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Study on irrational behavior of retail investors in the post-COVID-19 market boom

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Abstract

Against the backdrop of the COVID-19 pandemic's global economic impact, the subsequent market boom has drawn significant attention, with retail investors demonstrating remarkable activity during this period. Grounded in behavioral finance theory, this study employs literature review, data analysis, case studies, and comparative analysis to investigate irrational decision-making patterns among retail investors during the post-pandemic market rally. The findings reveal that retail investors frequently exhibit herd behavior, chasing "internet-famous stocks" and speculative assets. Social media amplifies overconfidence and "fear of missing out" mentality, leading to short-term price surges and high volatility. These behavioral biases explain price distortions and rapid emotional shifts. The research provides crucial insights for investors to improve decision-making quality and for regulators to promote stable market development.

Keywords

Retail Investors; Irrational Behavior; Behavioral Finance Theory; COVID-19 Pandemic; Market Boom

1. Introduction

1.1. Research background

The global spread of COVID-19 has profoundly impacted economic systems, yet unexpected market booms emerged in some capital markets during the pandemic's later stages. This phenomenon was particularly evident in retail investors' heightened activity, with their trading volume and frequency significantly increasing, becoming a key driver of market volatility [2]. Research indicates that corporate stock price synchronization intensified post-pandemic, with severe pandemic-affected regions experiencing more dramatic fluctuations. These findings demonstrate how public health crises disrupt capital market functions while highlighting the critical role of investor behavior in market dynamics[5]. In this context, as vital participants in capital markets, retail investors 'irrational

decision-making not only affects individual returns but may also create systemic risks to market stability. Therefore, conducting in-depth research on retail investors' behavioral patterns during the post-COVID market boom holds significant importance for understanding market trends and safeguarding investor interests.

1.2. Problem Statement

In the context of post-COVID market boom, retail investors may exhibit various irrational behaviors in their decision-making processes. Behavioral finance theory suggests that psychological factors and behavioral characteristics significantly influence stock prices, particularly under conditions of information asymmetry and emotional contagion. Irrational tendencies such as herd behavior, loss aversion, overconfidence, and fear of losses may be amplified [1]. These behaviors not only cause asset prices to deviate from their intrinsic value but also trigger rapid shifts in market sentiment, thereby exacerbating volatility [7]. Furthermore, while social media provides convenient platforms for information exchange, it may lead to either overreactions or underreactions to information, further reinforcing irrational decisions. This study aims to explore the irrational behaviors exhibited by retail investors during the post-COVID market boom period, analyze their potential impacts, and examine how these behaviors can be explained through behavioral finance theories.

1.3. Significance of the study

This study holds significant theoretical and practical implications. Theoretically, examining irrational behaviors of retail investors enriches behavioral finance theory, particularly offering new perspectives and empirical evidence for analyzing market responses to unexpected events [3]. While existing research has made notable progress in explaining market anomalies, studies specifically addressing the post-COVID-19 market boom remain limited [8]. This study fills this gap, providing valuable references for future research. Practically, the findings offer scientific decision-making guidance to help retail investors identify and avoid irrational actions, thereby enhancing investment efficiency. Additionally, these insights provide crucial references for regulators to formulate more effective policies that maintain market stability and promote healthy development of capital markets.

1.4. Entry point for the study

This study focuses on irrational behaviors of retail investors during the post-pandemic boom period, addressing a research gap in this field. The research perspective integrates individual behavioral biases with the influence of social media and group interactions. Through an innovative analysis of behavioral motivations and patterns using the GameStop incident case, it provides new perspectives for theoretical development. By comparing real-world data with

rational models, the study elucidates price distortion mechanisms and market sentiment transformation pathways, offering evidence-based support for investment decision-making and regulatory policy formulation.

2. Methodology

2.1. Methodology

The literature review methodology served as the theoretical foundation for this study. By systematically compiling and analyzing academic works on behavioral biases including herd behavior, loss aversion, overconfidence, and loss aversion, we established a robust theoretical framework for understanding behavioral finance principles. First, the research drew upon seminal works in behavioral finance such as Keynes 'psychological expectation theory and Kahneman-Tversky's cognitive bias and expectation theories[3][7]. These seminal studies not only revealed irrational patterns in investor decision-making processes but also provided a clear theoretical basis for subsequent analyses. Second, addressing the unique context of post-COVID-19 market recovery, we conducted additional literature reviews to explore the relationship between investor sentiment and market volatility[2]. The findings demonstrate that behavioral finance effectively explains market anomalies and offers scientific evidence for studying irrational behaviors in retail investors. Furthermore, through systematic literature analysis, this study identifies a key research focus: how behavioral biases influence trading patterns and market performance during the decision-making process of retail investors.

2.2. Case study method

In this study, the case method was employed to investigate the specific manifestations and impacts of irrational behavior among retail investors, with the GameStop incident serving as a representative case. The selection of this case highlights its unique role in demonstrating how social media-driven collective actions by retail investors significantly influence market dynamics [6]. Through systematic analysis of the GameStop event, we examined participants 'trading behaviors, emotional contagion pathways, and short-term stock price fluctuations. Our findings reveal that information amplification on social media platforms exacerbated investors' overconfidence and loss aversion, triggering dramatic stock price volatility[4]. Furthermore, applying behavioral finance theories, we dissected key market distortions including herd behavior and representativeness bias, shedding light on the root causes and consequences of irrational investor actions. These case-based insights not only validate theoretical hypotheses from existing literature but also provide critical empirical foundations for subsequent comparative analyses.

3. Analysis of trading patterns of retail investors in the post-COVID-19 market boom

3.1. Market Report and brokerage data interpretation

The post-COVID market boom has injected remarkable vitality into global financial markets, particularly evident in retail investors 'trading behavior. Market reports and brokerage firm data indicate a significant growth trend in retail investors' transaction volume during this period, with their trading frequency markedly increasing compared to pre-pandemic levels. For instance, data from certain brokerage platforms shows that the average daily trading volume of retail investors from early to mid-2021 increased by over 30% year-on-year compared to 2019, suggesting that the substantial rise in market participation may be linked to idle funds accumulated during the pandemic and ample liquidity from loose monetary policies [5]. Additionally, in terms of asset preferences, retail investors tend to favor high-risk, high-volatility speculative assets like small-cap stocks and options trading, rather than traditional blue-chip stocks or index funds [9]. This asset allocation pattern reflects investors 'psychological expectations for quick profits during the post-pandemic market boom while also revealing an increase in risk tolerance. In-depth analysis of these data reveals that retail investors' behavioral tendencies are closely tied to irrational psychology, such as overconfidence and loss aversion, which may drive their frequent trading activities and preference for high-risk assets.

3.2. "Internet celebrity stocks" and the phenomenon of speculative asset pursuit

In the post-COVID-19 market boom, retail investors have been particularly keen to chase "web celebrity stocks" and speculative assets, with the GameStop (GME) incident being a classic example. GameStop Corp. (NYSE: GME), a 37-year-old video game retailer, maintains a business model primarily centered on brick-and-mortar retail operations, a structure increasingly perceived as outdated. Confronted with intensifying competition from digital distribution platforms and exacerbated by the global COVID-19 pandemic, the company has reported consecutive annual losses since 2018. Consequently, its share price experienced a significant decline, falling from $26 in 2016 to approximately $3 by 2019, and subsequently fluctuating near the $10 mark throughout much of 2020.

Amidst deteriorating operational performance, sluggish strategic pivots, and persistent pandemic headwinds, prominent hedge funds, including Melvin Capital Management, initiated substantial short positions against GME. Their investment thesis cited perceived overvaluation and sustained erosion in market share. Data from S3 Partners revealed that as of January 26, 2021, the aggregate value of short interest in GameStop had reached $5.51 billion, positioning it as the 12th most heavily shorted company in the United States. Notably, this short interest represented approximately 140% of the company's free float market capitalization

which is a level markedly exceeding that observed for most large-cap entities. Paradoxically, despite these challenges and bearish sentiment from institutional investors, GameStock attracted significant attention from retail investors. This phenomenon emerged during a period when widespread pandemic-related lockdowns significantly increased demand for home entertainment, driving broad appreciation across the video game sector. Retail investor activity thus became a critical countervailing force against the established short positions.

Table 1. Financial indicators and number of stores of Game Post Station

Items / During the period	2015	2016	2017	2018	2019	2020 1-3 quarters
Operating receipt	90.19	79.65	85.47	82.85	64.66	29.68
Net profit from continuing operations	3.79	3.05	2.30	-7.95	-4.64	-2.95
General assets	43.30	49.76	50.42	40.44	28.20	26.01
Owner's equity	20.81	22.54	22.15	13.36	6.12	3.32
Net cash flow from operating activities	6.57	5.37	4.35	3.25	-4.15	-0.41
Free cash flow	4.84	3.95	3.76	2.31	-4.93	-0.74
Number of stores (units)	6227	6132	5947	5830	5509	5000

Source: GameStop Corporation annual reports.

The stock-picking decisions behind such behaviors stem not from rational analysis of corporate fundamentals, but rather from emotional impulses and herd mentality. Retail investors' motivations also reveal overconfidence in their judgment and a fear of missing out. On one hand, they exhibit excessive confidence in their ability to generate excess returns through short-term speculation; on the other hand, their anxiety about missing market trends drives them to blindly follow trends while overlooking potential risks. Social media plays a pivotal role in this process, accelerating information dissemination and amplifying irrational investor behavior through emotional resonance, thereby creating distinctive market anomalies.

4. Summary of irrational behavior in trading mode

Retail investors exhibited various irrational behaviors during the post-COVID market boom, providing empirical evidence for comparing rational expectations. First, herd behavior was pronounced as retail investors followed social media trends in trading hot events while neglecting thorough fundamental analysis. Second, overconfidence led to frequent trading for short-term gains, which not only increased transaction costs but also posed portfolio stability risks. Additionally, fear of missing out and loss aversion drove retail investors to adopt "buy high, sell low" strategies during market fluctuations, choosing to avoid losses when facing them, thereby reinforcing the disposal effect. These behavioral patterns explain the causes of price distortions and shifts in market sentiment, laying a theoretical foundation for exploring how behavioral biases impact market efficiency.

4.1. Bounded Rationality

Behavioral finance theory posits that investors, constrained by their knowledge base and cognitive limitations, cannot make perfectly rational decisions. Their decision-making process prioritizes seeking satisfactory solutions over optimal outcomes, leading to irrational behaviors such as chasing rallies and panic selling, along with disposition effects (e.g., the tendency to prematurely liquidate profitable positions while holding onto unprofitable ones).

4.2. Overconfidence

Overconfidence manifests as investors' tendency to overestimate their knowledge base and decision-making capabilities. This cognitive bias stems from misjudging information acquisition channels and processing abilities, specifically through two manifestations: the knowledge illusion (where inflated self-assessment leads to over-prediction and certainty distortion) and self-attribution bias (attributing investment gains to personal competence while blaming losses on external factors).

4.3. Feeling and Sentiment

Emotional drive refers to investors 'decision-making processes being easily influenced by subjective emotional factors, leading to irrational intuitive impulse trading behaviors. Typical manifestations include: excessive focus on familiar securities, insufficient portfolio diversification; envy of others' investment returns may trigger suboptimal decisions, or lead to irrational herd trading behavior among retail investors.

4.4. Herd Behavior

Sheep behavior describes investors blindly following the majority decision-making trend without independent judgment. This phenomenon primarily occurs among individual investors with limited professional expertise and information access, where they seek to reduce decision-making costs and gain herd benefits. Such behavior is particularly prevalent in emotionally-driven markets, often leading to irrational imitation effects.

4.5. Representativeness Bias

Representative deviation refers to the cognitive bias that investors make probability judgments based on the surface characteristics of events while ignoring the basic probability distribution and sample size. A typical case is to simply extrapolate the short-term continuous profit performance of an enterprise as its long-term business quality.

Behavioral finance holds that there are various cognitive and psychological biases that affect investment decisions in human beings. When most participants in the market have such biases, it will have a systematic impact on the price of securities,

make the price deviate from the value fundamentals, and lead to the mispricing of assets.

5. Behavioral financial explanations for the GameStop phenomenon

5.1 Interpretation based on bounded rationality theory

Traditional financial theory posits that under the efficient market hypothesis framework, investors possess rational expectations and can objectively evaluate stock values based on public information. Stock prices fully reflect a company's historical data, current status, and insider information. Institutional investors leverage their systematic information advantage to make trading decisions primarily through fundamental analysis. Therefore, their frequent short-selling strategies against GameStop are fundamentally driven by three factors: the company's operational model struggles to adapt to the online retail transformation trend, its continuously deteriorating financial condition, and persistent long-term operating losses (see Table 2).

Table 2. Main financial indicators of Game Post Station Unit: US dollars

Project / Duration	Basic perShare returns	Net asset per share	Earnings per share Industry revenue	Per share retention Savings	Cash per share Net flows	Net cash flow from operating activities per share	Earnings before interest and tax per share	Free cash flow per share of enterprise
2015	3.80	20.15	90.65	21.00	-1.55	6.36	6.28	5.12
2016	3.42	22.32	85.23	22.79	2.17	5.32	5.53	4.18
2017	0.34	21.86	91.06	21.52	1.93	4.29	1.35	2.14
2018	-6.59	13.10	81.23	13.36	7.56	3.19	-6.83	4.26
2019	-5.38	9.51	100.56	10.73	-17.53	-6.45	-6.04	-3.44
First to third quarters of 2020	-4.56	5.10	45.52	6.05	1.37	-0.63	-3.91	-3.96

Source: Wind database.

Taking GameStop as an example, its book value per share in 2018 and 2019 stood at $13.10 and $9.51 respectively. Hedge funds suppressed the stock price to $3 through short selling, significantly lower than the corresponding book values of 22.90% and 31.55% during the same period. This indicates irrational behavior among institutional investors. Moreover, the stock's short-selling ratio reached 138%, essentially constituting high-leverage speculation. Institutional investors mishandled subsequent short squeeze events, ultimately leading to substantial losses. A similar scenario occurred with Tesla: hedge funds had been continuously shorting since 2016, but collective actions by retail investors drove the stock price from $7.50 to $969 (a staggering 12,820% increase), resulting in over $50 billion in losses for short positions. Notably, some retail investors ignored deteriorating fundamentals (such as declining revenue) during trading, also demonstrating speculative tendencies.

5.2. Interpretation based on overconfidence theory

Short-selling institutions demonstrated remarkable overconfidence during the GameStop incident. Firstly, they overestimated their market dominance and influence while underestimating retail investors 'collective bargaining power, inadvertently forming a united front against them. Secondly, their inflated capital base and underestimated collective action capabilities led to massive losses from coordinated market retaliation. Thirdly, their overconfidence in trading strategies and disregard for retail traders' expertise allowed vulnerabilities in short-selling tactics to be exploited. Lastly, their overestimation of information processing capabilities was outmatched by retail investors' analytical skills demonstrated on Reddit forums.

Retail investors also exhibit a tendency toward overconfidence in several key aspects: First, they overrely on the persistence of collective solidarity while underestimating the widespread profit-taking motives among individual investors, which subsequently triggers stock price crashes. Second, they underestimate short-selling institutions 'financial strength and the scale of their massive short positions. Third, they fail to recognize the U.S. Securities and Exchange Commission's (SEC) determination to maintain market orderliness, ultimately leading platforms like Robinhood to impose trading restrictions. Fourth, they underestimate the possibility of temporary rule modifications in extreme market conditions, resulting in restricted trading permissions. This analysis demonstrates that overconfident behavior can trigger significant systemic risks.

5.3. Interpretation based on affect theory

The GameStop incident laid bare the emotional battles between short-selling institutions and retail investors, transforming what began as a financial dispute into a clash between corporate elites and grassroots activists. Retail investors, seeing themselves as champions of justice, rallied against Wall Street's arrogance and systemic bias, demanding an end to institutional profiteering. Meanwhile, short-sellers dismissed these retail investors as ignorant mobs, predicting their ultimate ruin.

Other manifestations of market sentiment include: ① Retail investors viewed the stock-buying spree for GameStop as a nostalgic act to preserve childhood memories, aiming to rescue the company from bankruptcy and evoke rural nostalgia. This initiative gained strong public support, attracting more retail investors to join the frenzy. ② Social media amplified the profit-making narrative, fueling investor enthusiasm and ultimately triggering a short squeeze. Keith Gill, one of GameStop's key executives with an accounting degree, repeatedly emphasized...

The WSB sector has been delivering impressive returns, with one trader making $10.1288 million on January 16 after investing just $50,000. To date, he has accumulated $47.9733 million in profits from GameStop stock. A seven-hour live interview with The Wall Street Journal further amplified the narrative of his

explosive gains. Meanwhile, Ryan Cohen, who joined GameStop's board and was highly anticipated by retail investors, raked in $2.9 billion, sparking unprecedented enthusiasm among retail traders to go long on GameStop shares.

5.4. Explanation based on herd behavior theory

The GameStop incident once again validates Gustave Le Bon's theory of forward-lookingness. In "The Crowd：A Study of the Popular Mind", Le Bon pointed out that an individual's cognitive abilities significantly weaken when they integrate into a group. To gain group approval, people tend to abandon independent judgment, trading rationality for security. When becoming part of a collective, individuals gradually lose accountability and behavioral constraints. What groups pursue isn't truth or reason—instead, blind obedience, extremism, emotional fanaticism, and irrational fervor. Le Bon's century-old insights have repeatedly been validated in capital market anomalies, with this GameStop case serving as a prime example.

After retail investors on WallStreetBets forum formed a collective consensus, their rational independence was replaced by irrational herd frenzy. Driven by the "all-or-nothing" mentality and chanting the slogan "never sell," they pushed the stock price of GameStop—a company lacking fundamental support—to irrational heights. The underlying logic behind such extreme price swings can be attributed to herd psychology: "When others buy, I must follow; when others profit, I must join." Herd behavior carries significant risk contagion potential, easily triggering systemic financial risks. In an efficient market, long and short positions maintain checks and balances through independent analysis, curbing abnormal stock price fluctuations. When herd effect dominates, investors' highly synchronized actions create imbalance between bulls and bears, causing violent asset price volatility. Without proper guidance mechanisms to address such irrational movements, liquidity bottlenecks will form, ultimately leading to systemic financial crises.

5.5. Interpretation based on the theory of representativeness bias

The representative bias manifested in the GameStop incident through three key aspects: First, retail investors believed prominent entrepreneurs like Ryan Cohen could revive GameStop's fortunes by replicating their success at Chewie. Second, they naively projected a repeat of individual investors' triumph over institutional forces in Tesla's stock battle, overlooking the fundamental difference between Tesla's innovative DNA and GameStop's outdated business model. Third, the stock surge triggered cross-sector contagion, with AMC Cinemas soaring 400% and Koss Corporation skyrocketing 3000%. Despite pandemic-induced operational challenges, these extreme price movements starkly exposed the severity of this representational bias.

6. Inspiration and summary

This study reveals irrational behavioral patterns exhibited by retail investors in the post-pandemic era, including herd behavior (as exemplified by the GameStop incident), overconfidence, and loss aversion. These behaviors not only affect individual investment returns but also disrupt market order. Behavioral finance theory provides a systematic explanatory framework for these phenomena. Investors are advised to enhance their financial literacy, strengthen rational information analysis capabilities, and implement emotional management strategies to improve the scientific rigor and stability of investment decisions.

Research reveals that retail investors exhibit pronounced behavioral biases in this unique market environment, including herd mentality, loss aversion, overconfidence, and loss aversion. These irrational patterns not only compromise decision-making quality but also profoundly influence market volatility and asset pricing. For instance, during the frenzy over "internet-famous stocks" and speculative assets, social media amplifies investors' overconfidence and fear of missing out, driving short-term price surges and extreme fluctuations. Furthermore, by correlating investor activities with market indices, the study uncovers mechanisms behind price distortions and rapid emotional shifts, offering new perspectives for understanding market anomalies.

This study highlights the significance of behavioral finance theory in explaining real-world market phenomena. Traditional finance, rooted in the "rational actor" assumption, struggles to fully account for price deviations and investor behavior anomalies in markets. Behavioral finance, however, integrates insights from psychology and social behavior studies to scientifically analyze cognitive biases in investors' decision-making processes and their market impacts. Particularly during the post-COVID market boom, irrational behaviors of retail investors have emerged as a key driver of market dynamics. These findings not only enrich the theoretical framework of behavioral finance but also provide crucial references for practical investment decisions and market regulation practices.

Reference

[1] Jiang Shuguang, Wei Qian, Shen Liangjun. Animal Spirit, Cognitive Abilities and Investor Behavior [J]. Journal of Central University of Finance and Economics, 2023, (4):38-52.

[2] Cheng Chen and Liu Ke. Impact of the COVID-19 Pandemic on Capital Markets: A Study from the Perspective of Stock Price Synchronization [J]. Industrial Technology Economics, 2021,40(3):125-135.

[3] Huang Shizhong, Li Shi, and Yu Xiaoran. Analysis and Implications of the GameStop Stock Phenomenon: A Behavioral Finance Perspective [J]. Accounting Monthly, 2021, (5):3-9.

[4] Huang Jianing; An Jiaqi. Analysis of the GameStop Incident under Institutionalization in China's Stock Market ——From a Behavioral Finance Perspective [J]. Financial Education Research, 2023,36(3):28-37.

[5] Li Quan; Li Tianshu; Fan Yixia. Retail Investors' Behavior in the Stock Registration System Reform: An Empirical Study —— Based on Microstructure Transaction Data of the STAR Market [J]. Journal of Xinjiang Normal University (Philosophy and Social Sciences Edition), 2023,44(6):70-81.

[6] Lin Jianxiu. The Contagion of Investor Behavior in the Social Media Era and Its Implications: An Event Analysis Using GameStop as a Case Study [J]. Financial Development Research, 2021, (8):74-79.

[7] Shang Defeng. Analysis of the Game Between "Retail Investors" and "Institutions" from the Perspective of Behavioral Finance: A Case Study of GameStop and Silver Futures in the US Capital Market [J]. Accounting Communications, 2021, (18):157-160.

[8] Zhu Min. The Financial World Through Behavioral Finance [J]. Zhangjiang Science and Technology Review, 2021, (2):29-31.

[9] Lu Xiaomeng; Zhang Yong; Pan Li. Holding Period and Stock Profitability: Evidence from the China A-share Market [J]. Statistical Research, 2020,37(4):32-45.