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The Influence of Cognitive Biases on Financial Decision-Making: A Bibliometric Analysis

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ABSTRACT

This study maps the intellectual structure and thematic evolution of research on cognitive biases in financial decision-making using a bibliometric approach. Data comprising 156 peer-reviewed articles were extracted from the Scopus database and analyzed using VOSviewer software to examine co-authorship networks, keyword co-occurrence, and citation patterns. Publications in this field experienced exponential growth, with 63.5% of the corpus concentrated in 2023-2026. India has emerged as the leading contributor by volume, reflecting a broader Global South turn in behavioral finance research. Overconfidence and behavioral finance dominate the keyword landscape, while financial literacy has emerged as a prominent moderating theme. Co-authorship networks remain fragmented, indicating opportunities for cross-institutional collaboration. Emerging frontier themes include technology-based debiasing, algorithmic bias, and ESG investment bias. Practitioners and policymakers can leverage the knowledge map produced by this study to identify high-impact research domains, prioritize financial literacy interventions, and design nudge-based decision environments that mitigate systematic biases in financial markets. This study provides the first comprehensive bibliometric map of cognitive bias research in financial decision-making covering 1997-2026, identifying collaboration gaps, dominant paradigms, and frontier themes that prior narrative reviews have not systematically captured.

Keywords: *Cognitive bias; behavioral finance; financial decision-making; investment decisions; overconfidence; loss aversion*

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INTRODUCTION

Rational decision-making has long been the foundational assumption of classical finance theory, where economic agents are expected to process information completely, evaluate alternatives systematically, and select utility-maximizing outcomes (Katenova et al., 2025). This *homo economicus* paradigm underpins the Efficient Market Hypothesis and Expected Utility Theory, treating systematic deviations from rationality as noise rather than structure. However, decades of research in behavioral economics have demonstrated that cognitive limitations and psychological factors produce *consistent* departures from rationality across individuals, markets, and institutional settings (Tversky and Kahneman, 1992; Thaler, 2016). These systematic deviations constitute what the literature designates as cognitive biases: patterned tendencies in judgment and reasoning that arise from heuristic processing under conditions of bounded rationality (Azmi et al., 2026; Mawadah et al., 2026).

The financial domain offers a particularly consequential arena for the expression of cognitive biases. *Overconfidence bias*, the tendency to overestimate the accuracy of one's knowledge and predictive capabilities, drives excessive trading, disproportionate risk-taking, and overinvestment at both individual and corporate levels (Barber and Odean, 2001; Malmendier and Tate, 2005). *Confirmation bias* induces selective processing of information consistent with prior beliefs, undermining objective portfolio assessment (Wahyudi et al., 2025; Amelia et al., 2025). *Anchoring bias* tethers valuations to arbitrary reference points, distorting IPO pricing, corporate negotiations, and asset valuation. *Loss aversion*, a core component of Prospect Theory, explains why the psychological pain of a given loss is approximately twice as intense as the pleasure from an equivalent gain, generating asymmetric and systematically suboptimal decision patterns (Tversky and Kahneman, 1992). At the market level, herding behavior amplifies these individual-level effects into asset bubbles and excess volatility that efficient market models cannot accommodate (Bikhchandani et al., 1992).

Despite the substantial growth of the cognitive bias literature since the 1970s, a comprehensive and systematic understanding of its intellectual structure, collaborative architecture, thematic evolution, and frontier directions remains absent. Existing bibliometric studies tend to address narrow sub-fields such as behavioral finance, investor psychology, or corporate governance without mapping the full topography of cognitive bias research across financial contexts (Donthu et al., 2021). This gap is consequential: without a structured knowledge map, researchers risk duplicating established findings, overlooking productive collaboration opportunities, and misallocating investigative resources toward already-saturated themes (Korip et al., 2025; Wibowo et al., 2026).

This study addresses that gap by conducting a bibliometric analysis of 156 Scopus-indexed articles on cognitive biases in financial decision-making published between 1997 and 2026. Employing VOSviewer for co-authorship mapping, keyword co-occurrence analysis, and text-based overlay visualization, this study answers four research questions: (1) What are the temporal trends in publications? (2) Which authors, institutions, and countries are most influential? (3) What are the dominant and emerging thematic clusters? (4) What directions define the research frontier?

This study makes three explicit contributions to the literature. First, it provides the first comprehensive bibliometric map of cognitive bias research in financial decision-making spanning nearly three decades, complementing prior narrative reviews by quantifying structural patterns that qualitative synthesis cannot reveal. Second, it identifies a Global South turn in behavioral finance, documenting the rise of India, Indonesia, and Pakistan as productive contributors and analyzing how this shift reflects distinct

institutional and cultural contexts for bias manifestation (Kim and Nofsinger, 2008; Rohandi et al., 2024). Third, it delineates frontier research themes, including technology-mediated debiasing, algorithmic bias in artificial intelligence applications, and cognitive bias in ESG investment decisions, offering a prioritized agenda for future inquiry. The remainder of this paper is organized as follows. Section 2 reviews the theoretical and empirical literature on cognitive biases in finance. Section 3 describes the methodology. Section 4 presents and discusses results. Section 5 concludes.

LITERATURE REVIEW

Classical financial theory rests on the premise that economic agents possess stable, consistent preferences, access to complete information, and the computational capacity to identify utility-maximizing choices. This framework, embedded in the Efficient Market Hypothesis and Expected Utility Theory, was subjected to systematic empirical challenge beginning with Kahneman and Tversky's seminal experimental work (Tversky and Kahneman, 1992). Prospect Theory, the theoretical centerpiece of behavioral finance, demonstrated formally that individuals evaluate outcomes relative to a reference point rather than in absolute terms, that the utility function is concave for gains and convex for losses, and that losses are weighted approximately twice as heavily as equivalent gains. These properties generate the phenomenon of loss aversion, which produces asymmetric and predictably irrational decision patterns across economic domains (Thaler, 2016). The significance of Prospect Theory extends beyond its descriptive accuracy: it established a formally tractable alternative to Expected Utility Theory that has since anchored the majority of behavioral finance research.

A complementary theoretical contribution appears in the work of Oechssler et al. (2009), the most-cited article in the present corpus with 335 citations, which established that individual cognitive ability, as measured by the Cognitive Reflection Test, is significantly correlated with the tendency to exhibit behavioral biases. Individuals with higher cognitive ability displayed fewer errors in probabilistic reasoning, although they remained systematically susceptible to bias under conditions of complexity and time pressure. This finding reinforces the view that cognitive biases reflect fundamental constraints on information processing capacity rather than mere ignorance, and has important implications for the design of debiasing interventions (Sunstein, 2014). The integration of neuroscientific methods, as demonstrated by Camerer et al. (2004), has further enriched theoretical understanding by identifying the neural substrates of biased choice, opening a pathway toward interventions grounded in cognitive neuroscience.

The literature identifies a rich taxonomy of cognitive biases with documented consequences for financial decision-making. Overconfidence, operationalized across three dimensions, including overestimation of one's knowledge accuracy, overplacement relative to peers, and overprecision in confidence intervals, is the most pervasively studied bias in the corpus. Barber and Odean (2001) provided landmark empirical evidence that overconfident individual investors trade excessively, incurring net return penalties through elevated transaction costs. Malmendier and Tate (2005) extended this finding to the corporate domain, demonstrating that CEO overconfidence predicts overinvestment and value-destroying merger activity, particularly when internal cash flow is available. These findings have been further refined by Chung et al. (2024), who show that overconfidence combined with self-attribution bias produces downward-sticky investment sensitivity, where managers increase investment following positive cash flow shocks but fail to reduce it commensurately when conditions deteriorate.

Anchoring bias reflects the disproportionate influence exerted by initial reference values on subsequent judgments. In corporate finance, anchoring shapes IPO pricing, asset valuations, and acquisition negotiations, as initial offer prices function as cognitive anchors that constrain the range of final settlements regardless of fundamental value. Madaan and Singh (2019) documented the joint presence of anchoring, overconfidence, disposition effect, and herding among individual investors in the Indian equity market, confirming that these biases co-exist and potentially reinforce one another in emerging market settings. Confirmation bias, defined as the systematic tendency to seek, interpret, and recall information in a manner that confirms prior beliefs (Nickerson, 1998), has been shown to compromise audit quality when auditors discount evidence inconsistent with their initial assessments (Wahyudi et al., 2025). Framing effects, which arise when logically equivalent choices yield different decisions depending on presentation format, further compound bias by manipulating risk perception through numerical and probabilistic framing of financial information (Alfaridzi and Hutama, 2025).

The disposition effect, first documented by Shefrin and Statman (1985), represents the most direct capital market manifestation of loss aversion: investors systematically sell winning positions too early to realize gains while holding losing positions too long to avoid confirming losses. This pattern generates suboptimal tax management, inefficient portfolio allocation, and systematic mispricings that persist across markets and investor segments. De Bondt and Thaler (1985) provided early evidence of market-level irrationality through overreaction to negative information, producing long-term reversal patterns that contrarian strategies could exploit. Jegadeesh and Titman (2008) documented the complementary momentum anomaly arising from initial underreaction to fundamental information. The coexistence of overreaction and underreaction across different time horizons reflects the complexity of interactions between individual-level biases and market-level corrective mechanisms.

Cognitive biases do not operate in isolation but interact with organizational structures, incentive systems, and social dynamics in ways that can amplify or attenuate their expression. Yuwen (2024) demonstrates that governance quality, board composition, and institutional investor presence moderate the impact of managerial biases on corporate investment decisions. Within group decision-making contexts, phenomena such as groupthink and social conformity can override independent deliberation, producing outcomes that reflect herd dynamics rather than aggregated rational analysis (Schwenk, 1984). Herding behavior, as analyzed by Bikhchandani et al. (1992), can occur rationally as an information cascade in which individuals rationally choose to follow others when private information is insufficiently precise, or irrationally as a conformity response to social pressure. Sabir et al. (2019) found that overconfidence and past investment experience are significant predictors of herding intensity among retail investors, while Parveen et al. (2020) documented how market overreaction and investor sentiment jointly produce excessive trading and price distortions in emerging equity markets.

Financial literacy has emerged as a critical institutional moderator in this relational structure. Rasool and Ullah (2020) provide empirical evidence from the Pakistani stock exchange that investors with higher financial literacy display significantly reduced susceptibility to behavioral biases including overconfidence, herding, and anchoring. Ariswati et al. (2025) and Kesuma et al. (2025) extend this finding to the entrepreneurial context, demonstrating that financial literacy drives resilience and rational decision behavior among microentrepreneurs in digital and resource-intensive economies. Putri (2026) operationalizes financial literacy as a debiasing mechanism by showing that critical thinking skills, as a component of broader financial literacy, enable more objective information processing and resistance to

framing manipulation. These findings collectively position financial literacy not merely as a background characteristic but as an active cognitive buffer that modifies the relationship between bias exposure and decision quality.

The integration of technological innovation into financial services has introduced both new opportunities and new risks for cognitive bias research. Kumar and Jha (2024) analyze artificial intelligence applications in behavioral finance and identify a dual role: algorithmic systems can reduce human bias by providing data-driven, dispassionate analysis, while simultaneously encoding and amplifying biases embedded in training data or system design at scales that individual human decision-makers cannot match. Chairani et al. (2026) find that digital transformation has fundamentally reshaped personal financial management behavior, altering the information architecture within which cognitive biases are expressed and potentially creating new bias pathways through interface design and algorithmic nudging. These developments are consistent with the broader trajectory identified by Sunstein (2014), who argues that the design of decision environments, rather than cognitive capacity enhancement alone, represents the most scalable path to systematic debiasing.

The intersection of cognitive bias research with environmental, social, and governance (ESG) investing constitutes an emerging frontier that the current bibliometric corpus reflects only partially. Kristofik (2025) demonstrates that status quo bias and optimism bias contribute to systematic underestimation of climate transition risks by financial managers. Pagano et al. (2023) show that framing and representativeness heuristics influence investor perceptions of ESG asset performance, potentially generating overvaluation of socially salient investments. The ethical dimensions of bias mitigation through technology, including questions of autonomy, privacy, and paternalism, are identified by Hagerty and Rubinov (2019) as a critically underexplored domain. The growing collaboration between finance, psychology, neuroscience, and computer science, evidenced by contributions such as Camerer et al. (2004) and Thaler (2016), signals that interdisciplinary synthesis will increasingly define the frontier of cognitive bias research in finance.

RESEARCH METHODOLOGY

This study employs a quantitative bibliometric approach to systematically map the structure and dynamics of the cognitive bias literature in financial decision-making. Bibliometric analysis is selected because of its demonstrated capacity to process large publication datasets objectively, uncover latent structural patterns in scholarly knowledge, and generate visual representations of thematic and collaborative networks that conventional narrative reviews cannot produce efficiently (Donthu et al., 2021; Eck and Waltman, 2010; Mawadah et al., 2026). This methodological choice is particularly appropriate for a literature that has grown exponentially over the past decade and that spans multiple disciplines including finance, psychology, behavioral economics, and organizational behavior.

Data were collected from the Scopus database, selected for its comprehensive coverage of high-quality peer-reviewed publications in the social sciences, economics, and finance, and its standardized metadata format that facilitates systematic bibliometric processing. The search strategy employed the following Boolean query: ("cognitive bias" OR "behavioral bias" OR "heuristic" OR "overconfidence" OR "loss aversion" OR "anchoring" OR "confirmation bias") AND ("decision making" OR "decision-making") combined with financial context terms. Following removal of duplicates and application of inclusion

criteria requiring English-language journal articles with an explicit focus on cognitive bias in financial decision-making contexts, the final corpus comprised 156 articles published between 1997 and 2026. This sample size is consistent with bibliometric analyses in cognate domains (Adelia et al., 2025; Ilmahdy et al., 2025; Althaf et al., 2025).

Analysis was conducted using VOSviewer (version 1.6.20) for network visualization and mapping, encompassing co-authorship analysis at the individual author and country levels, keyword co-occurrence analysis based on author-assigned keywords, and text-based co-occurrence analysis derived from titles and abstracts. Supplementary visualizations were generated using Python (matplotlib library) applied to Scopus metadata exports in CSV format. The primary metrics examined include temporal publication trends, citation distribution, geographic concentration, co-authorship network density and fragmentation, keyword frequency and clustering, and text-based thematic mapping. This multi-method approach within the bibliometric framework enables both quantitative characterization of the corpus and qualitative interpretation of thematic clusters and knowledge gaps (Saputra et al., 2025; Surya et al., 2025).

RESULTS AND DISCUSSION

Corpus Overview and Citation Structure

The bibliometric analysis of 156 Scopus-indexed articles on cognitive bias in financial decision-making reveals a corpus characterized by moderate citation impact and a heavily skewed temporal distribution. The total cumulative citation count across all articles reaches 2,060, yielding an average of 13.21 citations per article, consistent with moderate scholarly influence in an applied behavioral discipline. The highly cited articles are concentrated in the earlier periods of the corpus: Oechssler et al. (2009) leads with 335 citations, followed by Graham et al. (2017) and Parveen et al. (2020), reflecting the pattern whereby foundational contributions accumulate disproportionate citation share over time. This structure indicates that the intellectual foundation of the field was established prior to the recent publication surge, while recent contributions are expanding thematic breadth and contextual diversity rather than replacing core theoretical anchors.

Temporal Publication Trends

The temporal distribution of publications reveals a clear and accelerating growth trajectory that reflects the increasing salience of cognitive bias research across financial and managerial domains. Figure 1 presents annual publication counts from 1997 through 2026, and Figure 2 summarizes the distribution across major time periods.

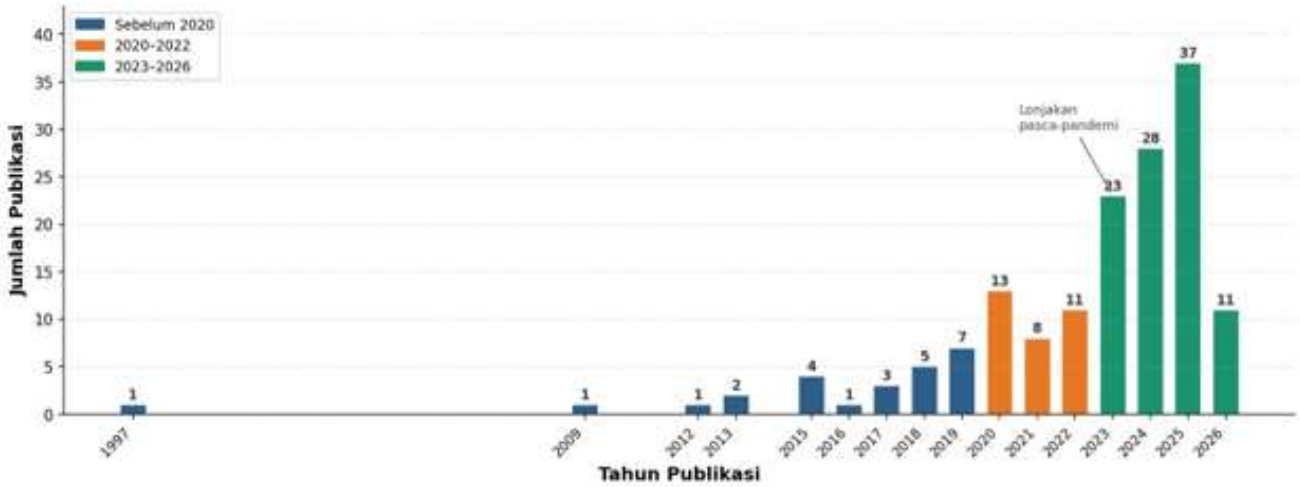

Figure 1. Annual Publication Trend: Cognitive Bias and Decision-Making (1997-2026).
Source: Scopus data analysis.

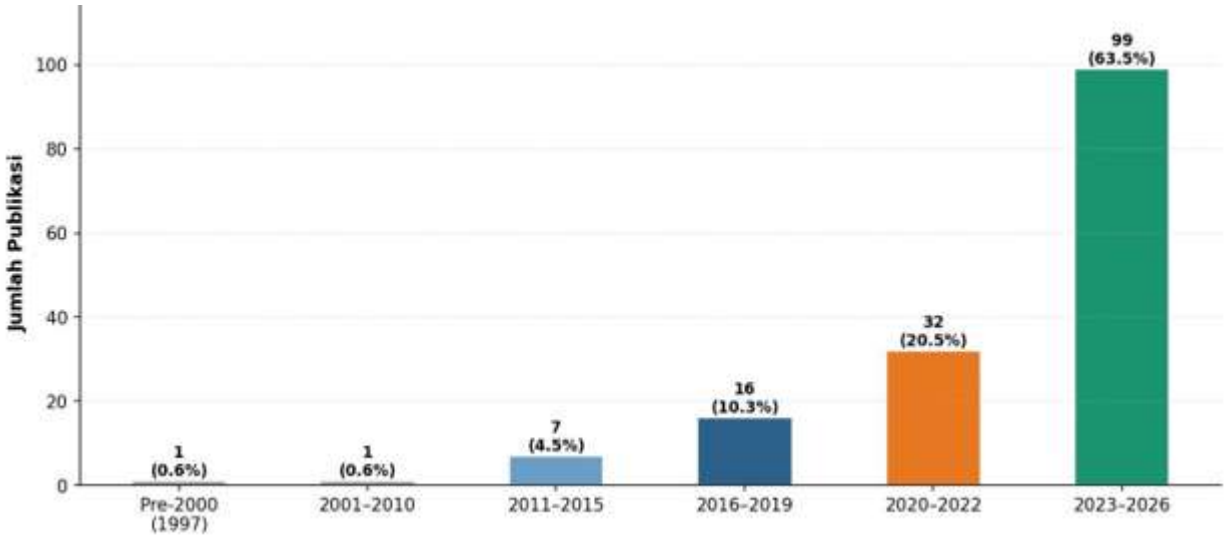

Figure 2. Distribution of Publications by Period.
Source: Scopus data analysis.

The pattern is unambiguous: from 1997 to 2018, annual publications remained consistently low, ranging between one and five articles per year, indicating that cognitive bias research in finance occupied a peripheral niche within the broader behavioral finance literature. A first inflection point occurred in 2019-2020, with annual output rising to 7 and 13 articles respectively, coinciding with intensified scholarly attention to behavioral factors during the COVID-19 pandemic. The most dramatic acceleration is concentrated in 2023-2026, with 23, 28, 37, and 11 articles (the latter being partial-year data), representing a volume that exceeds the entire preceding two-plus decades of publication. As shown in Figure 2, the period 2023-2026 accounts for 99 of the 156 articles (63.5% of the corpus). Three convergent factors

explain this acceleration: the COVID-19 pandemic created a natural laboratory for observing investor behavior under extreme uncertainty (Rasool and Ullah, 2020); the expansion of digital investment platforms facilitated large-scale collection of retail investor behavioral data; and the institutionalization of behavioral finance as a recognized research discipline, with dedicated journals, conferences, and academic programs, has lowered the barrier for publishing in this space.

Co-Authorship Analysis

The co-authorship network reveals a fragmented collaborative landscape characteristic of an interdisciplinary field in active expansion. Figure 3 presents the co-authorship map at the individual author level, and Figure 4 shows the country-level collaboration network. At the author level, Singh S. emerges as the most productive contributor with five publications, followed by Ahmad M. with three, while a broader group of researchers contributes two articles each. The absence of densely connected hub authors reflects the distributed and interdisciplinary nature of the field, which draws researchers from finance, psychology, economics, and management with limited sustained cross-group collaboration (Donthu et al., 2021).

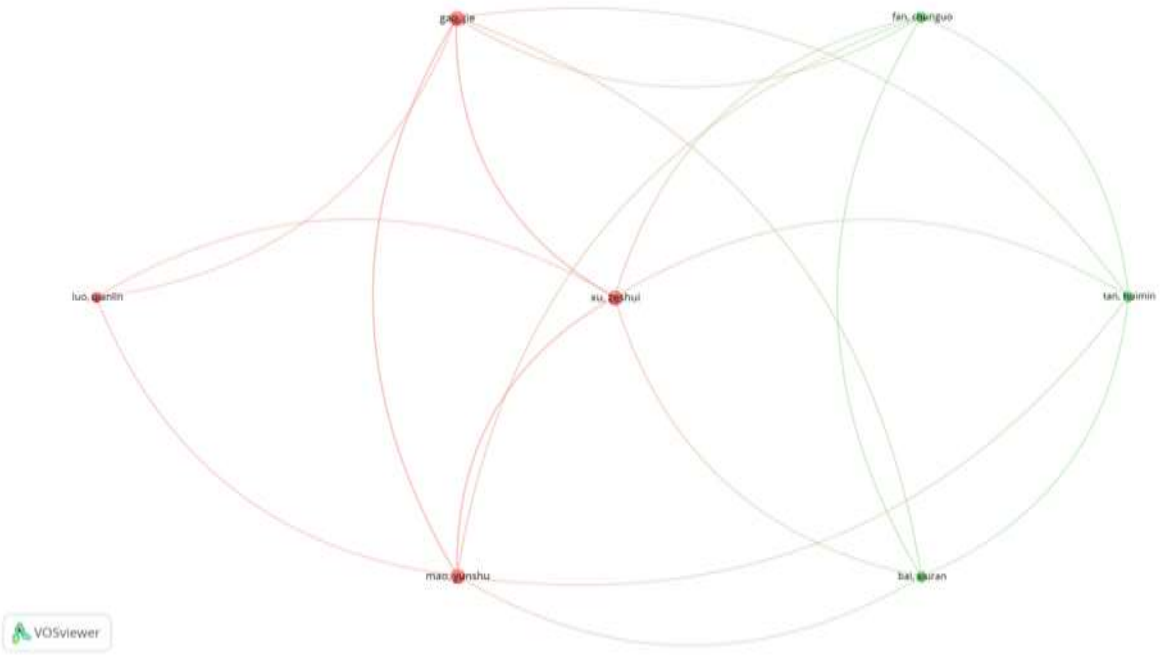

Figure 3. Co-Authorship Network Map (Author Level).
Source: VOSviewer analysis from Scopus data, 2026.

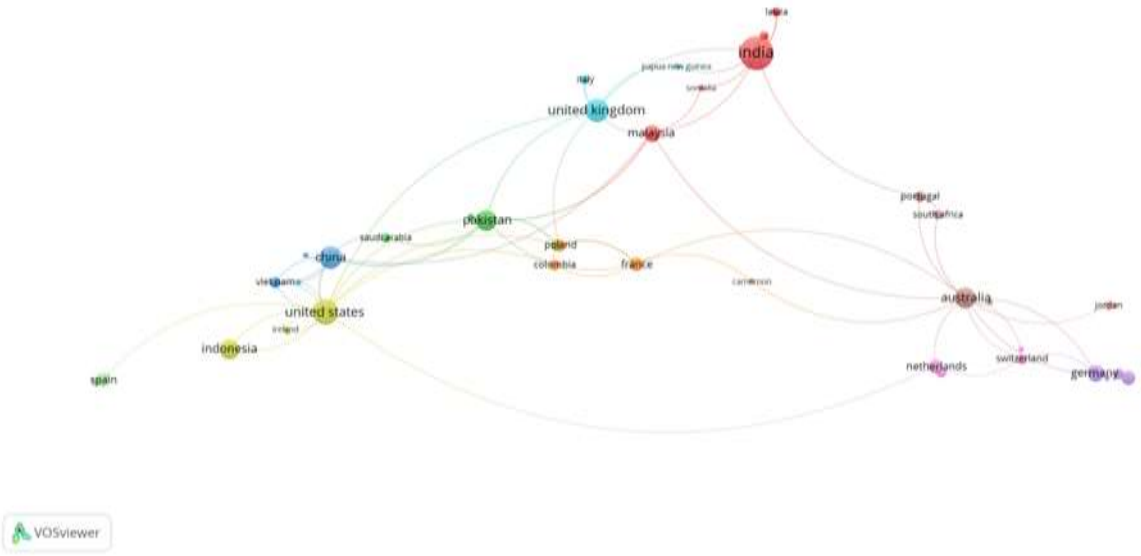

Figure 4. Co-Authorship Network Map (Country Level).
Source: VOSviewer analysis from Scopus data, 2026.

The geographic analysis, summarized in Table 1 below, reveals a publication landscape that diverges markedly from historical patterns in behavioral finance. India leads with 28 publications (17.9%), surpassing the United States (16, 10.3%) and the United Kingdom (14, 9.0%) in raw volume. This dominance reflects the growing relevance of behavioral finance research in emerging capital markets, where investor populations with lower average financial literacy and higher susceptibility to social influence provide a particularly informative research context (Rohandi et al., 2024; Kim and Nofsinger, 2008). Indonesia occupies the seventh position with 10 publications, driven by research on Generation Z investor behavior and the mitigating role of financial literacy (Putri, 2026; Ariswati et al., 2025). The data also reveal a significant impact-productivity gap: despite leading in publication volume, India and Indonesia lag behind the United States and United Kingdom in total citations, reflecting differential integration with global academic networks and mainstream theoretical debates.

Table 1. Distribution of Publications by Country Affiliation (Top 10)

No.	Country	Pub (N)	% Total	Thematic Focus
1	India	28	17.9%	Emerging market, investor behavior
2	United States	16	10.3%	Behavioral finance, corporate decision
3	United Kingdom	14	9.0%	Market anomaly, asset pricing

4	China	12	7.7%	Market overreaction, herding
5	Pakistan	11	7.1%	Financial literacy, investment
6	Australia	11	7.1%	Behavioural economics, risk
7	Indonesia	10	6.4%	Investor behavior, Gen Z
8	Malaysia	7	4.5%	Behavioural bias, Islamic finance
9	Germany	7	4.5%	Cognitive ability, experiment
10	Brazil	5	3.2%	Behavioral finance, capital market

Source: Scopus data analysis, 2026.

The country-level co-authorship map in Figure 4 identifies two primary collaborative clusters. The Anglo-Saxon cluster, anchored by the United States, United Kingdom, and Australia, exhibits strong internal connectivity reflecting shared traditions in behavioral economics research and established publication networks. The South and Southeast Asian cluster, comprising India, Pakistan, Indonesia, and Malaysia, shows intensive intra-regional collaboration driven by shared interest in emerging market investor behavior and Islamic finance dimensions of behavioral bias. China occupies an intermediary position, collaborating with both clusters. Kim and Nofsinger (2008) attribute the distinctive patterns of bias manifestation in Asian markets to cultural collectivism, which amplifies social influence mechanisms such as herding and social conformity in investment decision contexts.

Keyword Co-Occurrence Analysis

The keyword analysis, summarized in Table 2 and Figure 5, provides a quantitative map of the dominant concepts and their interconnections in the cognitive bias literature. "Behavioral finance" emerges as the most frequent keyword with 43 occurrences (27.6% of articles), confirming its role as the primary theoretical framework within which cognitive bias research is situated. "Investment decision" ranks second (28 occurrences, 17.9%), reflecting the dominance of investment contexts as the primary arena for bias research. The co-occurrence of "overconfidence" (26) and "behavioral biases" (26) at equal frequency reinforces the centrality of overconfidence as both the most studied individual bias and the definitional focus of the broader category.

Table 2. Top Twelve Keywords by Co-Occurrence Frequency

No.	Keyword	Freq.	% Articles	Description
1	*behavioral finance*	43	27.6%	Primary theoretical framework of studies
2	*investment decision*	28	17.9%	Main applied decision context

3	*overconfidence*	26	16.7%	Most dominant cognitive bias in literature
4	*behavioral biases*	26	16.7%	General category of research objects
5	*cognitive bias(es)*	19	12.2%	Primary study variable
6	*decision making*	18	11.5%	Core theme of decision-making
7	*financial literacy*	13	8.3%	Moderating and mitigating factor
8	*loss aversion*	10	6.4%	Component of Prospect Theory
9	*disposition effect*	8	5.1%	Market manifestation of loss aversion
10	*heuristics*	8	5.1%	Mechanism of cognitive bias
11	*prospect theory*	6	3.8%	Foundation of behavioral finance theory
12	*anchoring*	5	3.2%	Specific bias in valuation judgment

Source: VOSviewer analysis and Scopus author keywords, 2026.

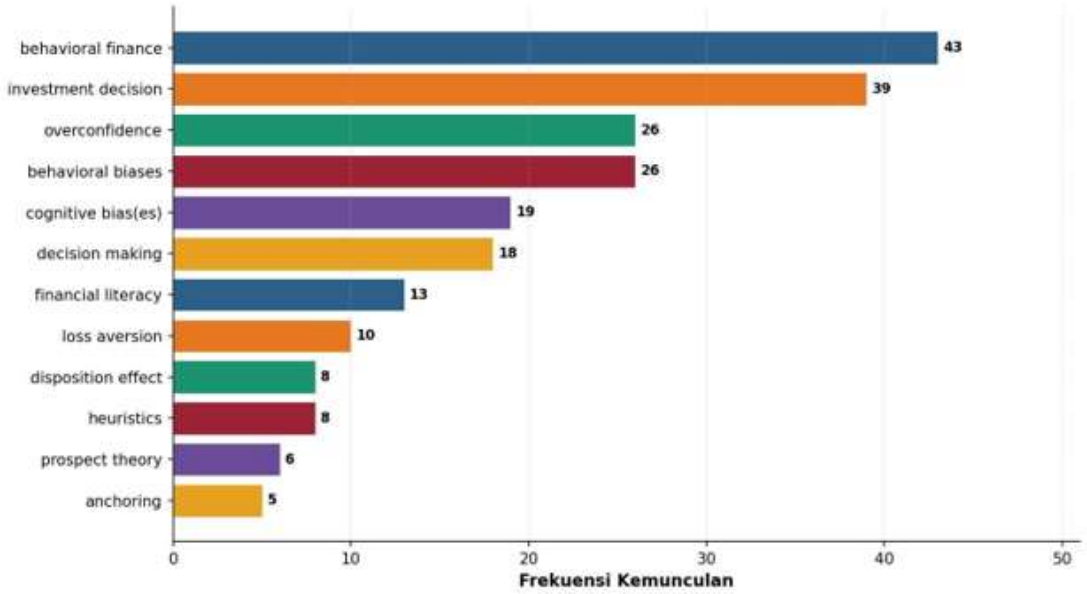

Figure 5. Frequency Distribution of Primary Keywords in the Cognitive Bias Literature. Source: Author keywords from Scopus data.

The presence of "financial literacy" with 13 occurrences (8.3%) is a particularly significant finding, indicating that the literature simultaneously addresses bias identification and the factors that moderate its impact. This dual focus is consistent with the increasing emphasis on financial literacy as a cognitive buffer against behavioral biases (Rasool and Ullah, 2020; Putri, 2026; Kesuma et al., 2025). The joint appearance of "prospect theory" (6) and "loss aversion" (10) alongside "behavioral finance" confirms that the Kahneman-Tversky theoretical framework remains foundational more than four decades after its

formulation. The keyword "anchoring" (5) and "disposition effect" (8) signal the literature's continued attention to specific market-level manifestations of theoretical biases documented in early empirical work.

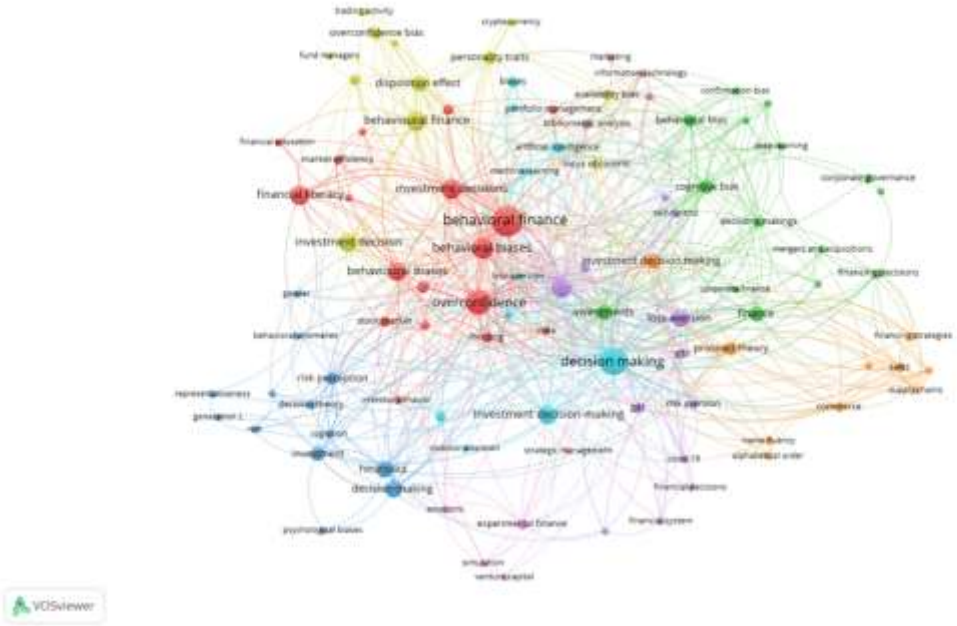

Figure 6. Keyword Co-Occurrence Network Map.
Source: VOSviewer analysis, 2026.

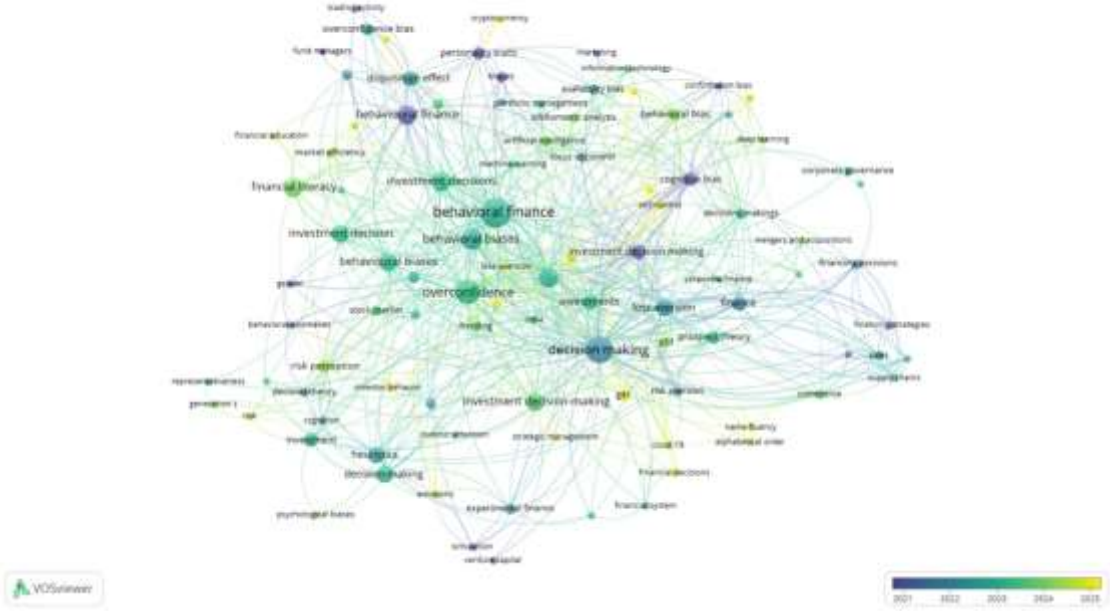

Figure 7. Keyword Co-Occurrence Overlay Map (Density Visualization).
Source: VOSviewer analysis, 2026

The network map in Figure 6 identifies three thematic clusters. The first cluster, centered on "behavioral finance," "cognitive bias," and "decision making," constitutes the theoretical core that interconnects all other sub-themes. The second cluster groups specific bias types, including overconfidence, loss aversion, anchoring, herding behavior, and prospect theory, reflecting the literature's systematic taxonomy of bias mechanisms. The third cluster assembles applied contexts: investment decision, stock market, financial markets, and portfolio management. Figure 7 (density overlay) confirms that the highest conceptual density lies at the intersection of behavioral finance, cognitive bias, and investment decision, while frontier areas such as ESG investment, algorithmic bias, and debiasing approaches appear at the map's periphery with lower density, indicating active but not yet consolidated research streams.

Beyond formal author keywords, VOSviewer's text-based co-occurrence analysis of titles and abstracts yields a more granular semantic map of actual research discourse. Figures 8 and 9 present these results. The network map in Figure 8 reveals three discursive clusters. The first focuses on investor behavior and financial markets, consistent with the dominance of retail investor studies in the corpus. The second cluster addresses corporate finance and managerial decision-making, encompassing investment, financing, and dividend decisions. The third cluster reflects methodological diversity, grouping terms associated with experimental, survey-based, and empirical research designs. The density map in Figure 9 confirms maximum discursive intensity at the intersection of investor psychology, risk perception, and financial decision-making, while frontier terminologies such as robo-advisory bias, algorithmic decision support, and ESG investment bias appear at the margins, consistent with their emerging but not yet mainstream status in the literature (Kristofik, 2025; Kumar and Jha, 2024).

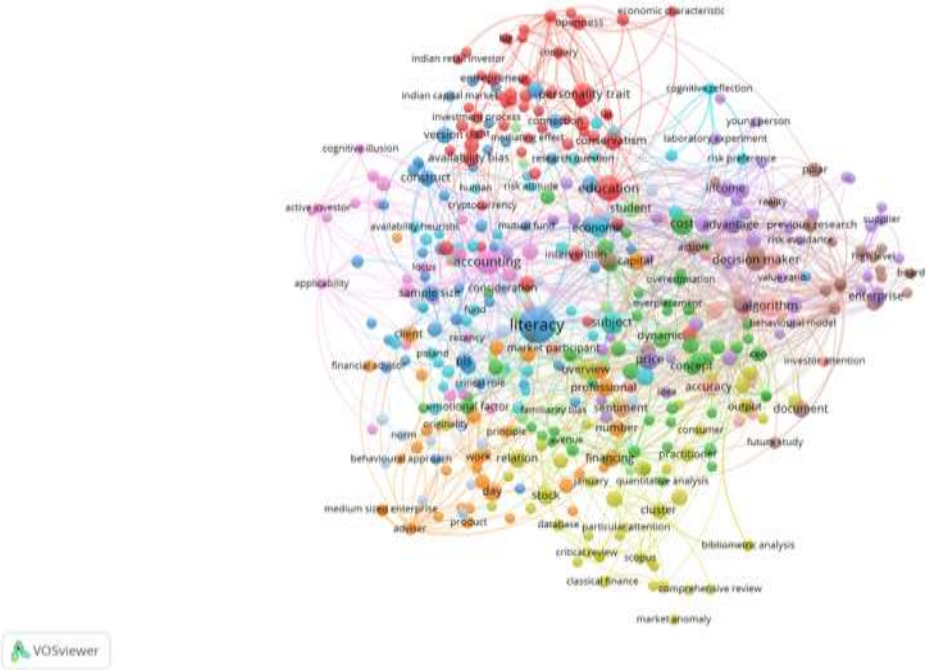

Figure 8. Text-Based Co-Occurrence Network Map.

Source: VOSviewer analysis, 2026.

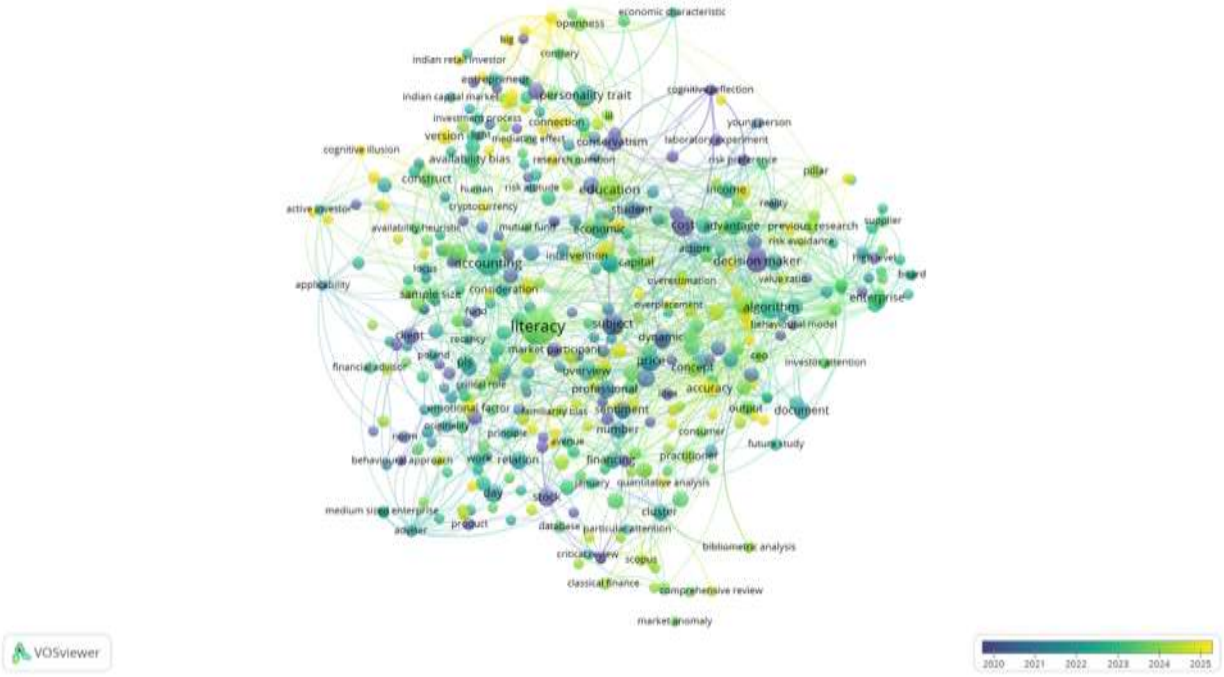

Figure 9. Text-Based Co-Occurrence Density Map.
Source: VOSviewer analysis, 2026

Thematic Clusters and Discussion

Overconfidence consistently emerges as the most dominant and most extensively studied bias in the corpus, reflecting its pervasive influence across individual investor behavior, managerial decision-making, and market dynamics. The manifestations of overconfidence are multi-layered: overestimation of knowledge accuracy, overplacement relative to peers, and overprecision in probability assessments (Barber and Odean, 2001). In the corporate context, Chung et al. (2024) find that overconfidence combined with self-attribution bias produces downward-sticky investment sensitivity, where capital expenditure responds asymmetrically to cash flow changes, rising disproportionately when conditions are favorable and failing to decrease when they deteriorate. This result extends and refines the seminal finding of Malmendier and Tate (2005) that CEO overconfidence is a significant predictor of value-reducing overinvestment. For corporate governance, these findings imply that effective monitoring mechanisms, including independent boards and activist institutional shareholders, are essential counterweights to managerial bias.

Loss aversion as formalized in Prospect Theory (Tversky and Kahneman, 1992) finds its most direct capital market expression in the disposition effect, the systematic tendency to sell appreciating assets prematurely while retaining depreciating positions beyond optimal holding periods (Shefrin and Statman, 1985). The disposition effect generates portfolio inefficiency, suboptimal tax management, and contributes to systematic mispricings across equity markets. A revealing extension of this framework is provided by Lukkowski et al. (2025), whose analysis of investor behavior during the COVID-19 pandemic shows that parameters of loss aversion are not stable psychological constants: during the crisis, risk aversion increased

while loss aversion paradoxically decreased, producing accelerated closure of both winning and losing positions. This finding, consistent with the broader crisis behavior literature reviewed in Mawadah et al. (2026), indicates that environmental context significantly modulates the expression of otherwise stable biases. Alfaridzi and Hutama (2025) further demonstrate that numerical and probabilistic framing of financial information significantly influences risk perception and decision outcomes, reinforcing the importance of information presentation design in financial advisory and regulatory contexts.

Herding behavior and collective investor sentiment jointly generate market anomalies that efficient market theory cannot accommodate. Bikhchandani et al. (1992) demonstrate theoretically that informational cascades can produce fragile equilibria in which rational agents rationally ignore private information to follow aggregate behavior, creating conditions ripe for sudden reversals. The empirical consequences documented by Parveen et al. (2020) in emerging stock markets include excessive trading volumes, distorted price formation, and amplified volatility driven by representativeness heuristic and overconfidence. De Bondt and Thaler (1985) document long-term reversal patterns attributable to overreaction to negative information, while Jegadeesh and Titman (2008) show that momentum anomalies arise from underreaction to fundamental signals. The coexistence of these opposing patterns across different time horizons highlights the complexity of bias-market interactions and the limitations of any single theoretical framework in capturing the full range of behavioral influences on price formation.

The bibliometric evidence documenting financial literacy as a significant moderator of cognitive bias effects reflects a broader shift in the literature from descriptive bias identification toward prescriptive intervention strategies. Rasool and Ullah (2020) provide empirical confirmation that investors with higher financial literacy demonstrate reduced susceptibility to overconfidence, anchoring, and herding. Ariswati et al. (2025) and Kesuma et al. (2025) extend this finding to microentrepreneurial decision-making in digital economies, showing that financial literacy drives both operational resilience and rational financial behavior under uncertainty. Putri (2026) operationalizes the mechanism by demonstrating that critical thinking skills, as a component of financial literacy, enable more objective evaluation of information and resistance to framing effects. Sunstein (2014) offers a complementary policy perspective by arguing that environmental design through nudging can guide individuals toward better decisions without relying exclusively on individual capacity enhancement, which is inherently slow and unequally distributed. The integration of literacy-based approaches and nudge architecture in digital financial platforms represents a highly promising policy and research frontier (Chairani et al., 2026).

Research Gaps and Future Directions

The bibliometric analysis identifies three primary research gaps that define the field's frontier. The first concerns cross-cultural comparative analysis: despite the emergence of South and Southeast Asian research communities, there is a notable absence of studies systematically comparing cognitive bias manifestations across cultural contexts using standardized methodologies. Cultural dimensions such as collectivism, long-term orientation, and uncertainty avoidance, identified as theoretically relevant by Kim and Nofsinger (2008), have not been incorporated into comparative cross-national frameworks. The second gap concerns the intersection of cognitive biases with financial technology: keyword and text-based maps confirm that themes such as algorithmic bias, robo-advisory distortions, and technology-mediated debiasing occupy low-density frontier zones in the corpus, despite their increasing real-world relevance (Kumar and Jha, 2024; Rafasya et al., 2026). The third gap involves the ethical dimensions of bias mitigation

technology: Hagerty and Rubinov (2019) identify this as a critically underexplored domain, as interventions that algorithmically correct investor behavior raise unresolved questions about autonomy, consent, and the normative boundaries of institutional paternalism.

CONCLUSION

This study examines the intellectual structure and thematic evolution of cognitive bias research in financial decision-making through a bibliometric analysis of 156 Scopus-indexed articles published between 1997 and 2026, utilizing VOSviewer for co-authorship mapping and keyword co-occurrence analysis. The results reveal four principal findings. First, the field has experienced exponential growth, with 63.5% of the corpus concentrated in 2023-2026, driven by the behavioral effects of the COVID-19 pandemic, the expansion of digital investment platforms, and the institutionalization of behavioral finance as an academic discipline. Second, India has emerged as the leading contributor by publication volume (17.9%), representing a Global South turn in behavioral finance that reflects the distinct investor behavior patterns of emerging capital markets, though the United States and United Kingdom maintain dominance in citation impact. Third, overconfidence and behavioral finance constitute the dominant conceptual core, while financial literacy has risen as a prominent moderating construct, reflecting the literature's shift from descriptive to prescriptive orientation. Fourth, co-authorship networks remain fragmented, indicating that cross-institutional and cross-national collaboration represents a significant structural opportunity for the field.

For policymakers and market regulators, this study highlights that cognitive biases are systematic, persistent, and context-modulated phenomena that require structural interventions, including mandatory financial literacy programs, nudge-based disclosure design, and governance mechanisms that counteract managerial overconfidence, rather than reliance on investor self-correction. For researchers, the knowledge map produced here identifies three high-priority frontier areas: comparative cross-cultural analysis of bias manifestations, investigation of algorithmic and AI-mediated bias amplification, and the ethical governance of technology-based debiasing. This study is bounded by its reliance on the Scopus database, which may underrepresent non-English and conference-based literature, and by the relatively nascent state of the most recent publication cohort in which citation accumulation is still in progress. Future research should expand the corpus through multi-database integration and apply longitudinal co-citation analysis to trace the evolution of theoretical paradigms within the field over time.

REFERENCES

Adelia, A., Rahman, M. H., Muthahari, M. W., Pramisya, F. L., Ariswati, L. D., and Kesuma, M. R. (2025), "Navigating digital business performance: A bibliometric exploration and integrated evaluation framework", Ekopedia: Jurnal Ilmiah Ekonomi, Vol. 1 No. 4, pp. 3222-3236, doi: 10.63822/yxfn4k21

Alfaridzi, G. R. and Hutama, V. P. P. (2025), "Dampak Framing terhadap Bias Kognitif dalam Pengambilan Keputusan Berbasis Numerasi, Probabilitas, dan Penalaran Deduktif", MARAS: Jurnal Penelitian Multidisplin, Vol. 3 No. 3, pp. 1121-1136, doi: 10.60126/maras.v3i3.1207

Althaf, S. A., Sustyaningsih, S., Kusuma, A. M. N., Anwar, A. G., Irianto, E. O., and Kesuma, M. R. (2025), "Digital transformation and sustainability: Unraveling interconnections and challenges through bibliometric insights", Digital Bisnis: Jurnal Publikasi Ilmu Manajemen dan E-Commerce, Vol. 4 No. 4, pp. 206-223, doi: 10.30640/digital.v4i4.5506

Amelia, T. F., Susanti, R., Maharani, S. D., and Anwar, Y. (2025), "Mengatasi Bias Kognitif dalam Pengambilan Keputusan untuk Meningkatkan Inovasi Pendidikan", Jurnal Sosial Humaniora Dan Pendidikan, Vol. 4 No. 2, pp. 49-57, doi: 10.55606/inovasi.v4i2.3954

Ariswati, L. D., Kesuma, M. R., Aini, R. N., Irianto, E. D. O., Widaryo, C. M., and Henrika, M. (2025), "Does financial literacy drive SME success in resource-rich regions?", Priviet Social Sciences Journal, Vol. 5 No. 11, pp. 308-321, doi: 10.55942/pssj.v5i11.714

Azmi, R., Pranesty, T. K., Puteri, R., Febrianty, Z., Hasanah, R., Irianto, E. D. O., and Kesuma, M. R. (2026), "Dinamika Rasionalitas Terbatas dan Pengambilan Keputusan: Perspektif Bibliometrik", Ekopedia: Jurnal Ilmiah Ekonomi, Vol. 2 No. 2, pp. 3525-3541, doi: 10.63822/fxjy8830

Barber, B. M. and Odean, T. (2001), "Boys will be boys: Gender, overconfidence, and common stock investment", Quarterly Journal of Economics, Vol. 116 No. 1, pp. 261-292, doi: 10.1162/003355301556400

Bikhchandani, S., Hirshleifer, D., and Welch, I. (1992), "A theory of fads, fashion, custom, and cultural change as informational cascades", Journal of Political Economy, Vol. 100 No. 5, pp. 992-1026

Camerer, C., Loewenstein, G., and Prelec, D. (2004), "Neuroeconomics: How neuroscience can inform economics", Journal of Economic Literature, Vol. 43 No. 1, pp. 9-64, doi: 10.1257/0022051053737843

Chairani, N. S., Najwa, N. A., Kartika, S. A., and Kesuma, M. R. (2026), "How has digital transformation reshaped personal financial management behavior research?", Moneter: Jurnal Ekonomi Dan Keuangan, Vol. 4 No. 1, pp. 85-106, doi: 10.61132/moneter.v4i1.2050

Chung, C. Y., Sul, H. K., and Wang, K. (2024), "Overconfidence, self-attribution bias, and investment-cash flow sensitivity", Finance Research Letters, Vol. 67, 105765, doi: 10.1016/j.frl.2024.105765

De Bondt, W. F. M. and Thaler, R. (1985), "Does the stock market overreact?", Journal of Finance, Vol. 40 No. 3, pp. 793-805, doi: 10.1111/j.1540-6261.1985.tb05004.x

Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., and Lim, W. M. (2021), "How to conduct a bibliometric analysis: An overview and guidelines", Journal of Business Research, Vol. 133, pp. 285-296, doi: 10.1016/j.jbusres.2021.04.070

Eck, N. J. van and Waltman, L. (2010), "Software survey: VOSviewer, a computer program for bibliometric mapping", Scientometrics, Vol. 84 No. 2, pp. 523-538, doi: 10.1007/s11192-009-0146-3

Hagerty, A. and Rubinov, I. (2019), "Global AI ethics: A review of the social impacts and ethical implications of artificial intelligence", AI and Society, Vol. 34 No. 4, pp. 779-791

Ilmahdy, A. N., Thio, O., Shalehah, N. N., Pratama, S. R. H., Henrika, M., and Kesuma, M. R. (2025), "The nexus of digitalization and innovation in business processes: A bibliometric analysis and identification of research gaps", Anggaran: Jurnal Publikasi Ekonomi dan Akuntansi, Vol. 3 No. 4, pp. 145-161, doi: 10.61132/anggaran.v3i4.1960

Jegadeesh, N. and Titman, S. (2008), "Returns to buying winners and selling losers: Implications for stock market efficiency", Journal of Finance, Vol. 48 No. 1, pp. 65-91

Katenova, M., Frolova, Y., and Schmunkamp, P. (2025), "Behavioral finance in the sphere of investment: Systematic review", F1000Research, Vol. 14 No. 949, pp. 1-17, doi: 10.12688/f1000research.166104.1

Kesuma, M. R., Ariswati, L. D., Henrika, M., Widaryo, C. M., Irianto, E. D. O., and Aini, R. N. (2025), "Can financial literacy drive microentrepreneur success in digital economies?", Journal of Economics Research and Policy Studies, Vol. 5 No. 3, pp. 765-781, doi: 10.53088/jerps.v5i3.2280

Kim, K. A. and Nofsinger, J. R. (2008), "Behavioral finance in Asia", Pacific-Basin Finance Journal, Vol. 16 No. 1-2, pp. 1-7, doi: 10.1016/j.pacfin.2007.04.001

Korip, Z. M., Assyifa, A. R., Mantika, S. U., Kesuma, M. R., and Ariswati, L. D. (2025), "A bibliometric analysis of financial literacy and financial planning research", Ekopedia: Jurnal Ilmiah Ekonomi, Vol. 1 No. 4, pp. 3354-3374, doi: 10.63822/31gje388

Kristofik, P. (2025), "Cognitive biases and sustainable finance: Implications for climate risk assessment", Sustainability, Vol. 17 No. 3, pp. 1-18

Kumar, R. and Jha, N. K. (2024), "Artificial intelligence in behavioural finance: Opportunities and challenges", International Journal of Advanced Research in Commerce, Management and Social Science, Vol. 7 No. 4, pp. 194-200

Madaan, G. and Singh, S. (2019), "An analysis of behavioral biases in investment decision-making", International Journal of Financial Research, Vol. 10 No. 4, pp. 55-67, doi: 10.5430/ijfr.v10n4p55

Malmendier, U. and Tate, G. (2005), "CEO overconfidence and corporate investment", Journal of Finance, Vol. 60 No. 6, pp. 2661-2700, doi: 10.1111/j.1540-6261.2005.00813.x

Mawadah, N., Auliyawati, A., Hendi, H., Mangkona, A. A., Aprilia, V., Widaryo, C. M., and Kesuma, M. R. (2026), "Bibliometric analysis of decision-making in crisis management: Mapping intellectual structures and contextual gaps in financial management with emphasis on emerging markets", Ekopedia: Jurnal Ilmiah Ekonomi, Vol. 2 No. 2, pp. 3448-3463, doi: 10.63822/33y71743

Nickerson, R. S. (1998), "Confirmation bias: A ubiquitous phenomenon in many guises", Review of General Psychology, Vol. 2 No. 2, pp. 175-220

Oechssler, J., Roider, A., and Schmitz, P. W. (2009), "Cognitive abilities and behavioral biases", Journal of Economic Behavior and Organization, Vol. 72 No. 1, pp. 147-152, doi: 10.1016/j.jebo.2009.04.018

Pagano, M. S., Sinclair, G., and Yang, T. (2023), "Understanding ESG ratings and ESG indexes", Research in International Business and Finance, Vol. 64, 101820

Parveen, S., Satti, Z. W., Subhan, Q., and Jamil, S. (2020), "Exploring market overreaction, investors' sentiments and investment decisions in emerging stock market", Borsa Istanbul Review, Vol. 20 No. 3, pp. 224-235, doi: 10.1016/j.bir.2020.02.002

Putri, K. D. (2024), "Mengeksplorasi Bias Kognitif dan Pengaruhnya Pada Pengambilan Keputusan Keuangan Manajerial: Model Konseptual", ResearchGate, available at: https://www.researchgate.net/publication/381472839

Putri, S. K. (2026), "Mitigasi Bias Kognitif dalam Pengambilan Keputusan Finansial: Peran Keterampilan Berpikir Kritis dan Literasi Keuangan", Jurnal Ilmiah Ekonomi Manajemen Bisnis Dan Akuntansi, Vol. 3 No. 1, pp. 191-201, doi: 10.61722/jemba.v3i1.1958

Rafasya, D. K., Limbong, J. A., Farich, S. N., Nakhat, S. S. R., Widaryo, C. M., and Kesuma, M. R. (2026), "Technology adoption in SMEs: Unraveling bibliometric patterns and public policy influences", Jejak Digital: Jurnal Ilmiah Multidisiplin, Vol. 2 No. 1, pp. 86-99, doi: 10.63822/gzytfc30

Rasool, N. and Ullah, S. (2020), "Financial literacy and behavioural biases of individual investors: Empirical evidence of Pakistan stock exchange", Journal of Economics, Finance and Administrative Science, Vol. 25 No. 50, pp. 261-278, doi: 10.1108/JEFAS-03-2019-0031

Rohandi, M. M. A., Saleh, A. K., Amelia, R., and Yusuf, M. (2024), "Financial behavior and investment decision in emerging markets: Evidence from Indonesia", Journal of Financial Economics and Investment, Vol. 4 No. 2, pp. 98-112

Sabir, S. A., Mohammad, H. B., and Shahar, H. B. K. (2019), "The role of overconfidence and past investment experience in herding behaviour with a moderating effect of financial literacy", Asian Economic and Financial Review, Vol. 9 No. 4, pp. 480-490

Saputra, S. A. J., Tofani, M. R. U., Risma, N., Aisyah, N., and Kesuma, M. R. (2025), "Navigating digital horizons: A bibliometric exploration of digitalization in family businesses and emerging research agendas", Ekopedia: Jurnal Ilmiah Ekonomi, Vol. 1 No. 4, pp. 2926-2942, doi: 10.63822/qbwx6k02

Schwenk, C. R. (1984), "Cognitive simplification processes in strategic decision-making", Strategic Management Journal, Vol. 5 No. 2, pp. 111-128, doi: 10.1002/smj.4250050203

Shefrin, H. and Statman, M. (1985), "The disposition to sell winners too early and ride losers too long: Theory and evidence", Journal of Finance, Vol. 40 No. 3, pp. 777-790

Sunstein, C. R. (2014), "Nudging: A very short guide", Journal of Consumer Policy, Vol. 37 No. 4, pp. 583-588, doi: 10.1007/s10603-014-9273-1

Surya, A. P., Kolompoy, B. E. Y., Khairunnisa, S. A., Liszt, C. I. K., Aini, R. N., and Kesuma, M. R. (2025), "Digital leadership in organizational transformation: Bibliometric insights and strategic implications", Ekopedia: Jurnal Ilmiah Ekonomi, Vol. 1 No. 4, pp. 3245-3259, doi: 10.63822/wy5jyh66

Thaler, R. H. (2016), "Behavioral economics: Past, present, and future", American Economic Review, Vol. 106 No. 7, pp. 1577-1600, doi: 10.1257/aer.106.7.1577

Tversky, A. and Kahneman, D. (1992), "Advances in Prospect Theory: Cumulative representation of uncertainty", Journal of Risk and Uncertainty, Vol. 5 No. 4, pp. 297-323, doi: 10.1007/BF00122574

Wahyudi, H. N., Priyatno, A., and Dewi, T. K. (2025), "Confirmation bias in audit judgment: Evidence from Indonesian public accounting firms", Jurnal Akuntansi dan Keuangan, Vol. 27 No. 1, pp. 14-28

Wibowo, B., Edyanto, C., Satrio, R., Aini, R., and Kesuma, M. R. (2026), "Financial management in the context of globalization: A bibliometric study", Ekopedia: Jurnal Ilmiah Ekonomi, Vol. 2 No. 1, pp. 37-51, doi: 10.63822/atc9bc19

Yuwen, C. (2024), "Corporate governance and managerial overconfidence in investment decisions: Evidence from Asian markets", Pacific-Basin Finance Journal, Vol. 83, 102261