A Bibliometric Exploration of Behavioral Finance: Trends, Influental Authors, Research Themes, and Emerging Concepts

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ABSTRACT

This bibliometric exploration delves into the evolving landscape of behavioral finance, employing a systematic analysis of scholarly publications from the past decade. The study maps key trends, influential authors, research themes, and emerging concepts within the interdisciplinary realm of behavioral finance, blending insights from psychology and economics. Through rigorous data collection and analysis using VOS Viewer, the research addresses four critical questions: identifying trends, profiling influential authors, categorizing research themes, and exploring potential future directions. The study reveals a dynamic field with a focus on psychological factors influencing financial decision-making. Key findings include influential authors such as Hirshleifer and Statman, thematic clusters encompassing market efficiency and investor sentiment, and emerging areas of interest like the impact of COVID-19 on financial behavior. The implications of this research extend to academia, practice, and policy, providing a valuable resource for navigating the complex landscape of behavioral finance.

INTRODUCTION

Behavioral finance has emerged as a dynamic and interdisciplinary field that combines insights from psychology and economics to understand and explain various financial phenomena (Ricciardi, 2008). Traditional finance models often assume rationality in decision-making, yet human behavior frequently deviates from these assumptions, leading to market anomalies and fluctuations (Berg, 2005; Zhang & Zheng, 2015). Behavioral finance seeks to explore the psychological factors influencing financial decision-making, providing a more nuanced understanding of market dynamics (Amoah, n.d.; Zhang & Zheng, 2015).

Over the past few decades, there has been a growing body of literature in behavioral finance, reflecting an increased recognition of the importance of human behavior in financial markets (Costa et al., 2017a, 2019; Hu & Yang, 2023; Singh, 2021). Researchers have delved into diverse topics such as investor sentiment, cognitive biases, and the impact of emotions on financial decisions. To gain a comprehensive overview of the field's evolution, it is essential to conduct a bibliometric analysis that systematically maps the trends, influential authors, research themes, and emerging concepts in behavioral finance.

Despite the wealth of literature in behavioral finance, there exists a need for a comprehensive and up-to-date analysis that synthesizes the vast array of research contributions. Existing reviews may be limited in scope or outdated, and a bibliometric exploration offers a systematic approach to map the intellectual structure of the field. Addressing this gap will not only provide researchers with a comprehensive understanding of the current state of behavioral finance but also offer insights into potential avenues for future research.

This research aims to provide a comprehensive understanding of the evolving field of behavioral finance through a bibliometric exploration. The study addresses four

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key research questions: firstly, it examines the prominent trends in behavioral finance research over the past decade, shedding light on the evolving nature of the field. Secondly, it investigates the influential authors in behavioral finance, identifying key contributors and analyzing their impact on the literature. Thirdly, the research categorizes and explores the primary research themes within behavioral finance, offering insights into the prevailing areas of interest. Finally, the study delves into potential future research directions and emerging areas of interest, contributing to the scholarly discourse by identifying prospective avenues for exploration in the dynamic realm of behavioral finance.

This research holds significance for academics, practitioners, and policymakers by offering a comprehensive overview of the current landscape in behavioral finance. Understanding the trends, influential figures, and potential future research directions will not only aid researchers in navigating the existing literature but also guide future investigations. Moreover, insights from this study can inform financial professionals and policymakers about the behavioral factors shaping market dynamics, potentially improving decision-making processes and risk management strategies.

METHOD

a. Data Collection

This research employs a systematic bibliometric approach to analyze the landscape of behavioral finance literature. A comprehensive search will be conducted across reputable academic databases, including but not limited to PubMed, Scopus, and Web of Science, to retrieve relevant publications. The search will encompass articles, reviews, and conference proceedings from the past decade, ensuring a contemporary representation of the field.

b. Inclusion Criteria

Selected publications will be those directly related to behavioral finance, encompassing studies that investigate psychological aspects influencing financial decision-making. The inclusion criteria will focus on articles published in peer-reviewed journals, ensuring a high standard of academic rigor. The temporal scope will cover the past ten years to capture recent trends and developments in the field.

c. Data Analysis

VOS Viewer is used as bibliometric software. This software will be utilized to conduct a thorough analysis of the retrieved publications. The analysis will be divided into four parts according to the research question, namely trend analysis using overlay visualization, most influential author analysis by identifying the most impactful articles and author mapping, clustering analysis with network visualization, and future research potential analysis with density visualization.

d. Research Questions Alignment

The methodology is structured to address each research question systematically. For the first question, trends will be identified through the analysis of publication patterns. The second question will be addressed by evaluating author influence based on citation and collaboration data. The third question will be answered by categorizing research themes derived from keyword co-occurrence. Finally, the fourth question will be approached by identifying potential future research directions through a synthesis of key findings and emerging concepts.

e. Validity and Reliability

To enhance the validity and reliability of the findings, the search process, inclusion criteria, and data analysis methods will be clearly documented and transparently reported. Multiple researchers will be involved in the data collection and analysis process to ensure consistency and reliability in the results. Additionally, the use of established bibliometric tools contributes to the reliability of the analysis.

RESULTS AND DISCUSSION

a. Research Data Metrics

In this segment, we delve into the quantitative aspects of the behavioral finance literature through data citation metrics. The analysis includes citation counts, h-index, and other relevant bibliometric indicators to gauge the impact and visibility of publications within the field. By examining these metrics, we aim to identify influential works, assess the overall impact of the literature, and provide a quantitative foundation for understanding the scholarly significance of behavioral finance research.

Table 1. Research Data Metrics

	VIF
Publication Years	2013-2023
Citation years	11 (2013-2024)
Paper	1000
Citations	8381
Cites/Year	761,91
Cites/Paper	8,38
Author/Paper	1,84
h-index	44
g-index	78
hI-norm	36
hI-annual	3,27
hA-Index	16
Papers with ACC	>=1,2,5,10,20:238, 145, 68, 30, 11

Source: Publish or Perish Output, 2024

Table 1 presents data citation metrics for a collection of 1,000 papers published between 2013 and 2023 and their corresponding citations from 2013 to 2024. During this period, these papers received a total of 8,381 citations, resulting in an average of 761.91 citations per year and 8.38 citations per paper. On average, each paper had 1.84 authors, indicating collaborative research efforts. The h-index, a measure of scholarly impact, is 44, indicating that there are 44 papers in the set with at least 44 citations each. The g-index is 78, representing the highest number of papers that collectively have at least 78 citations. The hI,norm is 36, indicating that the author's h-index normalized by the number of years since their first publication is 36. The hI,annual is 3.27, indicating that the author's h-index is growing by approximately 3.27 each year. Finally, the hA-index is 16, signifying that there are 16 papers in the set that have been cited at least 16 times. Additionally, the table provides information on the number of papers with various levels of accumulated citations, such as those with

at least 1, 2, 5, 10, and 20 citations, with counts of 238, 145, 68, 30, and 11 papers, respectively. These metrics collectively offer insights into the impact and performance of the papers and authors in this dataset over the specified time frame.

b. Research Trends

This subchapter explores the temporal evolution of behavioral finance through an analysis of research trends over the past decade. By examining publication patterns, thematic shifts, and emerging areas of interest, this section aims to provide a nuanced understanding of how the field has evolved. The discussion will shed light on the factors driving research trends, contributing to a dynamic narrative that reflects the evolving nature of behavioral finance scholarship.
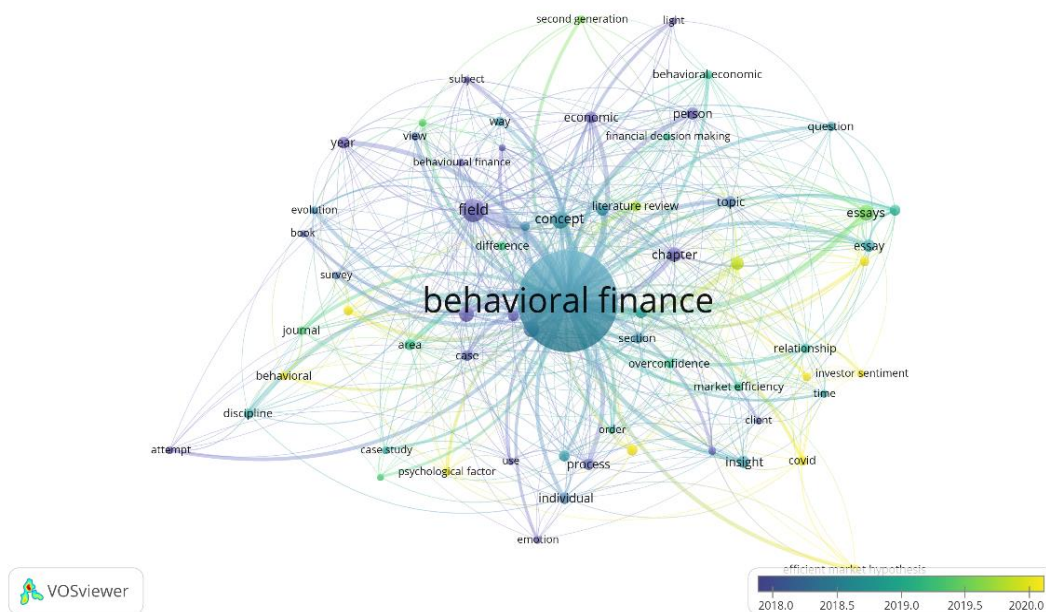

Figure 1. *Overlay Visualization*
Source: Data Analysis Result, 2024

The color gradient timeline at the bottom of the visualization, ranging from 2018 to 2020, serves as an indicator of when certain keywords gained prominence in the literature. The colors associated with the nodes likely represent the time at which these topics were most prominent or when they emerged in the literature. The evolution of colors in the nodes suggests how the focus of research has shifted over time. For instance, more recent keywords like "COVID" and "investor sentiment" are likely a response to new developments or global events such as the COVID-19 pandemic. This indicates that there is an ongoing trend in behavioral finance research exploring the implications of the pandemic on financial decision-making and markets, as well as other emerging areas of interest.

c. Influential Authorss

In this section, we identify and profile influential authors who have significantly contributed to the advancement of behavioral finance. Through citation analysis, co-authorship networks, and collaborative patterns, we unveil the key figures shaping the intellectual landscape of the field. The discussion will highlight their seminal works, collaborative networks, and the impact of their contributions, offering valuable insights into the scholarly community's dynamics within behavioral finance.

Table 2. *Model Fit Criteria*

Citations	Authors and year	Title
660	(Hirshleifer, 2015)	Behavioral Finance
342	(Statman, 2014)	Behavioral Finance: Finance with Normal People
254	(Garcia, 2013)	Financial education and behavioral finance: New Insights into the role of information in financial decisions
201	(Alquraan et al., 2016)	Do Behavioral finance factors influence stock investment decisions of individual investors? (Evidence from Saudi Stock Market)
173	(Costa et al., 2017b)	Bibliometric analysis on the association between behavioral finance and decision making with cognitive biases such as overconfidence, anchoring effect and confirmation bias

Source: Data Analysis Result, 2024

Figure 2. *Author Collaboration Network*
Source: Data Analysis Result, 2024

Given the limited number of nodes and the very few connections (edges) between them, this network suggests a relatively small or emerging field of study, or it could be a subset of a larger dataset focusing on a niche area. The most connected pair, "wahyulina, s" and "hidayati, sa," indicates these two authors have a direct relationship in terms of collaboration or citation. The other authors are shown as isolated, which suggests they do not share publications or citations with the others in this dataset or the threshold set for connections was not met.

d. Research Themes and Clusterization

This part of the analysis focuses on categorizing and exploring the primary research themes within behavioral finance literature. Utilizing keyword co-occurrence and clustering techniques, we identify thematic clusters and elucidate the interconnectedness of topics. By mapping the intellectual structure of the field, this section aims to provide a comprehensive understanding of the predominant themes and their relationships, contributing to a nuanced interpretation of the diverse research landscape in behavioral finance.
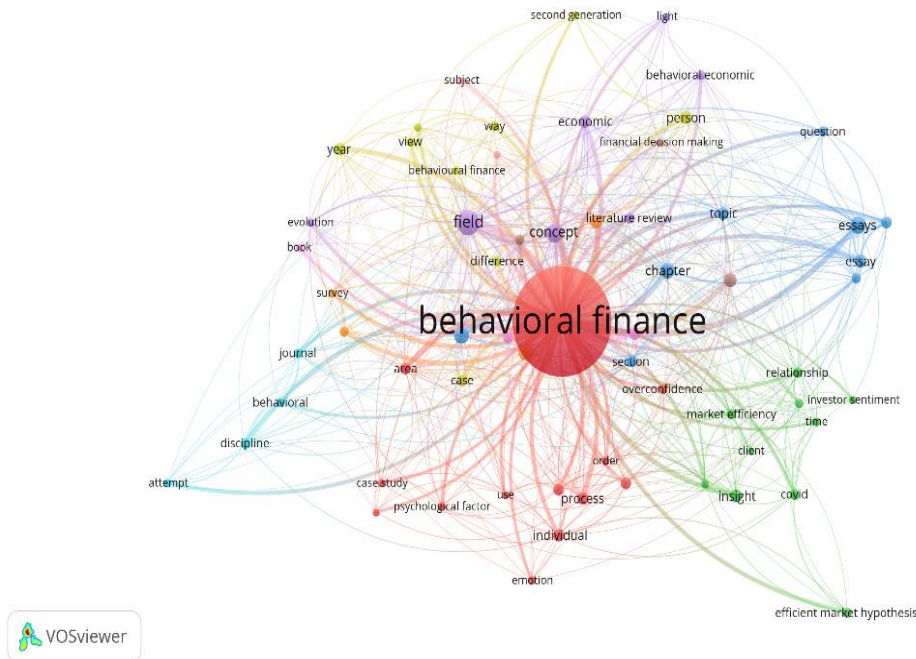
Figure 3. Network Visualization
Source: Data Analysis Result, 2024

From Figure 3 above, we can see a network centered around the concept of "behavioral finance." The nodes (circles) represent different terms or keywords, and their size usually indicates the frequency or weight of the term in the dataset (e.g., publications in the field of behavioral finance). The lines between the nodes are edges that represent the relationships or co-occurrences of these terms within the same works or contexts. Clusterisation in this network is indicated by different colors. Each cluster groups together terms that are more closely associated with each other than with terms in other clusters. For instance, the large red node labeled "behavioral finance" is the central focus and is strongly associated with terms like "overconfidence," "market efficiency," "psychological factor," and "emotion," which are also in red, indicating a cluster that might be dealing with the psychological aspects influencing market behavior and investment decisions. Other clusters, distinguishable by their unique colors, represent different sub-themes or focus areas within the broader field of behavioral finance. The blue cluster, for example, includes "essays," "essay," "investor sentiment," and "time," suggesting a thematic focus on investor behavior over time. The green cluster with terms like "insight," "covid," and "client" might indicate a recent focus on the impact of the COVID-19 pandemic on client behavior and market insights. Overall, this visualization is used to identify key themes, trends, and gaps in the literature of a scientific field, in this case, behavioral finance. It helps researchers understand how different concepts within the field are interconnected and how they have evolved over time.

e. Future Research Direction

***Figure 4.** Density Visualization*
Source: Data Analysis Result, 2024

When looking for potential research topics within this map, the areas with the most density (yellow to red zones) are good starting points, as they represent the most common themes. However, emerging or less explored topics can often be found at the fringes of the main clusters (in the blue zones) or where different clusters meet, which could represent interdisciplinary research opportunities.

a) Overconfidence and Market Efficiency: There seems to be a convergence of terms like "overconfidence," "market efficiency," and "psychological factor" near the central term "behavioral finance." Researching the impacts of psychological biases like overconfidence on market efficiency could lead to valuable insights into investor behavior.

b) Behavioral Finance in the Context of COVID-19: The term "COVID" appears to be relatively separate from the densest area of the network. Investigating how the pandemic has affected financial decision-making and market dynamics from a behavioral finance perspective could be a novel area of study, especially considering the ongoing developments in the post-pandemic economic landscape.

c) Investor Sentiment Over Time: The terms "investor sentiment" and "time" appear to be related but not in the densest area of the term map. A longitudinal study on how investor sentiment changes over time and its impacts on financial markets could be valuable, especially in light of recent market volatility and economic uncertainty.

d) Behavioral Finance and Financial Decision Making: "Financial decision making" is a term that's connected to the central node but not in the most dense part of the map. This suggests that while it's a significant topic within behavioral finance, there might still be room for more detailed research into specific decision-making processes in various financial contexts.

e) Interdisciplinary Approaches to Behavioral Finance: The map shows various terms from related fields like "psychological factor," "emotion," and "behavioral economic." Research that integrates insights from psychology, economics, and

finance to provide a more comprehensive understanding of investor behavior could also be promising.

Study Implication

The implications of this bibliometric exploration of behavioral finance are manifold. Firstly, the study provides a comprehensive overview of the evolving landscape in behavioral finance, offering valuable insights into prominent trends, influential authors, primary research themes, and emerging concepts. This information is crucial for academics, practitioners, and policymakers, as it not only facilitates a deeper understanding of the current state of behavioral finance but also guides future research endeavors. The identification of influential authors and their collaborative networks enhances the scholarly community's awareness of key figures shaping the field. Moreover, the thematic cluster analysis contributes to mapping the intellectual structure, aiding researchers in navigating the interdisciplinary nature of behavioral finance. The density visualization and potential research directions highlight areas with high research activity and suggest untapped avenues for exploration. Ultimately, the study's implications extend to fostering innovation, guiding future investigations, and enhancing decision-making processes in both academic and practical realms within the dynamic domain of behavioral finance.

CONCLUSION

In conclusion, this bibliometric exploration of behavioral finance provides a comprehensive and up-to-date analysis of the field's intellectual landscape, shedding light on key trends, influential authors, research themes, and emerging concepts. The study's systematic approach, employing rigorous data collection and analysis methods, offers valuable insights for researchers, practitioners, and policymakers. The identified influential authors and collaborative networks, coupled with thematic cluster analysis, contribute to a nuanced understanding of the interdisciplinary nature of behavioral finance. The density visualization and future research directions guide scholars toward areas of high research activity and potential untapped avenues. Overall, this study not only advances our understanding of the current state of behavioral finance but also serves as a valuable resource for shaping the trajectory of future research, fostering innovation, and informing decision-making processes in the dynamic intersection of psychology and economics within financial markets.

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