

Behavioral Finance: The impact of Investor Expectations on the Financial Markets

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Abstract. This paper explores the profound impact of investor behavior, driven by cognitive biases such as loss aversion, the framing effect, and the endowment effect, on financial markets. The presence of these biases introduces market anomalies and long-term reversals, challenging the efficiency of the market. While valuable insights are gained from studying investor behavior, limitations must be considered. Individual variations in psychological traits and decision-making processes may render these theories inapplicable to all investors. Historical data, a primary tool for analyzing behavior, may not reliably predict future market trends. Quantifying cognitive biases and measuring their impact presents challenges due to the subjective nature of psychological factors. Additionally, limited sample sizes in some studies may compromise the generalizability of findings. Despite these constraints, understanding investor behavior remains paramount for unraveling market dynamics and shaping informed investment strategies. The paper underscores the need to acknowledge these limitations while appreciating the nuanced role of cognitive biases in financial markets.

1 Introduction

The study of financial markets has been a cornerstone of economic research for decades. Traditional theories have long championed the concept of efficient markets, where prices reflect all available information. The Efficient Market Hypothesis (EMH), particularly influential in the 1970s, posited that securities' prices in financial markets are always at their fair value, making it impossible to consistently outperform the market through expert stock selection or market timing [1]. However, the steadfastness of this theory began to wane as anomalies and patterns of excess volatility emerged, particularly noted in the 1980s, which led to the burgeoning field of behavioral finance. Researchers like Shiller have chronicled the journey from a staunch belief in market efficiency to acknowledging the nuances and the value of behavioral theories in finance [1].

Yet, a gap remains in comprehensively understanding how investor expectations, characterized by cognitive biases and emotional reactions, influence market dynamics. While financial anomalies have been extensively documented, the mechanisms through which investor psychology, particularly loss aversion, impacts market efficiency are not fully understood. This is surprising given the potential implications for both market predictability and investment strategy. Current literature suggests that irrational investor behavior can indeed have significant effects on market efficiency, challenging the traditional EMH [2].

This paper aims to deepen the exploration of behavioral finance by investigating the impact of loss aversion on financial market anomalies, specifically

short-term momentum and long-term reversal, as well as the framing effect. By employing a refined predictive model that integrates behavioral factors overlooked in previous research, this study seeks to elucidate how investor expectations shape market movements. This approach is not only theoretically robust, but it also offers practical insights into market behavior that could be advantageous for financial practitioners.

In summary, this paper will present a structured examination of the following: the Efficient Market Theory, the correlation between irrational investors and market efficiency, and the influence of investor behavior on market anomalies. A detailed methodology is utilized to explore these phenomena, with significant findings highlighting the complex interplay between psychology and market efficiency. This investigation is poised to fill the research void by offering a nuanced perspective on how investor expectations can lead to predictable patterns within financial markets, ultimately challenging the notion of market efficiency.

2 Loss aversion

Loss aversion is a cognitive bias characterized by the principle that individuals feel the pain of a loss more acutely than the pleasure of an equivalent gain. This phenomenon is central to behavioral finance and has significant implications for investor behavior and market dynamics.

The impact of loss aversion extends deeply into the psyche of financial decision-making. Empirical studies have shown that when faced with potential losses, investors exhibit a tendency to become risk-averse, often

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irrationally holding on to losing investments to avoid realizing losses, while conversely, quickly liquidating profitable positions to secure gains [3, 4]. This behavior is driven by the disproportionate weight given to the fear of loss over the potential for an equal amount of gain. Loss aversion can therefore lead investors to make choices that are not aligned with their long-term financial interests or the fundamental values of the assets they hold.

In the context of financial markets, the decision-making processes influenced by loss aversion can contribute to several market anomalies. For example, the disposition effect, a behavioral bias where investors are prone to sell winners too early and ride losers too long, is a direct consequence of loss aversion [3]. This effect can result in the momentum and reversal patterns observed in asset prices, as investors react to short-term fluctuations and over-correct in the long term.

Moreover, loss aversion has been linked to the under-performance of individual investors compared to market benchmarks. The analysis of trading records and investment returns indicates that the more actively individuals trade, influenced by loss aversion, the poorer their performance tends to be, suggesting that this bias can be detrimental to wealth accumulation [3].

Research utilizing comprehensive data sets and psychological models has further reinforced that loss aversion can distort investor expectations and lead to systematic deviations from optimal investment behavior [3, 4]. This divergence from rationality is essential in understanding the mechanisms behind price formation and the efficiency of financial markets. The studies demonstrate that the pain of losses is felt more intensely and weighs more heavily in decision-making than the satisfaction of an equivalent gain. As such, loss aversion not only impacts individual investment choices but also has broader implications for market behavior and efficiency, challenging traditional financial theories which assume rational actors.

In summary, loss aversion plays a pivotal role in shaping investor expectations and financial decision-making. The tendency to avoid losses more strongly than to seek gains can result in predictable yet inefficient market outcomes. Recognizing and understanding the influence of loss aversion is paramount for both individual investors aiming to optimize their investment strategies and for economists seeking to elucidate the complexities of market behavior.

3 Market anomalies

3.1 Momentum

Short-term momentum in market anomalies refers to the phenomenon where stocks or assets that have performed well in the recent past continue to outperform in the near future. It is a manifestation of investor behavior driven by cognitive biases and emotional reactions, including loss aversion. Loss aversion leads investors to hold on to winning stocks for longer periods to avoid selling at a

loss and quickly liquidate profitable positions to secure gains.

Zaremba delves into the momentum effect within global equity markets, scrutinizing anomalies at the country level. The study encompasses 78 countries over the period from 1995 to 2015, investigating 40 potential cross-sectional inter-market anomalies, including some that have not been previously explored. The results offer compelling support for the notion that anomalies demonstrating strong performance in the preceding 6-12 months are likely to outperform in the future. Additionally, the returns on strategies at the individual country level display minimal correlation, implying that creating a portfolio based on historically top-performing strategies can be advantageous for global investors [5].

The research methodology entails employing sorting procedures to assemble portfolios of countries with equal and capitalization weights, subsequently evaluating their performance using both country-level and stock-level asset-pricing models. The investigation identifies the most resilient effects and constructs portfolios of anomalies with equal weights. To validate cross-sectional patterns linked to the past performance of portfolios, Patton and Timmerman's monotonic relationship tests are applied [5].

Another relevant study by Dhankar and Maheshwari places emphasis on behavioral-based explanations for the momentum anomaly [6]. The paper discusses the ongoing debate surrounding the profitability of momentum strategies and evaluates various authors' work on possible causes of the effect. It contributes to the literature on behavioral finance, which seeks to understand financial markets through a paradigm shift from neoclassical assumptions towards incorporating investor irrationality and cognitive biases [6].

3.2 Reversal

Long-term reversal refers to the phenomenon where stocks or assets that have performed poorly over a period eventually outperform in the longer run. This behavior impacts decision-making as it suggests that investors' initial reactions to information may be overextended, leading to subsequent corrections in asset prices. It implies that investors, driven by expectations built on past performance, may push prices away from fundamental values, only for these to correct over time.

The essence of long-term reversal lies in the psychological tendencies of market participants. Investors react to new information by updating their expectations, and these revised expectations can lead to significant price movements. However, due to cognitive biases like anchoring or the representativeness heuristic, investors often overreact to new information in the short term, leading to price movements that deviate from the assets' fundamental values. Over time, as emotions wane and rational analysis prevails, prices tend to revert, reflecting a more accurate assessment of the assets' intrinsic value. This adjustment manifests as a long-term reversal.

The influence of long-term reversal extends to the mechanisms of financial decision-making. Investors, driven by recency biases, might give undue weight to short-term performance when evaluating investments. This can lead to suboptimal strategies, such as the tendency to chase past performance, resulting in buying high and selling low—actions contrary to sound investment principles.

In the realm of financial markets, the decision-making shaped by long-term reversal contributes to distinctive patterns in asset pricing. For instance, the contrarian investment strategy, which involves buying underperforming assets and selling outperformers, is predicated on the principle of long-term reversal [7, 8]. This strategy assumes that the market will eventually correct the mispricing caused by investor overreaction, leading to the observed phenomenon where poor performers eventually outperform.

Additionally, long-term reversal has been linked with market inefficiencies. While traditional finance models assume markets are efficient and assets are fairly priced, the persistence of long-term reversal suggests that psychological biases can lead to systematic mispricing that savvy investors can exploit [7, 8]. Some argue that long-term return anomalies do not necessarily refute market efficiency. It suggests that both overreaction and underreaction to information are as common and that long-term return anomalies are sensitive to methodological approaches. This study utilizes event studies and considers the lag in price adjustments to information. The key conclusion is that the evidence against market efficiency from long-term return studies is fragile and that many anomalies are not robust to changes in methodology. This supports the main theme by showing how investor expectations, when tested with different methods, may not conclusively lead to persistent anomalies, thus questioning the impact of such expectations on financial markets [7].

While other explores long-term return reversals across international equity markets, introducing a late-stage contrarian strategy that identifies securities ready to reverse based on recent short-term performance. This study is particularly relevant as it provides evidence of reversal in both developed and emerging markets. By focusing on recent short-term performance to select contrarian securities, this research shows that investor expectations based on past performance can lead to profitable opportunities when such expectations result in mispricing, which then corrects over time. This supports the essay's theme by demonstrating a practical application of how investor expectations, when misaligned with long-term fundamentals, can impact financial markets [8].

These studies underline the fact that investor reactions to new information can be extreme and short-sighted, with a gradual realignment of prices over the long term as the market absorbs and accurately reflects all available information. Consequently, long-term reversal not only affects individual investment decisions but also has pervasive implications for broader market behavior and the concept of market efficiency,

challenging the conventional wisdom of rational market behavior.

In summary, the momentum effect is a pivotal aspect of behavioral finance, influencing investor expectations, market anomalies, and price formation. Understanding the influence of the momentum effect is crucial for investors seeking to optimize their strategies and for economists aiming to comprehend the complexities of market behavior. Nonetheless, long-term reversal is a critical concept in behavioral finance that challenges traditional market efficiency theories. The reviewed literature indicates that investor expectations, shaped by behavioral biases, can lead to market anomalies, although these anomalies' persistence and implications for market inefficiency are debatable. The impact of investor expectations on financial markets is evident but must be understood within the context of methodological rigor and the dynamic nature of market forces.

4 Framing effect

The framing effect, defined as the influence of how information is presented or framed on people's choices and decisions, plays a significant role in behavioral finance, shaping investment behaviors and influencing financial wellbeing.

One study focused on the impact of framing effect on investment behaviors and financial wellbeing [9]. The research, conducted in Pakistan, utilized Structural Equation Modeling to analyze data collected from 344 respondents. The study found that the framing effect could adversely influence financial wellbeing. Moreover, the research revealed the mediating role of investment behaviors between framing effect and financial wellbeing, contributing to the field of behavioral finance.

A different investigation delved into how the method of elicitation shapes return expectations [10]. The study revealed a notable impact of the elicitation mode on the forecasts. Surveys that inquired about anticipated future stock prices were observed to yield expectations more inclined towards mean reversion compared to surveys directly seeking future returns. This observation supports behavioral theories regarding investor expectation formation, particularly those grounded in the representativeness heuristic.

In the context of financial market surveys, the mode of eliciting return expectations can profoundly influence the results. Surveys asking for future stock price levels tend to produce different expectations compared to those directly asking for future returns. This insight is crucial, as survey results are influential in academia and practice, often shaping economic policy debates and corporate decisions.

The influence of the framing effect extends to the realm of investment decision-making. The manner in which information regarding an investment opportunity is presented—whether as a prospective gain or a prospective loss—holds substantial sway over investor behavior. This phenomenon is closely tied to the notion of loss aversion, wherein individuals tend to assign greater importance to potential losses than equivalent

gains, thereby impacting their choices in investment decisions.

In summary, the framing effect has substantial implications for investment behaviors and financial wellbeing. The way information is presented can significantly influence decision-making, investor expectations, and market outcomes. Understanding the influence of framing effect is crucial for investors, policymakers, and researchers, as it sheds light on the complexities of decision-making and the behavioral biases that influence financial markets.

These studies contribute to the body of knowledge in behavioral finance, emphasizing the need to consider the framing effect and its implications for investment behaviors and financial wellbeing. Recognizing the impact of framing effect is essential for developing more comprehensive and effective strategies for investment decision-making and policy formulation in the financial realm.

5 Endowment effect

The endowment effect is a cognitive bias that causes individuals to ascribe more value to things merely because they own them. This bias suggests that the act of owning an item increases its subjective value, which can distort an individual's valuation of the asset.

In financial markets, the endowment effect can have a profound impact on trading behavior and asset valuation. Investors affected by this bias may demand a higher price to part with an asset than the maximum price they are willing to pay to acquire it, if they do not own it. This can lead to pricing inefficiencies, where the market price does not reflect true asset value but is rather inflated by the subjective valuations of current owners.

The study by Furche and Johnstone provides empirical evidence of the endowment effect in stock market order placements [11]. They found that on the Australian Stock Exchange, sell orders were placed further from the market compared to buy orders, indicating that sellers, due to the endowment effect, valued their shares higher than potential buyers did. This asymmetry was more pronounced among private clients than institutional investors, suggesting that less sophisticated market participants are more prone to the endowment effect. This finding aligns with behavioral finance theories that predict individuals will not always act in economically rational ways.

Furthermore, the classroom experiment replicates the endowment effect in a controlled environment, demonstrating its relevance in educational settings and its potential impact on learning behavioral finance [12]. The experiment showed that students valued items they owned higher than the same items when they did not own them, thus illustrating the practical implications of the endowment effect in shaping financial decisions and expectations.

The endowment effect supports the essay's theme by illustrating how investor expectations, shaped by psychological ownership, can significantly affect financial markets. The tendency of investors to overvalue

assets they own contributes to market inefficiencies and challenges the assumption of rational behavior in economic theory. Such biases in valuation and trading behavior affect market liquidity, lead to potential asset mispricing, and can influence the dynamics of the market overall. The endowment effect, therefore, provides a clear example of how psychological factors, specifically ownership feelings, can distort investor expectations and, subsequently, market outcomes.

The literature supports the notion that the endowment effect influences financial decision-making. While traditional financial theories assume rational actors who value assets solely based on objective criteria, behavioral finance, through studies like those by Furche and Johnstone, reveals that subjective experience of ownership can alter this valuation [11]. The classroom experiment further reinforces the concept that even when made aware of their biases, individuals still succumb to them, which underscores the potency of the endowment effect in real-world financial scenarios [12].

In conclusion, the endowment effect is a fundamental concept in behavioral finance, providing insight into the non-rational ways in which investor expectations can shape financial market dynamics. By understanding this bias, market participants and educators can better anticipate and mitigate its impact on investment strategies and market efficiency.

6 Conclusion

Investor behavior, influenced by cognitive biases such as loss aversion, the framing effect, and the endowment effect, plays a significant role in financial markets. These biases can lead to market anomalies and long-term reversals, challenging the efficient market hypothesis and impacting market prices.

While the study of investor behavior and cognitive biases offers valuable insights into financial markets, there are certain limitations to consider. Firstly, these theories may not hold true for all investors as individuals vary in their psychological traits and decision-making processes. Secondly, relying on historical data to analyze investor behavior may not always accurately predict future market behavior. Additionally, quantifying cognitive biases and measuring their impact can be challenging, considering the subjective nature of psychological factors. Moreover, the sample sizes in some studies might be limited, which could affect the generalizability of the findings.

The intricate interplay between investor behavior and cognitive biases introduces a nuanced dimension to financial markets, challenging the traditional notions of market efficiency. While the identified biases such as loss aversion, the framing effect, and the endowment effect can instigate market anomalies and long-term reversals, a comprehensive understanding requires careful consideration of the limitations inherent in the study of investor behavior. Individual variations in psychological traits and decision-making processes may undermine the universality of these theories, and the reliance on historical data presents a potential obstacle to

accurately predicting future market behavior. Moreover, the subjective nature of psychological factors and the challenges in quantifying biases may introduce complexities in measuring their true impact. Despite these limitations, recognizing and delving into investor behavior is indispensable for unraveling the intricacies of market dynamics and formulating informed investment strategies in an ever-evolving financial landscape.

All in all, investor behavior influenced by cognitive biases can significantly influence financial markets by giving rise to market anomalies and long-term reversals. However, it is important to acknowledge the limitations of these theories, recognizing that not all investors may exhibit the same biases and that historical data cannot always predict future market outcomes. Nonetheless, understanding and studying investor behavior remains crucial for comprehending market dynamics and informing investment strategies.

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