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Behavioral Finance Perspective on the Size Effect in China's Stock Market

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Abstract: In financial markets, the size effect manifests as the phenomenon where stocks of small-cap companies yield higher long-term returns than those of large-cap companies. Based on the efficient market hypothesis, traditional finance attributes the size effect to risk compensation, but this theory struggles to explain the uniqueness of China's stock market fully. Behavioral finance, by analyzing investor psychology and behavioral biases, offers a new perspective on the size effect. This paper systematically reviews the research history of the size effect in China's stock market and explores the impact of behavioral factors such as limited attention, overreaction, herding behavior, disposition effect, and market manipulation on the size effect. The study finds that China's high proportion of retail investors, significant market sentiment fluctuations, and strong information asymmetry amplify the role of behavioral factors in the size effect. From a behavioral perspective, this paper proposes investment strategies that consider the macroeconomic environment and institutional reforms to optimize stock market development, enhance regulatory capabilities, and provide theoretical references for market investors.

Keywords: Behavioral finance, Size effect, Behavioral factors, Stock market, Economics

1. Introduction

Since its establishment in 1990, China's stock market has undergone rapid evolution in terms of market size and participant structure. By 2023, individual investors accounted for over 30% of the A-share market, which has grown rapidly and played a pivotal role in financing China's economy, becoming an important part of the global capital market [1]. The Chinese stock market has undergone decades of development and has grown into one of the world's leading securities markets in terms of scale. The current market size is huge, and the number of listed companies continues to grow. The comprehensive implementation of the registration system reform has further enhanced market inclusiveness. With the deepening of interconnectivity mechanisms such as the Shanghai Hong Kong Stock Connect and the Shenzhen Hong Kong Stock Connect, the participation of international capital has gradually increased, but foreign investment still plays a supplementary role in the overall shareholding structure. The structure of market investors presents distinct characteristics, with individual investors having significantly higher trading activity than mature markets. Value investing culture has not yet become mainstream, which has led to multiple irrational behaviors. Firstly, the phenomenon of emotional trading is prominent, and following the trend leads to long-term high market volatility, with the overall market index often experiencing significant fluctuations; Secondly, there is a strong speculative atmosphere in the subject matter, and emerging concepts are prone to

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triggering capital speculation, with some stock valuations deviating significantly from fundamentals; Once again, the market is sensitive to policy signals, and major news often triggers extreme market conditions where funds concentrate or withdraw; Finally, the volatility of leveraged funds has a significant effect on market growth and decline, and although the scale of financing transactions is within a controllable range, it is still an important channel for risk transmission. These phenomena reflect that the market is still in the stage of "emerging to mature", and it is necessary to promote the construction of a rational investment ecosystem through improving systems and optimizing structures.

However, the maturity of China's stock market lags far behind that of developed Western countries, and its lack of standardization in market size and regulation has led to irrational behaviors that profoundly impact market pricing mechanisms. Traditional finance, based on the rational investor hypothesis, posits that the size effect merely reflects risk premiums. However, the low efficiency of China's stock market suggests that behavioral factors cannot be ignored [2, 3]. This paper first analyzes the research development of the size effect in China, then examines the influence of various behavioral factors on the size effect in the context of China's stock market. From a behavioral finance perspective, it systematically explores the driving mechanisms of the size effect in China's stock market, providing references for theoretical refinement and practical applications. Finally, it proposes strategies to offer practical guidance.

2. Literature review

Behavioral finance, by integrating psychology and behavioral economics theories, reveals the relationship between cognitive biases and market anomalies. For example, Kahneman and Tversky's prospect theory indicates that investors' asymmetric perceptions of losses and gains lead to deviations from rational decision-making [4]. In the context of China's stock market, Zhu Weihua and Zhang Zongxin found that speculative behavior by retail investors exacerbates stock price volatility, amplifying the size effect [5].

Current mainstream research focuses on uncovering the causes of the size effect and its manifestations under different market conditions. Studies on the causes of the size effect have achieved some results, primarily divided into two directions. The first is the risk compensation theory, which posits that small-cap companies face higher operational and financial risks, requiring investors to demand higher returns as compensation. The second is the investor behavior theory, which suggests that institutional investors prefer large-cap stocks, while small-cap stocks, due to lack of attention and a smaller investor base, need to offer higher expected returns to attract investors. Additionally, small-cap companies often have less information disclosure and lower analyst coverage, making them prone to market undervaluation and resulting in a size premium [6].

Existing research predominantly uses methods such as weak-form, semi-strong-form, or strong-form efficiency tests to validate market efficiency or employs indirect measures like the number of listed companies, market capitalization, stock market size, financing costs, and market anomalies as proxies for market efficiency. However, studies on the role of retail investors remain limited. Therefore, this paper seeks appropriate quantitative methods for market efficiency to refine existing research on market efficiency and its influencing factors.

3. Analysis of China's stock market from a behavioral finance perspective

3.1. Limited attention of investors

In China's stock market, the large number of investors and complex information environment mean that large-cap companies, due to their high visibility and media exposure, attract more investor attention. In contrast, small-cap companies, with lower media exposure, are often undervalued. Hirshleifer and Teoh noted that limited attention leads investors to overlook less popular stocks [7].

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For example, startups on the STAR Market initially had lower stock prices than their intrinsic value due to insufficient information disclosure. However, subsequent policy incentives attracted capital inflows, resulting in excess returns [8]. When some investors begin to focus on small-cap companies, it triggers capital inflows, driving up stock prices and creating a premium for small-cap stocks. For instance, in 2017, blue-chip stocks like Kweichow Moutai attracted significant capital, causing substantial price fluctuations and overall market volatility. This demonstrates how limited attention influences market volatility and investor behavior. Extreme fluctuations can push the market toward two extremes, as seen during the 2015 stock market bubble when investor focus on profit-driven speculation led to rapid market surges, followed by panic-driven crashes after the bubble burst.

3.2. Overreaction and underreaction

China's investor base is dominated by retail investors, whose decisions are often influenced by emotions and cognitive biases. Retail investors exhibit biases in information processing. The investors overreact to extreme information, causing stock prices to overshoot. In China, positive news about small-cap companies often triggers collective buying by retail investors. For example, during the 2020 "chip concept stock" hype, some small-cap companies saw their price-to-earnings ratios surge by 300% in the short term [9]. In contrast, large-cap stocks, with their transparent information, experience slower price adjustments (e.g., Kweichow Moutai's earnings forecasts did not trigger significant fluctuations). When small-cap companies release positive news, investors may overestimate its impact, driving prices up excessively. Conversely, negative news may lead to excessive panic, causing prices to drop excessively. Over time, such overreactions are corrected, resulting in the size effect. On the other hand, investors may underreact to large-cap companies due to their stable and transparent information, leading to delayed price adjustments.

3.3. Herding behavior

Herding behavior refers to investors' tendency to mimic others' actions rather than making independent decisions based on analysis or information. Similar to how individuals in a herd follow the group, herding in the stock market often manifests as blind buying or selling of certain stocks or sectors, causing sharp price fluctuations. China's retail investors, with relatively weak information-gathering and processing capabilities, tend to imitate others' decisions. Banerjee's herding model shows that under information asymmetry, individuals rely more on others' behavior [10]. During the 2015 A-share "leveraged bull market," small-cap stocks became targets of speculation due to their hype potential, with the CSI 500 Index rising by 120%, far exceeding the 60% gain of the CSI 300 Index [10]. In April 2017, the announcement of the Xiongan New Area by the central government quickly turned related concept stocks into market hotspots. For instance, Jinyu Group's stock surged by 50% at the opening, while Longji Taihe Smart Energy soared by over 70%. Such short-term volatility reflects herding behavior under policy incentives, where massive capital inflows drove up prices, only to retreat later due to lack of fundamental support.

3.4. Disposition effect

The disposition effect refers to investors' tendency to sell winning stocks too early and hold losing stocks too long. For small-cap stocks, their higher price volatility may prompt investors to sell when profitable, preventing prices from fully reflecting intrinsic value. Conversely, investors may hold onto losing stocks due to psychological reluctance to realize losses, leading to undervaluation over time. When market conditions or investor sentiment shift, small-cap stock prices adjust, manifesting the size effect. For large-cap stocks, investors exhibit more rational disposition behavior, contributing to differences in market performance. Odean empirically showed that investors are more likely to sell

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winning stocks [11]. In China, retail investors are 15% more likely to sell small-cap stocks after a 10% gain compared to large-cap stocks, leading to long-term undervaluation of small-cap stocks [12].

3.5. Market manipulation

Small-cap stocks, with their smaller market capitalization, are more susceptible to manipulation. Institutions or large investors may control small-cap stock prices to create false market signals, luring retail investors to follow. Such manipulation disrupts normal pricing mechanisms, causing small-cap stock prices to deviate from intrinsic value and contributing to the size effect. Large-cap stocks, due to their size, are harder to manipulate and less affected by such behaviors. For example, the 2021 "Ye Fei whistleblowing incident" exposed how institutions manipulated small-cap stock prices through "market capitalization management," artificially creating the size effect [13]. Market manipulation can lead to significant volatility, affecting overall market stability.

4. Conclusion

The size effect in China's stock market arises from the combined influence of risk compensation and behavioral factors. Small-cap companies face higher operational and financial risks, prompting investors to demand higher returns—this is the risk compensation aspect of the size effect. Behavioral finance reveals the unique impact of a retail-dominated market, where limited attention leads to the undervaluation of small-cap companies. Overreaction, herding behavior, disposition effect, and market manipulation further distort stock prices, reinforcing the size effect. Future research should leverage machine learning to analyze high-frequency trading data and examine the dynamic impact of institutional changes like registration-based IPOs and foreign capital inflows on the size effect. To ensure healthy market development, regulatory measures and strategic guidance are essential to stabilize market fluctuations and provide references for investors and regulators.

While this paper systematically analyzes the causes of the size effect and the role of retail investors in China's stock market, data limitations have confined the study to theoretical analysis. Future research could incorporate empirical models to expand findings and enhance practical applicability by including real-world case studies.

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