

BEHAVIOURAL FINANCE: A BIBLIOMETRIC ANALYSIS USING SCOPUS DATABASE

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Abstract

A branch of behavioural economics in finance known as "behavioural finance" integrates sociological and psychological principles into its paradigms. Behavioural finance assumptions are often created when rational models fall short of explaining investor behaviour or market aberrations. The number of publications in this area has recently increased, indicating its increasing importance. The main objective of this article is to examine the state of behavioural finance studies at the moment. The article is conceptual and provides future directions. This is based on the bibliometric analysis methodology. A sample of 110 papers from the field of behavioural finance were subjected to bibliometric analysis through a systematic search technique on the Scopus database for the years 2002 until 2022. For the research, the R-based web application Biblioshiny from the Bibliometrix package was utilised. Using the software's automated workflow, significant authors, articles, journals, countries, and themes were located, and social network analysis, citation, and co-citation were also performed. The research discussed here exhibits not just the conceptual structure of the field but also its intellectual and social structure. This study offers crucial information on topics that require more research. Researchers in the future would benefit from a thorough assessment of the literature in order to create a solid conceptual framework. Since it offers a wider range of top-notch journals in organised ways that integrate with the Bibliometrics programme.

Keywords: Behavioural Finance, Investor Behaviour, Behavioural Economics, Bibliometric Analysis, Market Aberrations

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1. INTRODUCTION

Understanding financial phenomena requires taking into account the irrationality and limits of financial market players, according to behavioural finance, which looks at emotional and restricted human thinking and explains how psychology affects financial activity. (Bikas et al., 2013). It is necessary to look into the many aspects of the relationship between financial behaviour and financial literacy, as well as the moderating and mediating roles that it plays. Researchers recommend reading and reviewing works on a topic to better grasp the conceptual and theoretical framework in the field (Ingale & Paluri, 2022). According to Glaser et al. (2004, p. 527): "Behavioural finance, as a subdiscipline of behavioural economics, is finance that incorporates psychological and sociological findings into its theories. When

rational models fail to describe investor behaviour or market anomalies, behavioural finance models are typically developed" (Muradoglu & Harvey, 2012). According to the literature review, the goal of behavioural finance is to reduce the difference between expected (rational) behaviour and actual (normal) behaviour. Currently, no single behavioural finance theory can fully explain the variables impacting investors' investing choices (Joo & Durri, 2015). We derive that the behavioural finance theory was applicable prior to the crisis because the Egyptian stock market is an emerging market and is inefficient but useless afterward (Hafez, 2021). However, the evidence of links between prejudices and other socioeconomic characteristics need adjustment, notably regarding gender (anticipated) and cultural disparities among geographies. The findings of research on average people's behavioural finance biases should be taken into account in financial models (expected) (Calzadilla et al., 2021). We highlight that a wide range of fields, including marketing, finance, psychology, and management can benefit from many models created in behavioural economics and finance. SEM (structural equation modelling) for instance, can be used to investigate a wide range of critical issues in behavioural economics and behavioural finance. Other approaches include route analysis, factor analysis, confirmatory factor analysis, and exploratory factor analysis (Wong, 2020). This study also reveals how individual investors' financial conduct can reflect sophisticated rational and irrational mental processes at the same time. Several study findings are reliable with previous studies on overconfidence and self-attribution (Mushinada & Veluri, 2019). This research promotes the fields of behavioural economics and finance from a theoretical standpoint since it explains the route that these topic scientific outputs have taken, as well as their important contributors and writers (Costa et al., 2019). The study identifies a few potential advantages of behavioural finance research for the financial sector, but it also shows that professional and academic sectors employ the field in quite different ways (DeBondt et al., 2010). Overall, the findings indicate that a comprehensive theory must assume subjective perception, ambiguity, and an emotive and rational financial decision-making process (Olsen, 2010). A good area of research would appear to be how well-known biases such as overconfidence and the temperament effect affect market participants and how this increases transaction costs (Subrahmanyam, 2008).

This study's major purpose is to do a bibliometric examination of prior studies on behavioural finance. The goal of this article is to investigate the present state of research in behavioural finance. The paper is conceptual in nature and offers future directions.

This article's sections are organised into the following categories: Section 1 covers the introduction to behavioural finance, the prerequisites for behavioural finance, its purposes or goals, and the organisational structure. Section 2 contains the research approach or questions. The research methodology is described in Section 3. The results and discussions are presented in Section 4. The findings are summarised or concluded in Section 5, while Section 6 suggests new directions.

2. RESEARCH QUESTIONS/APPROACH

By considering the following areas of inquiry, the current study aims to visualise the intellectual structure of the field:

RQ1: Which publication trends in behavioural finance are the most prominent?

RQ2: Which associations, nations, authors, and journals are the most productive in the discipline of behavioural finance?

RQ3: What are the knowledge clusters in the intellectual structure of behavioural finance?

RQ4: What are the future research possibilities?

3. RESEARCH METHODOLOGY

The goal of this article is to investigate the present state of research in behavioural finance. The study used bibliometric analysis to achieve this goal. Bibliometric analysis research use statistical and mathematical techniques to examine patterns in previously published material (Ingale & Paluri, 2022). Figure 1 shows the inclusion and exclusion criteria.

Selection of database:

Data is retrieved from the Scopus database since most of the research favour it over others for bibliometric analysis because it contains well regarded articles from many categories (Ingale & Paluri, 2022).

Search strategy:

Keywords: ("Behavioral* finance" AND "investor behaviour*") OR ("behavioral* finance" AND "market deviation") OR ("behavioral* economics" AND "behavioral* finance") OR ("behavioral* finance" AND "investor rationality").

Subject area: Accounting, Finance, Business, Management, Economics, & Econometrics.

Document types: articles, reviews, and conference papers.

Source types: Journals & Conference proceedings.

Languages: English.

Timespan: 2002-2022 (20 years).

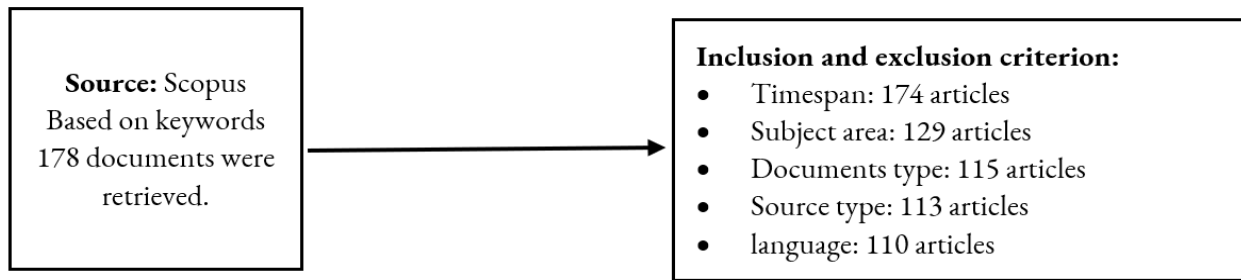


Fig. 1: Inclusion & Exclusion criterion

4. RESULTS & DISCUSSION

Under this section, the research question that is formulated above has been addressed:

4.1 Publication trend based on articles and citations:

Figure 2 depicts the number of behavioural finance papers and citations every year in our database. The database's first article was published in 2002. There is a break between this year and 2007, when the following article will be released. after 2007, there has been a consistent and increasing publication activity, particularly after 2010. This finding shows that behavioural finance is a current and exciting study topic(López-Cabarcos et al., 2020).

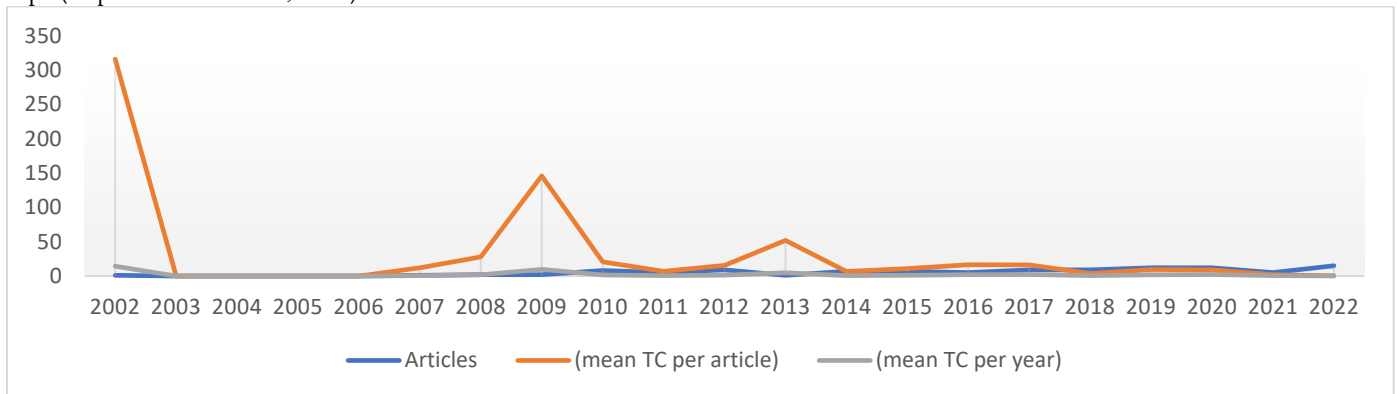


Fig 2. Annual scientific production

4.2 Author's performance:

Table 1 demonstrates the author's achievement in terms of total citations and average citations. The most prolific authors in this field are AHMAD Z, OEHLER A, FORBES W, and MUSHINADA VNC. Their articles are the most crucial in terms of the future.

Table 1. Author's performance

S. n o.	Author	Article	Year	Total Citations	TC per year
1	AHMAD Z	BEHAVIOURAL FINANCE PERSPECTIVES ON MALAYSIAN STOCK MARKET EFFICIENCY	2016	37	4.625
2	OEHLER A	FINANCIAL ADVICE GIVING AND TAKING - WHERE ARE THE MARKET'S SELF-HEALING POWERS AND A FUNCTIONING LEGAL FRAMEWORK WHEN WE NEED THEM?	2019	30	3
3	FORBES W	WHAT CAN BEHAVIOURAL FINANCE TEACH US ABOUT FINANCE?	2020	29	2.071

					2		
					0		
4	OEHLER A	GOOD CONSUMER INFORMATION: THE INFORMATION PARADIGM AT ITS (DEAD) END?	1	2	7	1	3
					2		
	MUSHIN ADA VNC	ELUCIDATING INVESTORS RATIONALITY AND BEHAVIOURAL BIASES IN INDIAN STOCK MARKET	1	1	9	7	3.4
					2		
					0		
6	FORBES W	ADAPTING FINANCIAL RATIONALITY: IS A NEW PARADIGM EMERGING?	1	1	4	4	1.4
					2		
					0		
7	CHAND RA A	DOES INDIVIDUAL HETEROGENEITY SHAPE RETAIL INVESTOR BEHAVIOUR?	1		7	9	1.286
					2		
					0		
8	MUSHIN ADA VNC	ARE INDIVIDUAL INVESTORS IRRATIONAL OR ADAPTIVE TO MARKET DYNAMICS?	2		0	8	2
					2		
					0		
9	CHAND RA A	BEHAVIOURAL ASSET PRICING: REVIEW AND SYNTHESIS	1		7	6	0.857
					2		
					0		
10	ACHARJ YA B	A FUZZY ROUGH FEATURE SELECTION FRAMEWORK FOR INVESTORS BEHAVIOR TOWARDS GOLD EXCHANGE-TRADED FUND	1		9	5	1

4.3 Country wise contribution:

Figure 3 depicts the contributions of several countries to this topic. It suggests that the United States made a significant contribution to the field's publishing and earned almost 40% of all citations, demonstrating the concentration of study in this location. According to bibliometric statistics, the United States leads the other countries in terms of citations, followed by Germany, the United Kingdom, Malaysia, India, and Spain. These countries received far fewer mentions.

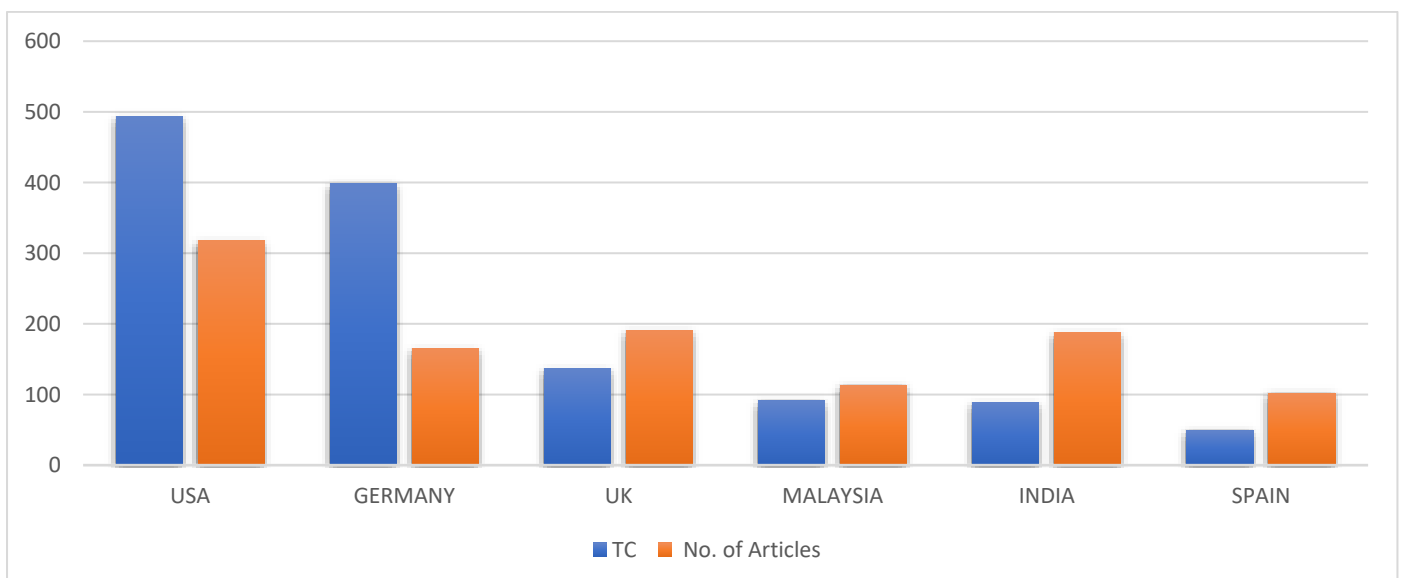


Fig.3 country's performance

4.4 Organization's contribution:

Figure 4 depicts the contributions of various organisations to the field. UNIVERSITI SAINS MALAYSIA made a significant contribution, publishing around 30% of the articles in this field. Lesser publications were produced by THE OPEN UNIVERSITY, UNIVERSITI TUNKU ABDUL RAHMAN, and TAMPERE UNIVERSITY OF TECHNOLOGY.

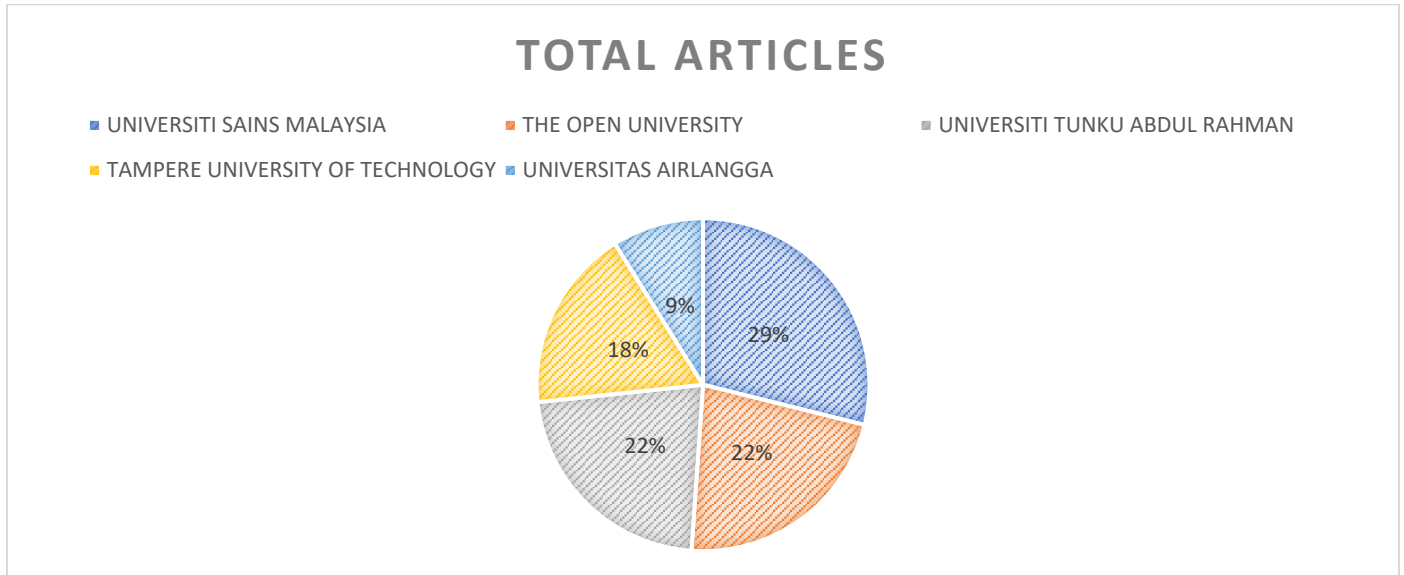


Fig.4 Affiliation's performance

4.5 Sources:

Figure 5 depicts the top 20 most influential journals in regards to number of publications. The journals with the greatest articles on this area of study are the journal of behavioural finance and the journal of behavioural and experimental finance.

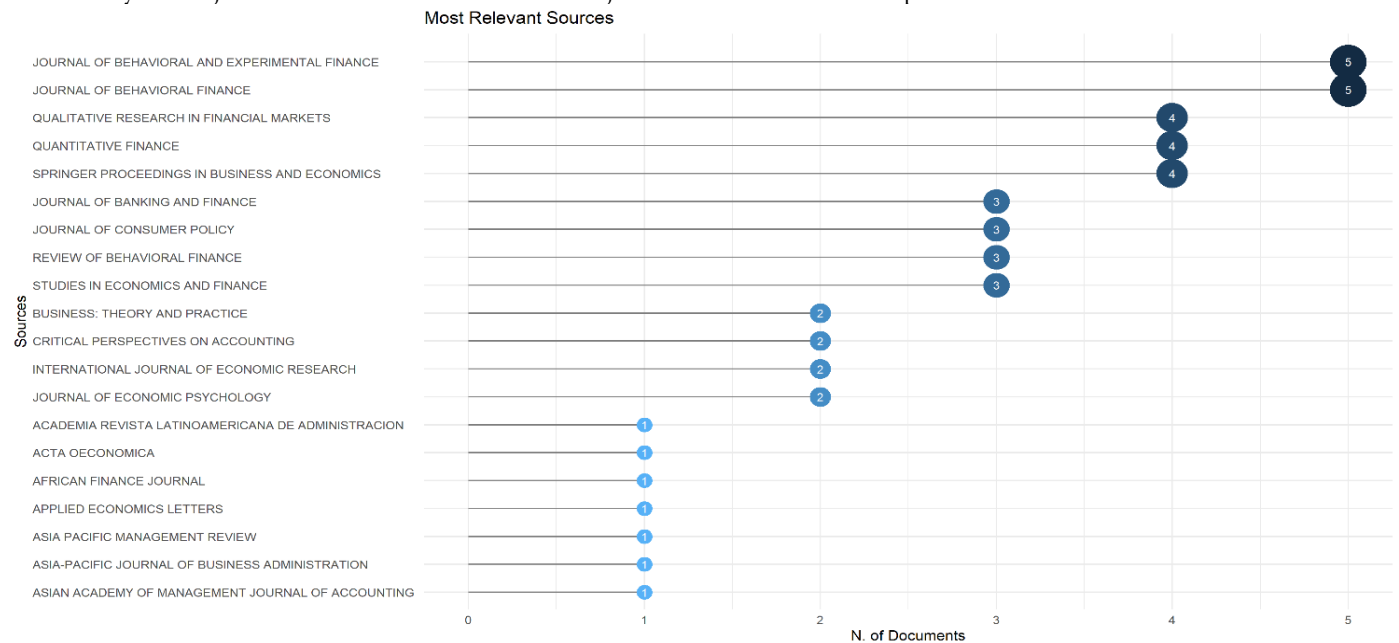


Fig. 5 Top 20 sources

4.6 Keywords:

Figure 6 depicts the frequency of keywords in the paper visually, as indicated by the size of the term. An examination of the frequency of terms used in articles revealed that behavioural finance occurred 36 times, with its recurrence increasing after 2010. It was followed by behavioural finance, behavioural economics, investor behaviour, behavioural biases, finance, and overconfidence, among other things.



Fig. 6 keyword analysis

4.7 Co-occurrence network:

Bibliometrics co-occurrence network and co-word analysis revealed many themes and trends in connected areas. As shown in figure 7, the author's keywords unit of analysis was constructed with a keyword co-occurrence network of 50 nodes and the default settings of automatic layout and normalisation by association using Louvain's clustering method (Ingale & Paluri, 2022). It signifies three clusters i.e., green, red, and blue. The various colours reflect distinct clusters, while closeness describes the relatedness between various clusters. The red cluster emphasises behavioural finance. Behavioural finance and economics dominate the blue clusters. Green clusters the various biases, such as overconfidence bias, self-attribution bias, and bounded rationality, etc.

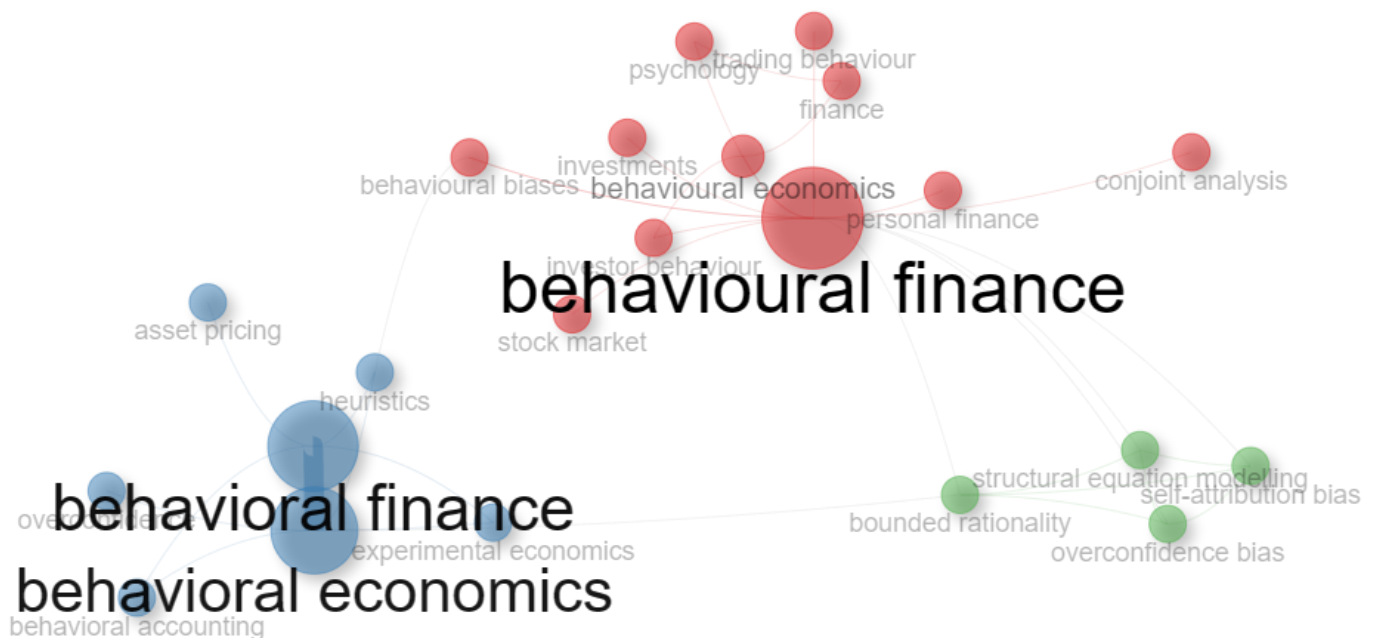


Fig. 7 co-occurrence network analysis

4.8 Thematic map:

Figure 8 shows five clusters representing the co-word analysis based on the author's keyword. It also has 50 nodes that are linked to one another. Distance denotes relatedness in this case; five groups are named red, blue, green, orange, and purple. The red cluster represents behavioural finance, and its frequency is 71. The blue cluster illustrates behavioural finance, which occurs 76 times per year. Finance

dominates the green cluster, which has 22 frequencies. With 31 occurrences, the orange cluster combines bounded rationality. With 15 occurrences, the purple cluster gave emerging field connects to overconfidence.

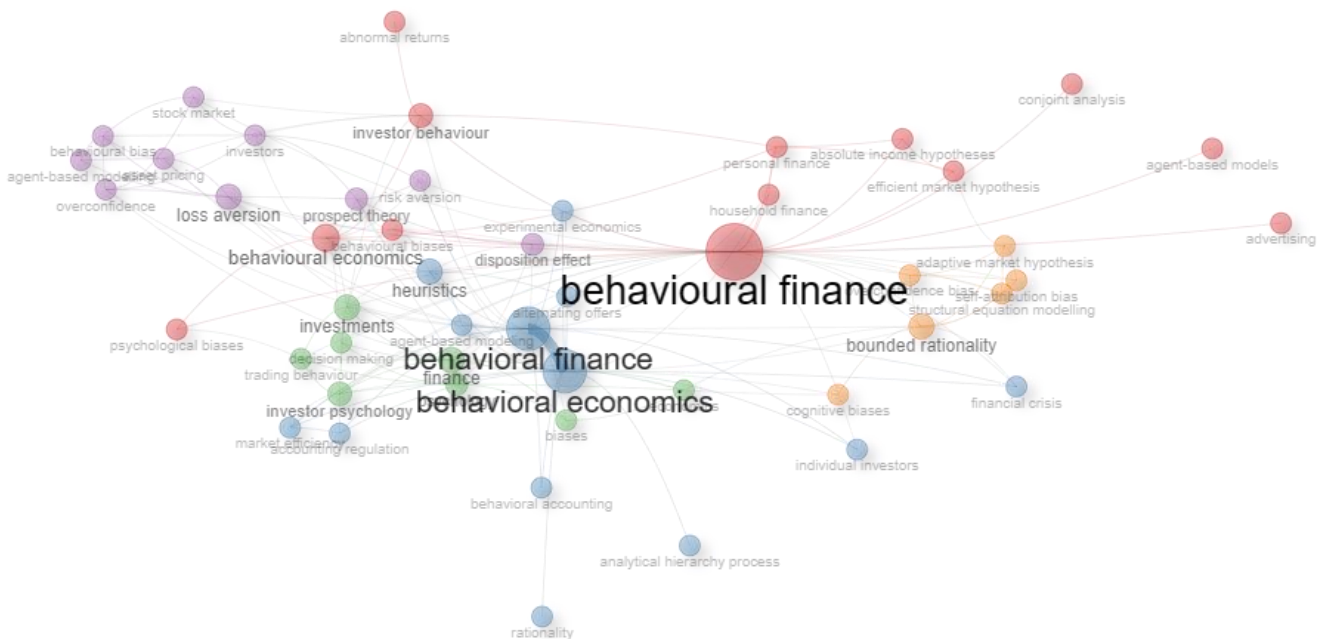


Fig. 8 Thematic map (co-word analysis)

5. CONCLUSION

This article examines the evolution of the behavioural finance domain from 2002 to 2022. The study's major contribution is the association of dispersed literature in the subject, emphasizing notable authors, documents, and sources. Because of its flexibility and accessibility, the Bibliometric R-studio package, a tool beneficial for bibliometric analysis, was applied. The study's dataset was constructed using the Scopus database because of its formal structure, excellent research sources, and software flexibility. The dataset depicts a progressive growth in publications in the early stages, followed by a streak in articles from 2010 to 2012. According to the findings, the JOURNAL OF BEHAVIORAL AND EXPERIMENTAL FINANCE is the most influential journal in terms of publications, and UNIVERSITY SAINS MALAYSIA is an appropriate organisation due to the articles' close relation towards behavioural finance, and it is the affiliation that has just published the most articles on this subject. Finally, considering the results of keyword co-occurrences, the relevance of behavioural finance appears obvious from 2010 onwards. Overall, the findings indicate that behavioural finance is a popular research topic, as evidenced by increment in publications on the subject in recent years. The study has a wide range of implications for researchers because its conclusions can be utilised in directing. The outcomes shows the appropriate issues in the investor's behaviour field, as well as the major publications that produce research papers on this area. In this regard, this study provides extremely important evidence for academics seeking to expand their understanding in the domain of behavioural finance research.

6. FUTURE RESEARCH DIRECTIONS

The gaps found during the investigation are described in this part of the article. In their bibliometric analysis, they consider the Scopus database. In the future, investigations might also use data from other databases. The study could include more publications relevant to this area by expanding the keyword query to include more terms. Science mapping should be completed to gain a thorough understanding of the subject domain. This should be followed by a thorough reading of the full text, abstract reading, and manual publication selection. It is essential to do more interdisciplinary research through intellectual and social interactions; Deeper understanding of the relevant frameworks and concepts may be possible by a comprehensive content analysis of publications in this area of research. The contributions of academic researchers and experts in the field must be investigated to make theoretical and practical improvements. Researchers recommend theme-specific literature and analyses as a means of reflecting the conceptual and theoretical framework used in the field of endeavour.

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