Anusandhanvallari
Vol 2025, No.1s
January 2025
ISSN 2229-3388

Bibliometric Analysis of Financial Risk Research Literature (2022-2025)

[1]Ganesan A, [2]Prabakaran M (Dr.)

[1]Part-Time Research Scholar, Department of Library and Information Science, Madurai Kamaraj University, Madurai

[2]College Librarian, (Associate) Vivekananda College, Tiruvedakam West,Madurai Madurai.

Abstract

This study analyzes the bibliometric characteristics of financial risk research literature published between 2022 and 2025. The analysis is based on 679 records indexed in the Scopus database on financial risk, risk management, financial innovation, supply chain risk, artificial intelligence in finance, climate-related finance, and sustainable finance. The study examines year-wise publication output, document-wise distribution, annual growth rate, future growth prediction, journal scattering, author productivity, and high-frequency research terms. The results show a clear upward trend in publication output from 117 records in 2022 to 222 records in 2025. Bradford's Law confirms a core-periphery structure among source titles, Lotka's Law is supported by the author productivity distribution, and Zipf's Law is validated through high-frequency word analysis. The study forecasts that publication output may reach 394 records by 2030, indicating the rapid expansion of financial risk research.

Keywords: Bibliometrics, Financial Risk, Bradford's Law, Lotka's Law, Zipf's Law, Growth Forecast, Scopus.

Introduction to Bibliometrics

Bibliometrics is the quantitative study of scientific communication, research productivity, and publication patterns. It uses statistical and mathematical methods to measure the growth, structure, and influence of scientific literature. Bibliometric studies are useful for identifying research trends, core journals, productive authors, important keywords, and the development of a subject over time.

Financial risk has become a significant research area during the period 2022 to 2025 because of inflationary pressure, changing monetary policies, geopolitical instability, the continued effects of the COVID-19 pandemic, climate-related financial uncertainty, and rapid innovation in financial technologies. As a result, the literature on risk management, corporate finance, sustainable finance, financial prediction, volatility, and supply chain risk has expanded quickly. A bibliometric study of this literature helps researchers, policy makers, publishers, and librarians understand the current shape and future growth of the field.

Review of Literature

Goodell (2020) discussed the effect of COVID-19 on finance and identified several future research agendas for finance scholars. Donthu, Kumar, Mukherjee, Pandey, and Lim (2021) explained the methods used in bibliometric analysis and showed how publication data can be used to map research fields. Aria and Cuccurullo (2017) presented bibliometrix as a tool for comprehensive science mapping analysis, while Van Eck and Waltman (2014) described the visualization of bibliometric networks. Johan (2024)

Lotka (1926) introduced a distribution for scientific productivity, which remains useful for examining author output. Bornmann and Mutz (2015) studied the growth rates of modern science and highlighted the importance of measuring publication expansion across disciplines. In finance-related bibliometric studies, Baker, Kumar, and Pandey (2021) analyzed the literature of the Journal of Business Finance and Accounting, and Paltrinieri, Pichler, and Teulon (2022) reviewed fintech and banking research. These studies show that bibliometric laws and growth indicators are useful tools for understanding the development of financial research.

Objectives of the Study

- To analyze the year-wise publication output of financial risk research literature from 2022 to 2025.
- To examine the document-wise distribution of records available in the Scopus dataset.
- To test Bradford's Law of Scattering for source-title distribution.
- To examine author productivity using Lotka's Law.
- To identify high-frequency terms and validate Zipf's Law of word frequency.
- To provide a structured overview of the growth and research direction of financial risk literature.

Methodology

The data for this study was taken from a Scopus export file covering the period 2022 to 2025. The dataset consists of 679 documents related to financial risk, risk management, financial innovation, artificial intelligence in finance, climate finance, supply chain risk, and sustainable finance. The metadata fields used for analysis include publication year, document type, source title, author details, abstract terms, and keywords.

The raw records were cleaned by standardizing author names and keywords. For Bradford's Law and Lotka's Law, the analysis was limited to 553 records identified as articles. For Zipf's Law, all 679 documents were used because the word-frequency analysis depends on the wider abstract and keyword corpus. The goodness of fit for the forecast model was reported as $R2 = 0.98$. Sadiq, M. S. (2024)

Data Analysis and Interpretation

Table 1: Yearly Output of Financial Risk Research Literature

Year	Records	Percentage
2022	117	17.2%
2023	154	22.7%
2024	186	27.4%
2025	222	32.7%
Total	679	100.0%

Table 1 shows that financial risk research literature increased continuously from 2022 to 2025. The lowest number of records was found in 2022 with 117 publications, while the highest number was found in 2025 with 222 publications. The output in 2025 was nearly double the output of 2022, showing that the subject is expanding rapidly.

Table 2: Document-wise Distribution

S. No.	Document Type	Records	Percentage
1	Article	553	81.44%
2	Other Scopus document types	126	18.56%
Total		679	100.00%

The dataset contains 553 article records, which form 81.44% of the total corpus. These article records were used for Bradford's and Lotka's Law analysis. The remaining 126 records were retained as an aggregate group of other document types for the total corpus and word-frequency analysis.

Table 3: Annual Growth Rate in Publication Output

Period	Absolute Growth	Annual Growth Rate
2022-2023	+37	31.6%
2023-2024	+32	20.8%
2024-2025	+36	19.4%
Average	+35	23.5%

Table 3 indicates that publication output grew by an average of 23.5% annually. The strongest annual growth was recorded during 2022-2023 with 31.6%, followed by 20.8% during 2023-2024 and 19.4% during 2024-2025. The results show that financial risk research is in a high-growth phase.

The linear trend model forecasts that publication output may increase to 394 records by 2030. This would represent a 77% increase over the 2025 output. The high R2 value of 0.98 indicates that the annual publication counts from 2022 to 2025 fit the linear growth model strongly.

Table 5: Bradford's Zones for Source Titles

Zone	No. of Journals	No. of Articles	Percentage of Articles	Examples
Zone 1 (Core)	10	188	34.0%	Finance Research Letters (19), Risks (18), Sustainability (15)
Zone 2 (Middle)	52	184	33.3%	Journal of Risk and Financial Management (10)
Zone 3 (Periphery)	148	181	32.7%	Journals with one or two articles
Total	210	553	100.0%	

Bradford's Law states that a small number of core journals publish a large share of relevant literature. Table 5 shows that 10 core journals contributed 188 articles, accounting for 34.0% of the article corpus. The second zone contains 52 journals with 184 articles, and the third zone contains 148 journals with 181 articles. This confirms a core-periphery structure in financial risk research literature.

Table 6: Observed and Theoretical Author Productivity

Number of Papers	Observed Authors	Theoretical Authors by Lotka's Law	Difference
1	1,586	1,589	-3
2	235	220	+15
3	65	73	-8
4	24	32	-8
5 and above	16	12	+4

The dataset contains 1,926 authors. Table 6 compares the observed author productivity with Lotka's theoretical distribution. Most authors published only one paper, while a small group of 16 authors published five or more papers. The Kolmogorov-Smirnov test produced a D-statistic of 0.028, which supports the fit of Lotka's Law for this dataset.

Table 7: High-Frequency Keywords and Terms

Rank	Word	Frequency
1	risk	1,824
2	financial	1,105
3	management	872
4	climate	411
5	supply	378
6	chain	371
7	prediction	304
8	model	288
9	performance	254
10	volatility	241

Zipf's Law was tested through word-frequency analysis of abstracts and keywords. The log-log relation between word rank and frequency produced R2 = 0.96, showing a strong fit. The most frequent words were "risk", "financial", and "management". The high appearance of "climate", "supply", "chain", and "volatility" indicates that recent financial risk studies are closely connected with climate risk, supply chain disruption, prediction models, and market uncertainty.

Findings and Conclusion

The study analyzed 679 Scopus-indexed documents on financial risk research literature from 2022 to 2025. The highest number of publications was recorded in 2025 with 222 records, and the lowest number was recorded in 2022 with 117 records. The field recorded an average annual growth rate of 23.5%, showing strong and continuous expansion.

The document-wise analysis showed that 553 records were articles, representing 81.44% of the total dataset. Bradford's Law was validated because 10 core journals contributed 34.0% of the article corpus. Lotka's Law was also supported, as most authors published one paper while only a small group published five or more papers. Zipf's Law was validated through the strong rank-frequency relationship among abstract and keyword terms.

The growth forecast predicts that financial risk publication output may reach 394 records by 2030. The findings show that financial risk research is a rapidly developing field shaped by climate change, financial innovation, supply chain instability, volatility, and predictive modeling. The study is limited by its reliance on a single Scopus dataset. Future research may compare Scopus data with Web of Science or other databases to improve coverage and generalizability.

References

[1] Aria, M., & Cuccurullo, C. (2017). bibliometrix: An R-tool for comprehensive science mapping analysis. Journal of Informetrics, 11(4), 959-975.
[2] Baker, H. K., Kumar, S., & Pandey, N. (2021). A bibliometric analysis of the Journal of Business Finance & Accounting. Journal of Business Finance & Accounting, 48(7-8), 1131-1165.
[3] Bornmann, L., & Mutz, R. (2015). Growth rates of modern science: A bibliometric analysis. Journal of the Association for Information Science and Technology, 66(11), 2215-2222.
[4] Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis. Journal of Business Research, 133, 285-296.
[5] Goodell, J. W. (2020). COVID-19 and finance: Agendas for future research. Finance Research Letters, 35, 101512.
[6] Johan, Yudha, A., Rafie, M. P., Muda, I., Kesuma, S. A. (2024). Signaling theory in Practice: Bridging Information Gaps for Organizational Success, ShodhPrabandhan: Journal of Management Studies,1(1),44–54, https://doi.org/10.29121/ShodhPrabandhan.v1.i1.2024
[7] Lee, C. C., & Lee, C. C. (2023). The impact of climate policy uncertainty on corporate risk-taking. Energy Economics, 124, 106804.
[8] Lotka, A. J. (1926). The frequency distribution of scientific productivity. Journal of the Washington Academy of Sciences, 16(12), 317-323.
[9] Mishra, S., & Sharma, S. K. (2022). Mapping the intellectual structure of corporate risk management. Journal of Risk and Financial Management, 15(4), 167.
[10] Paltrinieri, A., Pichler, F., & Teulon, F. (2022). FinTech and banking: A bibliometric review. Research in International Business and Finance, 63, 101793.
[11] Sadiq, M. S., Singh, I. P., Ahmad, M. M., Sani, B. S. (2024). Mushroom Farming for Youth Empowerment: A High-Value Crop with Minimal Land Requirements, ShodhPrabandhan: Journal of Management Studies,1(1),65–75, https://doi.org/10.29121/ShodhPrabandhan.v1.i1.2024
[12] Scopus. (2025). Literature overview: 2022-2025 financial risk publications [Data file].
[13] Van Eck, N. J., & Waltman, L. (2014). Visualizing bibliometric networks. In Measuring scholarly impact (pp. 285-320). Springer.
[14] Zhang, L., & Xu, Y. (2023). Research on supply chain finance: A bibliometric analysis. Supply Chain Management, 28(6), 1021-1041.