



The Impact of Financial Short Videos on Behavioral Decision-Making of Novice Investors

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Abstract. With the rapid popularization of mobile Internet technology, the transmission channel of financial knowledge has changed significantly and gradually moved to short video platform. This change has had a systemic and profound impact on novice investors with limited investment experience. This study focuses on in-depth analysis of the impact path of algorithmic recommendation mechanisms in financial short videos on the behavioral decisions of novice investors. Short video platforms have reconstructed the dissemination mode of financial knowledge through algorithm recommendations, bringing significant changes to inexperienced investors. The algorithm recommendation mechanism is prone to giving rise to the "information cocoon" effect, allowing investors to only access specific information; Meanwhile, the content design of financial short videos may also lead to cognitive biases. The synergy between the two leads to alienation in the decision-making of novice investors. To this end, a governance framework has been proposed, which includes establishing an algorithm transparency evaluation system, implementing content classification management, and strengthening qualification supervision. The aim is to develop systematic solutions and provide practical references for regulatory policy formulation and novice investor decision-making optimization.

Keywords: Financial Short Videos, Algorithmic Recommendation, Information Cocoon, Cognitive Bias, Investor Behavior.

1 Introduction

China's financial short video industry has experienced explosive growth in recent years. By 2023, major platforms will host over 500,000 financial content creators. This new dissemination format exhibits three distinct characteristics. First, it emphasizes high visualizability. For example, Ping An Bank's TikTok livestreams incorporate dynamic charts and scenario-based narratives, demonstrating that such methods enhance the efficacy of financial knowledge dissemination. Second, it prioritizes immediacy. The average response time for video-based interpretations of trending financial events has shortened to 2.7 hours, enabling rapid responses to market dynamics. Third, it fosters strong user engagement. A single Ping An Bank livestream on TikTok attracted 397,000 viewers and 119,000 likes, while top creators on Bilibili's financial channels

frequently achieve millions of views per video through interactive bullet comments, algorithmic recommendations, and youth-oriented storytelling strategies [1, 2].

These industry trends align with the practical demands of investor education. The Shenzhen Stock Exchange's 2020 survey on individual investors revealed significant disparities in financial literacy across different investor groups, highlighting the need for targeted educational interventions. Many novice investors lack sufficient knowledge of shareholder rights, trading rules, and financial terminology, leading to cognitive biases. This underscores the necessity for guided learning to mitigate misunderstandings.

Using literature analysis, this study aims to elucidate the mechanisms through which financial short videos influence the decision-making behaviors of novice investors. Existing research predominantly focuses on the dissemination strategies and content production models of financial short videos, yet systematic analyses of cognitive biases and behavioral alienation among novice investors remain limited.

In financial markets, novice investors occupy a vulnerable position characterized by limited investment experience and systematic analytical capabilities, making them susceptible to superficial information; reliance on fragmented content due to constrained information channels and insufficient capacity for in-depth interpretation; emotion-driven decisions marked by herd mentality and weak risk awareness. This demographic strongly favors intuitive and accessible information formats. Financial short videos, with their lightweight dissemination, visual expression, and real-time updates, have become a primary gateway for novice investors to access financial knowledge. While simplified investment logic and emotionally charged narratives in short videos align with novice investors' cognitive habits, inherent issues such as information overload, logical gaps, and biased content may amplify irrational decision-making.

2 The Information Narrowing Effect of Algorithmic Recommendation Mechanisms

2.1 Technical Logic of Platform Algorithms

According to BigData-Research, short videos rank as a high-frequency application, with 41.3% of users accessing them multiple times daily and 56.9% spending over 60 minutes per day [3]. Most platforms employ "user interest" (full-coverage) recommendation algorithms. For instance, ByteDance's patented algorithms construct preference tree diagrams based on users' historical viewing tags, enabling precise user profiling and content recommendations [4]. These algorithms operate on collaborative filtering principles, recommending content by matching user profiles with content tags. Item-based filtering emphasizes feature analysis (e.g., movie genres, article themes) to push similar content to interested users.

2.2 Evolution of Information Cocoons

The concept of "information cocoons" was first proposed by American legal scholar Cass Sunstein in *Infotopia: How Many Minds Produce Knowledge*. Sunstein argues

that individuals tend to select content aligned with their preferences, actively or passively constructing a "Personal Daily Me" information intake pattern. This confines users within closed ecosystems of homogeneous information and ideas. Algorithmic recommendations and user cognition form a bidirectional feedback loop. Continuous user interactions (likes, shares) with recommended content reinforce this cycle. Empirical research from Wenzhou University indicates that 92% of university students frequently use short video platforms, yet less than 5% of recommended content pertains to local culture, reflecting algorithmic reinforcement of user preferences. Selective exposure leads users to filter out heterogeneous information, progressively narrowing their informational scope.

After multiple algorithmic filters, users exhibit narrowed information pathways, highly customized content, homogenized cognition, echo-chamber social interactions, and entrenched behavioral habits [5]. The "selective exposure → algorithmic reinforcement → cognitive entrenchment" pathway creates "information barriers" centered on risk perception biases. Investors' ability to perceive heterogeneous risk signals is systematically weakened, resulting in decisions disconnected from actual market risk structures.

Under the reinforcement of algorithmic recommendations, users are likely to receive information confined to a narrow scope, limiting their exposure to diverse perspectives and content types. This creates an information-narrowing effect, which constrains users' cognitive horizons and exacerbates decision biases and cognitive rigidity.

3 Impact of Video Content on Cognitive Decision-Making

3.1 Cognitive Biases from Knowledge Compression

In investor decision-making, incomplete information and overload hinder rational choices. Limited computational capacity and information scarcity force decision-makers to act under uncertainty, leading to cognitive biases [6,7]. For example, the "primacy effect" in short videos anchors investors to initial information, while the "information cascade effect" accelerates the spread of partial cognition, distorting risk assessments [8]. The fragmented nature of financial short videos compresses complex knowledge into simplified content, fostering systematic biases. Novice investors may overestimate their judgment capabilities due to overreliance on abbreviated content [9].

3.2 Behavioral Conduction and Decision Alienation

Herd behavior in securities investment is a critical research area in finance. Novice investors often mimic others' decisions due to information asymmetry and a lack of expertise. Behavioral finance offers new insights into this phenomenon [10]. For instance, novice investors might follow trends by purchasing stocks without analyzing fundamentals, exacerbating price volatility and deviations from intrinsic value.

The social attributes and algorithmic mechanisms of short video platforms accelerate behavioral conduction among investors, leading to decision alienation. Myopic cognition drives overreliance on short-term market signals, while the herding effect promotes irrational trading through "imitation-reinforcement" mechanisms [11]. Furthermore,

unregulated content creators may disseminate misleading information for traffic gains, trapping novice investors in a vicious cycle of "misinformation → biased decisions → losses."

Video content exerts a significant impact on cognitive decision-making. The fragmented dissemination of financial short videos induces cognitive biases among novice investors, while the interplay of platform social features and algorithmic mechanisms accelerates behavioral conduction, leading to decision alienation. Furthermore, regulatory gaps intensify this vicious cycle. Due to limited industry knowledge, novice investors are more susceptible to constraints imposed by fragmented and restricted information, which distorts their understanding of the financial sector and ultimately results in erroneous judgments regarding market dynamics.

4 Risk Typology and Mitigation Strategies

Table 1. Key risks

Risk Type	Manifestation	Mechanism	Outcome
Cognitive Overload	Decision paralysis	High information density exceeds processing capacity	Delayed decisions
Authority Reliance	Blindly following "finance influencers"	Lack of experience fosters dependency	Erroneous copycat trading
Risk Desensitization	Underestimating market volatility	Fragmented learning weakens risk cognition	Increased risk misestimation

To address the risks in Table 1, a tripartite governance framework algorithm optimization, content adaptation, qualification supervision is proposed:

Dynamic Algorithmic Intervention: Integrate a "risk perception module" into recommendation systems. AI monitors user behavior (e.g., viewing duration, repeated clicks) to dynamically assess cognitive overload levels (low/medium/high), helping novices build systematic cognitive frameworks.

Contextual Content Classification: Implement tiered management based on risk types. For high cognitive overload users, enforce "R1-level content unlocking" (e.g., limit daily video views to 20, then push educational content). For authority-dependent users, display "3D credibility tags" (platform certification, prediction accuracy, institutional endorsements) and divergent opinion alerts (e.g., "63% of analysts disagree"). Mandate risk coefficient disclosures (e.g., "maximum 47% drawdown over three years") and interactive risk simulations.

Qualification Supervision: Establish a "creator-content-user" oversight system. Evaluate influencers via "capability radar charts" (financial qualifications, compliance rates, user complaints) and reduce exposure for subpar creators. Add post-publication market performance reviews to high-traffic videos. Introduce a "cooling-off period" tool requiring novices to watch risk warnings before copycat trading.

5 Conclusion

This study systematically analyzes how short financial videos influence novice investors' decision-making through algorithmic recommendations and content design. Algorithmic mechanisms create "selective exposure → reinforcement → entrenchment" pathways, fostering information cocoons that reduce heterogeneous risk perception. Fragmented content exacerbates cognitive biases, while social interactions amplify behavioral alienation. The proposed "algorithm-content-supervision" framework offers solutions to mitigate information narrowing, cognitive biases, and irrational decisions.

To regulate the financial short video ecosystem, three measures are recommended: enhance algorithmic transparency and accountability; enforce content classification and user-specific adaptation; establish creator credibility assessments. Future research could explore AI-driven cognitive bias monitoring, interdisciplinary studies on narrative strategies' psychological impacts, and the role of generative AI in investor education.

References

1. Shen, Y. Practice and reflection on empowering micro-financial services with digital intelligence through short videos: case study based on Ping An Bank's Douyin live broadcast. *E-Commerce Letters* (1), 511-519 (2025).
2. Xu, X. Dissemination characteristics and prospects of Bilibili financial videos. *News Culture Construction* (4), 164-165 (2021).
3. Big Data-Research. China short video market research report for the 3rd quarter of 2019. <http://www.bigdata-research.cn/content/201911/1010.html>, last accessed 2020-03-13 (2019-11-06).
4. Zhao, Z. Analysis on the "Douyin (Tiktok) mania" phenomenon based on recommendation algorithms. *E3S Web of Conferences* 235, 03029, (2021).
5. Pariser, E. The filter bubble: what the internet is hiding from you (F. Shishi & Y. Yang, Trans.). Renmin University of China Press, (2011).
6. Shen, L., Yang, Z. Formation mechanisms and governance of algorithmic filtering in short videos during the digital intelligence era. *Media Science and Technology of China* (8), 7-11 (2024).
7. Liu, X. Mechanisms of investor decision bias formation. *Co-Operative Economy & Science* (20), 66-68 (2011).
8. Ling, J., Wang, C. Performance and governance of fake news in short videos from an audience cognitive perspective. *Today's Mass Media* 29(11), 124-126 (2021).
9. Zeng, W. Legal responses to cognitive biases in online financial consumers. *Studies in Law and Business* 40(4), 101-114 (2023).
10. Cheng, G., Yao, J., Jiang, J. A literature review on herding behavior in Chinese securities investment funds. *Research of Finance and Accounting* (3), 50-52 (2008).

11. Xia, Y., Wei, M. A research on the optimal decision of internet financial platform considering short-sighted cognition and herd effect. *Industrial Engineering Journal* **25**(4), 36-44 (2022).

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