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**Understanding the trend and GAP of studies related to the banks' financial performance: a review of the literature using bibliometric as well as thematic analysis**

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## Understanding the trend and GAP of studies related to the banks' financial performance: a review of the literature using bibliometric as well as thematic analysis

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**Abstract:** The financial performance of banks has been a very eye-catching topic for researchers since the 19th century. This research covers years from 2012 to 2021. This was a period when the pandemic happened and during that period, the functional environment of the banking sector was entirely changed from manual to digital. For extracting the results of this study, 5974 Scopus journals were selected, out of which 4,840 journals are in top-level journals. Then, based on the subject field of finance, business management, accounting, social sciences, and econometrics, 1,917 papers were extracted. Research has been conducted on the 1,917 papers, which are indexed in the Scopus database. Results reflect the countries which primarily did a study on this topic, identify the best journals that publish the research on this topic and even identify the basic keywords used by the various authors related to this topic. The study also

identified top researchers associated with this area. Further, Thematic analysis was done to know about the future of the particular topic. Results of thematic analysis depict that profitability, credit risk, and commercial banks are the important themes that are niche covered by the researchers. So these fields required much consideration by the researchers for future research. As per the results, a new area for researchers is to find out the profitability of commercial banks through data envelopment analysis instead of benchmarking.

**Keywords:** biometric analysis; business management; finance; service sector; performance assessment.

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**Biographical notes:** Jaspreet Kaur is a research scholar and an Assistant Professor of the Chandigarh University and has about 12 years of teaching experience. She has a basic hold on the subjects of finance and accounting on the basis of that. Her area of interest in the PhD is banking.

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## **1 Introduction**

Banks are the lifeblood of our economy and they help to survive every individual, either through savings, loans, or insurance. It is also an important source of finance that supports most organisations. They assume the important part of their work is to stable the cost, elevate employment, and sound financial development. The reserves are accessible to address the issues of people, organisations, and public authority. They work properly only when their financial performance gets strong. In the past years, many banks get merged with reputed banks, only the reason is their functions or workings are not fulfil the required parameters of RBI. Their customers highly affected banks' performance. Only loyal customers, by providing the right inputs, enhance the level of banks with their competitors. The financial performance tells us the direction of our economy with the constraint of the course of progression and globalisation of the economy. The monetary execution of the chosen banks investigates the monetary qualities and shortcomings of the bank by appropriately laying out the relationship between the things of profit and loss account and balance sheet. This aids in the present moment and long-haul gauging and development can be related to the assistance of monetary execution investigation of banks. Now, a strong balance sheet is a basic challenge for every bank. Banks' financial execution decides the speed of advancement of the economy if the banking area neglects to demonstrate its stability to the public. No doubt the client will lose his trust in the economy and the second recession begins. To figure out the superior performance and battle for it strategy creators expressed the significant inquiry is 'What drives performance?' To resolve this inquiry, scientists have zeroed in on their endeavours to the functional subtleties (Soteriou and Zenios, 1999). Awareness regarding financial performance not only increases the confidence of stakeholders but can also enhance investments in the organisation. By focusing on the research queries, this article aims to map the field's underlying structure:

- RQ1 Which are the most current monetary performance trends for bank publications?
- RQ2 What is the liking of this topic among different nations?
- RQ3 Who are the most influential writers, publications, organisations, and nations in the field of financial performance?
- RQ4 What are the expectations for future studies?
- RQ5 What are the gaps in the studies and areas that need to be covered in the future?

Bibliometric analysis is the statistical examination of research projects through the use of different evaluative and related methodologies (Garfield, 1955; González-Torres et al., 2020). The bibliometric analysis identifies the respective nations and authors where this topic is largely researched. This research helps to identify the popularity of the topic among different nations. The study has been conducted on many aspects, like leading countries, leading authors, and preferred journals that mostly publish papers related to the same topic, etc.

## 2 Literature review

### 2.1 *Financial performance review*

According to the author, HDFC Bank is constantly in great shape because of the significant benefit procured and the legitimate board. On the other hand, Yes Bank is in a crumbling monetary position as an impact of administration issues, and misleading confirmation to clients. Even ICICI Bank and Axis Bank are steadily losing market share. J&K bank endured misfortunes in the period 2016–2017 because of the distress in the Kashmir valley (Vithalbhai, 2020). The paper had been written on the systematic review of liquidity risk management and financial performance. According to the author, LRM and financial performance need more exact investigations by different methods. Further studies will help to find out the gap and performance can be improved with that (Alta'ani and Dali, 2021). The experimental proof was determined through stepwise relapse investigation, Pearson correlation, and descriptive statistics to help hypothetical models that interface HRM rehearses with the monetary execution of banks. The review presumed that all factors affect the monetary execution of banks, yet the major contributory practices are selection, training remuneration, and worker support (Lee and Cogan, 2022).

### 2.2 *Bibliometric analysis*

The research was conducted in the range of 2000 and 2019 in Scopus by using bibliometrics analysis. The outcome shows that 2.18 creators were contributing individually and the USA, India, and the UK are the top three contributors in the field of computerised advertising. They also found three clusters that focus on a digital advertisement, application improvement, and managing segment profiles of the client (Faruk et al., 2021). Bibliometric analysis was used in this study and through that the future directions in financial reporting publications can be identified. The research was conducted on 246 publications from various databases. Because of their distribution and references, as well as their importance within the organisation as shown by network representation, overlay perception, and thickness representation, this survey identifies the most significant articles and writers. This is the exact manner through which future directions can be identified through the current situation (Murdayanti and Khan, 2021). The research involved the time 2009–2019 by applying the bibliometric analysis. The basic reason for this paper is to offer researchers an efficient view and address how this subject added to the advancement of successful research channels for future investigation and examination on the subject. 2,782 articles had been studied on customer loyalty and customer satisfaction. Research conducted on customer loyalty in banks through bibliometric analysis. The object of exploration is the logical records published in the greatest conceptual data set, Scopus (Bhatnagar et al., 2022a, 2022b; Bhatnagar et al., 2023a, 2023b; Dangwal et al., 2022a, 2022b; Jangir et al., 2023; Özen et al., 2022; Özen and Sanjay, 2022; Singh et al., 2021; Taneja and Özen, 2023; Taneja et al., 2023, 2022a, 2022b). In addition, Additional challenges arise in the banking industry as a result of the financial crisis, which also increases interest among scholars (Dubina et al., 2020).

### 3 Research methodology

The study's ultimate goal is to trace the knowledge hierarchy in the field of financial performance in the banking sector. For that purpose, the data conducted the bibliometric analysis. For investigating and analysing vast amounts of scientific data, bibliometric analysis is a well-liked and exacting technique. It enables us to illuminate the frontiers of a given topic while delving into the nuances of its evolutionary history.

The process of the literature search is given below:

#### 3.1 Data collection

Data collection is the method of compiling precise data from numerous sources and evaluating it to identify the solutions to research problems (Simplilearn). When compared to WoS and Scopus, Scopus offers more overall coverage. Although that is confirmed by numerous times by making early and most recent content coverage comparisons and that gets confirmed (Pranckutė, 2021; Dominko et al., 2022). In this study, bibliographic information was gathered for the financial performance and performance of banks through the Scopus database which is produced by Elsevier. Based on the period from 2012 to 2022, a total of 5,974 documents can be obtained out of which 5,790 journals are in the final stage of publishing and 4,871 papers are peer-reviewed in top-level subject fields: Business, management, accounting, social sciences, and computer science are among the fields of economics, econometrics, and finance (Patria et al., 2019). Then restrictions are imposed on papers related to the 'English' language and only business papers will be selected data comes from 1,917 papers on which further research is conducted (Saggese et al., 2016).

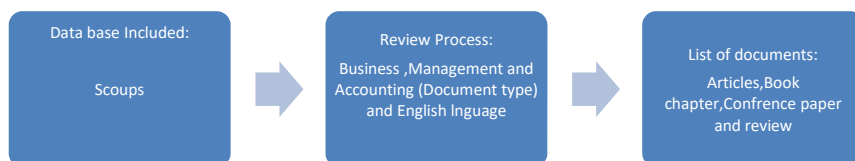
##### 3.1.1 The search technique and the data source

Data were collected through the Scopus database from July 1 to July 7, 2022. Numerous factors led to the choice of the Scopus database as their preferred method for accessing literature:

- 1 it is the largest repository of abstract and citation data
- 2 frequently updated (Jain et al., 2021).

This review article includes research based on 'performance' and 'financial performance of banks'. The publications can be extracted from 2012 to 2021. Following is the research question string regarding how the data can be extracted.

**Figure 1** Process of collecting data on performance and financial performance of banks (see online version for colours)



The research is restricted to language English only and the subject area will be business, so SUBJAREA is BUSI mentioned in the article.

### *3.2 Techniques for analysis*

Bibliometric analysis is a crucial statistical method for assessing the current level of knowledge in a field of study and finding significant data for several of purposes, including discovering potential new areas of study and substantiating scientific claims (De Oliveira et al., 2019). Citation, countries, and keywords are extracted from Vos viewed version 1.6.18. This is the software that helps in the visualisation and mapping of things (Van Eck and Waltman, 2010). Vosviewer, a free computer tool that combines the Vos mapping approach and a sophisticated viewer (Van Eck and Waltman, 2009).

RStudio is freely available and open source, and it is suitable for use with Windows, and other operating systems. Various open-source programs exist to carry out the particular user-drive features of R-Studio. Among them is Bibliometrics. R is a program primarily created for bibliometric and scientometric research. Bibliometrics were used in this investigation and for data interpretation and analysis.

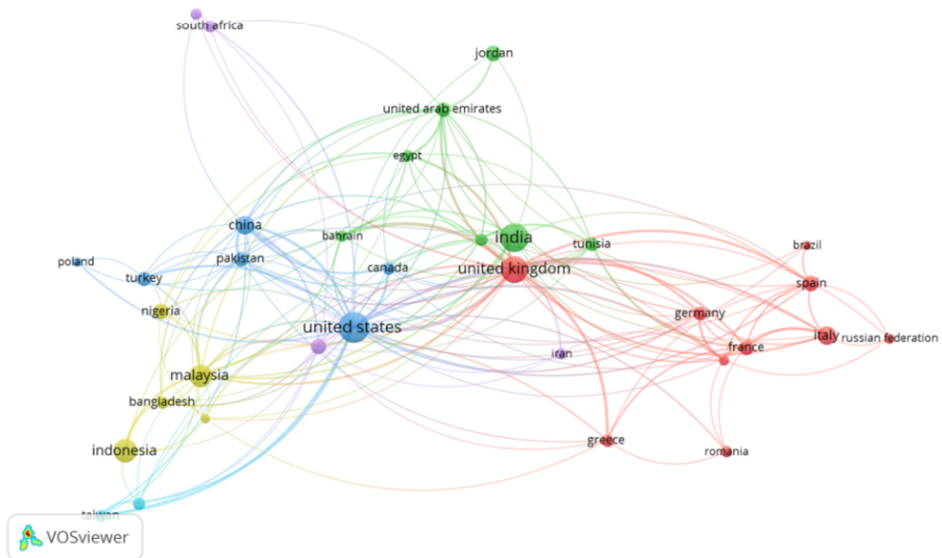
### *3.3 The bibliometric maps*

In this research, 1,917 documents were used to get the results through the software. Even though this software identifies the link between two or more items, which shows the positive relationship among two or more variables. Research reflects that 2013 is the base year for the research on the topic of financial performance and the performance of the banks and with the increase in the period, the research on that topic is getting doubled. Annual publications have increased progressively. Consequently, it is hoped that the annual publication will maintain stand-up. However, most of these articles are not freely available, and the consumer has to pay to get the right of entry to the statistics contained in them.

#### *3.3.1 Co-authorship research*

In the co-authorship relationship, it did the unit of analysis for authors. It was done on a CSV file from the Scopus database. In this analysis, an article has a maximum of 20 authors included in the study and the minimum number of documents per author is 5. As per this thresh-hold, only ten authors get selected which reflects in Figure 2 that there is no relationship between the authors on this topic. Only Buallay and Ahamadan have an equal contribution.

It took another analysis of the co-authorship relationship among countries, in which software selects a maximum ten number of countries per document and a minimum 20 number of documents per country. So, out of 133 countries, only 34 meet this criterion. Figure 3 shows the primary ten countries that have given their major contribution to this topic: the USA, UK, India, Indonesia, Australia, Malaysia, China, Italy, South Africa, and Jordan.

**Figure 2** Co-authorship analysis (see online version for colours)**Figure 3** Co authorship relationship among countries (see online version for colours)

### 3.3.2 Co-occurrence analysis

The visualisation mode displays the yearly number of publishing and index keywords. Keyword colour shows the main keywords in the publishing documents occur. It can take the minimum keyword occurrence up to ten in the VOSviewer.



3.4 Data analysis

Concentric approach:

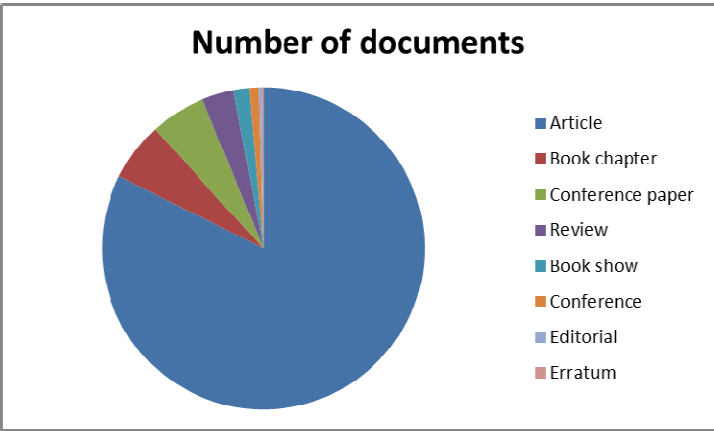
3.4.1 Descriptive analysis

Research is conducted to know about the introductory period of the research. The fundamental intent of this research is to find out about the authors, countries, relevant journals, and speed of liking among researchers on this topic. So the foremost objective of this research is to conduct an expanded review of the research. So in this research, all sorts of papers included articles, book chapters, conference papers, review books, conference reviews, and editorial erratum. Table 1 shows the typology of documents. As per Table 1 and Figure 4, 82% of articles were included in the research which is the maximum ratio, books and chapters, and conference papers are just 5% and the rest of the book shows, conferences, and reviews are very less.

**Table 1** Type of documents included in this research

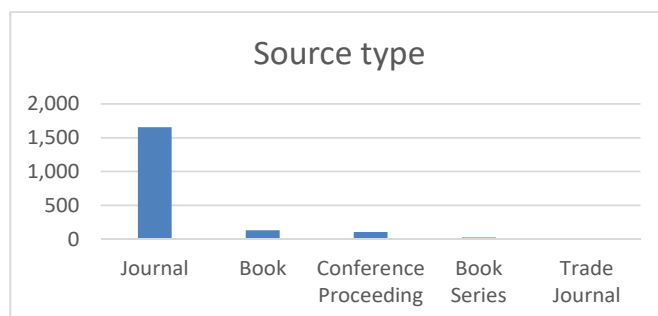
<i>Typology</i>	<i>Number of documents</i>	<i>Percentage</i>
Article	1,580	82.42045
Book chapter	113	5.894627
Conference paper	106	5.529473
Review	61	3.182055
Book show	30	1.564945
Conference	18	0.938967
Editorial	5	0.260824
Erratum	4	0.208659

**Figure 4** Number of documents included in the research (see online version for colours)



**Table 2** Source used in the research

<i>Typology</i>	<i>Source type</i>	<i>Percentage</i>
Journal	1,657	86.43714
Book	132	6.885759
Conference proceeding	103	5.372979

**Figure 5** Type of source included in the research

As per Table 2 and Figure 5, journals are the major source of research in this study which shows 86% in the typology. Other sources from where the data has been included are books and conferences.

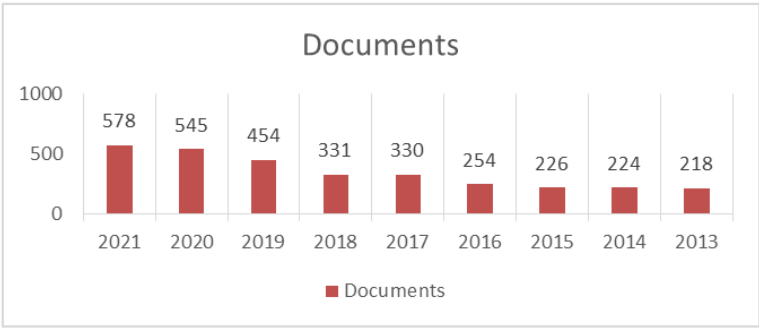
**Table 3** Documents per year

<i>Years</i>	<i>Documents</i>
2021	578
2020	545
2019	454
2018	331
2017	330
2016	254
2015	226
2014	224
2013	218

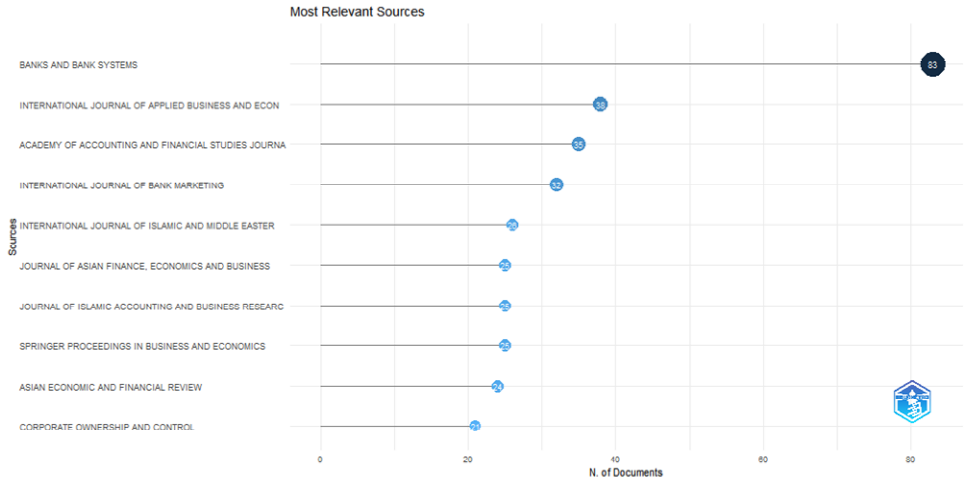
Table 3 shows the publishing trend and the number of studies published over the years on the topic related to financial performance and the performance of the bank. In the year 2013–2021, there are a total of 3,160 papers indexed related to the performance and financial performance of banks in the Scopus database. Table 1 and Figure 4 depict that the research on this topic started in 1971 when there is only one paper got published, but as per the term of this paper. In 2013, they started with 218 articles and that shows little progress in publications in two to three years. But until 2021, the yearly publication was double as per the diagram 578 papers in 2021.

The graph shows the range of articles from 2013 to 2021, which indicates an increasing trend every year. This shows that interest in this topic among researchers getting increased over the years. It published most of the papers in 1917 on this topic in business and management. Rest in other fields like economics, econometrics, and finance (1,036), social sciences (327), decision science (199), and in engineering (103) papers. Because of a multidisciplinary topic that was also published in five different languages like English, Croatian, Portuguese, Spanish, and Czech. The first writing publish related to this topic was in 1971 by Sprague, R.H and the problem was a conceptual description of the financial planning model for commercial banks. According to the study, the planning model is an IT-based model which forecasts monetary aspects and the loan market. This is a very important system and uses Linear programming for asset and liabilities management systems. The system also focuses on the time value of money and asset marketability (Sprague, R.H.).

**Figure 6** Graphical presentation of articles published from 2013–2021 (see online version for colours)



**Figure 7** Top ten publications (see online version for colours)



**Table 4** List of top ten publications

<i>Name of the journal</i>	<i>TP</i>	<i>TC</i>	<i>Cite score 2020</i>	<i>The most cited article (reference)</i>	<i>Time cited</i>	<i>Publisher</i>
Banks and Bank Systems	285	479	1.7	The relationship between economic growth and banking sector development	18	Business Perspectives
International Journal of Applied Business, and Economic Research	1,273	69	0.1	Financial performance analysis of selected public sector banks: a CAMEL model approach	4	Serials Publications
Academy of Accounting and Financial Studies Journal	473	655	1.4	Human capital cost accounting in the company management system	42	Allied Business Academies
International Journal of Bank Marketing	293	1,808	6.2	Customer satisfaction, loyalty and financial performance: a holistic approach of the Greek banking sector	87	Emerald
International Journal of Islamic and Middle Eastern Finance, and Management	176	482	2.7	Islamic banking and economic growth: the Indonesian experience	67	Emerald
Journal of Asian Finance, Economics, and Business	897	2,316	2.6	Impact of corporate governance mechanisms on corporate social responsibility disclosure of publicly-listed banks in Bangladesh	19	Korea Distribution Science Association (KODISA)
Journal of Islamic Accounting and Business Research	232	388	1.7	Open Access Determinants of financial performance of Islamic banks: an intellectual capital perspective	60	Emerald
Springer Proceedings in Business and Economics				Profitability determinants of Islamic and conventional banks during the global financial crises: the case of emerging	2	
Corporate Ownership and Control	818	139	0.2	The effect of corporate governance on bank financial performance: evidence from the Arabian Peninsula	11	Virtus Interpress
				Open Access		

3.4.2 Preferred journal

Table 4 reflects the top ten journals related to the performance and financial performance of banks. These journals can be referred to extract the most suitable information from the papers and even help us to find out new insights for future research and publications. That shows Emerald publisher has three journals that publish most of the articles. *International Journal of Applied Business and Economic Research* in Serials Publication has 1,273 articles, which is the highest number of publications among others. *Journal of Asian Finance, Economics, and Business* has 897, and *Corporate Ownership and Control* has 818 articles related to this.

3.4.3 Leading countries, organisations, and international institutions

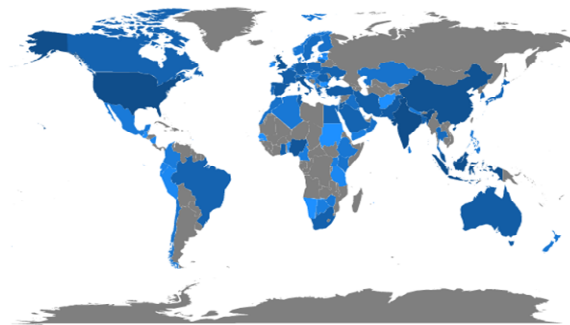
In Table 5, the bibliometric examination of the contributions of various nations to academic publications on financial performance revealed that India has a massive contribution of (407 papers). The USA reaches the second position with (403 papers). But when the most cited contributions are calculated, the USA, UK, and China come consecutively. India holds the fourth position, as India has only 480 citations.

Theoretically, it assumed that the USA, China, Malaysia, and the UK contributed the most to this, even though they had the greatest degree of collaboration. India is lacking behind in it.

**Table 5** Leading countries in the publication on this topic

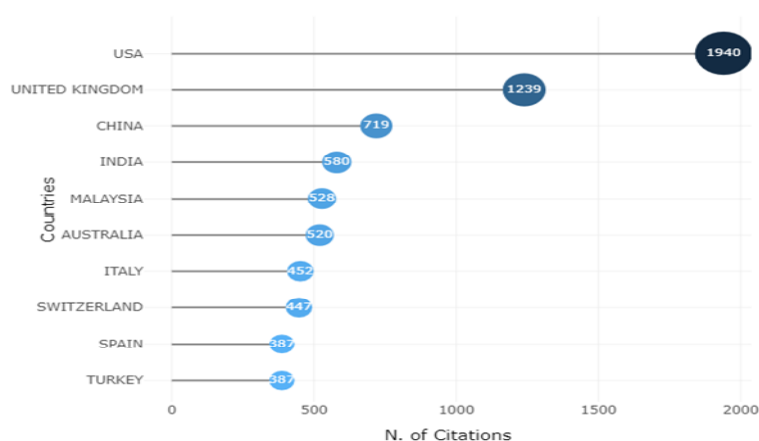
<i>Region</i>	<i>Freq.</i>
India	407
USA	403
Indonesia	346
China	256
Malaysia	247
UK	230
Nigeria	183
Italy	159
Jordan	122
Spain	118

**Figure 8** Leading countries in this topic (see online version for colours)



**Table 6** Leading countries with citation numbers

<i>Country</i>	<i>TC</i>	<i>Average article citations</i>
USA	1,940	20.64
United Kingdom	1,239	20.31
China	719	11.06
India	580	5.86
Malaysia	528	8
Australia	520	16.77
Italy	452	11.02
Switzerland	447	55.88
Spain	387	12.9
Turkey	387	16.13

**Figure 9** Citation per country (top ten countries) (see online version for colours)

### 3.4.5 Country collaborations

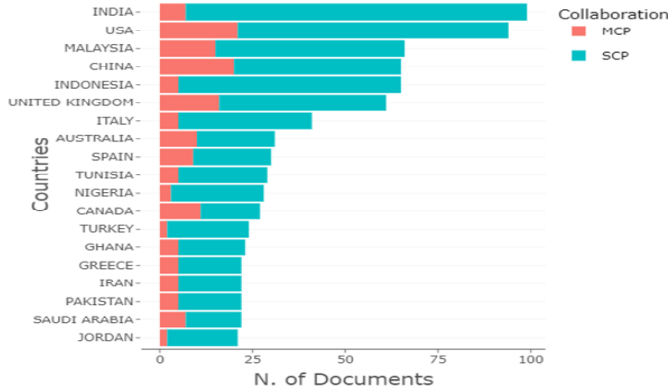
As per the results shown in Figure 10, India is having more intra-country collaboration (SCP) for research on that topic, but the countries like the USA and China and even the UK have more inter-country (MCP) collaborations.

### 3.4.6 Keywords and cluster analysis

VOSviewer and R square software were used to obtain information related to co-occurrence. This section examines the author's keyword co-occurrence and gives the timeline view. The index keywords were used for further analysis. A keyword occurrence occurs when more or equal to two keywords occur within the same paper (Su and Lee, 2010). A total of 1,332 keywords had shown in the Vosviewer. So five minimum numbers of occurrences was applied to extract the data and 60 keywords were extracted from the threshold based on the closest relationship. Solely the top ten keywords were reflected in Table 7 and five clusters were prepared accordingly. The visualisation map

shows these five clusters in different colours and keywords. The map reflects cluster 1 is red, cluster 2 is green colour, cluster 3 is blue colour, cluster 4 is yellow colour, and cluster 5 is purple colour.

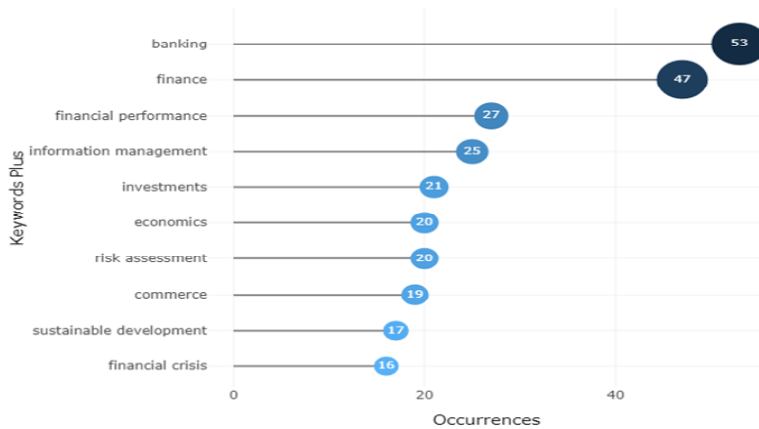
**Figure 10** Countries collaborations (see online version for colours)



**Table 7** Keywords

<i>Words</i>	<i>Occurrences</i>
Banking	53
Finance	47
Financial performance	27
Information management	25
Investments	21
Economics	20
Risk assessment	20
Commerce	19
Sustainable development	17
Financial crisis	16

The outcome of the keywords is reflected in Table 8. Further, cluster analysis was employed in this research. Mainly five clusters were extracted, which are displayed in Figure 12. The node indicates an author-keyword; the size tells the number of citations. The keyword has more citations the larger the node is. A link indicating the co-occurrence of two keywords connects two nodes. The table reflects the complete details of clusters. They indicate the common words like, ‘banking’, ‘finance’, ‘financial words’, ‘investment’, ‘financial crisis’, etc. which are mainly employed in most of the research related to financial performance. The most links between clusters exist for banking because it has the most citations. We then list the top ten author keywords together with their frequency in Table 7. The frequency of each keyword is more than 10.

**Figure 11** Keywords used in the study (see online version for colours)

### 3.4.7 Leading authors

Table 9 contains information related to the top ten writers for the financial performance of the bank. They particularly contributed to the topic of business management and economics. They cover the years from 1990 to 2017. Few of them are first authors in the initial papers and some are co-author.

**Table 8** Clusters keywords

Clusters	Keywords	Colour in the diagram
Cluster 1	Banking, empirical analysis, financial crisis, financial market, financial sector, financial services, financial system, Fintech, firm performance, industrial performance, intellectual capital, investment, knowledge management, and performance assessment.	Red
Cluster 2	Competition, corporate governance, economic and social efforts, economics, electronic commerce, financial services, industrial management, industry, information management, information technology, innovation, investments, regional planning, and sustainable development.	Green
Cluster 3	Bank performance, big data, commerce, commercial bank, data envelopment analysis, design/methodology, developing countries, efficiency, financial institution, public policy, risk management, supply chains, survey.	Blue
Cluster 4	Artificial intelligence, credit risk, credit scoring, data mining, decision making, decision tree, finance, forecasting, regression analysis, risk assessment.	Yellow
Cluster 5	The banking industry, customer satisfaction, financial performance, financial statements, performance, profitability, project management, sales, and service industry.	Purple



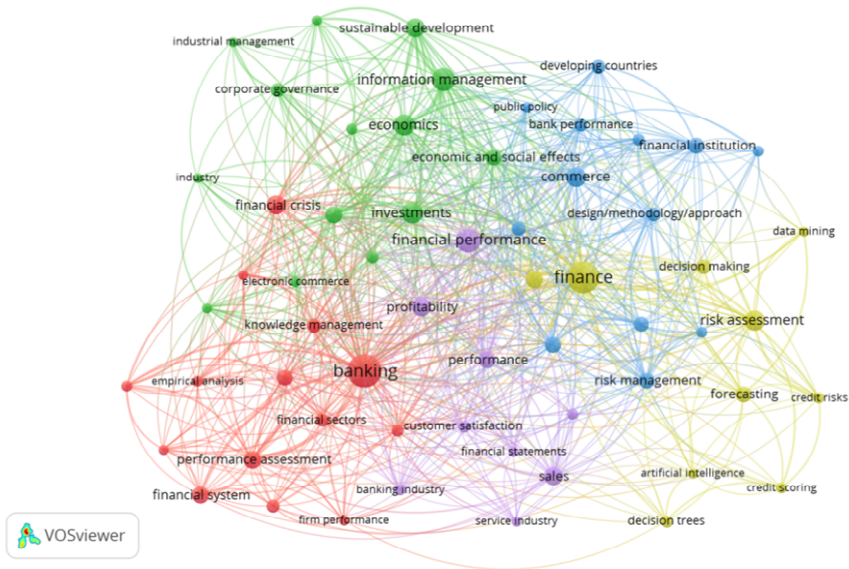
**Table 9** Top ten leading authors

<i>Author</i>	<i>Scopus-ID</i>	<i>H-index</i>	<i>Year of 1st publication</i>	<i>Current affiliation</i>	<i>Country</i>	<i>Most contributed topics</i>
Buallay, Amina Mohammed	Author ID: 57193757289	13	2017	Ahlia University, Manama, Bahrain	Bahrain	Business management and accounting, economics, econometrics, and finance, computer science, decision science, and social science
Nawaz, Tasawar	Author ID: 57192269501	6	2016	University of Plymouth, Plymouth, United Kingdom	United Kingdom	Business, management and accounting, economics, econometrics and finance, social science
Shen, Chunghua	Author ID: 7402860192	22	1990	Shih Chien University, Taipei	Taiwan	House prices; housing market; mortgage rates
Wanke, P.F.	Author ID: 16200418700	28	1991	Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil	Brazil	Business, management and accounting, social sciences, decision sciences, economics, econometrics and finance, engineering, computer science, environmental science
Haron, Razali	Author ID: 23992283900	10	2006	International Islamic University Malaysia, Kuala Lumpur, Malaysia	Malaysia	Business, management and accounting, economics, econometrics and finance, social sciences, arts and humanities
Hasan, Iftekhhar	Author ID: 7003267147	47	1994	Fordham University, New York, United States	United States	Economics, econometrics and finance, business, management and accounting, social sciences, decision sciences
Lin, Chihyung	Author ID: 36559597500	12	2010	National Yang Ming Chiao Tung University, Hsinchu, Taiwan	Taiwan	Business, management and accounting, economics, econometrics and finance, social sciences, arts and humanities
Matousek, Roman	Author ID: 6602616984	21	1998	The University of Nottingham, Nottingham, United Kingdom	United Kingdom	Economics, econometrics and finance, business, management and accounting, decision sciences, decision sciences
Nobanee, Haitham	Author ID: 16068872700	12	2007	Abu Dhabi University, Abu Dhabi, United Arab Emirates	United Arab Emirates	Economics, econometrics and finance, business, management and accounting, decision sciences, computer sciences
Belás, Jaroslav	Author ID: 9740254600	22	1998	Alexander Dubcek University in Trencin, Trencin, Slovakia	Slovakia	Economics, econometrics and finance, business, management, social sciences

**Table 10** Top clusters of the key words

<i>Cluster</i>	<i>Keywords</i>	<i>Position</i>
Cluster1	Financial performance (187), banking sector (34), intellectual capital (27), non-performing loans (18), financial ratios (16), commercial bank (12), productivity (12), supply chain management (11), content analysis (10), Indian banks (10), GCC (8), financial sector (8), Turkey (5), corporate social responsibility (CSR) (5), resource-based view (7), social performance (7), factor analysis (6), financial institution (6), case study (6), Shariah supervisory board (5), investment (5), human capital efficiency (5)	Motor theme
Cluster 2	Banking (70), data envelopment analysis (44), corporate social responsibility (42), efficiency (42), India (20), conventional banks (16), financial services (19), DEA (16), customer satisfaction (14), Malaysia (10), organisational performance (9), performance management (6), banking performance (7), Fin-tech (5), technical efficiency (9), customer loyalty (8), satisfaction (9), trust (10), financial inclusion (16), financial stability (11), ICT (6), service quality (22), business performance (9), banking industry (23), bank (27), leadership (7), bench-marking (11), microfinance (14), competitive advantage (10), top sis (7), financial literacy (5), rural banks (5), emerging markets (11), information technology (5)	Basic theme
Cluster 3	Corporate governance (114), bank performance (83), financial crisis (80), firm performance (43), risk management (22), Nigeria (14), Ghana (12), bank efficiency (12), bank risk (10), agency theory (10), environmental performance (7), board composition (9), banking system (9), gender diversity (8), social responsibility (8), bank stability (6), corporate performance (6), stakeholder theory (5), foreign direct investment (5), firm size (5), exchange rate (5), financial institutions (26)	Basic theme
Cluster 4	Performance (121), banks (108), risk (25), sustainability (17), balanced scorecard (15), performance evaluation (9)	Declining
Cluster 5	Profitability (52), return on assets (24), return on equity (20), capital adequacy (20), capital structure (15), asset quality (9), camel (12), mergers and acquisitions (7), financial innovation (7), public sector banks (7), economic value added (5)	Niche theme
Cluster 6	Commercial bank (42), global financial crisis (20), bank profitability (16), panel data (14), Jordan (14), risk-taking (11), operating performance (6), banks performance (9), camels (6), economic development (5)	The mix of declining and niche
Cluster 7	Credit risk (38), credit scoring (9), financial distress (7), deposits (7), panel regression (6), small and medium-sized enterprises (5), financial constraint (5)	The mix of motor and niche

**Figure 12** Keywords and their link with others (see online version for colours)



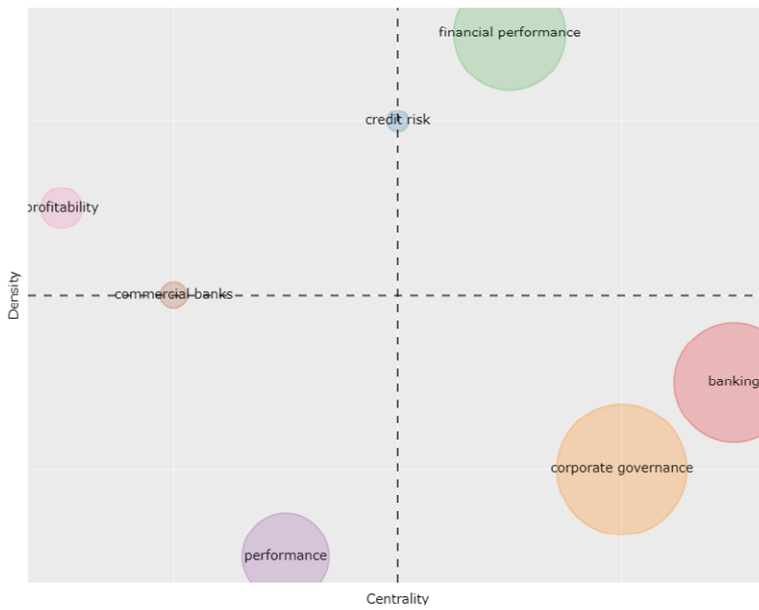
### 3.5 Performance centre research

### 3.5.1 Themetical analysis

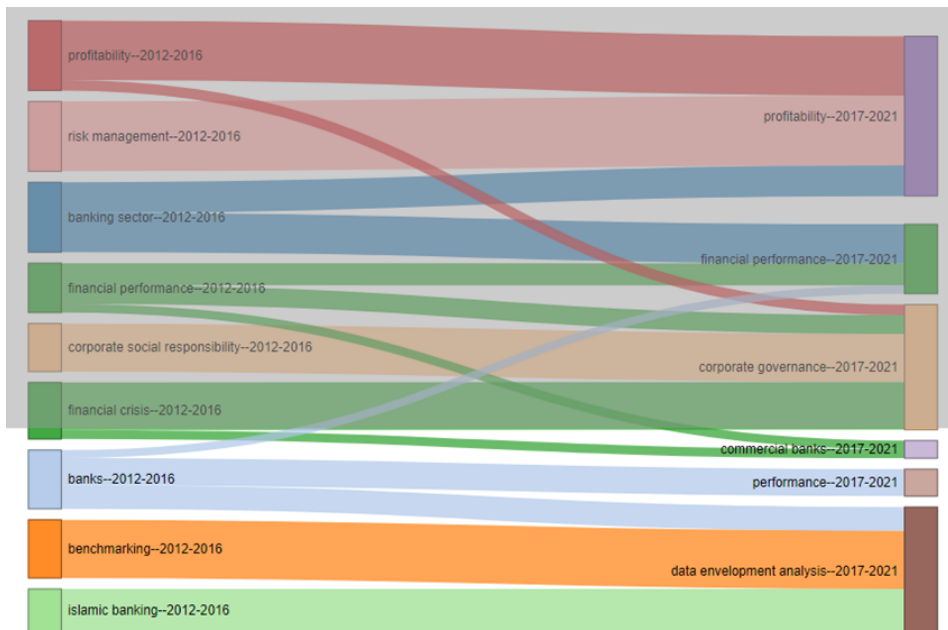
Issues in the top-right corner are thought to be established and important subjects for the research field since they exhibit high position and full denseness. The subject presented in the upper-left corner has strong centrality and low density and is therefore a rapidly developing, special, or narrow subject. Emerging themes are those that are situated in the lower-left corner and have a devalued denseness and down position. Topics with a high density and low-level position in the lower-right corner are regarded as basic themes. So figure no: reflects that profitability, credit risk, and commercial bank are the themes that are niche covered and these fields required much consternation by the researchers for future research. Corporate governance and banking are the basic themes in which the work is going on. Financial performance is an area that is important for researchers. On the other hand performance or performance evaluation through balance score card and risk only are the declining areas for the research.

The diagram reflects that the profitability word used from 2012 to 2016 is used the same in 2017–2021 but also used in financial performance. Risk management is now used nowadays that also became a part of profitability. This means the research of profitability itself works on risk management. The banking sector now in 2017–2021 works with the topic of financial performance and profitability. Even Financial performance now refers to commercial banks. Corporate social responsibility is now known as corporate governance. A financial crisis is also abolished now. Banks are now known for their performance evaluation. Benchmarking word is used in 2012–2016 and now instead of that, the word data envelop analysis is used. Even Islamic bank words get abolished.

**Figure 13** Density and position of the theme (see online version for colours)



**Figure 14** Probability words used (see online version for colours)



## 4 Discussion

RQ1 Which are the most current monetary performance trends for bank publications?

RQ2 What is the liking of this topic among different nations?

RQ3 Who are the most influential writers, publications, organisations, and nations in the field of financial performance?

Since 1971, there has been a surge in the publication of the financial health of the banking industry, and this trend has continued to the present. The following are the key points:

The annual publication trend on the financial health in the banking industry indicates that such research is receiving depth attention in the academic world. The interest in this topic is increasing every year. In the Scopus database, 1,917 papers were published in the management field. This is a multidisciplinary topic that can be published in various languages.

Second, co-authorship analysis reveals no author has collaborated (collaborating on the article). On the country-wise co-authorship relationship out of 133 countries, 34 countries are majorly researching this topic. USA, UK, and India are the countries having major contributions to that topic most significant relationship are reflected by using the VOSviewer program.

The typology of documents reflects that in this research, 82% of articles were included, which is the maximum ratio, based on which results are declared. The main source of the data is journals, which contribute 86% of this research.

As per Table 3, the number of documents related to this research is increasing every year and Emerald publisher has three journals that publish most of the articles related to this topic.

India has a massive contribution of (407 papers) but most cited contributions are calculated, the USA, UK, and China come consecutively and India holds the fourth position. Even other countries are having high collaborations.

RQ4 What are the expectations for future studies?

RQ5 What are the gaps in the studies and areas that need to be covered in the future?

As per the thematic analysis profitability, credit risk, and commercial banks are the themes that are niche covered and these fields required much consternation by the researchers for upcoming research. Work is mostly going on corporate governance and banking as these are the basic themes. Financial performance is an area that is important for researchers. On the other hand performance or performance evaluation through balance score card and risk only are the declining areas for the research. The earlier used Balance scorecard is now overcome by data envelop analysis.

## 5 Limitations/implications of the study

This study's fundamental flaw is that it only used one database for the examination of the work. Other databases like Web of Science, etc. get ignored. The study involves only financial performance, so other areas like operational performance and management performance is also an area which is untapped in this research. There is immense space

for other researchers to work in these fields. They can identify that India is leading in the more papers on this topic but they have fewer citations as compared to USA, UK, and China.

## 6 Conclusions

This study's goals were to give a comprehensive picture of the trend of study related to the financial performance of banks. Scientific literature on the financial performance of banks related to co-author study, co-citation analysis of authors and publications, co-word evaluation, and keyword cluster analysis in Scopus, from 2012 to 2021. The main bibliometric analysis methods used to analyse the data. This quantitative analysis and knowledge map visualisation of the financial performance of banks is done using the VOSviewer software and R studio. Based on the results of the visualisation map on the biometric analysis, a map of the literature review that is divided into several outcomes based on the keyword analysis by comparing terms from prior research as well as an overlay visualisation map is created. Map analysis and density visualisation, as well as earlier work, are examples of overlay visualisation. It can be seen in Table 8 and Figure 12 that the keywords are divided into five clusters. 'Banking', 'finance', 'financial performance', and 'investment' are the main keywords which are appearing in most of the studies, and further in the different studies, these words can be used.

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## References

- Alta'ani, A.Z. and Dali, N.R.S.M. (2021) 'A systematic literature review on liquidity risk management and the financial performance of banks', *Asian Journal of Accounting and Finance*, Vol. 3, No. 1, pp.32–41.
- Bhatnagar, M., Özen, E., Taneja, S., Grima, S. and Rupeika-Apoga, R. (2022a) 'The dynamic connectedness between risk and return in the Fintech market of India: evidence using the GARCH-M approach', *Risks*, Vol. 10, No. 11, p.209, <https://doi.org/10.3390/risks10110209>.
- Bhatnagar, M., Taneja, S. and Özen, E. (2022b) 'A wave of green start-ups in India – the study of green finance as a support system for sustainable entrepreneurship', *Green Finance*, Vol. 4, No. 2, pp.253–273, <https://doi.org/10.3934/gf.2022012>.
- Bhatnagar, M., Taneja, S. and Rupeika-Apoga, R. (2023a) 'Demystifying the effect of the news (shocks) on crypto market volatility', *Journal of Risk and Financial Management*, Vol. 16, No. 2, p.136, <https://doi.org/10.3390/jrfm16020136>.
- Bhatnagar, M., Taneja, S., Kumar, P. and Özen, E. (2023b) 'Does financial education act as a catalyst for SME competitiveness', *International Journal of Education Economics and Development*, Vol. 1, No. 1, p.1, <https://doi.org/10.1504/ijeed.2023.10053629>.

- Dangwal, A., Kaur, S., Taneja, S. and Taneja, S. (2022a) 'A bibliometric analysis of green tourism based on the Scopus platform', in Kaur, J., Jindal, P. and Singh, A. (Eds.): *Developing Relationships, Personalization, and Data Herald in Marketing 5.0*, Vol. 1, pp.1–327, IGI Global, USA, <https://doi.org/10.4018/9781668444962>.
- Dangwal, A., Taneja, S., Özen, E., Todorovic, I. and Grima, S. (2022b) 'Abridgement of renewables: it's potential and contribution to India's GDP', *International Journal of Sustainable Development and Planning*, Vol. 17, No. 8, pp.2357–2363, <https://doi.org/doi.org/10.18280/ijstdp.170802>.
- De Oliveira, O.J., da Silva, F.F., Juliani, F., Barbosa, L.C.F.M. and Nunhes, T.V. (2019) 'Bibliometric method for mapping the state-of-the-art and identifying research gaps and trends in literature: an essential instrument to support the development of scientific projects', *Scientometrics Recent Advances*, November, BoD – Books on Demand, UK.
- Dominko, M., Prime, K., Slabe-Erker, R. and Kalar, B. (2022) *Bibliometric Analysis of Circular Economy in the Fields of Business and Economics: Towards More Action-Oriented Research, Environment, Development and Sustainability*, pp.5797–5830, Springer Netherlands, New York, <https://doi.org/10.1007/s10668-022-02347-x>.
- Dubina, O., Us, Y., Pimonenko, T. and Lyulyov, O. (2020) 'Customer loyalty to bank services: the bibliometric analysis', *Virtual Economics*, Vol. 3, No. 3, pp.53–66.
- Faruk, M., Rahman, M. and Hasan, S. (2021) 'How digital marketing evolved over time: a bibliometric analysis on Scopus database', *Heliyon*, Vol. 7, No. 12, p.e08603.
- Garfield, E. (1955) 'Citation indexes for science; a new dimension in documentation through association of ideas', *Science*, 15 Jul., Vol. 122, No. 3159, pp.108–111.
- González-Torres, T., Rodríguez-Sánchez, J-L., Pelechano-Barahona, E. and García-Muiña, F.E. (2020) 'A systematic review of research on sustainability in mergers and acquisitions', *Sustainability*, Vol. 12, No. 2, p.513.
- Jain, J., Walia, N., Singh, S. and Jain, E. (2021) *Mapping the Field of Behavioural Biases: A Literature Review Using Bibliometric Analysis*, New York, <https://doi.org/10.1007/s11301-021-00215-y>.
- Jangir, K., Sharma, V., Taneja, S. and Rupeika-Apoga, R. (2023) 'The moderating effect of perceived risk on users' continuance intention for FinTech services', *Journal of Risk and Financial Management*, Vol. 16, No. 1, <https://doi.org/10.3390/jrfm16010021>.
- Lee, I. and Cogin, J. (2022) 'Formalizing the HRM and firm performance link: the S-curve hypothesis', *International Journal of Human Resource Management*, Vol. 33, No. 5, pp.898–929.
- Murdayanti, Y. and Khan, M.N.A.A. (2021) 'The development of internet financial reporting publications: a concise of bibliometric analysis', *Heliyon*, Vol. 7, No. 12, pp.1–12, <https://doi.org/10.1016/j.heliyon.2021.e08551>.
- Özen, E. and Sanjay, T. (2022) 'Empirical analysis of the effect of foreign trade in computer and communication services on economic growth in India', *Journal of Economics and Business Issues*, Vol. 2, No. 2, pp.24–34, <https://doi.org/https://jebi-academic.org/index.php/jebi/article/view/41>.
- Özen, E., Taneja, S. and Makalesi, A. (2022) 'Critical evaluation of management of NPA/NPL in emerging and advanced economies: a study in context of India (Gelişenve Gelişmiş Ekonomilerde NPA/NPL Yönetiminin Eleştirel Değerlendirmesi: Hindistan Bağlamında Bir Çalışma)', *Yalova Sosyal Bilimler Dergisi*, Vol. 12, No. 2, pp.99–111, <https://doi.org/https://dergipark.org.tr/en/pub/yalovasosbil/issue/72655/1143214>.
- Patria, H., Wahyuni, S. and Kusumastuti, R.D. (2019) 'Intellectual structure and scientific evolution of strategic decision in the field of business and management from 1971 to 2018', *Asian J. Bus. Account*, Vol. 12, No. 2, pp.233–286.
- Prancutë, R. (2021) 'Web of Science (WoS) and Scopus: the Titans of bibliographic information in today's academic world', *Publications*, Vol. 9, No. 1, pp.1–12.

- Saggese, S., Sarto, F. and Cuccurullo, C. (2016) 'Evolution of the debate on control enhancing mechanisms: a systematic review and bibliometric analysis', *Int. J. Manag. Rev.*, Vol. 18, pp.417–439.
- Singh, V., Taneja, S., Singh, V., Singh, A. and Paul, H.L. (2021) 'Online advertising strategies in Indian and Australian e-commerce companies: a comparative study', *Big Data Analytics for Improved Accuracy, Efficiency, and Decision Making in Digital Marketing*, pp.124–138, IGI Global, USA, <https://doi.org/10.4018/978-1-7998-7231-3.ch009>.
- Soteriou, A. and Zenios, S.A. (1999) 'Operations, quality, and profitability in the provision of banking services', *Management Science*, Vol. 45, No. 9, pp.1221–38.
- Su, H.N. and Lee, P.C. (2010) 'Mapping knowledge structure by keyword co-occurrence: a first look at journal papers in technology foresight', *Scientometrics*, Vol. 85, No. 1, pp.65–79.
- Taneja, S. and Özen, E. (2023) 'To analyze the relationship between bank's green financing and performance', *International Journal of Electronic Finance*, Vol. 1, No. 1, p.1, <https://doi.org/10.1504/ijef.2023.10050554>.
- Taneja, S., Bhatnagar, M., Kumar, P. and Rupeika-Apoga, R. (2023) 'India's total natural resource rents (NRR) and GDP: an augmented autoregressive distributed lag (ARDL) bound test', *Journal of Risk and Financial Management*, Vol. 16, No. 2, p.91, <https://doi.org/doi.org/10.3390/jrfm16020091>.
- Taneja, S., Jaggi, P., Jewandah, S. and Ozen, E. (2022a) 'Role of social inclusion in sustainable urban developments: an analyse by PRISMA technique', *International Journal of Design and Nature and Ecodynamics*, Vol. 17, No. 6, pp.937–942, <https://doi.org/10.18280/ij dne.170615>.
- Taneja, S., Kaur, S. and Özen, E. (2022b) 'Using green finance to promote global growth in a sustainable way', *International Journal of Green Economics*, Vol. 16, No. 3, pp.246–257, <https://doi.org/10.1504/ijge.2022.10052887>.
- Van Eck, N.J. and Waltman, L. (2009) 'VOSviewer: a computer program for bibliometric mapping', *12th International Conference on Scientometrics and Informetrics*, ISSI: 2009886–97.
- Van Eck, N.J. and Waltman, L. (2010) 'Software survey: VOSviewer, a computer program for bibliometric mapping', *Scientometrics*, Vol. 84, pp.523–538, DOI: 10.1007/s11192-009-0146-3.
- Vithalbhair, V.S. (2020) 'Financial performance of banks in India: a study of selected private sector banks', *Journal of Advanced Research in Economics and Administrative Sciences*, Vol. 1, No. 1, pp.45–52.

## Websites

<https://www.simplilearn.com/what-is-data-collection-article>.