TAKAFUL INDUSTRIAL RESEARCH DEVELOPMENTS: A BIBLIOMETRIC ANALYSIS ON THE SCOPUS DATABASE

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ABSTRACT

This study aims to describe research development in the takaful industry from 2013 to 2022. This study used bibliometric analysis research methods. The data used is only sourced from research in the takaful industry field indexed by Scopus. There were 261 articles analyzed using Vosviewer software. This research shows that Malaysia is the most significant contributor to research in the takaful industry. Salman is the most prolific writer, with 18 articles. Moreover, the Journal of Islamic Accounting and Business Research became the most popular journal with the most contribution in publishing articles in the takaful industry. Potential future topics are deposit insurance, takaful insurance, and Sharia governance associated with Islamic banking. The contribution of this research can be used as a consideration for discussion topics in research in this field.

Keywords: takaful, scopus, bibliometric, vosviewer.

INTRODUCTIONS

One of the non-bank financial institutions in the Sharia sector is insurance or commonly referred to as takaful, where the contract model can be in the form of ijarah and can also use tabarru contracts (Hardi 2016). Sharia insurance or takaful in Indonesia is one of the Non-Bank Financial Industries (NBFI) whose operations are supervised by the Financial Services Authority (FSA) (Nurbaya and Alam 2019). Insurance can make people aware of the possible risks. Risks need to be managed to minimize the impact caused by uncertainty (Rizki, Noor Athief, and Puspitaningrum 2022). Meanwhile, takaful has a goal that aligns with these risk management efforts, namely, as a plan regarding the possibilities of facing challenging conditions in human life (Zein, Zein, and Alhaq 2021). The takaful industry operational system also prioritizes responsibility, helping each other and protecting all participants (Nurbaya and Alam 2019).

The Takaful industry was first introduced in Malaysia (Ismail and Said 2017), while in Indonesia itself, the development of the Sharia insurance industry or takaful has been overgrown, and the emergence of many Sharia insurance companies marks this. Indonesia is also one of the contributors to Sharia insurance operators, with a relatively large number in the world (Arijulmanan 2015). In terms of bureaucracy, Indonesia, through the fatwa of the National Sharia Council (NSC) of the Indonesian Ulema Council (IUC) Number 21 of 2001 concerning the general guidelines for Sharia insurance, also supports the development of information systems, effectiveness, and operational efficiency of companies, especially the operating system between sharia insurance companies.
that are different from conventional insurance companies (Alam and Hidayati 2020). Based on the fatwa, insurance is defined as an effort to help each other and protect certain parties through investments in the form of assets or tabarru, where the possibility of risks is settled by a Sharia-compliant contract that has been agreed upon (Ridwan 2014).

Unfortunately, with such rapid development, there have not been many studies that analyze articles about takaful from scientific publications in the global scope. Research on takaful is minimal compared to research on other topics in economics, because it is still relatively new but entirely developed rapidly (Khan et al. 2020). The amount of research on sharia insurance or takaful seen from Scopus data began to show its hilal since 1983. However, the years that followed showed little development. Until 2007 A total of 8 articles were indexed by Scopus and tended to increase in the following year. Based on this Sharia insurance literature, a longitudinal review needs to be known to see and analyze the development of the Sharia insurance industry in the future. Thus, sharia insurance industry players can use the data obtained to map the policies that will be applied in their institutions.

Napitupulu (2021) said that bibliometrics is a set of methods for quantitatively analyzing written publications. Another opinion is also said by Royani and Idhani (2018) that bibliometrics is a study in library science whose application is in the form of statistics and mathematics. In addition, Bibliometrics also means written quantitative study through its form of realization (Broadus 1987). Bibliometrics itself can also be used as a method of study in the field of information that is descriptive; for example, in the field of authorship, the level of authorship can be measured, collaboration carried out by the author, and can also be used to study the use of literature using citation analysis (Rahayu and Saleh 2017). From the description above, this paper will explain the development of takaful industry research using bibliometric analysis methods.

Literature research on the topic of takaful, especially related to bibliometrics, has previously been carried out by several researchers such as Khan et al. (2020); Nasir, Farooq, and Khan (2021); Marzuki et al. (2022); Qadri et al. (2022) with different findings, then the period, the keywords used are also different. This research also differs from this research, namely examining all types of publications, while this research is devoted to journal articles. Then the time range, keywords, and research questions also have differences. Therefore this research is different from previous research and deserves further study, so this study aims to describe the development of research in the takaful industry from 2013 to 2022.

LITERATURE REVIEW

Khan et al. (2020) conducted academic research on takaful literature from 69 articles from 1950-2020: 49 articles from the ISI Web of Knowledge and 20 from additional contributions. The research reveals the influential aspects of takaful literature, such as countries, authors, institutions, articles, and citation networks. In addition to these influential aspects, Khan et al. (2020) also identified three main research streams: takaful's overview, growth and model, takaful's
governance mechanisms, and takaful's products/services and customer perceptions.

Al-Amri, David Cummins, and Weiss (2021) in their research related to the takaful industry that affects economic coverage, insurance company models, and bankruptcy risk by taking samples of takaful insurance companies from 19 countries. The results showed that takaful, who ran a profit-sharing model, performed better than a cost-based model. Then, profit-sharing-based takaful is also more efficient than cost-based ones, as they have a higher ROA and ROE and a low risk of insolvency.

The research studied by Hassan (2019) regarding the origin, development, and future of takaful is enough to explain how the potential of the takaful industry in the future will develop rapidly and will penetrate the international insurance market. The operations center started in the Middle East and South Asia countries until it spread throughout Europe and Australia. However, it should be noted that the challenges faced also vary from innovation, and risk management, to financial modeling.

Studies on the determinants of takaful company performance worldwide have been conducted by Kantakji, Abdul Hamid, and Alhabshi (2020), using unbalanced panel data sets during the 2010-2015 period from 53 companies. The performance measure in this study refers to two things, namely, investment returns and net investment income, where both have functioned as interlocking variables. This study found that financial performance positively relates to the company's size, GDP per capita, return on equity, and interest rates. Meanwhile, strong liquidity and dependence are negatively related.

Shukor (2020) researched the factors influencing trust in takaful agents and their consequences. This research shows that the communication and expertise of takaful agents and the image of takaful operators represented by takaful agents have a significant effect on trust in takaful agents so that potential sustainable relationships will occur. Takaful agents must also be trained to become customers' advocates, advisors, and problem solvers. That is very important to overcome customer doubts and generate trust.

Bibliometric studies on the takaful industry have yet to be conducted. Qadri et al. (2022) studied network development and global trends in takaful research through the Scopus database for 2001-2022. Therefore, the author would like to present a recent analysis of the research conditions regarding the takaful industry using bibliometric studies using the following problem formulation (RQ):

RQ1: What is the trend of takaful industry research based on the number of publications per year?
RQ2: Who is the most prolific author in takaful industry research?
RQ3: What are the potential future topics for takaful industry research?
RQ4: Which country is the most significant contributor to takaful industry research?
RQ5: Which articles are the most influential in takaful industry research?
RQ6: What journal publishes the most articles in takaful industrial research?
RQ7: What are the disciplines that contribute to the field of takaful research?
RQ8: Which institutions are affiliated with the field of industrial research?
METHODS

The method used in this study is descriptive quantitative with a type of bibliometric analysis. The stages use the method said by Busro, Mailana, and Sarifudin (2021), where there are five stages in analyzing bibliometric research: define keywords, data search, article selection, data validation, and data analysis.

Keywords are famous phrases in the title, subject header, content notes, abstracts, or text of a listing in online catalogs and bibliographic databases, which are used for search terms in free searches that allow finding articles/results that contain the keywords used. Keywords that look simple at first glance can be a big deal if they cannot satisfy their search results (Siswadi 2013). From the description above, the researcher pays attention to determining the keywords in this study because it dramatically affects the analysis obtained from the search. On October 1, 2022, the authors determined keywords relevant and related to takaful research. The keywords used in this study are takaful and takaful industry.

At the data search stage, researchers search for articles in the Scopus database using predetermined keywords. This search was conducted on October 4, 2022, to avoid updating the existing data in the Scopus database. Since Scopus is an international publication media with guaranteed credibility, daily updates will be carried out to continue collecting and updating data and searched keywords based on article title, abstract, keywords, and author as written (TITLE-ABS-KEY (takaful) OR TITLE-ABS-KEY (takaful AND industry)). This data search obtained 409 articles which were then used as an electronic database for the following research stage.

Data selection and validation are carried out to improve the results that can later be analyzed. Researchers make improvements to search results by selecting according to the data that will be needed, such as the selected articles are articles within the last ten years, the sources used are journals and conference proceedings, document types are only in the form of articles, and articles that are only in English as follows (TITLE-ABS-KEY (takaful) OR TITLE-ABS-KEY (takaful AND industry)) AND (LIMIT-TO (PUBYEAR, 2022) OR LIMIT-TO (PUBYEAR, 2021) OR LIMIT-TO (PUBYEAR, 2020) OR LIMIT-TO (PUBYEAR, 2019) OR LIMIT-TO (PUBYEAR, 2018) OR LIMIT-TO (PUBYEAR, 2017) OR LIMIT-TO (PUBYEAR, 2016) OR LIMIT-TO (PUBYEAR, 2015) OR LIMIT-TO (PUBYEAR, 2014) OR LIMIT-TO (PUBYEAR, 2013)) AND (LIMIT-TO (LANGUAGE, "English") AND (LIMIT-TO (SRCTYPE, "j") OR LIMIT-TO (SRCTYPE, "p")) AND (LIMIT-TO (DOCTYPE, "ar"))

Datasets that have gone through a process of improvement have certainly decreased the number of articles obtained. The 405 articles obtained in the previous stage were reduced because they underwent refinement and data validation. Now there are only 261 articles obtained after the data improvement. The results will later be grouped based on several categories, such as publication development per year, author network, and most influential authors.

The adjusted categories are saved in RIS format and will be visualized later using Vosviewer software. Vosviewer is used to analyze writing using a
visual network using the file.ris format is input from a previously saved file (Tupan et al. 2018).

In the last stage, researchers conduct a descriptive analysis of the dataset results visualized through Vosviewer software. The analysis is a series of activities, activities, and processes in which there is a connection to solve a problem, detail objects in detail, and then recombine to draw a conclusion. Meanwhile, data analysis can be interpreted as an effort to search and systematically process records of observation results, interviews, and others to increase the researcher's understanding of the case or problem being studied and presented as findings for others (Rijali 2018).

RESULTS AND DISCUSSION

Vosviewer software is widely used as a bibliometric research tool, especially theme and cluster analysis (Kokol 2018; Hasanah et al. 2022). The initial analysis using Vosviewer found 911 keywords from 261 articles. From the 911 keywords, only three appeared in at least three articles. After being pursued, there are only 77 keywords left that appear at least three times, and 41 left after being selected. The author removed some similar and less closely related keywords to this study. The results of the network visualization were carried out using Vosviewer, where the results showed ten keyword clusters displayed, the details as shown in Table 1.

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster 1 (9 items)</td>
<td>Human, Human Experience, Insurance System, Islamic Insurance, Islamism, Knowledge, Marketing, Muslim, Religion.</td>
</tr>
<tr>
<td>Cluster 3 (5 items)</td>
<td>Islamic Banking, Islamic Economics, Islamic Finance, Islamic Microfinance Microfinance.</td>
</tr>
<tr>
<td>Cluster 4 (5 items)</td>
<td>Deposit Insurance, Islamic Banking and Finance, Islamic Banks, Shariah Governance, Takaful Insurance.</td>
</tr>
<tr>
<td>Cluster 6 (3 items)</td>
<td>Islam, Shariah, Takaful Industry.</td>
</tr>
<tr>
<td>Cluster 7 (3 items)</td>
<td>Retakaful, Takaful, Takaful Operator.</td>
</tr>
<tr>
<td>Cluster 8 (2 items)</td>
<td>Awareness, Religiosity.</td>
</tr>
<tr>
<td>Cluster 9 (2 items)</td>
<td>Insurance Companies, Mutual Insurance.</td>
</tr>
<tr>
<td>Cluster 10 (2 items)</td>
<td>Transparency, Wakalah.</td>
</tr>
</tbody>
</table>

Source: processed on Vosviewer
Research Trends By Number of Publications Per Year (RQ1)

Takaful Industry Research in the decade 2013-2022 shows quite volatile developments. Although it increased in the early years, there were findings that research in this field had decreased in 2018 and 2019 until it increased again in 2020 but declined sharply again until this study was written. It has yet to be concluded that in 2022 takaful research such as the one in Figure 1 only amounts to less than 20 articles because 2022 is ongoing.

![Figure 1 Document Per Year](Source: Scopus)

In Figure 1, the number of publications of articles is no more than 40. Sharia insurance companies, in terms of their potential, are still wide open; public interest in Indonesia in Sharia insurance, according to Fitriani et al. (2022), is still high. However, the high public interest also did not go hand in hand with developing research on takaful.

Most Prolific Author in Takaful Research (RQ2)

The most prolific authors in takaful research can be seen in Figure 2, where the top 10 authors contribute to their articles. Salman is the most prolific writer; in Figure 2, he has written as many as 18 articles, followed by Htay in second place with 10 articles. Ghazali, Mamat, Md Husin, and Yakob contributed the same number of 6 articles. Akhter and Hassan R wrote 5 articles. Finally, Hamat and Hassan M.W. have written 4 articles.
Future Topics for Takaful Industry Research (RQ3)

An analysis of potential future topics from the 41 keywords that have been selected can be seen in Figure 3. In the picture, purple keywords such as insurance system were popularly used around 2014-2016. In contrast, turquoise colors such as takaful are popular keywords around 2018 and beyond. That is, takaful itself is a research topic that is rarely researched currently. Combined with the analysis results in RQ1, this is entirely aligned.

Figure 3 Overlay Visualization
Source: Vosviewer
Topics that are trending now are yellowish-green, like Islamic banks. However, it is not necessarily that it will continue to survive in the following years; it may well dim like the topic of insurance systems mentioned at the beginning. Islamic banks certainly are one of the potential topics in the future; apart from being trending now, the network is also only side by side with three topics: deposit insurance, takaful insurance, and shariah governance. Meanwhile, the Islamic bank has yet to network on other topics such as marketing, risk management, awareness, etc.

The Most Countries as Contributors to Takaful Industrial Research (RQ4)

In Figure 4, it is evident that Malaysia leads with research contributions of nearly 180 documents. Malaysia was the first country to pioneer takaful business in Asia; naturally, this country is the most significant contributor to the research. Then Pakistan in second place, Saudi Arabia in third position, and so on. Indonesia is in fifth place with the number of research contributions that have yet to reach 20 documents.

![Figure 4 Total Documents](Source: Scopus)

The Most Influential Articles in Takaful Industrial Research (RQ5)

Articles can be influential or cannot be seen from the number of citations in each article. The more articles are written that are cited by other researchers, the more influential and indeed of high quality (Cahyono, Sutomo, and Harsono 2019).
Figure 5 contains the top ten authors by number of citations. The data has previously been filtered only based on articles with a minimum number of authors in one document totaling three people. Md Husin is the author of the most influential article in takaful industry research, with 121 citations. In second place is Ab Rahman with 83 times, Ismail with 61, and so on. Salman, the most prolific writer, is in fourth place with 60 citations; this can be concluded that the number of articles written cannot necessarily have a significant influence. However, from Md Husin's influential research, he only collaborated a little with many people. Judging from the total link strength in Figure 5, he only collaborated with four people with six documents. Unlike Salman, who reached 20 people, it could be because of the number of research documents, as many as 18. That can mean that the research written by Md Husin is quality research for takaful industry research topics.

Journal Publishes The Most Articles In Takaful Industrial Research (RQ6)

There are only five journals that publish articles in the field of takaful industrial research for the period 2013-2022, as shown in Figure 6. The data in Figure 6 shows no consistent journals publishing research in the takaful industry per year in 2013-2022. Journal of Islamic Accounting and Business Research is the most published journal, with 28 articles. The Journal of Islamic Marketing follows them with a total of 14 articles. International Journal of Islamic and Middle Eastern Finance and Management Asian Social Science has 11 articles. Isra International Journal of Islamic Finance also published 11 articles with contributions that started in 2017 and continued from 2020 to 2022. Finally, Asian Social Science only contributed throughout 2013-2014 with 7 articles.
Disciplines That Contribute to Industry Takaful Research (RQ7)

Research on the takaful industry comes from more than just economic disciplines. As in Figure 7, the contributors to research in the takaful industry are various disciplines. Business, Management, and Accounting is the discipline that has contributed the most to takaful industry research, with 131 documents, followed by Economics, Econometrics, and Finance, with as many as 109 documents. Social science also contributed as many as 70 documents. Also, some other disciplines such as Arts and Humanities, Computer Science, Engineering,
Mathematics, Environmental Science, Multidisciplinary, Decision Science, Energy, Psychology and many more.

Affiliated Institutions in Takaful Industry Research (RQ 8)

Figure 8 is the top ten affiliated institutions in takaful industry research. International Islamic University Malaysia became the affiliate with the most contributions, with 40 documents. Then followed the International Islamic University Malaysia, Institute of Islamic Banking and Finance with contributions of 23 documents. Furthermore, the University of North Malaysia contributed 19 documents.

![Figure 8 Top Ten Document By Affiliation](Source: Scopus)

Moreover, University Teknologi MARA contributed 17 documents, and University Sains Islam Malaysia as many as 16 documents. University Kebangsaan Malaysia, University Malaya, and University Sultan Zainal Abidin contributed 15 documents. Then, the International Centre for Education in Islamic Finance had as many as 13 documents. Finally, University Putra Malaysia contributed 9 documents.

CONCLUSIONS

The study in this article uses bibliometric analysis by reviewing all research articles in the takaful industry field in the Scopus database from 2013-2022. Bibliometric analysis can also be used to review the development of the publication of scientific articles, in this case, the takaful industry. Malaysia's contribution to research in this field is very rapid, considering Malaysia is also a pioneering country of takaful commerce in Asia. Salman is the most prolific writer, with 18 articles. Moreover, the Journal of Islamic Accounting and Business Research became the most popular journal with the most contribution in publishing articles in the takaful industry. Many studies published by contributors show a healthy pattern in this field of research. Although the results tend to
fluctuate, it can be a gap for researchers in this field to develop. Of course, with the discussion of potential topics in the future, they are still broad enough to be raised. Potential future topics are deposit insurance, takaful insurance, and Sharia governance associated with Islamic banking. The contribution of this research can be used as a consideration for discussion topics in research in this field. For this reason, future research can examine potential topics presented previously.

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