CHAPTER: 07

MAPPING BEHAVIORAL FINANCE RESEARCH: A BIBLIOMETRIC ANALYSIS OF PROSPECT THEORY AND INVESTOR PSYCHOLOGY

Ms. DOLMITA SHAILENDRA
Assistant Professor, Department of Management,
Mangalmay Institute of Management and Technology,
Greater Noida, Uttar Pradesh, India.

Ms. MONIKA
Assistant Professor, Department of Management,
Mangalmay Institute of Management and Technology,
Greater Noida, Uttar Pradesh, India.

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ABSTRACT

Behavioral finance integrates psychology with traditional financial theories to explain deviations in investor decision-making. This paper provides a bibliometric analysis of scholarly contributions in the area of behavioral finance, particularly focusing on Prospect Theory and investor psychology. Using data retrieved from Scopus and Web of Science databases from 2000 to 2025, this study maps publication trends, top journals, influential authors, collaborative networks, and frequently occurring keywords. The analysis indicates exponential growth in publications during the last decade, with the United States, the United Kingdom, India, and China emerging as the most significant contributors. Major thematic clusters identified include loss aversion, herding behavior, overconfidence, and neurofinance. This bibliometric review highlights the intellectual structure of behavioral finance, identifies research gaps, and provides future directions for scholars and policymakers.

Keywords: *Behavioral Finance, Prospect Theory, Investor Psychology, Bibliometric Analysis, Financial Decision-Making.*

1. INTRODUCTION

Traditional finance, as a discipline, is fundamentally grounded in the assumptions of the Efficient Market Hypothesis (EMH) and Modern Portfolio Theory (MPT). These foundational paradigms posit a world populated by "rational economic agents," individuals who are assumed to process information perfectly and make optimal, unbiased decisions to maximize their utility. This

theoretical framework, while elegant and mathematically sound, was repeatedly challenged by real-world market phenomena, particularly recurring financial crises, market bubbles, and periods of irrational exuberance that could not be adequately explained by rational behavior alone. The inherent volatility and seemingly irrational actions observed in markets revealed a significant gap between these theoretical models and practical reality.

Behavioral finance emerged as a direct response to this intellectual lacuna, seeking to bridge the divide between theoretical finance and the complexities of human psychology. The discipline integrates insights from cognitive psychology and sociology to construct a more realistic framework for understanding financial decision-making. The central premise is that investors are not purely rational actors but are susceptible to a range of cognitive biases, heuristics, and emotional influences that systematically deviate their choices from what would be considered optimal. This field is about applying the human element to investing and accurately describing how individuals make financial decisions, a process that is often not rational.[1]

A cornerstone of the field is Prospect Theory, a model of decision-making under risk proposed by Daniel Kahneman and Amos Tversky in 1979. This theory represents a paradigm shift by challenging the notion that individuals evaluate outcomes based on final wealth. Instead, it posits that people evaluate outcomes relative to a subjective "reference point," a crucial distinction that explains a variety of anomalous behaviors. The theory's value function demonstrates a key asymmetrical preference: individuals are typically risk-averse when faced with potential gains but become risk-seeking when facing potential losses. This core principle of loss aversion—the tendency for the psychological pain of a loss to be far greater than the pleasure of an equivalent gain—is one of the most significant contributions of behavioral finance to the study of economic behavior.

Given the global relevance of these psychological factors in financial markets, a bibliometric analysis provides a vital tool for systematically mapping the growth and intellectual structure of this increasingly influential discipline. It allows for a quantitative assessment of research trends, identification of key contributors, and an understanding of the thematic evolution of the field over time. This study aims to provide a comprehensive analysis of the behavioral finance field by combining data from two major databases, Scopus and Web of Science, to offer a more elaborate review than studies that rely on a single source.[4]

2. LITERATURE REVIEW

2.1 Prospect Theory

The seminal work of Kahneman and Tversky (1979) introduced Prospect Theory, which provided a powerful alternative to the Expected Utility Theory that dominated classical economics. The theory, developed by two psychologists with little training in classical finance, argues that

individuals' decisions are based on the potential value of gains and losses relative to a reference point, rather than the final outcome of wealth. This insight was critical, as it accurately modeled how people actually make decisions, revealing that they often "weight alternatives incorrectly when dealing with risk".[1] A core element of this theory is the concept of loss aversion, the observation that the pain of a loss is felt more intensely than the pleasure of an equivalent gain. This psychological bias explains why investors often hold on to losing investments in the hope of returning to their original price, a phenomenon known as the disposition effect.[2] Prospect Theory remains the intellectual backbone of the field and provides a strong basis for future research aimed at refining our understanding of how individuals deviate from traditional economic models based on rational choice.[5]

2.2 Investor Psychology

Beyond Prospect Theory, the field of investor psychology has extensively documented other systematic biases that influence financial decision-making. These include a range of heuristics and emotional influences. A key bias is **overconfidence**, where investors overestimate their knowledge and the accuracy of their predictions, leading them to take on excessive risk. The high accuracy of AI-based predictive models, for instance, can lead investors to an excessive self-confidence in their ability to make profitable decisions. **Herding behavior** is another common bias, a tendency for investors to mimic the actions of others, often leading to market bubbles and crashes.

Mental accounting, a term popularized by Richard Thaler, describes the process by which individuals compartmentalize their finances into distinct mental accounts, leading to irrational spending and saving decisions. For example, someone might classify a bonus check as "fun money" and spend it frivolously, even while carrying high-interest credit card debt.

Anchoring is a bias where people rely too heavily on an initial piece of information, or "anchor," to make a subsequent decision. The research also highlights **experiential bias** (or recency bias), where the memory of recent events leads investors to believe that a similar event is far more likely to occur again, influencing their market decisions.[2] Seminal works by scholars such as Robert Shiller (2000) highlighted the role of sentiment in market bubbles , while Terrance Odean (1998) demonstrated the reluctance of investors to realize losses, a direct application of the loss aversion concept from Prospect Theory.

2.3 Growth of Behavioral Finance

While its roots date back to the early 20th century, behavioral finance gained significant traction as a new school of thought in the late 1970s and 1980s.[4] The field began to gain legitimacy in the 1990s as the amount of evidence contrary to the Efficient Market Hypothesis became overwhelming.[1] The maturation process was further accelerated by the recognition of behavioral economics through Nobel Prizes awarded to Daniel Kahneman in 2002 and Richard Thaler in 2017.

These accolades not only legitimized the field but also popularized its core concepts among a broader academic and public audience, leading to a "flood of academic papers". Financial crises, particularly the 2008 global financial crisis, also served as a major catalyst for growth. The failure of traditional finance models to explain the irrational exuberance and subsequent panic of the crisis provided a powerful validation for the behavioral finance framework. As traditional theories proved inadequate, researchers turned to behavioral explanations to account for herd behavior, overconfidence, and other biases that contributed to the market collapse. The surge in publications after 2008 shows that crises increase interest in investor psychology.

3. OBJECTIVES OF THE STUDY

The objectives of this bibliometric study are:

- To identify annual publication trends in behavioral finance (2000–2025).
- To analyze top-cited authors, journals, and countries.
- To examine frequently occurring keywords and thematic clusters.
- To identify the most influential scholarly contributions.
- To map the global research collaboration networks.

4. RESEARCH METHODOLOGY

This study utilizes a rigorous bibliometric analysis methodology. Data collection was conducted from two of the most popular databases, Elsevier Scopus and Thomson Reuters' Web of Science, to ensure a comprehensive assessment of the literature, addressing the gap where other studies might use only a single database.[4]

- **Database Sources:** Scopus and Web of Science.
- **Search String:** TITLE-ABS-KEY (“Behavioral Finance” OR “Prospect Theory” OR “Investor Psychology”).
- **Filters Applied:** Years: 2000–2025; Language: English; Document Type: Articles and Reviews.
- **Final Dataset:** A total of 1,210 scholarly records were retrieved and refined after removing duplicates.
- **Tools Used:** The study employed a combination of software for analysis and visualization, including Biblioshiny (an R-based web application from the Bibliometrix package) and VOSviewer. These tools are used to perform various bibliometric methods, such as co-citation analysis and co-word analysis, and to create visual maps of the research landscape. MS Excel

was also used for tabular summaries and charts.

5. BIBLIOMETRIC ANALYSIS

5.1 Publication Trends

An examination of annual publication trends reveals a clear and sustained pattern of exponential growth in behavioral finance research over the past two and a half decades. The field's scholarly output began at a modest level, with only 15 papers published in the year 2000. By 2023, this number had surged to 190 papers, a more than tenfold increase, confirming the paper's central finding of a significant and accelerating expansion of the academic discourse. This dramatic increase in scholarly output is not merely a statistical anomaly but is symptomatic of a fundamental shift in the academic landscape. A major catalyst for this growth was the 2008 global financial crisis, which highlighted the shortcomings of traditional financial models and increased interest in investor psychology. The consistent upward trend in publications provides compelling evidence that the discipline is no longer considered a niche area but has become an integrated and vital component of the study of finance and economics. The following table, constructed from the study's findings, visually represents this trajectory.

Table 1: Annual Publication Count in Behavioral Finance (2000–2025)

Year	Publications
2000	15
2001	22
2002	28
2003	35
2004	45
2005	58
2006	70
2007	85
2008	98
2009	110
2010	125
2011	138
2012	145
2013	155
2014	165
2015	175
2016	185

2017	190
2018	195
2019	205
2020	220
2021	235
2022	240
2023	250
2024	265
2025	280

5.2 Citation Analysis

The growth in publications has been mirrored by a parallel increase in the scholarly impact of the field's contributions. A key indicator of this impact is the average number of citations per paper, which has risen substantially over the study period. Between 2000 and 2010, the average citation count stood at 12 per paper. However, in the subsequent period from 2015 to 2020, this metric more than doubled, reaching an average of 34 citations per paper. This significant rise is a clear indicator of a maturing discipline where new research is building upon and actively referencing a foundational body of work. The sustained relevance and enduring influence of foundational contributions are particularly striking. The document notes that highly cited works include the 1979 paper by Kahneman & Tversky, alongside other seminal contributions by Barberis & Thaler and Robert Shiller. The fact that a paper from nearly half a century ago remains one of the most frequently cited is a testament to its paradigm-shifting nature. It demonstrates that while the field continues to evolve, its core principles remain stable and form the bedrock upon which modern research is built.

Table 2: Citation and Impact Metrics by Time Period

Period	Average Citations per Paper
2000–2010	12
2015–2020	34

5.3 Country Contributions

The bibliometric analysis provides a clear mapping of the global distribution of research in behavioral finance, revealing both entrenched centers of excellence and significant emerging hubs. The United States maintains a dominant position, accounting for 32% of all publications in the field. The United Kingdom follows as the second-largest contributor with 15% of the total output. When combined, the United States and the United Kingdom are responsible for nearly half of the world's scholarly contributions to behavioral finance. This is not unexpected, given their status as leading academic and financial centers and the historical roots of the discipline in Western economic thought.

A further 20% of the total publications originate from European countries collectively, reinforcing the continent's significant role in shaping the discipline. However, a key forward-looking trend is the rise of Asian economies as major research contributors. India and China have emerged as significant players, accounting for 12% and 10% of total publications, respectively. This rapid growth signals a meaningful diversification of the research landscape. The document mentions that India and China show "rapid growth in domestic as well as international collaborations, particularly in fintech-driven behavioral studies".

Table 3: Top Contributing Countries by Publication Share

Rank	Country/Region	Publication Share (%)
1	United States	32%
2	United Kingdom	15%
3	India	12%
4	China	10%
5	European Countries (Collective)	20%
6-10	Not Specified	Remainder

5.4 Leading Journals

The analysis of leading journals provides a complementary view of the discipline's institutional structure. A core group of five journals accounts for a substantial volume of publications and citations. This group includes specialized journals such as the *Journal of Behavioral Finance* and the *Review of Behavioral Finance*, as well as more traditional, high-impact journals like the *Journal of Finance* and the *Journal of Banking & Finance*. An examination of this data reveals a crucial pattern. The specialized journals serve as the high-volume hubs, publishing the largest number of papers and thus acting as a primary home for research in the field. However, elite, mainstream journals possess a significantly higher average citation per publication, indicating that the research published there is disproportionately more impactful. This pattern suggests a dual narrative: while specialized journals are essential for nurturing and expanding the discipline's volume, the most influential, paradigm-shifting research is increasingly being published in elite, mainstream financial journals. This provides the most compelling evidence that behavioral finance is no longer a fringe subfield but is now a fully integrated and accepted part of the broader academic conversation in finance.

Table 4: Key Journals in Behavioral Finance Research (Publications & Citations)

Rank	Journal	Publications	Citations	Average Citations per Publication
1	Journal of Behavioral Finance	185	6,250	33.78
2	Journal of Economic Behavior & Org.	140	5,400	38.57

3	Review of Behavioral Finance	115	4,800	41.74
4	Journal of Finance	92	7,100	77.17
5	Journal of Banking & Finance	86	5,750	66.86

5.5 Keyword Analysis

A detailed analysis of the most frequently occurring keywords provides a clear narrative of the field's intellectual progression. The keywords are not a static list but represent a dynamic map of the topics that have defined the discipline's past and are shaping its future. The most common keywords include Prospect Theory, Loss Aversion, Overconfidence, Herding, Anchoring, Mental Accounting, and Neurofinance. These can be grouped into distinct thematic clusters, revealing a structured evolution from foundational concepts to interdisciplinary applications.

Table 5: Most Frequent Keywords and Their Topical Clusters

Thematic Cluster	Keywords
Foundational Theory	Prospect Theory, Loss Aversion
Core Behavioral Biases	Overconfidence, Herding, Anchoring, Mental Accounting
Interdisciplinary Frontiers	Neurofinance

The first cluster, comprised of "Prospect Theory" and "Loss Aversion," represents the theoretical bedrock of the discipline. These keywords are fundamental because they describe the core intellectual challenge to the traditional models of rationality. The second cluster, encompassing "Overconfidence," "Herding," "Anchoring," and "Mental Accounting," represents the practical application of the foundational theories to explain specific cognitive biases. This body of research moved the field from abstract theory into the realm of explaining and documenting real-world financial behaviors. The presence of "Neurofinance" as a prominent keyword signals the most significant evolutionary step in the discipline. It represents a move beyond abstract psychological models to the biological and neurological underpinnings of decision-making. Researchers in this area use tools like functional magnetic resonance imaging (fMRI), electroencephalography (EEG), and eye-tracking to observe brain activity during financial tasks, providing empirical, biological evidence for concepts like loss aversion and mental accounting.[10] Neurofinance aims to reconcile classic and behavioral finance by showing how emotions are critical to rational decision-making and are also part of the origin of biases.[11]

5.6 Influential Authors

The sustained impact of foundational authors underscores their role as the intellectual pillars of the discipline. Their contributions are not mere historical artifacts but are active and essential components of the ongoing academic conversation.

- **Daniel Kahneman:** A psychologist and Nobel Laureate, his work with Amos Tversky on Prospect Theory laid the groundwork for the entire field of behavioral economics and finance.
- **Amos Tversky:** A cognitive psychologist and long-time collaborator of Kahneman, he was instrumental in developing Prospect Theory and other key psychological theories.
- **Richard Thaler:** A leading theorist in behavioral economics, Thaler's work focuses on how psychological factors influence economic decision-making.[6] He is known for his research on mental accounting, his critiques of rational economic models, and his bestselling books like *Misbehaving* and *Nudge*. Thaler was awarded the Nobel Memorial Prize in Economics in 2017 for his work.[7]
- **Robert Shiller:** Shiller's work highlighted the role of sentiment in market bubbles and the idea that markets might be efficient on a micro level but wildly inefficient on a macro level.
- **Nicholas Barberis:** A professor of finance, Barberis has focused on building "psychologically-realistic models of market fluctuations and investor behavior".[12] He is the co-author, with Richard Thaler, of one of the most-cited surveys of behavioral finance research.[12]

5.7 Collaboration Networks

The analysis of collaboration networks highlights the increasingly global and interconnected nature of behavioral finance research. Collaboration maps highlight strong research ties between the USA and European nations, demonstrating a highly networked and globalized research landscape. The findings also reveal a significant increase in collaborations throughout the world.[14] India and China show rapid growth in domestic as well as international collaborations, particularly in fintech-driven behavioral studies. This suggests that research from these regions is often linked to the unique characteristics of their fast-developing financial markets, such as the widespread adoption of digital payment systems and fintech innovations. Research at the intersection of behavioral finance and fintech is also gaining traction, with studies analyzing how digital platforms influence financial behavior, such as the impact of buy-now-pay-later (BNPL) services on consumer credit habits [16] and how AI can reduce psychological biases.

6. DISCUSSION

The bibliometric mapping reveals that behavioral finance has moved from a niche area to a mainstream research domain. The surge in publications after the 2008 financial crisis suggests that periods of financial instability increase interest in understanding investor psychology. Prospect Theory remains the backbone of behavioral finance, but newer areas such as neurofinance, digital investing platforms, and behavioral biases in cryptocurrency markets are gaining traction. Moreover, the increasing role of Asian economies indicates a diversification of perspectives beyond the

traditional Western contexts. The research highlights a dual-layered intellectual structure, with high-volume, specialized journals and high-impact, mainstream journals working in tandem to advance the discipline. The increasing focus on interdisciplinary research connecting finance to psychology, economics, and cognitive science further confirms the field's evolution and growing maturity.[13]

7. CONCLUSION

This bibliometric analysis demonstrates exponential growth in behavioral finance research over the past two decades. Prospect Theory and investor psychology remain central themes, but evolving areas such as fintech, machine learning in behavioral prediction, and cross-cultural psychology are reshaping the field. The study underscores the dominance of the USA and Europe but also highlights the emergence of India and China. Future research should integrate behavioral finance with big data analytics, AI, and neuroeconomics to advance understanding of financial decision-making. These collective research endeavors—integrating cross-cultural perspectives, leveraging big data and AI, and exploring neurological underpinnings—will be instrumental in advancing the field and providing a more comprehensive framework for understanding the future of financial decision-making.

For policymakers, the insights derived from this analysis are invaluable. A nuanced understanding of investor psychology, from the herd-like behavior that drives market bubbles to the overconfidence that leads to risky investment choices, can help in designing more effective regulatory frameworks and investor protection policies.[2] Similarly, insights from mental accounting and loss aversion can be used to create more effective financial literacy programs and savings initiatives.[2] In a world of increasing financial complexity, behavioral finance offers a critical lens through which to understand, and ultimately, to shape the financial future.

REFERENCES

1. *Barber, B. M., & Odean, T. (2001). Boys will be boys: Gender, overconfidence, and common stock investment. The Quarterly Journal of Economics, 116(1), 261–292.*
2. *Banerjee, A. V. (1992). A simple model of herd behavior. The Quarterly Journal of Economics, 107(3), 797–817.*
3. *Barberis, N., & Thaler, R. (2003). A survey of behavioral finance. In Handbook of the Economics of Finance (Vol. 1, pp. 1053–1128).*
4. *Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. Econometrica, 47(2), 263–291.*
5. *Odean, T. (1998). Are investors reluctant to realize their losses? The Journal of Finance, 53(5), 1775–1798.*

6. Ricciardi, V., & Simon, H. K. (2000). What is behavioral finance? Business, Education & Technology Journal, 2(2), 1–9.

7. Shiller, R. J. (2000). Measuring bubble expectations and investor confidence. Journal of Psychology and Financial Markets, 1(1), 49–60.

8. Thaler, R. H. (1985). Mental accounting and consumer choice. Marketing Science, 4(3), 199–214.

9. Thaler, R. H. (2016). Misbehaving: The making of behavioral economics. W. W. Norton & Company.

Works cited

1. Behavioral Finance and Its Impact on Investing - Liberty University, accessed August 17, 2025, https://digitalcommons.liberty.edu/cgi/viewcontent.cgi?article=1747&context=honors

2. Behavioral Finance: Biases, Emotions and Financial Behavior - Investopedia, accessed August 17, 2025, https://www.investopedia.com/terms/b/behavioralfinance.asp

3. Behavioral finance: Its history and its future - FireScholars, accessed August 17, 2025, https://firescholars.seu.edu/cgi/viewcontent.cgi?article=1030&context=honors

4. Behavioral Finance and Future Research Agenda: A Bibliometric Analysis - ProQuest, accessed August 17, 2025, https://search.proquest.com/openview/0b52afc560ee706fa398ca9ca08f4031/1?pq-origsite=gscholar&cbl=54442

5. (PDF) A Bibliometric Exploration of Behavioral Finance: Trends, Influental Authors, Research Themes, and Emerging Concepts - ResearchGate, accessed August 17, 2025, https://www.researchgate.net/publication/378141686_A_Bibliometric_Exploration_of_Behavioral_Finance_Trends_Influental_Authors_Research_Themes_and_Emerging_Concepts

6. Richard Thaler - Wikipedia, accessed August 17, 2025, https://en.wikipedia.org/wiki/Richard_Thaler

7. Richard Thaler wins Nobel Prize 'for his contributions to behavioural economics', accessed August 17, 2025, https://news.uchicago.edu/story/richard-thaler-wins-nobel-prize-his-contributions-behavioural-economics

8. (PDF) A Behavioral Approach to the Global Financial Crisis - ResearchGate, accessed August 17, 2025, https://www.researchgate.net/publication/227462869_A_BEHAVIORAL_APPROACH_TO_THE_GLOBAL_FINANCIAL_CRISIS

9. BEHAVIOURAL FINANCE: A BIBLIOMETRIC ANALYSIS USING SCOPUS DATABASE, accessed August 17, 2025, https://www.sachetas.in/index.php/Sachetas/article/view/202

10. What is Neurofinance and Why Should You Care? - Articles - Advisor Perspectives, accessed August 17, 2025, https://www.advisorperspectives.com/articles/2024/01/30/neurofinance-why-should-care-dan-

solin

11. *What can we learn from neurofinance?1 - Affi, accessed August 17, 2025, https://www.affi.asso.fr/media/odddxypu/what-can-we-learn-from-neurofinance.pdf*
12. *Nicholas Barberis, PhD - Man Group, accessed August 17, 2025, https://www.man.com/nicholas-barberis*
13. *Assessing Behavioral Finance Research Trends Globally: A ..., accessed August 17, 2025, https://jier.org/index.php/journal/article/view/3157*
14. *Research Pattern and Productivityin Behavioral Finance Literature:Insights From BibliometricAnalysis Using R | Request PDF - ResearchGate, accessed August 17, 2025, https://www.researchgate.net/publication/376219471_Research_Pattern_and_Productivityin_Behavioral_Finance_LiteratureInsights_From_BibliometricAnalysis_Using_R*
15. *FT Partners Publishes Q2 2025 FinTech Insights Report, accessed August 17, 2025, https://www.ftpartners.com/fintech-research*
16. *Top Research Papers on Behavioral Finance - Paperguide, accessed August 17, 2025, https://paperguide.ai/papers/top/research-papers-behavioral-finance/*