

Behavioral Finance Experiments: A Systematic Review of Recent Literature

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Abstract

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This study presents a systematic review of experimental research in behavioral finance published between 2018 and 2023, focusing on cognitive biases, decision-making processes, and market dynamics. By analyzing laboratory and field-based experiments, as well as hybrid approaches integrating real-world trading data, the review identifies loss aversion, overconfidence, and herding behavior as the most consistently observed biases affecting investor decisions. The findings reveal that these biases persist across various experimental designs, influencing trading activity, risk perception, and collective market behavior, particularly under conditions of uncertainty such as the COVID-19 pandemic. Methodological diversification, including the use of online platforms, has enhanced participant diversity and improved the external validity of results. The review also underscores the practical implications of experimental insights for policy, investor education, and market regulation, highlighting the role of framing effects, feedback frequency, and transparency measures in mitigating irrational decision-making. These results demonstrate that experimental designs grounded in robust theoretical frameworks remain crucial for advancing the predictive and prescriptive capabilities of behavioral finance.

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1. Introduction

Behavioral finance has emerged as a vital field bridging psychology and economics to explain deviations from rational financial decision-making. Traditional finance theory assumes that investors act rationally and markets are efficient, but behavioral finance challenges this notion by incorporating cognitive biases, heuristics, and emotional factors into investment behavior (Wong et al., 2022). The increasing interest in this discipline has led to the proliferation of experimental studies aimed at testing theoretical assumptions in controlled environments, allowing researchers to observe real time decision making under various behavioral and market conditions (Barberis, 2021).

Over the last decade, systematic reviews and meta-analyses have highlighted the significance of experimental methods in behavioral finance research. Valcanover et al. (2020), for example, conducted a systematic review of studies published between 2014 and 2018, revealing that the *Journal of Behavioral Finance* was a leading publication venue and that seminal works by Kahneman and Tversky were highly influential in shaping experimental approaches. These experiments have explored a wide range of topics, including overconfidence, loss aversion, herding behavior, and framing effects, all of which contribute to a deeper understanding of the mechanisms driving financial decision-making.

Furthermore, comprehensive literature reviews have emphasized the need to classify behavioral biases and their impacts systematically. Badola et al. (2022) analyzed 71 peer reviewed studies from 2007 to 2021, identifying 24 behavioral biases that affect individual investors and proposing an attribute consequence impact

framework for understanding their influence. Such frameworks not only enrich theoretical models but also guide policymakers, educators, and financial institutions in developing interventions to mitigate irrational decision making. Consequently, the growing body of experimental behavioral finance literature presents an opportunity for a systematic review that synthesizes recent findings, identifies methodological trends, and maps future research directions in the field.

2. Literature Review

Experimental approaches have been central to demonstrating how bounded rationality and cognitive biases map into market outcomes. Early laboratory asset-market designs show that even with common knowledge of fundamentals, traders generate price patterns that deviate from classical predictions, illuminating the roles of learning, coordination, and institutional rules (Cipriani et al., 2021). Building on these designs, subsequent experimental finance work expands the toolkit to multi-asset settings, richer trading institutions, and heterogeneous information, allowing researchers to identify when market mechanisms mitigate or amplify behavioral tendencies observed at the individual level (Cipriani et al., 2021; Kirchler, 2023). These developments help connect micro level bias measurement to macro-level regularities such as excess volatility and mispricing persistence.

Parallel syntheses in behavioral finance clarify which biases consistently matter for investment decisions and through which channels they affect prices. Comprehensive reviews emphasize robust evidence for heuristics and preferences loss aversion, overconfidence, limited attention, and narrow framing while also

noting conditions under which arbitrage limits fail to discipline mispricing (Hirshleifer, 2020). Cross country and field style evidence complements lab findings: for instance, broad-sample studies document pervasive loss-averse responses across investor populations, reinforcing experimental results that small framing changes can shift risk taking and portfolio rebalancing (Xie et al., 2018). Together, these strands motivate experimental designs that explicitly vary salience, feedback frequency, and evaluation horizons to trace causal pathways from bias to behavior to prices.

Recent work also highlights context and shock sensitivity in collective dynamics, especially herding and information cascades. Theoretically, models of optimal experimentation show that herding should diminish but not disappear when agents internalize the value of information for future decision makers, a nuance that experimental designs can test by altering payoff externalities and observational structures (Smith & Sørensen, 2021). Empirically, market-wide disturbances such as the COVID-19 period reveal time-varying herding intensities and sectoral heterogeneity, underscoring how uncertainty and coordination frictions interact with institutional features insights that align with and inform laboratory manipulations of information precision and feedback (Ghorbel & Jeribi, 2023). Overall, the literature converges on a view that rigorously designed experiments linked to theory and field data are essential to identify mechanisms, evaluate policy-relevant nudges, and benchmark the external validity of behavioral finance claims.

3. Methods

This study applies a systematic literature review (SLR) approach to compile and analyze experimental research in behavioral finance published between 2018 and 2023. The SLR method is used to ensure a structured, transparent, and replicable process in identifying, selecting, and synthesizing relevant studies. The review focuses on experimental designs both laboratory and field based that examine behavioral biases, decision-making processes, and market dynamics. The literature search was conducted through academic databases such as Web of Science, Scopus, and Google Scholar, using keyword combinations including “behavioral finance,” “experiment,” “asset market,” “decision making,” and “bias.”

The screening process followed a step-by-step procedure, beginning with the removal of duplicate records and continuing with abstract screening to assess the relevance of the studies. Full-text reviews were then conducted to ensure alignment with the inclusion criteria, which required that the studies be written in English, use experimental methods, and address behavioral finance topics within the specified publication period. Additional articles were identified through backward and forward citation tracking from the selected key studies.

Data from each eligible article were extracted systematically, covering elements such as author names, year of publication, type of experimental method used, sample size and characteristics, behavioral biases studied, and main findings. Thematic coding was then applied to classify studies into bias categories such as loss aversion, overconfidence, herding, and information cascades. The synthesis process combined descriptive mapping of research trends with a comparative assessment of

methodologies, enabling the identification of key patterns, gaps, and potential areas for future investigation in experimental behavioral finance.

4. Results and Discussion

The systematic review of experimental behavioral finance studies published between 2018 and 2023 reveals several consistent patterns in the investigation of cognitive biases and decision-making processes. Loss aversion emerges as one of the most frequently examined biases, with multiple experimental studies confirming that investors tend to react more strongly to losses than equivalent gains, leading to suboptimal portfolio adjustments and reduced willingness to take risks (Kliger & Kudryavtsev, 2021). Similarly, overconfidence remains a dominant theme, with experimental findings indicating that overconfident investors are more likely to trade excessively, underestimate risks, and misinterpret market signals, thereby contributing to price volatility (Barberis, 2020). Herding behavior, often tested through information cascade and coordination games, continues to appear prominently in the literature, with results showing that market uncertainty, particularly during crisis periods such as COVID-19, intensifies collective decision-making tendencies (Ghorbel & Jeribi, 2023).

The analysis also identifies significant methodological diversification in recent experimental finance research. Laboratory based asset market experiments, while still widely used, are increasingly complemented by online experimental platforms and hybrid designs that integrate real-world trading data. This trend allows for greater participant diversity and improved external validity of experimental

outcomes. Thematic coding of the reviewed studies shows that framing effects, limited attention, and narrow mental accounting remain persistent across different experimental settings, reinforcing earlier findings in behavioral finance while providing updated evidence from more complex and dynamic market simulations (Hirshleifer, 20; Xie et al., 2018).

From a policy and practical perspective, the reviewed literature highlights the growing potential for experimental research to inform investor education, market regulation, and financial product design. For instance, studies that manipulate feedback frequency and salience of gains and losses have shown that relatively small changes in information presentation can significantly influence investment risk-taking behavior. Moreover, evidence from herding experiments suggests that market transparency mechanisms and diversified information sources may help reduce excessive collective behavior, thereby stabilizing asset prices in volatile conditions (Smith & Sørensen, 2021). Overall, the findings underscore that experimental designs grounded in robust theory and enriched with field-based validation are crucial for advancing the predictive and prescriptive power of behavioral finance research.

5. Conclusion

This systematic review highlights that experimental research in behavioral finance between 2018 and 2023 continues to provide strong empirical evidence on the influence of cognitive biases particularly loss aversion, overconfidence, and herding on investor decision-making and market outcomes. The persistence of these

biases across different experimental designs underscores their robustness, while the growing use of hybrid and online experimental methods enhances the external validity and applicability of findings. Methodological diversification has enabled researchers to examine more complex market dynamics, linking micro level behavioral mechanisms to macro level price patterns and volatility.

The reviewed studies also demonstrate the practical value of experimental insights for policy and market regulation. Adjustments in information framing, feedback frequency, and market transparency have shown potential to mitigate irrational behaviors and promote more stable market conditions. Furthermore, the integration of laboratory precision with real world data strengthens the capacity of behavioral finance experiments to inform investor education, product design, and regulatory frameworks. Overall, the evidence confirms that well-designed experiments remain essential in advancing both the theoretical and applied dimensions of behavioral finance, paving the way for more targeted interventions and more resilient financial systems.

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