose to pay because they already "own" the product. Specifically, "try-before-you-pay" and "seven-day, no-questions-asked returns" allow consumers to feel that they "own" the item for a short period of time and that they do not want to "own" it. This is where the power of the endowment effect comes into play.

In their 1990 study, Kahneman et al. distributed cups or pens to half of the randomly selected subjects and the other half did not receive a cup or pen. The researcher then asked those who received a cup or pen to choose the price they were willing to sell it for, while the other half wrote down the price they were willing to pay for the cup or pen. The difference between the "selling price" and the "buying price" was found to be very large, with those who owned the item offering a much higher "selling price" than those who did not own the item. Those who owned the items offered a much higher "selling price" than those who did not. This study confirms the existence of an endowment effect. To sum up, the endowment effect is an important and universal effect in the field of behavioral economics and consumer psychology, which can provide some reference for businesses to develop marketing strategies. Understanding the endowment effect can help consumers avoid irrational consumption due to merchants' marketing tactics. The endowment effect has a wide range of applications, but at the same time, there are also many areas that deserve further exploration and research. In the future, we can further analyze its psychological mechanism on the basis of existing research, and try to make a clearer explanation of its generation and mechanism of action.

6. Conclusion

In conclusion, this paper has provided a comprehensive overview of the four main branches of behavioral finance, namely prospect theory, overconfidence, anchoring and heuristics, and framing effects. By integrating and synthesizing these different schools of thought, the paper has demonstrated how they provide a more nuanced understanding of the complex behavior of market participants. Moreover, the paper has shown how each of these schools of thought is supported by case studies and empirical evidence. This highlights the importance of understanding the psychological factors that underpin investment decisions, which can have a significant impact on market outcomes. While there are still many areas of behavioral finance that are yet to be explored, it is clear that this field of study has gained significant traction in recent years. As more scholars conduct research and people's recognition of the importance of behavioral finance grows, we can expect to gain even deeper insights into how individuals and markets operate. Overall, this paper underscores the importance of incorporating a behavioral perspective into financial decision-making. By understanding how psychological factors influence investor behavior, we can develop more effective investment strategies and mitigate the risks associated with market volatility.

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