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Cognitive Biases and Behavioral Patterns Shaping Investment Decision-Making: Kecenderungan Kognitif dan Pola Perilaku yang Mempengaruhi Pengambilan Keputusan Investasi

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General Background: Traditional financial theories, such as the Efficient Market Hypothesis and Modern Portfolio Theory, assume rational, utility-maximizing investors. Specific Background: However, empirical evidence shows persistent cognitive and emotional biases—loss aversion, overconfidence, herding, mental accounting, and anchoring—that distort investment decisions and market outcomes. Knowledge Gap: Despite growing interest in behavioral finance, there remains insufficient synthesis that integrates these psychological factors with conventional financial frameworks, particularly across diverse contexts. Aims: This study conducts a comprehensive literature review to examine how behavioral finance theories influence individual and institutional investment decisions. Results: The findings reveal that systematic biases shape investor behavior by driving excessive risk-taking, irrational asset allocation, and susceptibility to market inefficiencies, thereby challenging rational-choice models. Novelty: Unlike prior works, this review offers a structured thematic synthesis of behavioral concepts, highlights empirical patterns across global studies, and underscores the interdisciplinary relevance of psychology in finance. Implications: The study calls for reform in financial education, the integration of behavioral diagnostics into fintech, and the development of policy tools informed by cognitive biases, ultimately contributing to more resilient investment strategies and adaptive financial systems.

Highlights:

- Investor decisions are often shaped by psychological biases rather than rational models.
- Behavioral finance provides tools to anticipate and correct irrational market behaviors.
- Integrating psychology into financial education and policy enhances decision-making.

Keywords: Behavioral Finance, Investment Decisions, Cognitive Biases, Prospect Theory, Market Inefficiency

Introduction

Historically, academic debates have been dominated by traditional financial theories like the Efficient Market Hypothesis (EMH) and Modern Portfolio Theory (MPT), which assume that investors act rationally, have complete knowledge, and make utility-maximizing decisions. Still,

empirical paradoxes like heuristic-driven behavior, emotional reactions to volatility, and flocking phenomena have shown the limitations of these concepts. Behavioral finance, which combines psychological and cognitive components into financial theory to better precisely represent uncertainty-driven decision-making, has emerged from this epistemological conundrum.

Mohammadi's (2024) study on investor cognition and emotion adds to this growing debate. His work looks at how, despite developments in information technology and analytics, financial markets continue to be inefficient. Using modern empirical data, the paper shows how overconfidence, loss aversion, and framing effects skew asset allocation and forecasting accuracy. In portfolio optimization, behavioral diagnostics, and financial education, Mohammadi's theoretical ideas have relevance. His results highlight the need of a multidisciplinary strategy combining behavioral and conventional finance to create more adaptable and strong investment ideas in a complicated market.

Theoretical Framework

The article's analysis is based on Kahneman and Tversky's Prospect Theory (1979), but not expressly stated. This paradigm asserts that economic players value gains and losses asymmetrically, with losses weighted more in subjective utility evaluations. Valuation distortions produce systematic disagreements with utility theory, leading to inefficient and emotional financial decisions.

The Theory of Planned Behavior, which views investing behavior as a consequence of risk attitudes, social norms, and investor control over financial outcomes, is also implicitly included in the article. These theoretical underpinnings explain recurring deviations from rational choice models well. These behavioral frameworks explain the psychological causes of inconsistent investor behaviour in financial markets, emphasizing the need for behaviorally informed financial modelling.

Methodology

The article adopts a narrative literature review methodology, facilitating an extensive thematic synthesis of the extant scholarship within the domain of behavioral finance. This qualitative approach enables the author to critically integrate and contextualize diverse theoretical constructs, empirical findings, and methodological perspectives drawn from peer-reviewed academic journals, working papers, and foundational texts. Unlike a meta-analytic or empirical inquiry, which emphasizes statistical aggregation or data-driven validation, the narrative review framework prioritizes conceptual coherence and interpretive depth. Through this method, the author constructs a cohesive analytical narrative that captures the evolution, scope, and interdisciplinary intersections of behavioral finance, thereby offering a structured exposition of key cognitive biases, decision-making heuristics, and market implications. This approach is particularly well-suited for identifying theoretical gaps, assessing the trajectory of scholarly discourse, and proposing future research directions within a complex and rapidly expanding field.

Mohammadi categorizes the literature into five major behavioral concepts:

1. Prospect Theory (Kahneman & Tversky)
2. Mental Accounting (Thaler)
3. Overconfidence Bias
4. Herd Behavior
5. Anchoring and Adjustment Heuristic

Each concept has definitions, illustrations from past studies, and implications for investment decisions. By adopting this structured review approach, the author ensures a cohesive comparison of theoretical assumptions with empirical findings, leading to deeper insights into financial

behavior.

Main Findings and Discussion

The paper reveals several pivotal findings:

1. Prospect Theory:

Investors exhibit loss aversion; that is, they feel the pain of losses more intensely than the pleasure of equivalent gains. This leads to risk-averse behavior in gains and risk-seeking behavior in losses. Mohammadi shows that this bias influences portfolio management, where investors are reluctant to sell losing assets, hoping for a rebound, while quickly selling winning stocks to “lock in” gains.

2. Overconfidence Bias:

One of the most widely observed biases, overconfidence leads investors to overestimate their knowledge and predictive abilities. Mohammadi references several studies that show how overconfidence contributes to excessive trading, which often results in subpar returns due to transaction costs and poor timing.

3. Herding Behavior:

The tendency of investors to follow the majority, particularly during times of uncertainty, is explored in depth. The paper discusses how herding behavior can create market bubbles or crashes, where individual analysis is overshadowed by group behavior. Mohammadi emphasizes that institutional investors, despite having access to more information, are not immune to this behavior.

Mental Accounting:

Investors often treat money differently depending on its source or intended use. For example, they might treat windfall gains more frivolously than regular income. This leads to compartmentalized and often irrational budgeting and investment decisions.

Anchoring:

Anchoring refers to the human tendency to rely heavily on the first piece of information received (the "anchor") when making decisions. In finance, this manifests when investors base expectations on historical prices or outdated news, resulting in mispricing and poor forecasting.

Overall, the article emphasizes that these biases are not random; they are systematic and predictable. Hence, behavioral finance provides tools for anticipating and potentially correcting irrational market behaviors.

Comparison with Other Studies

A great variety of empirical and theoretical contributions within the behavioral finance field strongly supports Mohammadi's results. Hwang and Park (2023) found by means of a thorough meta-analytic study that unless accompanied by behavioral self-awareness, financial literacy by itself is inadequate to improve financial well-being. Their study emphasizes that to get the best financial results, cognitive ability has to be matched with systems for bias awareness and behavioral control. Kalayci and Tutar (2024), likewise, used a psychometric approach to show that people with Type A personality traits tend to show more financial discipline and less vulnerability to emotionally driven investment mistakes, therefore supporting Mohammadi's claim that behavioral

finance has to include intrapersonal variability into explanatory models.

Thukral et al. (2024) further explore how digital ecosystems affect investor behavior by means of their research on online forums including Reddit's r/WallStreetBets, which shows that social dynamics in virtual environments especially amplify herd behavior among younger generations. This digital amplification of behavioral contagion extends Mohammadi's argument into the realm of technologically mediated finance. Foundational study by Baker and Ricciardi (2015) uncovered basic behavioral distortions—anchoring, confirmation bias, and framing effects—within retail investing choices, therefore supporting a move toward client-centric advice systems that include behavioral diagnostics. Lusardi and Mitchell (2014) also uncovered via a worldwide poll that even in financially advanced countries bad decision-making continues because of inadequate financial knowledge and deep-seated cognitive biases. These results taken together support Mohammadi's main argument: that improving the quality and robustness of decision-making in more complicated financial contexts depends on including psychological insights into financial education and advice methods.

Limitations of the Original Article

Despite its analytical contributions, the paper has significant academic and methodological flaws that limit its generalizability and robustness:

1. Geographic Concentration Bias: Lessons from Western economies are limited in their cross-cultural relevance. A lack of empirical information from developing economies hinders the article's ability to reflect global behavioral finance trends.
2. Insufficient Methodological Transparency: The evaluation process's rigor is unclear due to the chosen studies' unclear inclusion and exclusion criteria. This lack of methodological openness may affect the article's internal validity and replicability.
3. Absence of Quantitative Synthesis: The research lacks a meta-analytical methodology, which may have statistically aggregated effect estimates throughout the evaluated literature. This absence limits the article's ability to infer behavioral bias magnitude and consistency.
4. Limited Contextual and Sectoral Applicability: The essay provides broad theoretical insights into behavioral abnormalities but does not situate them within financial sectors. The results are less useful for sector-specific policy or investment plan creation without comparison case studies, such as real estate market vs digital asset trading behavioral patterns.

Practical Implications

The empirical and theoretical insights advanced in the article and reinforced by this critical evaluation yield several pivotal implications for financial practice, policy formulation, and academic inquiry.

1. Financial education frameworks must evolve beyond traditional content by incorporating behaviorally-informed components such as cognitive self-assessment tools, scenario-based learning modules, and emotional regulation strategies, thereby fostering more comprehensive decision-making competencies.
2. The integration of AI-driven behavioral diagnostics within digital financial advisory platforms presents significant potential, offering real-time, personalized interventions—such as nudges and feedback mechanisms—that mitigate the influence of heuristic-driven distortions.
3. Behavioral principles should inform the design of public financial policies, enabling institutions like central banks and fiscal authorities to embed default options, targeted tax incentives, and subsidy structures that align with behavioral propensities such as present

bias and loss aversion.
4. The application of psychometric profiling tools enables financial institutions to assess individual differences in risk perception, temporal preferences, and cognitive biases, allowing for the formulation of investment strategies tailored to the investor's behavioral typology.
5. Finally, there remains a critical need for context-specific behavioral finance research, particularly in underrepresented regions such as Iraq, where socio-cultural dynamics, informal economies, and religious norms significantly shape financial behavior. Such localized inquiry is essential for designing effective, culturally attuned financial interventions and regulatory frameworks.

Conclusions and Recommendations

The article concludes that behavioral finance constitutes a critical theoretical and empirical framework for elucidating the pervasive cognitive and emotional distortions that undermine rational financial decision-making. By systematically identifying recurrent patterns of heuristic-driven biases and decision errors, the discipline offers actionable insights for the formulation of targeted interventions. These insights empower policymakers, financial educators, and market participants to implement behaviorally-informed strategies aimed at reducing susceptibility to suboptimal choices, thereby enhancing financial resilience and improving allocative efficiency across individual and institutional contexts.

Mohammadi recommends several practical steps:

1. Financial Education Reform: Traditional financial literacy programs should include modules on behavioral biases and cognitive psychology.
2. Policy Interventions: Regulatory bodies should know herd-induced market vulnerabilities and design stabilizing mechanisms accordingly.
3. Investor Tools: Financial technology platforms can incorporate behavioral prompts and nudges to guide investors toward more rational decisions.
4. Future Research: The article suggests that future empirical studies should examine the long-term effects of behavioral training on investment outcomes and explore the impact of emerging technologies (e.g., AI and social media) on investor behavior.

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