Mapping Overconfidence Bias in Finance and Psychology: A Bibliometric Review

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Abstract. This study investigates the prevalence and development of overconfidence bias within the domains of finance and psychology through a bibliometric analysis employing VOSviewer. Motivated by the significant role of overconfidence in shaping financial and psychological decision-making, this research seeks to provide a comprehensive mapping of the scholarly discourse on the topic. Data were collected from Google Scholar-indexed publications and analyzed to identify author collaboration networks, thematic trends, and topical concentrations. The analysis reveals a notable surge in publications in 2020, along with the emergence of prominent research clusters and a thematic evolution from foundational theories to more specialized issues. The findings underscore the academic significance of overconfidence bias and highlight its implications for the formulation of mitigation strategies. The study recommends future research to emphasize causal factors, the design of targeted interventions, and the promotion of interdisciplinary collaboration.

Keywords: Overconfidence Bias, Psychology, Finance, Bibliometric Analysis, VOSviewer.

1 Introduction

Behavioral finance has emerged as a rapidly expanding interdisciplinary field that seeks to explain individual economic decision-making by integrating insights from behavioral and cognitive psychology with conventional economic and financial theories [1]. Among the core constructs in this domain, overconfidence bias stands out as a prominent explanatory factor for deviations from rational decision-making. Overconfidence is defined as an unwarranted belief in the accuracy of one's judgments, evaluations, and cognitive abilities [2]. The concept first appeared in the psychological literature in the 1960s [3], and was later incorporated into economic models to explain anomalies in financial markets and corporate finance [4–6].

In recent years, scholarly interest in overconfidence has intensified, particularly regarding its implications for financial decision-making [7–12]. Concurrently, psychological research has explored the antecedents of overconfidence, attributing its emergence to evolutionary, emotional, motivational, and cognitive mechanisms—each shaped by contextual and perceptual factors [13–16].

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To systematically assess the development and current state of overconfidence research in finance and psychology, this study employs a bibliometric analysis. Bibliometric analysis is a quantitative technique used to examine patterns within the scientific literature, including co-authorship networks, citation dynamics, and keyword distributions. It is particularly well-suited for mapping large research domains and identifying influential authors, journals, and thematic evolutions [17–19]. This methodological approach provides a robust overview of the intellectual structure of a field and supports the identification of research gaps and emerging areas of interest [18].

The primary objective of this study is to investigate the volume and temporal distribution of publications addressing overconfidence, identify the most frequently studied themes, and determine the most influential articles and journals in the field. Additionally, this study aims to uncover existing research gaps and offer strategic insights to guide future investigations. By doing so, it contributes to a deeper understanding of the intellectual landscape of overconfidence bias across disciplinary boundaries.

2 Methods

This study aims to further examine research trends related to overconfidence in the fields of finance and psychology. The methodological approach employed is bibliometric analysis, which enables the exploration of publication and citation distributions across various academic literatures [20]. Bibliometric indicators are widely used to assess the development and maturity of a particular discipline by evaluating the nature and progress of its scientific output. The accuracy of bibliometric indicators is influenced by two main factors: the selection of databases, including both multidisciplinary and domain specific sources, and the identification of publications based on author provided affiliation data [21].

The data for this study consist of research articles published in peer reviewed journals indexed by Google Scholar. These data were retrieved using reference management tools, specifically the Publish or Perish software, which facilitates literature review based on specified search themes. Articles selected from Google Scholar were limited to journal publications relevant to the topic and archived for further analysis using VOSviewer.

To ensure relevance, only articles related to finance and psychology were included in the dataset. The data collection process utilized the keywords "Overconfidence, finance, psychology" via Publish or Perish. Articles published between 2014 and 2024 were included in the final dataset and exported in RIS format. The visualization and analysis of bibliometric trends were performed using VOSviewer, with three types of bibliometric maps generated: network visualization, density visualization, and overlay visualization.

In total, 1,000 articles were analyzed, yielding 67,535 total citations. The average number of citations per year was 6,753, while the average number of citations per article was 67.54. At the individual level, authors received an average of 32,199 citations, with an average of 490 articles per author and two authors per article. The h index reached 128, indicating that 128 papers were cited at least 128 times. The g index was recorded

at 208, meaning that 208 papers received a minimum of 208 citations each. Additionally, the hI norm and hI annual indices were 83 and 8.30 respectively, while the hA index was 47. These metrics collectively provide a comprehensive overview of the influence and productivity of scholarly publications over the specified time period.

3 Results and Discussion

The bibliometric analysis in this study encompasses four primary dimensions: literature clustering, research trend identification, future research potential mapping, and author collaboration network analysis. Literature clustering aims to categorize existing studies based on thematic and conceptual similarities. Research trend analysis identifies prevailing topics within the field across the years, while the exploration of future research potential highlights emerging themes that remain underexplored. The analysis of author collaboration seeks to map the network of scholarly interactions, reflecting the degree of interdisciplinarity and integration in the research landscape.

A more complex collaboration network indicates a broader and more diverse knowledge base, suggesting that collaborative efforts contribute significantly to the development of comprehensive research. Table 1 presents the annual distribution of publications on overconfidence bias in finance and psychology from 2014 to 2024, serving as a foundational dataset for the subsequent bibliometric mapping.

Table 1. Number of Publications on Overconfidence Bias in Finance and Psychology (2014-2024)

Year	Publication
2014	107
2015	109
2016	107
2017	94
2018	104
2019	*102*
2020	*112*
2021	*106*
2022	*83*
2023	*47*
2024	*29*
Total	*1000*

Source: Author's work

Based on the analysis, the publication trend over the 2014–2024 period exhibits a fluctuating pattern. The highest number of publications was recorded in 2020 (112 articles), while the lowest occurred in 2024 (29 articles). The early years (2014–2016) show relatively stable output, averaging around 107–109 publications per year. A decline occurred in 2017, followed by a slight recovery in 2018 and 2019. After peaking in 2020, publication output gradually declined in subsequent years. This reflects varying scholarly interest influenced by external and academic developments.

In addition to trend analysis, the contribution of individual scholars is essential to understanding the development of this research field. Table 2 lists the ten most prolific authors in the domain of overconfidence bias in finance and psychology.

Table 2. Most Prolific Authors in Overconfidence Bias Research (2014–2024)

Author	Number of Publications
HK Baker	9
S Singh	9
M Salehi	8
S Kumar	6
N Goyal	6
V Ricciardi	6
Y Zhang	6
J Jain	5
MZ Tauni	5
Y Wang	5

Source: Author's work

HK Baker and S Singh lead the list with 9 publications each, marking them as key contributors to the field. M Salehi follows with 8 publications, demonstrating consistent engagement with various aspects of overconfidence. Other notable contributors include S Kumar, N Goyal, V Ricciardi, and Y Zhang with 6 publications each, while J Jain, MZ Tauni, and Y Wang have each contributed 5 publications. These figures reflect significant scholarly engagement across multiple countries and underscore the interdisciplinary nature of research on overconfidence bias.

To support further mapping, VOSviewer was used to visualize co-authorship, keyword co-occurrence, and thematic evolution. Co-authorship visualization (Figure 1) reveals clusters of collaboration among researchers, where node size represents productivity and proximity indicates the strength of co-authorship ties.

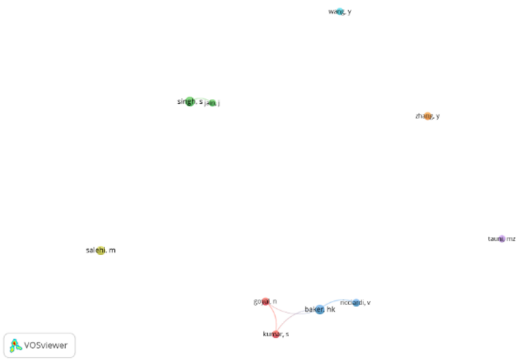

Fig. 1. Co-authorship Network Visualization
Source: Author's work

The co-authorship network highlights distinct clusters of collaboration. For instance, Cluster 1 includes N Goyal, J Baverink, V Ricciardi, and S Kumar, while Cluster 2 comprises S Singh and P Jain. The collaboration between H.K. Baker and V Ricciardi appears most prominent. On the other hand, authors like Y Wang, Y Zhang, and MZ Tauni demonstrate more independent research patterns. This visualization illustrates key actors, collaborative groups, and isolated contributors within the research field.

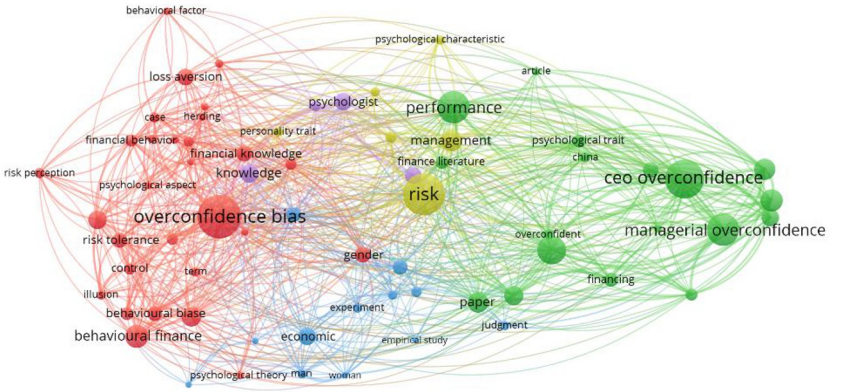

Fig. 2. Keyword Co-occurrence Network Visualization
Source: Author's work

Figure 2 presents the keyword co-occurrence map based on terms extracted from article titles and abstracts. Out of 3475 terms initially identified, 121 met the minimum threshold of appearing at least 10 times. VOSviewer automatically selected the top 60% most relevant terms, resulting in 69 core terms grouped into five clusters.

The red cluster centers on the core concept of overconfidence bias, including its drivers and links to risk taking. The green cluster emphasizes managerial and leadership applications, such as CEO decision making and corporate performance. The yellow cluster focuses on psychological underpinnings, including personality traits and cognitive processes. The blue cluster includes research methods such as empirical design, experiments, and economic data analysis. The network illustrates the interdisciplinary nature of overconfidence bias and its integration across psychological and financial domains.

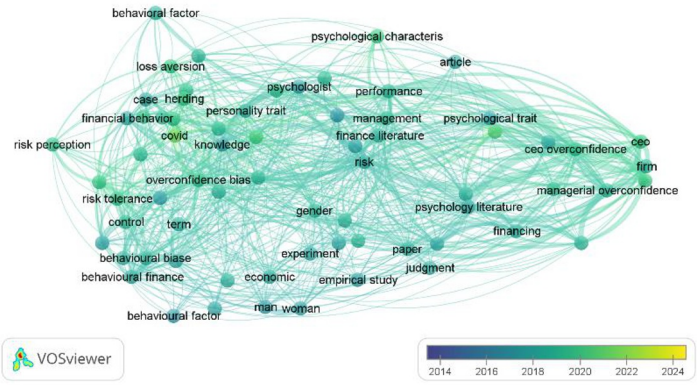

Fig. 3. Overlay Visualization of Keyword Co-occurrence
Source: Author's work

The overlay visualization adds a temporal dimension, where colors indicate the average publication year. Earlier research (blue) focused on foundational concepts and psychological aspects. In the intermediate period (green), attention shifted toward management and financial decision making. Recent research (yellow) explores specific topics such as herding behavior, gender effects, and performance implications. This highlights the thematic evolution and growing sophistication of overconfidence research.

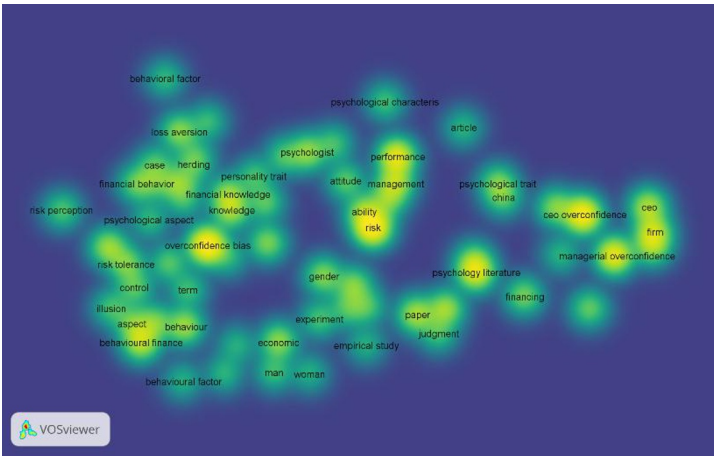

Fig. 4. Density Visualization of Keyword Co-occurrence
Source: Author's work

The density map shows areas of concentrated research. Bright yellow regions indicate highly studied topics. Key focus areas include fundamental constructs like risk tolerance and risk perception, psychological traits associated with overconfidence, and managerial implications of overconfidence bias. The map reinforces the notion that overconfidence bias is shaped by psychological dimensions and has significant relevance in

financial decision making, particularly in investment and portfolio management contexts.

This study contributes novel insights by conducting a comprehensive bibliometric analysis of overconfidence bias literature in finance and psychology—a gap seldom addressed in prior studies. By integrating co-authorship, keyword co-occurrence, overlay, and density visualizations, the study presents a holistic overview of collaboration structures, thematic evolution, and topic concentration. The findings offer important implications for future research, including the identification of research gaps and opportunities for interdisciplinary collaboration.

4 Conclusion

This study analyzes the academic literature on overconfidence bias in finance and psychology using a bibliometric approach with VOSviewer. Based on 1000 publications from 2014 to 2024, the findings reveal a fluctuating publication trend, peaking in 2020. The h-index of 128 indicates strong academic influence. The analysis maps researcher collaboration, research trends, and topic concentration, highlighting key contributors, patterns of co-authorship, and thematic evolution from foundational concepts to more specific issues such as herding behavior and gender effects.

The results underscore the importance of further exploring the antecedents of overconfidence bias to develop more effective mitigation strategies. Future studies are encouraged to design intervention models and engage in multidisciplinary collaboration for deeper insights. These findings have practical implications for financial professionals, including improved strategies for risk management and informed investment decisions. Additionally, educators and policymakers can benefit by promoting cognitive bias awareness and developing evidence based regulation.

Overall, this study provides a comprehensive overview of the research landscape surrounding overconfidence bias, serving as a reference point for scholars, practitioners, and policymakers alike. Future research could focus on more nuanced analyses of contributing factors, implications across financial instruments, and intervention strategies to minimize the impact of overconfidence in financial decision making.

References

1. Baker HK, Nofsinger JR. Behavioral finance: an overview. In: Baker HK, Nofsinger JR (eds) Behavioral Finance: Investors, Corporations, and Markets. John Wiley & Sons, Hoboken, NJ. pp 1–21 (2010).
2. Budiarto A, Susanti S. Pengaruh financial literacy, overconfidence, regret aversion bias, dan risk tolerance terhadap keputusan investasi (studi pada investor PT. Sucorinvest Central Gani Galeri Investasi BEI Universitas Negeri Surabaya). Jurnal Ilmu Manajemen (JIM). 5(2):1–9 (2017).
3. Grežo M. Overconfidence and financial decision-making: a meta-analysis. Rev Behav Finance. 13(3):276–296 (2021).
4. Daniel K, Hirshleifer D, Subrahmanyam A. Investor psychology and security market under- and overreactions. J Finance. 53(6):1839–1885 (2015).

5. Malmendier U, Tate G, Yan J. Overconfidence and early-life experiences: the effect of managerial traits on corporate financial policies. J Finance. 66(5):1687–1733 (2011).
6. Skala D. Overconfidence in psychology and finance—an interdisciplinary literature review. Bank Kredyt. 4:33–50 (2008).
7. Jain R, Sharma D, Behl A, Tiwari AK. Investor personality as a predictor of investment intention—mediating role of overconfidence bias and financial literacy. Int J Emerg Mark. 18(12):5680–5706 (2023).
8. Nguyen DV, Dang DQ, Pham GH, Do DK. Influence of overconfidence and cash flow on investment in Vietnam. J Asian Finance Econ Bus. 7(2):99–106 (2020).
9. Ogunlusi OE, Obademi O. The impact of behavioural finance on investment decision-making: a study of selected investment banks in Nigeria. Glob Bus Rev. 22(6):1345–1361 (2021).
10. Shabri M, Sakir A. The effect of optimism bias and over confidence on investment decisions in Aceh mediated by herding. Calitatea. 25(198):173–181 (2024).
11. Ul Abdin SZ, Qureshi F, Iqbal J, Sultana S. Overconfidence bias and investment performance: a mediating effect of risk propensity. Borsa Istanb Rev. 22(4):780–793 (2022).
12. Xu J, Khraiche M, Mao X, Wang X. Hubris or talent? Estimating the role of overconfidence in Chinese households' investment decisions. Int Rev Financ Anal. 91:102992 (2024).
13. Dunning D, Griffin DW, Milojkovic JD, Ross L. The overconfidence effect in social prediction. J Pers Soc Psychol. 58(4):568 (1990).
14. Ifcher J, Zarghamee H. Affect and overconfidence: a laboratory investigation. J Neurosci Psychol Econ. 7(3):125 (2014).
15. Johnson DDP, Fowler JH. The evolution of overconfidence. Nature. 477(7364):317–320 (2011).
16. Logg JM, Haran U, Moore DA. Is overconfidence a motivated bias? Experimental evidence. J Exp Psychol Gen. 147(10):1445 (2018).
17. Chen G, Xiao L. Selecting publication keywords for domain analysis in bibliometrics: a comparison of three methods. J Informetr. 10(1):212–223 (2016).
18. Passas I. Bibliometric analysis: the main steps. Encyclopedia. 4(2) (2024).
19. Zupic I, Čater T. Bibliometric methods in management and organization. Organ Res Methods. 18(3):429–472 (2015).
20. Utami SB, Karlina N. Analisis bibliometrik: perkembangan penelitian dan publikasi mengenai koordinasi program menggunakan VOSviewer. Jurnal Pustaka Budaya. 9(1):1–8 (2022).
21. Devos P. Research and bibliometrics: a long history. Clin Res Hepatol Gastroenterol. 35(5):336–337 (2011).First Section

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