Review

Islamic Finance in the Era of Financial Technology: A Bibliometric Review of Future Trends

Hanan Qudah [1],*, Sari Malahim [2], Rula Airout [2], Mohammad Alomari [3], Aiman Abu Hamour [4] and Mohammad Alqudah [5]

[1] Department of Financial and Administrative Sciences, Ajloun University College, Al-Balqa Applied University, Ajloun 26166, Jordan
[2] Department of Financial and Administrative Sciences, Amman University College, Al-Balqa Applied University, Amman 11931, Jordan; sarymalahim@bau.edu.jo (S.M.); rula.airout@bau.edu.jo (R.A.)
[3] Finance Department, School of Management, Universiti Sains Malaysia, Gelugor 10100, Malaysia; mohammadalomari@student.usm.my
[4] Department of Accounting and Accounting Information System, Amman University College, Al-Balqa Applied University, Amman 11931, Jordan
[5] Accounting and Finance Department, Faculty of Economics and Business, University of Zaragoza, 50005 Zaragoza, Spain
* Correspondence: mhmad_qudah@bau.edu.jo; Tel.: +962-772-217-891

Abstract: This study focused on a current study on Islamic finance and financial technology as well as prospective topics for future research. As a bibliometric and visualization tool for the Web of Science core collection database and viewer-based literature, 918 papers dealing with Islamic finance and financial technology authored between 1999 and 2022 were analyzed. Cluster analysis, all-keyword co-occurrence analysis, and bibliographic coupling mapping are all investigated in the study. This research enables us to propose future research paths that may be useful in reflecting on the significant impact that technology will have on the growth of Islamic finance and financial technology. The survey discovered four main research trends: the first trend shown is "Financial Inclusion and Corporate Governance in Islamic Fintech". The second trend focuses on "information technology and future financial Islamic services". The third trend is "The Transformation of Islamic Finance: How Fintech is Changing the Game". The fourth trend is related to "Islamic Finance: A Growing Force in the Digital Age". This study provides a comprehensive analysis of research trends at the intersection of Islamic finance and financial technology, identifying future research directions.

Keywords: Islamic finance; financial technology; bibliometric analysis

1. Introduction

Due to its devotion to Shariah principles and values, Islamic finance has attracted substantial attention in recent years as an alternative to traditional finance (Rabbani et al. 2020). With the increased use of technology in finance, Islamic finance has adapted and integrated financial technology (fintech) to provide its consumers with more efficient and accessible financial services (Hassan et al. 2020). The rise of fintech has created new possibilities and difficulties for the Islamic finance industry, providing creative solutions to old financial issues while also raising new regulatory and ethical concerns. This has resulted in a growing body of literature assessing the possible influence of Islamic finance and fintech on the sector and its clients, as well as addressing the difficulties and prospects for growth and development (Rabbani 2022; Kok et al. 2022).

Islamic finance has grown in popularity in recent years because of its commitment to Shariah rules and values. With the fast improvements in financial technology (fintech), Islamic finance has embraced fintech to improve its services and give its consumers more efficient and accessible financial solutions (Belal et al. 2019; Oladapo et al. 2022). One of the

benefits of combining fintech with Islamic finance is the possibility of increased financial inclusion, which allows more individuals and enterprises to access Shariah-compliant financial goods and services. Fintech can also increase the transparency and efficiency of Islamic financial transactions, lowering costs and broadening access (Hasan et al. 2020; Ahmad and Al Mamun 2020).

However, there are several drawbacks to combining technology with Islamic financing. One possible drawback is the prospect of financial exclusion, as those without access to or familiarity with technology may be left behind. There is also the issue of ensuring that fintech platforms follow Shariah principles and laws, which may be complicated and need rigorous monitoring (Oseni and Ali 2019; Rabbani et al. 2022b). Furthermore, there are questions regarding the ethical implications of fintech, such as the use of artificial intelligence in decision-making and the possibility of bias in algorithms (Antoniadi et al. 2021). Subsequently, the convergence of technology and Islamic finance offers various benefits but also creates issues that must be handled through careful analysis and regulation.

Islamic finance has been an increasingly popular and essential topic of study in recent years, with a growing body of literature addressing its ideas and practices (Alam and Seifzadeh 2020). At the same time, the growth of financial technology (fintech) has created new potential and difficulties for the Islamic finance industry (Unal and Aysan 2022). While there is a growing body of literature studying the convergence of Islamic finance and fintech, there is still much to learn about the developing and future trends in this subject (Zulkhibri 2019; Bashir et al. 2020; Orlando and Pelosi 2020; Asutay et al. 2021). Islamic banking systems and fintech are two progressive and quickly expanding sectors of the finance industry. Fintech is the term used to describe the use of technology to deliver financial services and enhance the overall client experience (Nguyen 2021). Contrarily, Islamic banking is a kind of banking that complies with Islamic law, which forbids the charging of interest on loans and investments in specific sectors such as the gambling and alcohol industries. Fintech and Islamic banking systems are superior to conventional banks in a number of ways. Fintech businesses leverage technology to deliver financial services that are quicker, easier, and more customized while charging less (Nguyen 2022b). Customers who cherish these values may be drawn to Islamic banking systems' emphasis on ethical and socially conscious investing (Nguyen 2022a). Nevertheless, fintech and Islamic banking systems both encounter difficulties. Fintech businesses must compete with existing financial institutions while navigating complicated regulatory settings. Islamic banking systems can have trouble luring clients who are not familiar with Islamic finance's tenets and procedures (Mehdiabadi et al. 2020). It will be interesting to observe how the fintech and Islamic banking systems continue to expand and innovate in the financial sector as they compete with traditional banks (Nguyen 2022b).

The objective of this study is to fill a knowledge gap about the interaction of Islamic finance and financial technology. The professional academic goals of this work are to conduct a comprehensive evaluation of the available literature on the subject and to give insights into the field's progress. The study intends to employ bibliometric analysis to identify the most significant publications, authors, and institutions in this field of study. Furthermore, the study intends to highlight essential issues and future paths for research on Islamic finance and financial technology. By attaining these goals, the paper hopes to contribute to the growth of the knowledge base on Islamic finance and financial technology, as well as to give practical assistance to both scholars and professionals in this sector.

Through a bibliometric assessment of future trends, this paper tries to answer various issues about the convergence of Islamic banking and financial technology. Identifying the most prominent topics and research areas in this field, determining the countries, institutions, and journals that have made the most contributions to research, analyzing how the volume of research has changed over time, identifying the most influential papers and authors, and exploring emerging trends and future directions in research are all part of these questions. This study will give useful insights for scholars, policymakers, and practitioners in the fields of Islamic banking and financial technology by addressing these topics.

A bibliometric evaluation of the literature can help identify major topics and gaps in existing research on Islamic finance and fintech, revealing obstacles and the potential for growth and development in the next few years. This study specifically seeks to discover the most referenced authors, journals, and publications on the topic of Islamic finance and fintech, as well as emerging and future trends in this sector. Through this analysis, the study hopes to contribute to a better understanding of the problems and potential of Islamic finance in the age of financial technology.

Alshater et al. (2021a) conducted a bibliometric study of articles in Scopus-indexed journals in order to fill the gap in the literature on zakat. The analysis revealed key articles, co-citation patterns, and research goals that will help guide future scholarly efforts on this subject. Additionally, Biancone et al. (2020) utilized bibliometric analysis to identify major study topics such as banking, rates, comparisons with traditional banks and portfolios, and governance and control structures after conducting a complete screening technique of all IBF-related publications. The study offered journal citation rates and impact factors as quantitative markers for predicting future research trends in IBF. Furthermore, Lada et al. (2023) contributed to this body of knowledge by completing a thorough literature review and bibliometric analysis in order to give a systematic study of the link between the Islamic economy and sustainability.

Conversely, Hassan et al. (2021) conducted a bibliometric analysis and determined Malaysia to be the most relevant country, the International Islamic University Malaysia (IIUM) to be the most relevant institution, and the International Journal of Systems and Ethics to be the most relevant journal in the field of Islamic microfinance. They also highlighted four major research issues and proposed future research initiatives. Likewise, Ahmed et al. (2022) recognized four major study issues in the field of blockchain technology in finance, namely blockchain applications in payment systems, cryptocurrencies, financial market and regulatory developments, and blockchain technology development. The study's findings provide insights into the present level of blockchain technology research in finance, as well as ideas for future research in this field.

In the age of financial technology, the study of Islamic finance has grown increasingly relevant as the business continues to expand and adapt to changing technologies and client expectations. This bibliometric review adds to the literature by highlighting major topics and trends at the junction of Islamic finance and fintech, as well as the field's most cited authors, journals, and publications. This paper also emphasizes new and future developments in this sector, such as the application of blockchain technology in Islamic finance, the potential for fintech to promote financial inclusion, and the ethical concerns associated with the use of artificial intelligence in decision-making. This study provides insights into the obstacles and potential for growth and development in Islamic finance in the age of financial technology by identifying these patterns and gaps in the literature. The review's conclusions may be utilized to drive future research and policy development in this subject, therefore promoting the growth and development of the Islamic finance industry in the next few years. The research intends to contribute to the future advancement of Islamic finance in the era of financial technology by examining and addressing the interplay between Islamic finance and financial technology.

This study has important implications for scholars, policymakers, and practitioners interested in Islamic banking and financial technology. This study provides a roadmap for future research on this subject by identifying the most notable themes and research areas, nations, organizations, and journals that have contributed the most, as well as the most influential articles and authors. Furthermore, an examination of the amount of research and its evolution through time gives insight into the field's growth and maturation, allowing researchers and practitioners to comprehend the current state of research and its future direction. Subsequently, the purpose of this literature review is to highlight the most important concepts that may have an impact on Islamic finance and financial technology, as well as to give a framework for future research in the clusters described in the next section.

The remainder of the paper is structured as follows: The data and methodology utilized are described in Section 2. The findings of the bibliometric analysis are presented in Section 3. The discussion is placed in context in Section 4. The study concludes in Section 5, which draws conclusions and discusses the research implications and future directions.

2. Methodology

It is critical to identify research gaps and trends in the educational setting in order to offer direction for future study. Although there have been various investigations into delay analysis, a comprehensive study that creates a framework for future projects and maps international delay analysis research has yet to be undertaken. This work intends to fill that gap by employing scientometric analyses and performing a literature assessment of delayed analytical methodologies in the context of Islamic finance and financial technology. The method employs scientific mapping tools to identify current trends and research gaps, as well as the important organizations, authors, sources, and countries participating in data collection and analysis. A scientific map's ultimate purpose is to identify the important aspects of a scientific issue through broad topic analysis and visualization. The research plan is divided into several sections, including "Data Sourcing", "Tool Selection for Science Mapping", and "Scientometric Techniques".

2.1. Data Sourcing

Identifying research gaps and trends is critical for providing direction for future study in the educational setting. Although various studies on delay analyses have been completed, a comprehensive study that defines the foundation for future research and maps worldwide delay analysis research has yet to be undertaken. This work intends to fill that gap by undertaking a scientometric analysis of the most concentrated research challenges and a literature evaluation of delay analysis approaches in the context of Islamic finance in the age of financial technology. To accomplish this purpose, the research technique incorporates various steps.
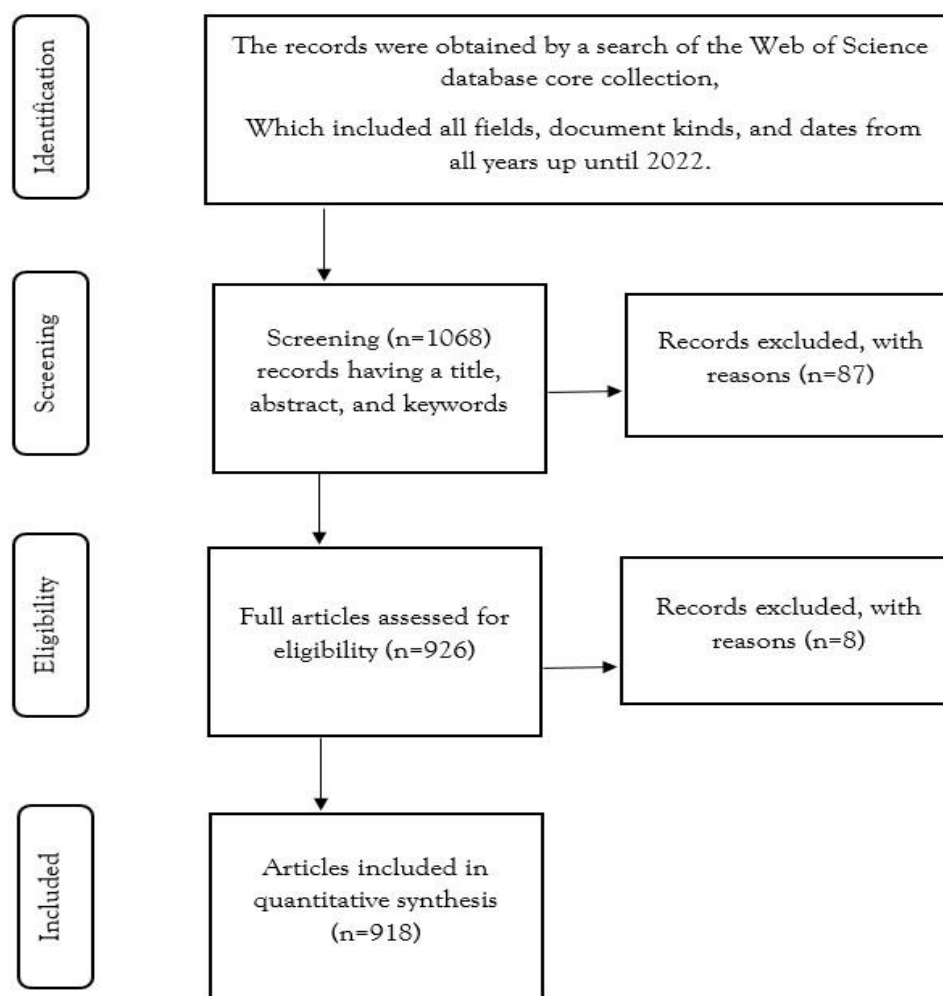
2.2. Selection of Research Database

The most relevant keywords were chosen and employed in bibliometric analysis of publications from the Web of Science Database in critical categories to find academic works closely connected to Islamic finance and financial technology (Dhamija and Bag 2020; Huang et al. 2022). The terms "Islamic finance" and "financial technology" appeared often in the titles, abstracts, and keywords of related papers. While Islamic finance and financial technology can help organizations offer a positive financial image to stakeholders, it is critical to recognize the dangers involved with these practices. For example, the use of Islamic finance might create specific obstacles, such as Shariah law compliance and the requirement for particular skills. Furthermore, the introduction of financial technology may pose new cybersecurity and data privacy threats. As a result, enterprises must carefully weigh the benefits and drawbacks of adopting Islamic finance and financial technology, as well as establish suitable risk management techniques to reduce any hazards. Ultimately, the employment of Islamic finance and financial technology should be undertaken with prudence, and the possible repercussions on a firm's financial image and reputation should be carefully considered.

2.3. Finding Relevant Materials

A forward search on the Web of Science Database was conducted using the search terms "ALL = "Islamic finance" and "Fintech" or "financial technology" and Language: (English) and Articles". As shown in Figure 1, the search yielded 918 articles published between 1999 and 2022. However, given the dynamic and fast-developing character of Islamic finance in the context of financial technology, the number of publications on this issue is projected to increase in the future. As a result, it is critical for academics to stay

up-to-date on the newest advancements in this sector and to pursue new research avenues that might shed light on the convergence of Islamic finance and financial technology.

Figure 1. Paper inclusion/exclusion flowchart.

The distribution of the top ten research fields in terms of their contribution to the total number of articles exported from various disciplines is shown in Table 1. Business and economics had the most publications (430 in total), followed by computer science (228 in total). Due to the inclusion of duplicate papers and those classified under numerous areas at the same time, the total number of papers may surpass 1104.

Table 1. Research in the field of Islamic finance and financial technology.

No.	Research Filed	Contribute Number
1	Business Economics	430
2	Computer Science	228
3	Engineering	136
4	Science Technology Other Topics	62
5	Environmental Sciences Ecology	54
6	Government Law	53
7	Telecommunications	48
8	Operations Research Management Science	33
9	Social Sciences Other Topics	33
10	Information Science Library Science	27

2.4. Tool Selection for Science Mapping

In order to carry out research in any sector, it is crucial to employ the proper scientific mapping techniques. Some of the most popular programs for this purpose are VOSviewer, Gephi, Citespace, HistCite, and Sci2. VOSviewer was utilized in this bibliometric investigation because it uses mathematical methods to produce two-dimensional maps based on network data. This program is frequently used in bibliometric research because it generates insightful maps that show many kinds of data, such as authors, references, keywords, journals, organizations, and countries, as networks and structures. This tool may also be used to show the connections between these various kinds of data, such as co-authorship, co-occurrence, citation, bibliographic coupling, and co-citation.

VOSviewer 1.6.19 (Leiden University's Centre for Science and Technology Studies (CWTS), Leiden, Netherlands) was chosen after carefully weighing the pros and cons of several mapping programs because of its text-mining skills and capacity to produce maps with striking visuals. The program was determined to be suitable for the needs of the current investigation. The Web of Science Database's scientific papers were examined using pertinent keywords in the VOSviewer application (Xie et al. 2020).
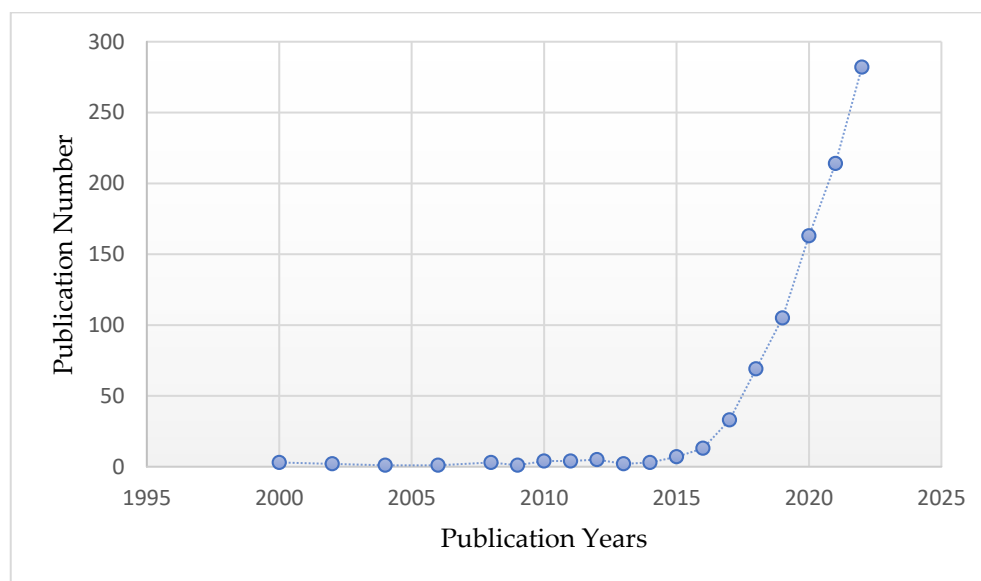
2.5. Scientometric Techniques

Using VOSviewer, the co-occurrence of the authors' keywords was examined, revealing the most frequently occurring terms and their connections. In order to investigate changes in the corpus of Islamic finance in the context of financial technology between 1999 and 2023, data analysis was carried out using Excel and VOS Viewer. Excel was selected because of its adaptability in evaluating descriptive data on enterprises, countries, and research fields and because it can update data in databases such as WoS. Using VOSviewer, a co-occurrence network was built, making it possible to comprehend the relationships between words and academic interests. The study made use of VOSviewer to analyze and display the co-occurrence of authors' keywords and bibliographic coupling among companies.

3. Findings

3.1. Web of Science Database Analysis of Islamic Finance and Fintech Literature

Several units, including authors, citations, journals, affiliations, publishers, and countries, can be tallied for the total number of publications within a certain time period in order to quantify publishing activity in the subject of Islamic finance and financial technology. These measurements can shed light on the scope and organization of the field's research, as well as the leading journals, universities, and countries that have contributed to it (Bautista-Bernal et al. 2021). This section examines the development of literature on Islamic finance and financial technology between 1999 and 2022 using the most significant bibliometric analysis findings. We examine the most important academic institutions and their connections based on 918 papers that were published in 23 scholarly journals.

The results of this study demonstrate how the body of knowledge on Islamic finance and financial technology has grown exponentially in recent years. With an average of 1 to 4 publications per year over the first ten years, publishing activity was rather low. Yet from 2015, there has been a noticeable rise in publications, with various maxima seen in 2016 ($n = 13$), 163 in 2020, 214 in 2021, and 282 in 2022. In particular, the majority of citations were made during the past year (3960 citations). The quantity of publications has increased steadily during the last three years. The present uptick in publishing activity highlights the expanding need for study on Islamic finance and financial technology. A detailed breakdown of the rise in publishing activity is shown in Figure 2.

Figure 2. Number of publications growth from 1999–2022.

The number of publications on Islamic finance and financial technology has dramatically increased in recent years. This may be linked to the expanding role of Islamic finance as a worldwide sector, the demand for financial technology innovation, and the rise in popularity of ethical investing strategies. Islamic finance offers Shariah-compliant investment opportunities, and financial technology enhances accessibility and ease (Karim and Hasan 2019; Saba et al. 2019). Both have been combined to create cutting-edge financial products that cater to ethical and socially conscious investing possibilities. Research into Islamic finance has been stimulated by the increased interest in ethical investment, underscoring the importance of this area in the present financial environment.

On the other hand, there are a number of approaches to researching Islamic finance and financial technology, and it is anticipated that study in these fields will develop and alter through time. Nonetheless, the increasing focus on these issues is a good thing since it highlights how important accurate and truthful financial reporting is for fostering openness and accountability in the financial sector. Islamic finance and financial technology have the ability to increase financial inclusion and give investors alternatives for investments that are morally and socially acceptable. To assure the industry's long-term viability and expansion, there are dangers and hurdles to overcome, just as there are with any newly developing subject (Abedifar et al. 2016; Kuanova et al. 2021).

The major journals and publishers of research on Islamic finance and financial technology are listed in Table 2. With 24 papers, an h-index of 10, and a high citation rate of 263, *Sustainability* is the top journal. In contrast, despite having 14 articles published, the *Journal of Risk and Financial Management* has a lower h-index of 3 and just 27 citations. However, these two publishers produce just 4.14% of all publications in this sector together. Elsevier, in comparison, has published 141 papers, a high h-index of 28 and 2263 total citations. IEEE, with 92 publications, an h-index of 13, and 656 total citations, is the second-largest publisher. These two publishers produced 25.37% of all articles published on this topic.

As mentioned, *Sustainability*, a well-known journal in Islamic finance and financial technology, has published 24 papers on the topic. The potential for improving financial inclusion and providing ethical and socially responsible investing alternatives to investors is driving interest in these themes. Islamic finance, which adheres to Shariah law principles, offers an alternative to traditional finance, and the advancement of financial technology has improved operations and services in this industry. Financial technology and Islamic finance integration have also resulted in novel financial solutions catering to ethical and socially responsible investors. Because of the growing interest in ethical investment practices, more

study has been conducted into Islamic finance, which provides a unique and complete approach to ethical investing.

Table 2. Most relevant journals and publishers of publications citing Islamic finance and financial technology.

Journals	Publications	H-Index	TC	Publishers	Publications	H-Index	TC
Sustainability	24	10	263	Elsevier	141	28	2263
Journal of Risk and Financial Management	14	3	27	IEEE	92	13	656
Technological Forecasting and Social Change	13	6	293	Springer Nature	92	15	926
Advances in Social Science Education and Humanities Research	9	2	7	Emerald Group Publishing	81	14	603
Cogent Economics Finance	9	2	11	Taylor and Francis	76	13	603
Journal of Asian Finance Economics and Business	8	4	34	MDPI	71	13	627
AEBMR Advances in Economics Business and Management Research	7	1	1	Wiley	37	7	242
Finance Research Letters	7	5	151	Sage	21	11	413
Financial Innovation	7	5	225	Atlantis Press	18	2	8
Pacific-Basin Finance Journal	7	4	84	Assoc. Computing Machinery	17	5	110
Technological Forecasting and Social Change	13	6	293	Springer Nature	92	15	926

According to Table 3, the majority of research on Islamic finance and financial technology is concentrated in a few countries and territories, including China, the United States, England, Indonesia, Taiwan, Australia, and Malaysia, which account for 80.9% of the 743 papers reviewed. China, in particular, had the largest number of papers published on this topic (273, or 29.74%), indicating that China has a well-developed academic and research infrastructure, funding possibilities, and a growing need for study on Islamic finance and financial technology. Additionally, the availability of high-quality publication channels may have contributed to the great number of scientific research projects on these terms in China.

A large number of scientific articles on Islamic finance and financial technology have been published in China, covering a wide variety of issues. Islamic finance, sukuk (Islamic bonds), takaful (Islamic insurance), Islamic wealth management, Islamic accounting, financial inclusion, financial innovation, and the convergence of Islamic finance and financial technology are some of the themes covered. A considerable number of publications in China indicate a robust academic and research infrastructure, funding possibilities, and a need for Islamic finance and financial technology research. Furthermore, high-quality publication channels in China (Altarturi et al. 2021; Alshater et al. 2022) may have aided the enormous volume of scientific study in these areas.

Table 3. Most productive countries publishing on Islamic finance and financial technology.

Countries/Regions	Publications	Countries/Regions	Publications
China	273	Russia	22
USA	129	Pakistan	20
England	93	Spain	19
Indonesia	85	Canada	18
Taiwan	72	France	17
Australia	47	Japan	17
Malaysia	44	Saudi Arabia	17
India	35	Singapore	17
Germany	25	Vietnam	17
South Korea	24	Italy	16

Table 4 lists notable authors ordered by the total number of publications written or coauthored as well as the number of citations obtained in the WoS database. It is worth noting that all of the top authors on this list wrote at least six publications during the review period. Huang SH is the most prolific author, with an h-index of 5, and Huang has the most citations (n = 113). These indicators indicate that Huang SH not only had more publications but also a better academic reputation than the other authors on the list.

Table 4. The most relevant authors of publications citing Islamic finance and financial technology.

Authors	Number of Publications	H-Index	TC	Affiliation
Huang SH	16	5	113	National Yang Ming Chiao Tung University
Chen CT	8	3	30	National Yang Ming Chiao Tung University
Wang J	7	4	54	Rutgers State University New Brunswick
Yang XH	7	2	20	Shihezi University
Grobys K	6	5	83	University of Vaasa
Ma F	6	2	14	Xi'an Jiaotong-Liverpool University
Zhang Q	6	2	17	Xinjiang Academy of Agricultural Sciences
Almunawar MN	5	3	53	University Brunei Darussalam
Geng ZH	5	2	15	Shihezi University

According to Table 5, the majority of the top publication affiliations are academic institutions. According to the statistics, China published 86 publications while Indonesia produced 33. The most productive institution was Taiwan's National Yang Ming Chiao Tung University, which had 21 publications. The majority of the top affiliations were from China, and among them, the Southwestern University of Finance and Economics China received the most citations, with 225 in total. It is important to note that nine of the top affiliations were from China, with the remaining three coming from Indonesia, Hong Kong, and Taiwan, as well as nine from Australia.

Significant advancements in Islamic finance and financial technology have been accomplished as a result of thorough research and studies carried out by universities and research organizations in China and other countries. The results of these efforts include a greater comprehension of the tenets and practices of Islamic finance, the creation of cutting-edge financial services and products that adhere to Islamic law, and the development of financial technology that has completely changed the way that financial transactions are carried out. The combined efforts of these academic and research institutes have helped Islamic finance spread and gain acceptability throughout the world and have opened the door for further development in this area.
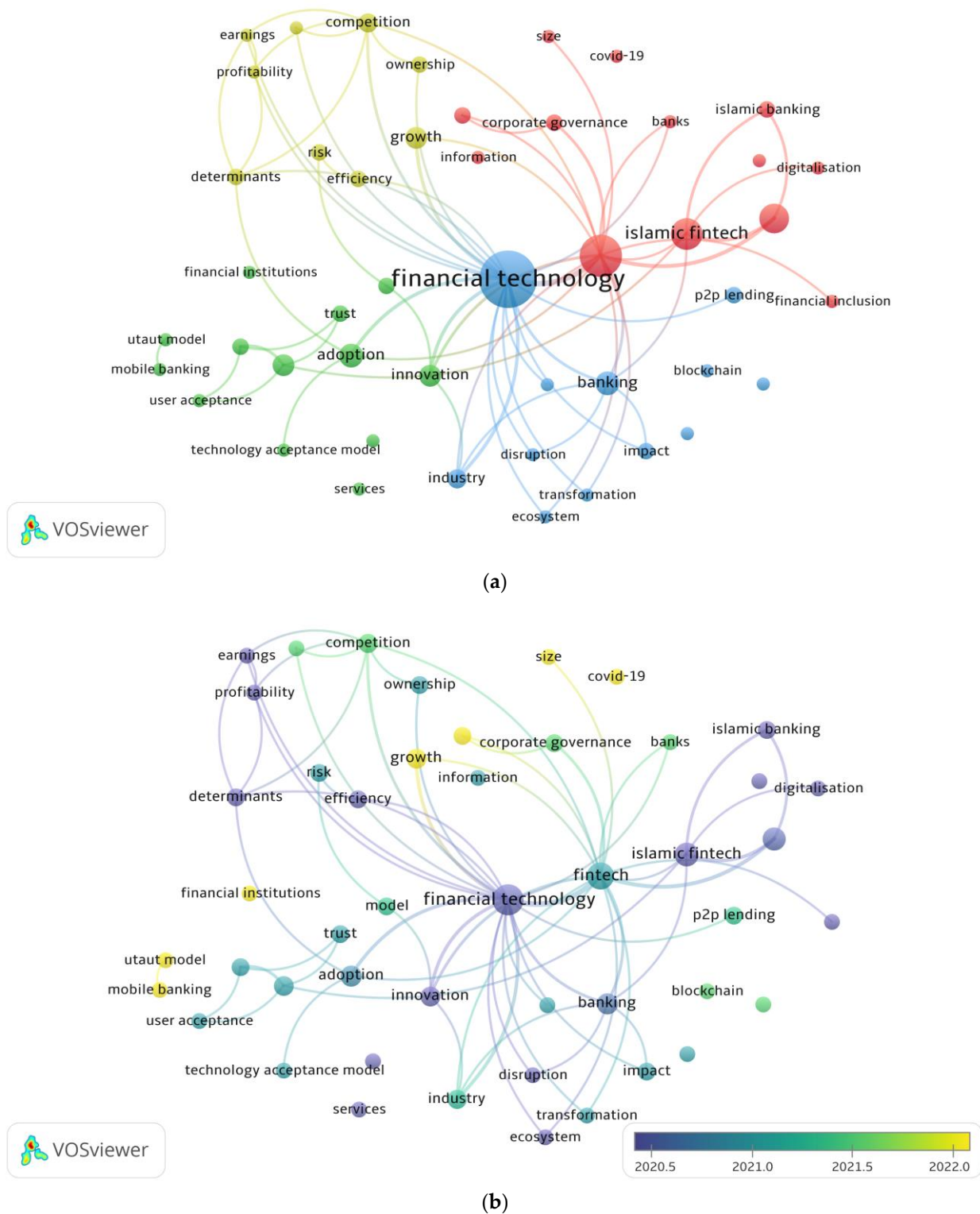
Table 5. Top productive universities on Islamic finance and financial technology.

Affiliation	Number Publications	Country	Affiliation	Number Publications	Country
National Yang Ming Chiao Tung University	21	Taiwan	Tianjin University	9	China
University of Indonesia	17	Indonesia	City University of Hong Kong	8	Hong Kong
University of London	14	England	Ming Chuan University	8	Taiwan
University of Hong Kong	13	Hong Kong	Universities Bina Nusantara	8	Indonesia
Chinese Academy of Sciences	12	China	Universities Padjadjaran	8	Indonesia
Xi An Jiao Tong Liverpool University	12	China	University of California System	8	USA
Fudan University	10	China	University of New South Wales Sydney	8	Australia
Southwestern University of Finance Economics China	10	China	University of Sydney	8	Australia
Renmin University of China	9	China	Zhejiang University	8	China
Shihezi University	9	China	Central University of Finance Economics	7	China

3.2. Primary Research Interests in Islamic Finance and Fintech

Using bibliometric analysis and an emphasis on the word "co-occurrence", VOSviewer was used to find commonly recurring words and phrases. To determine how often this phrase appears in all of the literature, the whole dataset's count was utilized. By choosing the most popular terms to represent trends in Islamic finance and financial technology and setting a minimum recurrence criterion of four, the relevance of keywords was determined. The results are shown in Figure 3, which show the most prevalent and quickly expanding items in the literature. The number of articles in which a keyword occurred was calculated using its co-occurrence in the title, abstract, and keyword fields. Table A1 shows the list of papers on the subject of Islamic finance and fintech in which it is described. Both mapping and clustering techniques are often used in bibliometric and scientometric studies to analyze network structure. We can distinguish between phrases that need more attention and those that are the most sophisticated and expanding quickly in the area by employing intensity and overlaying graphics.

In order to help scholars acquire a thorough grasp of a field's evolution through time, the use of bibliometric approaches has grown in popularity in the study of academic literature. Moreover, the depiction of data is made more comprehensible and accessible with visualization tools such as VOSviewer. A number of studies have used bibliometric and scientometric analysis to look at several facets of Islamic finance and financial technology, including their development, current state, and potential future possibilities (see, e.g., Biancone et al. 2020; Alshater et al. 2021b, 2023).

(**a**)

(**b**)

Figure 3. (**a**) Co-occurrence of keywords network visualization on Islamic finance and financial technology. (**b**) Growth of keywords network visualization on Islamic finance and financial technology.

The word "co-occurrence" was employed in the study to carry out a clustering examination. It requires the clustering of similar elements into analytical unit groups. The generated word associations might be connected to a variety of scientific topics. The clustering process aids in spotting research patterns. The study's cluster analysis is based on the

data's co-occurrence of terms. These clusters were found and categorized according to the quantity and quality of their linkages. Eventually, 47 out of 274 keywords met the criteria. Four distinct clusters, 316 linkages, and 409 total link strengths were identified. Each cluster in Figure 3 is connected to the others. Whereas clustering around the map has a lesser keyword link, clustering in the center of the map has a greater keyword correlation. In this study, Cluster 1 has 13 items, whereas Clusters 2, 3, and 4 each have 13, 12, and 9 items, respectively. On the other hand, Figure 3 shows that in 2020, phrases such as "financial technology", "Islamic fintech", and "Islamic finance" started to gain popularity. Therefore, because of Islamic finance's growing interest in and use of fintech and the rising significance of financial technology in the broader financial industry and its ability to advance financial inclusion and sustainable economic development, more study and investigation of fintech implementation options have resulted. In the context of financial technology and Islamic finance, words such as "blockchain", "industry", "mobile banking", "performance", and "growth" became more common between the beginning of 2021 and the end of 2022. These phrases express the growing importance of technology and innovation in the financial sector, as well as the demand for equitable and sustainable growth. Mobile banking, for example, can increase access to financial services, especially in underbanked and underserved regions, while blockchain technology has the potential to completely transform the way financial transactions are carried out. The focus on "performance" and "growth" draws attention to how crucial it is to achieve financial sustainability and profitability while fostering social and environmental responsibility.

3.3. Research Trends on Islamic Finance and Fintech

Co-occurrence analysis is a multidimensional, structural methodology that has proven to be a highly successful way to find patterns and identify new study areas. By assessing the frequency with which word pairs occur together in a document, a method known as co-word analysis may be used to evaluate the conceptual and intellectual underpinnings of a scientific issue. Following the selection of the pertinent phrases, a network of co-occurrences and similarity measures is created that may be applied to statistical techniques such as clustering and multidimensional scaling (MDS). Scientific maps can show author affiliations, publications, papers, and keywords. Their co-occurrence in titles, abstracts, and keywords can be used to estimate how often keyword maps appear in articles. In bibliometric and scientometric research, mapping and exploratory factor analysis are frequent techniques that reveal network patterns (Sedighi 2016; Li et al. 2016).

In this study, the authors examined keyword co-occurrence using VOSviewer, a program that generates a visual representation of a network of objects. The number of linkages and the intensity of each link were taken into account, and the size of the circles associated with each item represents the importance of the words that are presented. By using this method, the authors were able to pinpoint the areas of Islamic finance and financial technology research that have advanced as well as forecast upcoming developments in these areas. When it comes to bibliometric mapping, VOSviewer is a potent tool that can display maps in a variety of ways, each of which emphasizes a particular feature of the network. The study was meticulously carried out, including an extensive keyword counting process (Sinkovics 2016; Kristiana and Tukiran 2021).

Cluster 1: "Financial Inclusion and Corporate Governance in Islamic Fintech"

Thirteen items make up the study cluster "Financial Inclusion and Corporate Governance in Islamic Fintech", which mainly focuses on important issues such as "Islamic Banking", "Islamic Fintech", "Corporate Governance", and "Financial Inclusion". Table 6 lists the first cluster of terms, Cluster 1, along with their frequency and relationships.

Table 6. Cluster 1 keywords including Islamic finance and fintech.

Keywords (Cluster 1):	Links	Total Links Strength	Occurrences
Fintech	36	65	17
Islamic Fintech	20	29	10
Islamic Finance	10	19	9
Corporate Governance	17	20	3
Islamic Banking	4	8	3
Performance	16	18	3
Banks	7	9	2
COVID-19	10	10	2
Digitalization	4	5	2
Financial Inclusion	4	5	2
Information	14	14	2
Islamic Finance Industry	7	7	2
Size	10	11	2

The red cluster on the map, according to the data, is an indication of a major idea that will need in-depth investigation in the future. This cluster, which spans the whole map from the center to the far right, shows a direct connection to the blue cluster while also showing an indirect connection to the green and yellow clusters. These findings emphasize the value of thoroughly examining this idea in order to comprehend its ramifications. Recent years have seen explosive growth in the Islamic fintech sector, in part due to a focus on financial inclusion and a dedication to moral and Shariah-compliant business practices (Tok and Heng 2022). With their strong growth, it is probable that these trends will continue to influence the sector as Islamic fintech businesses work to increase underprivileged groups' access to financial services while keeping high standards of corporate governance (World Bank 2020). In terms of financial inclusion, we may anticipate the creation of fresh, cutting-edge goods and services catering to the unique requirements of Muslim customers. In order to facilitate safe and transparent financial transactions that adhere to Shariah standards, this may include the adoption of blockchain technology (Rabbani et al. 2021; Karim et al. 2022a). As they work together to create suitable regulatory frameworks that safeguard consumer interests while simultaneously supporting innovation and growth, we can also anticipate seeing increased cooperation between Islamic fintech businesses and authorities (Unal and Aysan 2022). We should anticipate an increased focus on accountability, transparency, and risk management in terms of corporate governance as Islamic fintech businesses work to establish themselves as reliable actors in the financial services sector (Rabbani et al. 2021). This may entail adopting best practices from seasoned participants in the market as well as creating fresh, ground-breaking governance frameworks that are uniquely suited to the requirements of the Islamic fintech sector (Al-Matari et al. 2022; Hassan and Raza Rabbani 2022). Subsequently, we may anticipate that the development of Islamic fintech will be marked by a dedication to financial inclusion, moral business conduct, and a significant emphasis on corporate governance.

Fintech will continue to alter Islamic finance through Environment, Social, Governance (ESG) concerns, with blockchain technology playing a key role in enhancing transparency, security, and transaction speed. To remain competitive, there will be an increase in ESG-focused Islamic fintech businesses as well as digital banking services. Social impact investment will also grow, with an emphasis on creating both financial rewards and beneficial social effects. Finally, machine learning and Artificial Intelligence (AI) will be used to obtain a better knowledge of client demands and to build more tailored financial products and services (De Anca 2019; Goud et al. 2021; Alshater et al. 2022).

Islamic banking and fintech are fast expanding industries that stress financial inclusivity and Shariah-compliant business methods. The use of bibliometric analysis identified significant clusters in several domains, including a red cluster that will need to be investigated further. As Islamic fintech companies expand, they will prioritize accountability, transparency, and risk management in corporate governance. Blockchain technology will be

critical in improving transparency and security, while social impact investing will generate financial incentives as well as beneficial social consequences. Finally, machine learning and AI will aid in the development of customized financial products and services.

The cluster offers unique insights into the rise and possible future of Islamic fintech, emphasizing its significance in the financial services industry as well as the significance of blockchain technology, ESG issues, and social impact investing. However, the essay might benefit from a more extensive study of the obstacles encountered by Islamic fintech enterprises, a discussion of the ethical considerations associated with the use of machine learning and AI, and more specific instances of successful Islamic fintech ventures.

Cluster 2: "Information Technology and Future Financial Islamic Services"

Thirteen items make up the study cluster "Information Technology and Financial Islamic Services", which focuses mainly on important issues such as "Information Technology", "Financial Institutions", "Technology Acceptance Model", and "User Acceptance". Table 7 lists the second cluster of terms, Cluster 2, along with their frequency and relationships.

Table 7. Cluster 2 keywords including Islamic finance and fintech.

Keywords (Cluster 2):	Links	Total Links Strength	Occurrences
Adoption	26	32	6
Innovation	17	24	5
Intention	19	24	5
Information Technology	15	19	3
Model	19	21	3
Trust	13	15	3
Financial Institutions	14	14	2
Mobile Banking	8	9	2
Services	13	13	2
Technology Acceptance Model	11	12	2
Technology Adoption	8	8	2
User Acceptance	10	12	2
Utaut Model	8	9	2

Carrying out a detailed investigation of the green cluster shown on the map will be essential in the upcoming time. Although showing essentially little link with the yellow and red clusters, this cluster has a slender relationship with the blue cluster. We may anticipate a growing focus on the function of information technology in providing financial services that are consistent with Shariah principles as the Islamic finance sector continues to expand and change (Atif et al. 2021). In particular, we should expect to see the acceptance and continuous development of digital platforms and technologies that facilitate quick, safe, and effective financial transactions. This may involve integrating artificial intelligence and machine learning to offer individualized financial advice and support, as well as the usage of blockchain technology to conduct safe and transparent transactions (Alaeddin et al. 2021; Chong 2021). Moreover, we should anticipate the creation of novel and cutting-edge goods and services that address the particular requirements of Muslim customers, such as Islamic microfinance and crowdfunding platforms (Razak et al. 2021). With these developments, the financial ecosystem will change in a way that better serves the particular requirements of the Islamic finance sector and is more open and accessible. To guarantee that new technologies are adopted responsibly and sustainably, the sector must likewise address issues with cybersecurity and data protection (Rabbani 2022; Rabbani et al. 2022a). Subsequently, the Islamic finance industry's use of information technology is anticipated to be defined by a continuous emphasis on innovation and digital transformation, with a focus on providing services that are Shariah-compliant, accessible, and secure.

Islamic finance and fintech are two fast expanding industries that are revolutionizing the financial services industry. The Islamic fintech sector is gaining traction, with an emphasis on financial inclusion and Shariah-compliant business processes. Bibliographic coupling

has been used to investigate the structure of research topics and to identify connections between diverse sources in Islamic finance and fintech. Blockchain technology, machine learning, and artificial intelligence (AI) are expected to play an important role in improving transparency, security, and transaction speed, as well as in developing personalized financial products and services. The Islamic financial sector is also producing new goods and services to meet the specific needs of Muslim clients. As the industry continues to develop and evolve digitally, cybersecurity and data protection must be addressed to guarantee that new technologies are deployed in a sustainable and safe manner.

The cluster provides a well-informed appraisal of the green cluster's potential for growth and development in the Islamic banking industry. It emphasizes the need of researching this cluster, which has few connections to other clusters and focuses on the role of technology in providing Shariah-compliant financial services. The authors predict that AI, machine learning, and blockchain technology will continue to be used to promote safe and transparent transactions, as well as the introduction of novel goods and services suited to the special demands of Muslim customers. While the paper might need greater discussion of the problems and hazards involved with new technology, it does give useful insights into the future of Islamic fintech.

Cluster 3: "The Transformation of Islamic Banking: How Fintech is changing the Game"

Twelve items make up the study cluster "The Transformation of Islamic Banking: How Fintech is Changing the Game", which mainly focuses on important issues such as "Financial Technology", "Ecosystem", "Revolution", and "Industry". Table 8 lists the Cluster 3 terms, along with their frequency and relationships.

Table 8. Cluster 3 keywords including Islamic finance and fintech.

Keywords (Cluster 3):	Links	Total Links Strength	Occurrences
Financial Technology	33	70	30
Banking	23	21	6
Industry	15	21	4
Impact	13	15	3
P2p Lending	11	12	3
Blockchain	8	8	2
Cryptocurrency	8	8	2
Disruption	6	8	2
Ecosystem	11	13	2
Payments	12	12	2
Revolution	8	9	2
Transformation	9	11	2

According to the supplied map, it looks as if the blue cluster of terms presents a significant issue and will need in-depth analysis in the near future. The additional clusters shown on the map are connected to and related to this cluster in a number of ways. Therefore, a thorough examination of the connections between the blue cluster and the other clusters is essential. Fintech's application to alter Islamic banking is a current trend that will likely have a big influence on the sector in the future. One of the important trends in this space is the incorporation of fintech products into Islamic banking operations, which is anticipated to improve operational effectiveness, increase customer satisfaction, and lower costs (Zouari and Abdelhedi 2021; Barbu et al. 2021). Peer-to-peer lending, crowdfunding, and robo-advisory services are just a few of the new goods and services that this integration will allow Islamic banks to provide (Abdeljawad et al. 2022). The rising usage of blockchain technology in Islamic banking is another future trend that is expected to materialize and has the ability to improve the sector's transparency and security (Truby and Ismailov 2022). Furthermore, it is anticipated that the use of AI and machine learning algorithms would strengthen Islamic banking's capacity for fraud detection and risk management (Mohamed 2021; Chowdhury and Uddin 2021). Subsequently, it is

anticipated that the transformation of Islamic banking through fintech would result in a more innovative and competitive sector that is better equipped to fulfill the changing demands of clients.

Islamic finance is a fast-developing business, and fintech has been highlighted as a crucial trend that will alter the sector. Banks may increase efficiency, customer satisfaction, and cost-cutting by incorporating fintech solutions into their Islamic banking processes. With this connection, Islamic banks will be able to provide new services such as peer-to-peer lending, crowdfunding, and robo-advisory services. Blockchain technology is also expected to play an important role in improving Islamic banking transparency and security. Another area where fintech might improve Islamic finance is the incorporation of AI and machine learning algorithms in fraud detection and risk management. Finally, the transformation of Islamic banking via fintech is projected to result in a more innovative and competitive industry that can better meet the demands of clients. A thorough investigation of the links between the various clusters is required for the industry's future growth.

The blue cluster on the map looks to be a big issue that warrants in-depth investigation. The authors emphasize the significance of investigating the connections between the blue cluster and the other clusters. Fintech product integration with Islamic banking operations is a contemporary trend that is projected to increase operational efficiency, customer happiness, and cut costs. This connection will enable the adoption of new goods and services such as peer-to-peer lending, crowdfunding, and robo-advisory services. Blockchain technology, as well as AI and machine learning algorithms, are expected to increase transparency, security, and fraud detection in Islamic banking.

Cluster 4: "Islamic Finance: A Growing Force in the Digital Age"

Nine items make up the study cluster "Islamic Finance: A Growing Force in the Digital Age", which mainly focuses on important issues such as "growth", "bank performance", "competition", and "efficiency". Table 9 lists the fourth cluster of terms, Cluster 4, along with their frequency and relationships.

Table 9. Cluster 4 keywords including Islamic finance and fintech.

Keywords (Cluster 4):	Links	Total Links Strength	Occurrences
Growth	17	21	5
Competition	16	24	4
Determinants	15	20	3
Efficiency	18	20	3
Ownership	17	19	3
Risk	22	24	3
Bank Performance	10	12	2
Earnings	10	14	2
Profitability	10	14	2

The yellow cluster of sentences is made up of complex concepts that call for additional research, according to the supplied map. The poor links this cluster has with other clusters on the map also suggest a possible lack of integration with larger conceptual frameworks. Therefore, in-depth investigation and analysis are necessary to comprehend the intricacy and potential connections between the yellow cluster and other clusters. In the digital age, Islamic finance is expanding quickly. Future changes to the Islamic financial sector are expected because of the growing usage of digital technology. One of the important factors that will decide the future of Islamic finance is the integration of digital technology into traditional banking operations (Nurdin and Yusuf 2020). Through this connection, Islamic banks will be able to provide consumers with services such as online account management, mobile banking, and e-payment solutions that are more effective and streamlined (Wenner et al. 2018; Mujahed et al. 2022). The adoption of blockchain technology in Islamic finance is another anticipated future development since it might improve the sector's transparency, security, and adherence to Islamic precepts (Abojeib and Habib 2021;

Chong 2021). Big data analytics and AI usage are also anticipated to transform risk management procedures and improve client profiling in Islamic finance (Milana and Ashta 2021). Furthermore, the expansion of fintech startups in the Islamic finance sector is anticipated to open up new channels for cooperation and invention, resulting in the creation of fresh goods and services (Ali et al. 2019). Subsequently, it is anticipated that the fusion of digital technology with Islamic finance would provide a more open, inclusive, and competitive market that responds to the changing demands of consumers (Qudah et al. 2021).

The use of digital technology in Islamic banking is predicted to determine the industry's future as the digital era brings significant expansion to the sector. Islamic banks can leverage digital technology to provide more efficient and streamlined services to consumers, such as online account management and e-payment options. Another potential development that might increase transparency and security is the implementation of blockchain technology in Islamic banking. Furthermore, big data analytics and artificial intelligence can improve risk management procedures and customer profiling. The growth of fintech firms in the Islamic finance industry is projected to create new prospects for innovation. Subsequently, the combination of digital technology with Islamic banking is expected to result in a more open and competitive market that adapts to changing customer needs. More study is needed to establish possible links between the yellow cluster and other clusters, as well as to fully comprehend the potential for innovation in the Islamic banking business.

The cluster gives an overview of how digital technology might alter the Islamic banking industry, emphasizing the potential benefits of incorporating fintech products and services, blockchain technology, big data analytics, and artificial intelligence. The cluster, on the other hand, may benefit from a more in-depth examination of possible dangers and issues related with digital technology, such as data privacy, cybersecurity, and accessibility. Overall, while the chapter gives useful insights, a more balanced perspective that takes into account potential dangers and problems would be beneficial.
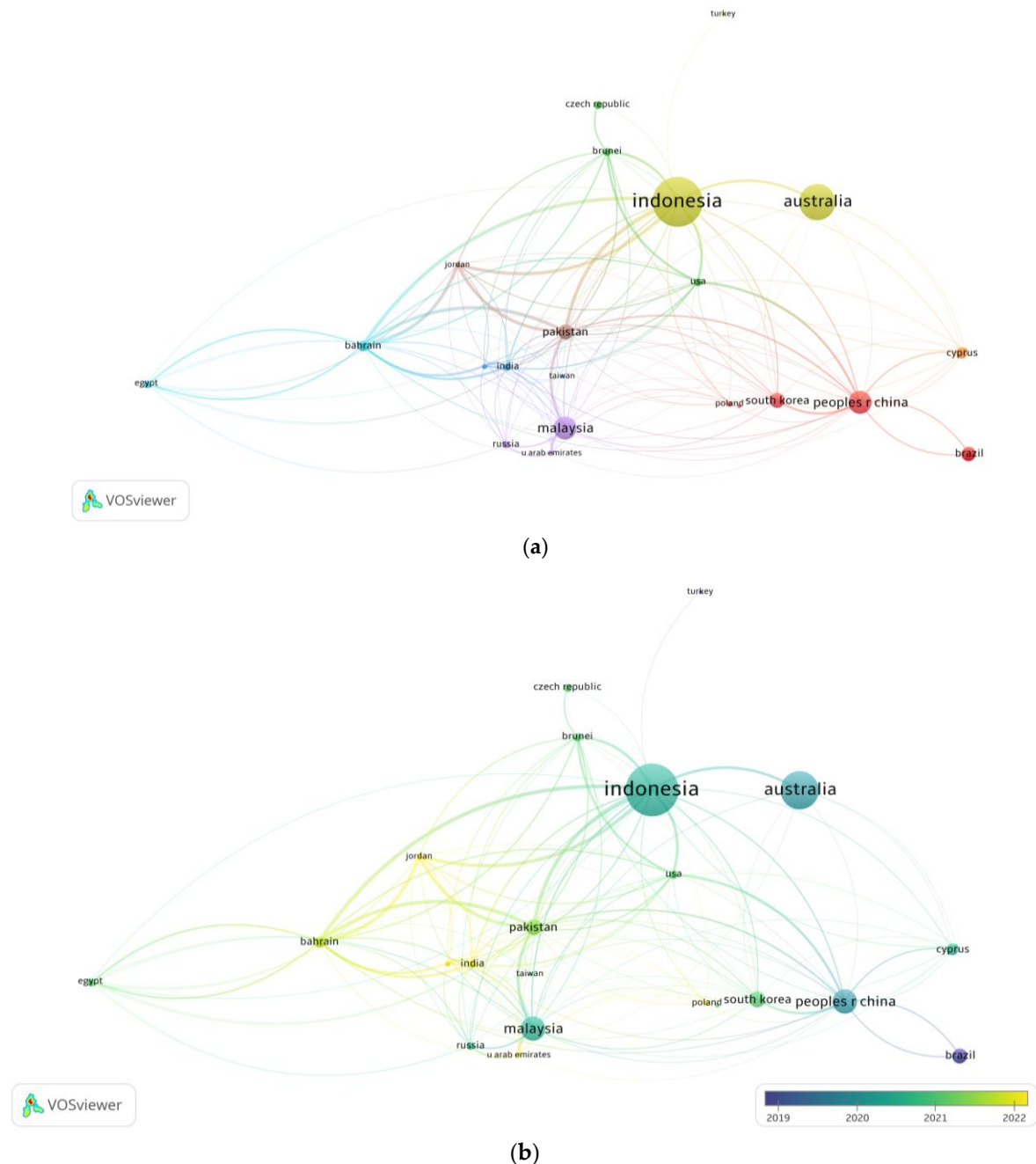
3.4. Mapping the Landscape of Islamic Finance and Fintech Literature

In the context of a certain study criterion, Figure 4 depicts the organizational structure of regional and national cooperation. Up to fifty of the most pertinent bibliographic links are used to display the criterion's results. Rectangles are the most popular pattern for labels, which are used to identify goods. The label and circle of an object are sized according to its weight, with the most important object having the biggest label and circle. The distance between the map's items reflects the degree of relatedness among the countries relevant to the study topic, and the lines connecting the objects show their connections. The map's main benefit is its capacity to make studying countries or areas with comparable features easier. For instance, countries on the same continent have a lot in common and are shown on the map as being close to one another (Chhtrapati et al. 2021; Xu et al. 2021).

As the largest circle in Figure 4, Indonesia is clearly visible and close to Brunei, Pakistan, Malaysia, the United States, Bahrain, China, and Jordan. The bulk of publications on the subject of Islamic finance and fintech have been created in Indonesia, so it is anticipated that 33.24% of all link strengths will come from there. Some recurrent themes have emerged from the variety of articles on this subject that have been written in Indonesia. These issues include the potential for fintech to expand access to Islamic financial services, the need for regulatory frameworks that can accommodate novel business models, and the contribution of Islamic finance to sustainable development. An increasing number of people are also interested in the advancement of sophisticated Islamic finance and financial technologies. This pattern started in Indonesia and Australia and is now being seen in other countries, such as Bahrain and Jordan. As seen in Figure 4, discussions of Islamic finance and financial technology effectively demonstrate the connections between the eight clusters and historical eras.

Indonesia holds a pivotal position in the network of publications connected to Islamic finance and fintech, with a substantial proportion of publications on the subject emanating from the country. The potential for fintech to extend access to Islamic financial services, the

necessity for regulatory frameworks that can accommodate creative business models, and the contribution of Islamic finance to sustainable development are all recurring topics in these articles. Indonesia's focus on how conversations about Islamic banking and fintech shows linkages between different clusters on the map and historical eras. The section, however, might benefit from further information on how Indonesia became a pioneer in Islamic banking and fintech, as well as possible hurdles and dangers linked with the country's expansion of the business.

(**a**)

(**b**)

Figure 4. (**a**) Collaboration of Countries' Network Visualizations on Islamic Finance and Fintech; (**b**) Growth of Countries' Network Visualizations on Islamic Finance and Fintech.

Bibliographic coupling is a bibliometric approach that compares the similarity of two sources based on how their reference lists overlap. This method is used to discover links between disparate sources and to study the structure of research fields. The number of common references is recorded as a fraction of the total number of references in each source
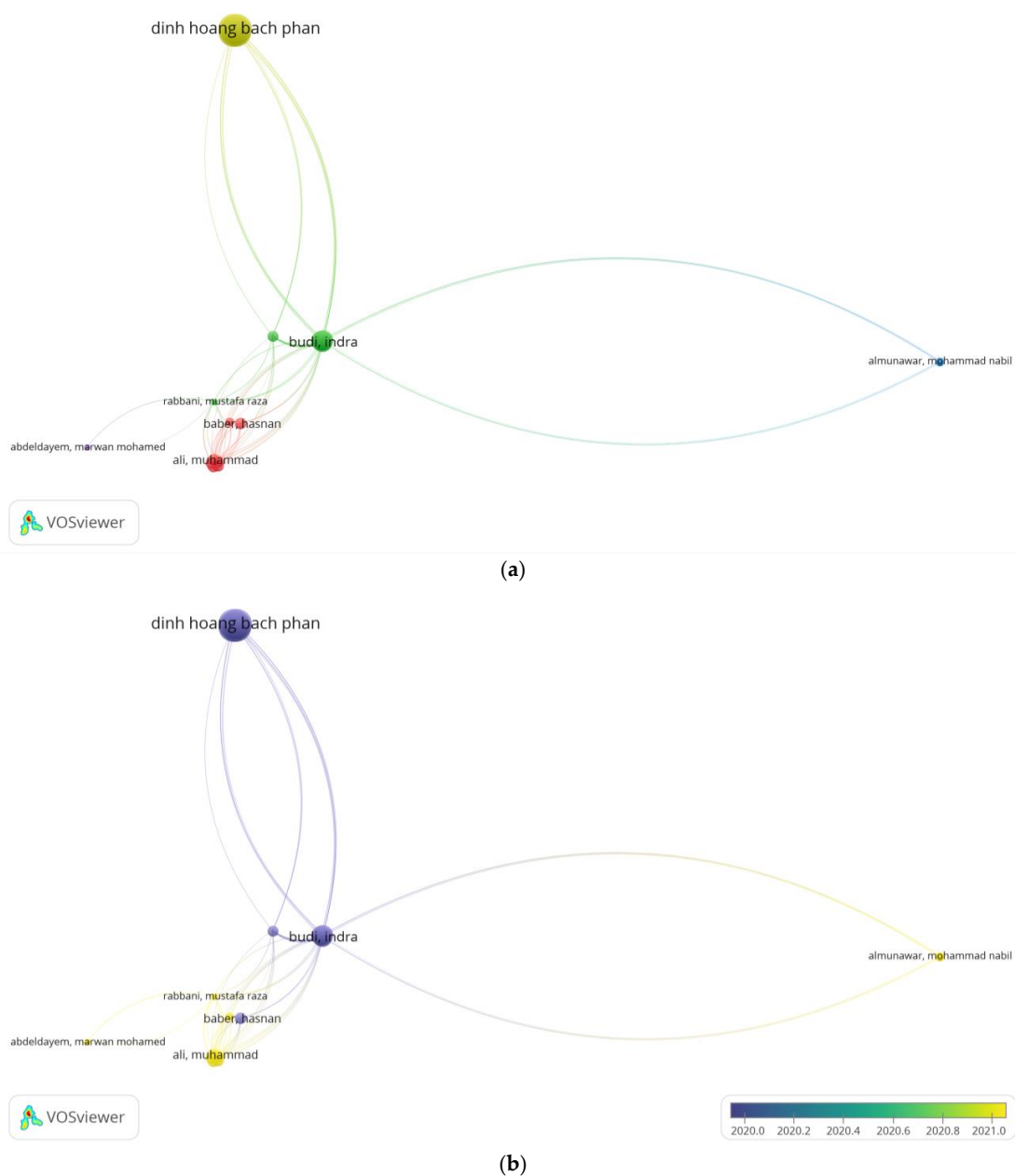
to assess bibliographic coupling. A high degree of bibliographic coupling between two sources suggests that they are related and may belong to the same research tradition or topic, whereas a low level suggests that the sources are unconnected (Özen Çınar 2020; Igwaran and Edoamodu 2021). Many studies have examined the area of Islamic finance and fintech using bibliographic coupling. For example, one study discovered that the journals *Islamic Accounting and Business Research* and *Qualitative Research in Financial Markets* were significantly connected, indicating that they are part of the same research tradition. The *Pacific-Basin Financial Journal* has the most citations and the strongest total links. Sustainability and risk journals were also shown to be essential in the realm of Islamic finance and fintech. These journals provide a forum for scholars and practitioners to communicate their views and ideas, which may help shape the industry's future by fostering research, innovation, and best practices. Subsequently, the study's conditions included at least one citation from each of the 23 journals, resulting in the finding of 99 linkages and a total link strength of 263 points, culminating in the identification of five unique clusters as shown in Figure 5.

(**a**)

(**b**)

Figure 5. (**a**) Collaboration of sources' network visualizations on Islamic finance and fintech. (**b**) Growth of sources' network visualizations on Islamic finance and fintech.
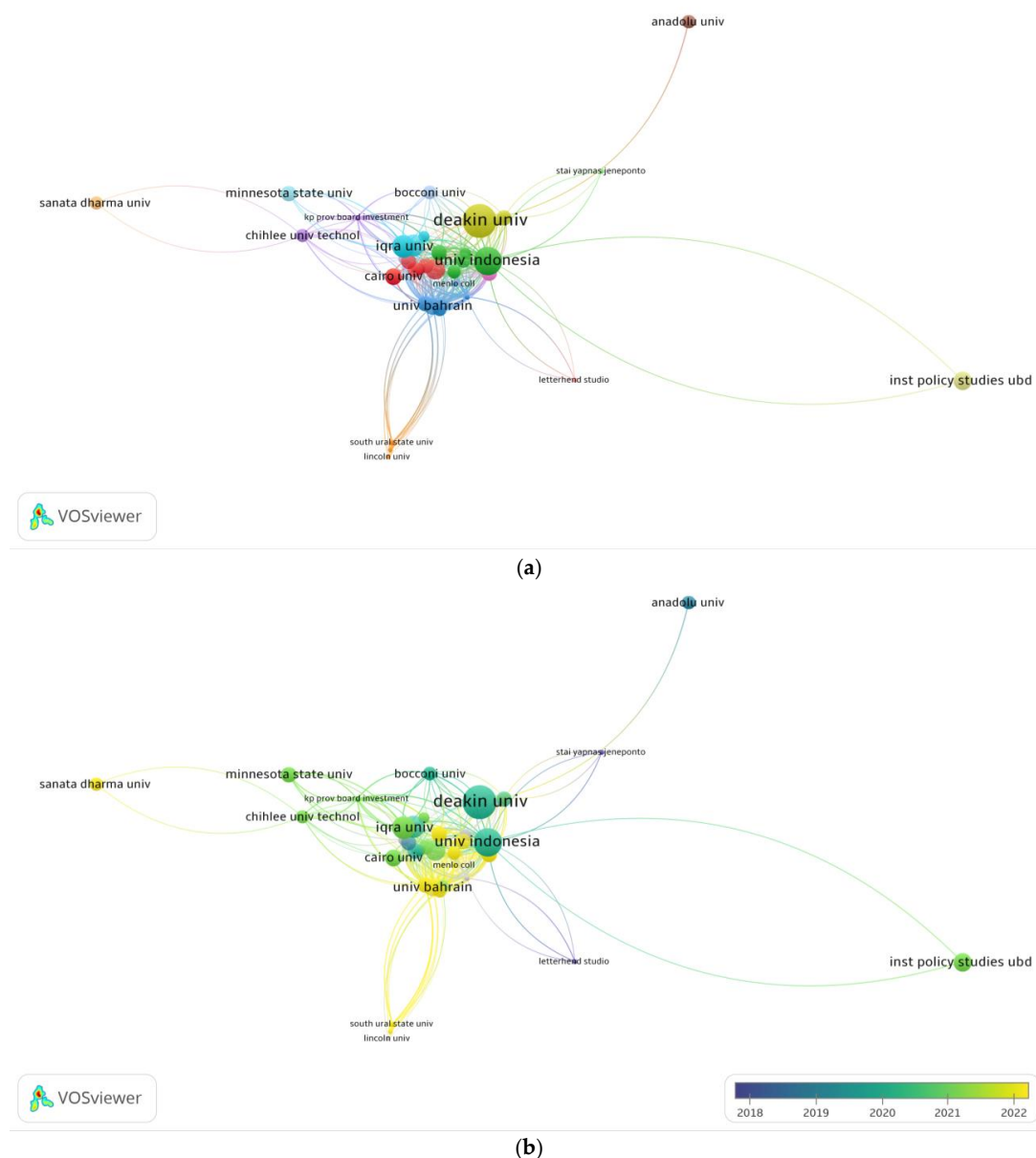
Bibliographic coupling is a technique used in text mining and data visualization to investigate the bibliographic linkages between documents. When two authors cite the same publications in their works, this is referred to as author bibliographic coupling (ABC). According to the ABC assumption, the more references two authors have in their collected works, the more comparable their research is. The value of bibliographic links in investigative text mining and data visualization has been investigated (Djeki et al. 2022; Ye et al. 2020). Figure 6 depicts the top 23 authors in terms of article citations who have contributed the most to Islamic finance and financial technology literature. "Dinh Hoang Bach Phan", "Budi, Indra", "Ali, Muhammad", "Baber, Hasnan", "Iman, Nofie", and "Almunawar, Mohammad Nabil" have received the most citations, totaling 127. Each of the top 23 authors has, on average, five article citations linked to Islamic finance and financial technology. In Figure 6, the yellow bubbles reflect authors who have undertaken studies on this topic. "Rabbani, Mustafa Raza" has also just released the most recent study on Islamic finance and financial technology.

(**a**)

(**b**)

Figure 6. (**a**) Collaboration of authors' network visualizations on Islamic finance and fintech. (**b**) Growth of authors' network visualizations on Islamic finance and fintech.

Figure 7 depicts the network of organizational collaboration, which contains one document and up to fifty of the most important bibliographic links. The elements are represented by circles and labels, with the largest circle and label representing the most important item, since its weight correlates to its size. The closeness of the elements on the map indicates their amount of connectivity, and the lines linking them represent links (Moral-Muñoz et al. 2020). The key advantage of this map is its ability to find universities with comparable qualities. The study established sixteen groups based on common characteristics such as the college's continent. The biggest circle represents Deakin University (Australia), which has the most citations (57). The University of Indonesia (Indonesia) appears on the map as well, with a total link strength of 252 and 29 citations based on a single published work on Islamic finance and financial technology. The close collaboration between Australian and Indonesian universities suggests an active flow of ideas. Furthermore, certain Malaysian, Bahraini, and Jordanian universities have recently published papers on Islamic finance and financial technology, and their locations are shown on the map.

(**a**)

(**b**)

Figure 7. (**a**) Collaboration of universities' network visualizations on Islamic finance and fintech. (**b**) Growth of universities' network visualizations on Islamic finance and fintech.

4. Discussion

Due to growing fintech adoption, it appears that the Islamic finance industry is undergoing a considerable transition. The rise of Islamic fintech, which is motivated by financial inclusion and Shariah-compliant business practices, is shown by the red cluster on the map, which is closely related to the blue cluster. Despite having a tenuous connection to the blue cluster, the green cluster is crucial for the adoption of digital platforms and technology that provide quick, secure, and efficient financial transactions. Some of the trends that are anticipated to arise soon include the incorporation of ESG considerations in Islamic fintech, the expansion of social impact investing, and the application of machine learning and AI to better understand customer demands and provide more specialized financial products and services. The clusters also emphasize the integration of fintech products into Islamic banking activities, which is anticipated to increase operational effectiveness, increase customer satisfaction, and lower expenses. It is also anticipated that the usage of blockchain technology in Islamic banking will grow, resulting in better security and transparency. Finally, Islamic banking is anticipated to offer individualized financial guidance and support through the use of AI and machine learning.

To ensure that the necessary legal and regulatory frameworks are in place to support the growth of the sector, there will be a need for greater collaboration between Islamic fintech businesses, regulators, and financial institutions in the provision of Shariah-compliant financial products and services (Rabbani et al. 2023; Khan et al. 2022). To guarantee that customers can make educated decisions about their financial lives, the industry will also need to address difficulties with financial literacy and education, especially in poor populations (Hudaefi et al. 2023; Hassan et al. 2022a). The growing emphasis on environmental, social, and governance (ESG) considerations is another trend that is anticipated to influence the direction of Islamic fintech in the future. Islamic fintech is not an exception to the increased awareness of how companies affect society and the environment in recent years. Greater focus will be required on concerns including climate change, social justice, and ethical business practices as the industry expands (Karim et al. 2022b; Hassan et al. 2022b). This will probably lead to the creation of new financial services and products that are intended to have a beneficial social or environmental effect, such as green bonds, social impact investment funds, and underserved communities' microfinance programs.

Islamic fintech is a rapidly evolving sector poised for significant growth in the coming years. The integration of new technologies such as blockchain, AI, and machine learning is expected to transform the way that financial services are delivered and consumed in the Islamic finance industry, while the increasing focus on ESG factors will drive the development of new products and services that have a positive social or environmental impact. However, to ensure the sustainable growth of the sector, it will be important to address issues around regulatory frameworks, cybersecurity, and financial literacy, and to promote greater collaboration between Islamic fintech businesses, regulators, and financial institutions.

5. Research Implications, Future Research Directions, Limitations and Conclusions

5.1. Practical and Theoretical Implications

The highlighted research trends in Islamic finance and fintech have significant practical implications. To begin, financial institutions should prioritize the development of Shariah-compliant fintech solutions that promote financial inclusion while also addressing ESG issues. Furthermore, financial institutions should embrace digital platforms, AI, and blockchain technology to deliver accessible and safe financial services. On the other hand, cybersecurity and data protection measures should be implemented to safeguard consumer data security. Furthermore, financial institutions should embrace digital integration into Islamic finance in order to improve operational efficiency, increase client satisfaction, and reduce expenses. Lastly, digital technology should be integrated into traditional banking processes to provide more efficient services, increase transparency, and improve risk management. Fintech entrepreneurs should be encouraged to enter the market with

innovation and competition, resulting in a more open and inclusive financial industry. In short, integrating technology into Islamic finance will result in a more efficient, inventive, and competitive market that responds to changing customer expectations.

5.2. Future Research Directions

The four identified clusters are used to categorize research trends in Islamic finance in the age of financial technology. The first trend demonstrates that the focus of Islamic fintech on financial inclusion and Shariah-compliant practices is driving expansion, with blockchain technology and ESG concerns playing major roles. There will be increased collaboration with authorities, social impact investment, and AI-powered financial products. The projected focus on the function of information technology in providing Shariah-compliant financial services is the second trend in the Islamic finance sector. With a concentration on innovation and digital transformation, the development of digital platforms, including AI, machine learning, blockchain, Islamic microfinance, and crowdfunding platforms, is projected to provide accessible and safe financial services. However, issues about cybersecurity and data privacy must be addressed.

The third trend is fintech integration into Islamic finance, with products such as peer-to-peer lending and robot-advisory services improving operational efficiency, customer satisfaction, and cost-cutting. The use of blockchain, artificial intelligence, and machine learning is intended to increase transparency, security, and risk management. Fintech's revolution in Islamic finance will result in a more innovative and competitive market. Lastly, the fourth trend is that digital technology is propelling Islamic finance forward, with integration into standard banking processes allowing for more efficient services. The use of blockchain, big data analytics, and artificial intelligence (AI) is expected to increase transparency and risk management. Fintech startups will also create new avenues for collaboration and innovation, making the market more competitive.

Future research directions can be consolidated by using a multi-database method and broadening the scope of the study to encompass a bigger sample size from other places. It would also be beneficial to look into the impact of emerging technologies such as quantum computing and their potential role in the advancement of Islamic finance. Finally, as response variable variables, it would be useful to investigate the impact of the COVID-19 pandemic on the Islamic finance industry, as well as the extent to which digital technology has assisted the sector in navigating the challenges posed by the pandemic, as explanatory variables, as well as the most significant keywords obtained from the bibliometric analysis conducted in this study.

Based on the examination of the four identified Islamic finance trends, there are various intriguing research avenues that might increase our understanding of this rapidly expanding business. To begin, future research should investigate employing a multi-database strategy to widen the scope of the study and incorporate a bigger sample size from other places. This would give a more detailed review of the existing situation and possible development areas in the Islamic financial industry. Second, it would be helpful to explore the influence of future technologies on Islamic finance, such as quantum computing, and their potential roles in improving the business. As technology evolves at a rapid speed, it is critical to comprehend how these developing technologies may be integrated into Islamic banking and their potential influence on the sector. Third, it is critical to investigate the impact of the COVID-19 pandemic on the Islamic banking business, as well as the extent to which digital technology has aided the sector in navigating the pandemic's problems. This would give insights on how digital technology might be used to strengthen the Islamic banking industry's resilience and adaptability in the event of future crises. Finally, future research should concentrate on the most relevant terms identified by the bibliometric analysis performed in this study. In-depth research into these terms can give a more nuanced view of the present situation of the Islamic finance business, as well as uncover prospective areas for development and innovation. Finally, future Islamic finance

research should target these critical areas in order to improve our understanding of this fast-developing business, uncover chances for innovation and growth, and drive its success.

5.3. Limitations

This study has certain limitations that must be acknowledged. To begin, the data source employed was limited to the WoS core collection, which may limit the scope of the study. Furthermore, the study concentrated on certain fields and places, and the results were inconclusive, leaving several areas unexplored. Second, the paucity of quantitative research, the concentration of authors and nations, currency and timing constraints, language bias, and keyword analysis limitations may have damaged the findings' comprehensiveness, generalizability, and representativeness. As a result, further study is needed to overcome these constraints and obtain a more thorough grasp of the issue of Islamic finance and fintech.

5.4. Conclusions

This study contributes to the knowledge of the literature on Islamic finance and fintech by conducting a comprehensive review and clustering of papers published in the WoS core collection. It highlights the most important authors, topics, publications, and countries in Islamic finance and fintech literature. Furthermore, it investigates new research streams that may be valuable in reflecting on ESG, analyzing financial inclusion and corporate governance, identifying the long-term sustainability of Islamic financing in fintech, and reviewing their Islamic financial services. The significant increase in the number of publications in recent years reflects the rising interest in Islamic finance and the fintech phenomenon, which is still in its early stages with just a few quantitative studies conducted. As a result, many of the results are inconclusive, and some concerns remain unexplored in the literature.

The keyword analysis finds four outstanding areas of study that are currently being explored, with a few studies linking the various topics. Islamic finance research in the age of financial technology reveals the following broad trends: reflecting on the ESG effect, analyzing financial inclusion, identifying the long-term sustainability of Islamic finance on fintech, and evaluating Islamic finance financial services. As a result, scholars are interested in investigating how Islamic finance might employ fintech to solve ESG problems, enhance financial inclusion, and maintain the long-term viability of Islamic financing. Furthermore, there is an emphasis on analyzing the performance of Islamic financial services in the context of fintech and understanding how these many sectors are interrelated. Other academics may strive to establish a scale to statistically quantify Islamic finance and fintech traits and investigate their relationships with value co-creation and other emerging market difficulties; however, research in this field is sparse.

Another indicator that Islamic finance and fintech writing is in its early stages is the concentration of papers in the hands of a few countries and authors, which is increasingly expanding. The bulk of the 918 articles analyzed were published in Asian and Australian publications and are well-cited, suggesting substantial interest in writing on this issue. Additional Islamic finance articles were often published in Indonesia, Australia, Jordan, Bahrain, China, the United States, Brunei, and Pakistan throughout the financial technology age. The most famous authors who provided published citations for articles debating Islamic finance and fintech literature were "Dinh Hoang Bach Phan", "Budi, Indra", and "Ali, Muhammad". Likewise, Deakin University in Australia and the Pacific-Basin Financial Journal were the most significant universities and journals in terms of publishing citations. According to the survey, the number of scholarly publications surged because of unforeseen challenges and worldwide bubbles. It demonstrates once more that worrying about Islamic finance in the age of financial technology is a fascinating subject, both philosophically and practically.

To further research in the field of Islamic finance and fintech, it would be good to explore the influence of cultural and legislative restrictions on the adoption of digital

technologies in Islamic finance. Moreover, research might be performed on the possible obstacles and possibilities that arise because of non-Muslim clients' increased usage of Islamic fintech platforms. Additionally, investigating the role of Islamic finance in encouraging sustainable development and resolving social and environmental challenges may yield useful insights.

Author Contributions: Conceptualization, H.Q. and M.A. (Mohammad Alqudah); methodology, M.A. (Mohammad Alqudah) and H.Q.; software, S.M. and R.A.; validation, S.M. and R.A.; formal analysis, H.Q.; investigation, M.A. (Mohammad Alomari), A.A.H. and M.A. (Mohammad Alqudah); resources, M.A. (Mohammad Alomari), A.A.H. and M.A. (Mohammad Alqudah); data curation, H.Q., S.M., R.A.; writing—original draft preparation, H.Q.; writing—review and editing, H.Q.; visualization, H.Q. and S.M.; supervision, H.Q.; project administration, H.Q., S.M., R.A., M.A. (Mohammad Alomari), A.A.H. and M.A. (Mohammad Alqudah) funding acquisition, H.Q., S.M., R.A., M.A. (Mohammad Alomari), A.A.H. and M.A. (Mohammad Alqudah). All authors have read and agreed to the published version of the manuscript.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. A List of articles in the field of Islamic finance and fintech.

Article Title and Authors	Year	Journal	Main Focus	Number of Citations
The economics of mobile payments: Understanding stakeholder issues for an emerging financial technology application (Au and Kauffman 2008)	2008	*Electronic Commerce Research and Applications*	Mobile payments	220
The emergence of the global fintech market: Economic and technological determinants (Haddad and Hornuf 2019)	2019	*Small Business Economics*	Global fintech market	176
Fintech investments in European banks: a hybrid IT2 fuzzy multidimensional decision-making approach (Kou et al. 2021)	2021	*Financial Innovation*	Fintech investments in European banks	148
Artificial Intelligence in FinTech: understanding robo-advisors adoption among customers (Belanche et al. 2019)	2019	*Industrial Management & Data Systems*	Adoption of robo-advisors	146
Blockchain technology: Transforming libertarian cryptocurrency dreams to finance and banking realities (Eyal 2017).	2017	*Computer*	Blockchain technology in finance and banking	145

References

Abdeljawad, Islam, Shatha Qamhieh Hashem, and Mamunur Rashid. 2022. Fintech and Islamic Financial Institutions: Applications and Challenges. In *FinTech in Islamic Financial Institutions: Scope, Challenges, and Implications in Islamic Finance*. Cham: Palgrave Macmillan, pp. 193–222. [CrossRef]

Abedifar, Pejman, Shahid M. Ebrahim, Philip Molyneux, and Amine Tarazi. 2016. Islamic banking and finance: Recent empirical literature and directions for future research. In *A Collection of Reviews on Savings and Wealth Accumulation*. New York: Wiley, pp. 59–91. [CrossRef]

Abojeib, Moutaz, and Farrukh Habib. 2021. Blockchain for Islamic social responsibility institutions. In *Research Anthology on Blockchain Technology in Business, Healthcare, Education, and Government*. Hershey: IGI Global, pp. 1114–28. [CrossRef]

Ahmad, Syed Magfur, and Abdullah Al Mamun. 2020. Opportunities of Islamic FinTech: The Case of Bangladesh and Turkey. *CenRaPS Journal of Social Sciences* 2: 412–26. [CrossRef]

Ahmed, Shamima, Muneer M. Alshater, Anis El Ammari, and Helmi Hammami. 2022. Artificial intelligence and machine learning in finance: A bibliometric review. *Research in International Business and Finance* 61: 101646. [CrossRef]

Alaeddin, Omar, Mohanad Al Dakash, and Tawfik Azrak. 2021. Implementing the blockchain technology in islamic financial industry: Opportunities and challenges. *Journal of Information Technology Management* 13: 99–115. [CrossRef]

Alam, Intekhab, and Pouya Seifzadeh. 2020. Marketing Islamic financial services: A review, critique, and agenda for future research. *Journal of Risk and Financial Management* 13: 12. [CrossRef]

Ali, Hassnian, Rose Abdullah, and Muhd Zaki Zaini. 2019. Fintech and its potential impact on Islamic banking and finance industry: A case study of Brunei Darussalam and Malaysia. *International Journal of Islamic Economics and Finance (IJIEF)* 2: 73–108. [CrossRef]

Al-Matari, Ebrahim Mohammed, Mahfoudh Hussein Mgammal, Mushari Hamdan Alosaimi, Talal Fawzi Alruwaili, and Sultan Al-Bogami. 2022. Fintech, board of directors and corporate performance in Saudi Arabia financial sector: Empirical study. *Sustainability* 14: 10750. [CrossRef]

Alshater, Muneer Maher, Ashraf Khan, Mohammad Kabir Hassan, and Andrea Paltrinieri. 2023. Islamic Banking: Past, Present and Future. *Journal of College of Sharia and Islamic Studies* 41: 351. [CrossRef]

Alshater, Muneer M., Irum Saba, Indri Supriani, and Mustafa Raza Rabbani. 2022. Fintech in islamic finance literature: A review. *Heliyon* 8: e10385. [CrossRef]

Alshater, Muneer, Kabir Hassan, Ashraf Khan, and Irum Saba. 2021a. Influential and intellectual structure of Islamic finance: A bibliometric review. *International Journal of Islamic and Middle Eastern Finance and Management* 14: 339–65. [CrossRef]

Alshater, Muneer, Ram Al Jaffri Saad, Norazlina Abd. Wahab, and Irum Saba. 2021b. What do we know about zakat literature? A bibliometric review. *Journal of Islamic Accounting and Business Research* 12: 544–63. [CrossRef]

Altarturi, Basheer Hussein Motawe, Hamza H. M. Altarturi, and Anwar Hasan Abdullah Othman. 2021. Applications of financial technology in Islamic finance: A systematic bibliometric review. In *Artificial Intelligence and Islamic Finance*. London: Routledge, p. 138161.

Antoniadi, Anna Markella, Yuhan Du, Yasmine Guendouz, Lan Wei, Claudia Mazo, Brett A. Becker, and Catherine Mooney. 2021. Current challenges and future opportunities for XAI in machine learning-based clinical decision support systems: A systematic review. *Applied Sciences* 11: 5088. [CrossRef]

Asutay, Mehmet, Hakim Ahmad, and Abu Umar Faruq. 2021. Blockchain and Smart Contracts for Islamic Finance: A Critical Assessment. *International Journal of Financial Studies* 9: 62.

Atif, Mohammad, M. Kabir Hassan, Mustafa Raza Rabbani, and Shahnawaz Khan. 2021. Islamic FinTech: The digital transformation bringing sustainability to Islamic finance. In *COVID-19 and Islamic Social Finance*. London: Routledge, pp. 91–103.

Au, Yoris A., and Robert J. Kauffman. 2008. The economics of mobile payments: Understanding stakeholder issues for an emerging financial technology application. *Electronic Commerce Research and Applications* 7: 141–64. [CrossRef]

Barbu, Cătălin Mihail, Dorian Laurenţiu Florea, Dan-Cristian Dabija, and Mihai Constantin Răzvan Barbu. 2021. Customer experience in fintech. *Journal of Theoretical and Applied Electronic Commerce Research* 16: 80. [CrossRef]

Bashir, Usman, Abu Jafar Mohammad Sufian, and Zeshaan Rasheed. 2020. Fintech and Islamic Finance: Digitalization, Development, and Disruption. *Journal of Risk and Financial Management* 13: 15.

Bautista-Bernal, Irene, Cristina Quintana-García, and Macarena Marchante-Lara. 2021. Research trends in occupational health and social responsibility: A bibliometric analysis. *Safety Science* 137: 105167. [CrossRef]

Belal, Ataur Rahman, Mohammed Mehadi Masud Mazumder, and Mohobbot Ali. 2019. Intellectual capital reporting practices in an Islamic bank: A case study. *Business Ethics: A European Review* 28: 206–20. [CrossRef]

Biancone, Paolo Pietro, Buerhan Saiti, Denisa Petricean, and Federico Chmet. 2020. The bibliometric analysis of Islamic banking and finance. *Journal of Islamic Accounting and Business Research* 11: 2069–86. [CrossRef]

Belanche, Daniel, Luis V. Casaló, and Carlos Flavián. 2019. Artificial Intelligence in FinTech: Understanding robo-advisors adoption among customers. *Industrial Management & Data Systems* 119: 1411–30.

Chhtrapati, Devang, Shanti P. Chaudhari, Dilip Mevada, Atul Bhatt, and Dharmendra Trivedi. 2021. Research productivity and network visualization on digital evidence: A bibliometric study. *Science and Technology Libraries* 40: 358–72. [CrossRef]

Chong, Felicia Hui Ling. 2021. Enhancing trust through digital Islamic finance and blockchain technology. *Qualitative Research in Financial Markets* 13: 328341. [CrossRef]

Chowdhury, Asad Iqbal, and Mohammad Shamsu Uddin. 2021. Artificial intelligence, financial risk management, and Islamic finance. In *Artificial Intelligence and Islamic Finance*. London: Routledge, pp. 181–92.

De Anca, Celia. 2019. Fintech in Islamic Finance: From collaborative finance to community-based finance. In *Fintech in Islamic Finance*. London: Routledge, pp. 47–61.

Dhamija, Pavitra, and Surajit Bag. 2020. Role of artificial intelligence in operations environment: A review and bibliometric analysis. *The TQM Journal* 32: 869–96. [CrossRef]

Djeki, Essohanam, Jules Dégila, Carlyna Bondiombouy, and Muhtar Hanif Alhassan. 2022. E-learning bibliometric analysis from 2015 to 2020. *Journal of Computers in Education* 9: 727–54. [CrossRef]

Eyal, Ittay. 2017. Blockchain technology: Transforming libertarian cryptocurrency dreams to finance and banking realities. *Computer* 50: 38–49. [CrossRef]

Goud, Blake, Tanvir A. Uddin, and Bayu A. Fianto. 2021. Islamic Fintech and ESG goals: Key considerations for fulfilling maqasid principles. In *Islamic Fintech*. London: Routledge, pp. 16–35.

Haddad, Christian, and Lars Hornuf. 2019. The emergence of the global fintech market: Economic and technological determinants. *Small Business Economics* 53: 81–105. [CrossRef]

Hasan, Rashedul, Mohammad Kabir Hassan, and Sirajo Aliyu. 2020. Fintech and Islamic finance: Literature review and research agenda. *International Journal of Islamic Economics and Finance (IJIEF)* 3: 75–94. [CrossRef]

Hassan, Kabir, and Mustafa Raza Rabbani. 2022. Sharia governance standards and the role of AAOIFI: A comprehensive literature review and future research agenda. *Journal of Islamic Accounting and Business Research* 14: 677–98. [CrossRef]

Hassan, Kabir, Mustafa Raza Rabbani, and Mahmood Asad Mohd Ali. 2020. Challenges for the Islamic Finance and banking in post COVID era and the role of Fintech. *Journal of Economic Cooperation and Development* 41: 93–116.

Hassan, Kabir, Mustafa Raza Rabbani, Mamunur Rashid, and Irwan Trinugroho. 2022a. Islamic Fintech, Blockchain and Crowdfunding: Current Landscape and Path Forward. In *FinTech in Islamic Financial Institutions: Scope, Challenges, and Implications in Islamic Finance*. Cham: Springer International Publishing, pp. 307–40.

Hassan, Kabir, Zehra Zulfikar, Mustafa Raza Rabbani, and Mohd Atif. 2022b. Fintech Trends: Industry 4.0, Islamic Fintech, and Its Digital Transformation. In *FinTech in Islamic Financial Institutions: Scope, Challenges, and Implications in Islamic Finance*. Cham: Springer International Publishing, pp. 113–30.

Hassan, M. Kabir, Muneer M. Alshater, Rashedul Hasan, and Abul Bashar Bhuiyan. 2021. Islamic microfinance: A bibliometric review. *Global Finance Journal* 49: 100651. [CrossRef]

Huang, Yuandong, Chong Xu, Xujiao Zhang, and Lei Li. 2022. Bibliometric analysis of landslide research based on the WOS database. *Natural Hazards Research* 2: 49–61. [CrossRef]

Hudaefi, Fahmi Ali, M. Kabir Hassan, and Muhamad Abduh. 2023. Exploring the development of Islamic fintech ecosystem in Indonesial. a text analytics. *Qualitative Research in Financial Markets* 15: 514–33. [CrossRef]

Igwaran, Aboi, and Chiedu Epiphany Edoamodu. 2021. Bibliometric analysis on tuberculosis and tuberculosis-related research trends in Africal. a decade-long study. *Antibiotics* 10: 423. [CrossRef]

Karim, A. K. M. Rezaul, and Mohammad Hasan. 2019. Islamic Finance and Fintech: A Critical Review. *Journal of Islamic Accounting and Business Research* 10: 296–311. [CrossRef]

Karim, Sitara, Muhammad Abubakr Naeem, and Emad Eddin Abaji. 2022a. Is Islamic FinTech coherent with Islamic banking? A stakeholder's perspective during COVID-19. *Heliyon* 8: e10485. [CrossRef]

Karim, Sitara, Mustafa Raza Rabbani, Mamunur Rashid, and Zaheer Anwer. 2022b. COVID-19 Challenges and the Role of Islamic Fintech. In *FinTech in Islamic Financial Institutions: Scope, Challenges, and Implications in Islamic Finance*. Cham: Springer International Publishing, pp. 341–56.

Khan, Mohammad Shahfaraz, Mustafa Raza Rabbani, Iqbal Thonse Hawaldar, and Abu Bashar. 2022. Determinants of behavioral intentions to use Islamic financial technology: An empirical assessment. *Risks* 10: 114. [CrossRef]

Kok, Seng Kiong, Cynthia Akwei, Gianluigi Giorgioni, and Stuart Farquhar. 2022. On the regulation of the intersection between religion and the provision of financial services: Conversations with market actors within the global Islamic financial services sector. *Research in International Business and Finance* 59: 101552. [CrossRef]

Kou, Gang, Özlem Olgu Akdeniz, Hasan Dinçer, and Serhat Yüksel. 2021. Fintech investments in European banks: A hybrid IT2 fuzzy multidimensional decision-making approach. *Financial Innovation* 7: 39. [CrossRef]

Kristiana, Yustisia, and Martinus Tukiran. 2021. A Systematic Review: Is Transformational Leadership Effective for Organizational Commitment? *Journal of Industrial Engineering and Management Research* 2: 266–73. [CrossRef]

Kuanova, Laura Aibolovna, Rimma Sagiyeva, and Nasim Shah Shirazi. 2021. Islamic social finance: A literature review and future research directions. *Journal of Islamic Accounting and Business Research* 12: 707728. [CrossRef]

Lada, Suddin, Brahim Chekima, Rudy Ansar, Mohamad Isa Abdul Jalil, Lim Ming Fook, Caroline Geetha, Mohamed Bouteraa, and Mohd Rahimie Abdul Karim. 2023. Islamic Economy and Sustainability: A Bibliometric Analysis Using R. *Sustainability* 15: 5174. [CrossRef]

Li, Huajiao, Haizhong An, Yue Wang, Jiachen Huang, and Xiangyun Gao. 2016. Evolutionary features of academic articles cokeyword network and keywords co-occurrence network: Based on two-mode affiliation network. Physica AL. *Statistical Mechanics and Its Applications* 450: 657–69. [CrossRef]

Mehdiabadi, Amir, Mariyeh Tabatabeinasab, Cristi Spulbar, Amir Karbassi Yazdi, and Ramona Birau. 2020. Are we ready for the challenge of Banks 4.0? Designing a roadmap for banking systems in Industry 4.0. *International Journal of Financial Studies* 8: 32. [CrossRef]

Milana, Carlo, and Arvind Ashta. 2021. Artificial intelligence techniques in finance and financial markets: A survey of the literature. *Strategic Change* 30: 189–209. [CrossRef]

Mohamed, Hazik. 2021. Managing Islamic financial risks and new technological risks. In *Artificial Intelligence and Islamic Finance*. London: Routledge, pp. 61–76.

Moral-Muñoz, José, Enrique Herrera-Viedma, Antonio Santisteban-Espejo, and Manuel J. Cobo. 2020. Software tools for conducting bibliometric analysis in science: An up-to-date review. *Profesional de la Información* 29: e290103. [CrossRef]

Mujahed, Hamed, Elsadig Musa Ahmed, and Siti Aida Samikon. 2022. Factors influencing Palestinian small and medium enterprises intention to adopt mobile banking. *Journal of Science and Technology Policy Management* 13: 561–84. [CrossRef]

Nguyen, Quang Khai. 2021. Oversight of bank risk-taking by audit committees and Sharia committees: Conventional vs. Islamic banks. *Heliyon* 7: e07798. [CrossRef]

Nguyen, Quang Khai. 2022a. Determinants of bank risk governance structure: A cross-country analysis. *Research in International Business and Finance* 60: 101575. [CrossRef]

Nguyen, Quang Khai. 2022b. The Effect of FinTech Development on Financial Stability in an Emerging Market: The Role of Market Discipline. *Research in Globalization* 5: 100105. [CrossRef]

Nurdin, Nurdin, and Khaeruddin Yusuf. 2020. Knowledge management lifecycle in Islamic bank: The case of syariah banks in Indonesia. *International Journal of Knowledge Management Studies* 11: 59–80. [CrossRef]

Oladapo, Ibrahim Abiodun, Manal Mohammed Hamoudah, Md Mahmudul Alam, Olawale Rafiu Olaopa, and Ruhaini Muda. 2022. Customers' perceptions of FinTech adaptability in the Islamic banking sector: Comparative study on Malaysia and Saudi Arabia. *Journal of Modelling in Management* 17: 1241–61. [CrossRef]

Orlando, Giuseppe, and Roberta Pelosi. 2020. The Role of Islamic Finance and Fintech in Promoting Financial Inclusion in Malaysia. *International Journal of Financial Studies* 8: 68. [CrossRef]

Oseni, Umar, and Nazim Ali. 2019. Fintech in Islamic finance. In *Fintech in Islamic Finance*. London: Routledge, pp. 3–14. ISBN 9781351025584.

Özen Çınar, İlgun. 2020. Bibliometric analysis of breast cancer research in the period 2009–2018. *International Journal of Nursing Practice* 26: e12845. [CrossRef] [PubMed]

Qudah, Hanan Ahmad, Khawla Kassed Abdo, Laith Akram Al-Qudah, Hussein Mohammad Aldmour, and Mohammad Zakaria AlQudah. 2021. Factors Affecting Credit Policy in Islamic Banks of Jordan. *Academy of Accounting and Financial Studies* 25: 307–21.

Rabbani, Mustafa Raza. 2022. Fintech innovations, scope, challenges, and implications in Islamic Finance: A systematic analysis. *International Journal of Computing and Digital Systems* 11: 579–608. [CrossRef]

Rabbani, Mustafa Raza, Abu Bashar, Nishad Nawaz, Sitara Karim, Mahmood Asad Mohd Ali, Habeeb Ur Rahiman, and Md Shabbir Alam. 2021. Exploring the role of islamic fintech in combating the aftershocks of COVID-19: The open social innovation of the islamic financial system. *Journal of Open Innovation: Technology, Market, and Complexity* 7: 136. [CrossRef]

Rabbani, Mustafa Raza, Adel Sarea, Shahnawaz Khan, and Yomna Abdullah. 2022a. Ethical concerns in artificial intelligence (AI): The role of RegTech and Islamic finance. In *Artificial Intelligence for Sustainable Finance and Sustainable Technology: Proceedings of ICGER 2021 1*. Cham: Springer International Publishing, pp. 381–90. [CrossRef]

Rabbani, Mustafa Raza, M. Kabir Hassan, and Mamunur Rashid. 2022b. Introduction to Islamic Fintech: A Challenge or an Opportunity? In *FinTech in Islamic Financial Institutions: Scope, Challenges, and Implications in Islamic Finance*. Cham: Springer International Publishing, pp. 1–27. [CrossRef]

Rabbani, Mustafa Raza, Shahnawaz Khan, and Eleftherios Thalassinos. 2020. FinTech, blockchain and Islamic finance: An extensive literature review. *International Journal of Economics and Business Administration* 8: 65–86. Available online: https://www.um.edu.mt/library/oar/handle/123456789/54860 (accessed on 1 June 2023).

Rabbani, Mustafa Raza, Shahnawaz Khan, and Mohammad Atif. 2023. Machine learning-based P2P lending Islamic Fintech model for small and medium enterprises in Bahrain. *International Journal of Business Innovation and Research* 30: 565–79. [CrossRef]

Razak, Dzuljastri Abdul, Syamsu Rizal Zulmi, and Qosdan Dawami. 2021. Customers' perception on islamic crowdfunding as a possible financial solution for the pandemic COVID-19 crisis in Malaysia. *Journal of Islamic Finance* 10: 92–100. Available online: https://journals.iium.edu.my/iiibf-journal/index.php/jif/article/view/531 (accessed on 1 June 2023).

Saba, Irum, Rehana Kouser, and Imran Sharif Chaudhry. 2019. FinTech and Islamic finance-challenges and opportunities. *Review of Economics and Development Studies* 5: 581–890. [CrossRef]

Sedighi, Mehri. 2016. Application of word co-occurrence analysis method in mapping of the scientific fields (case study: The field of Informatics). *Library Review* 65: 52–64. [CrossRef]

Sinkovics, Noemi. 2016. Enhancing the foundations for theorizing through bibliometric mapping. *International Marketing Review* 33: 327–50. [CrossRef]

Tok, Yoke Wang, and Dyna Heng. 2022. *Fintech: Financial Inclusion or Exclusion?* Washington, DC: International Monetary Fund.

Truby, Jon, and Otabek Ismailov. 2022. The role and potential of blockchain technology in Islamic finance. *European Business Law Review* 33: 175–92. [CrossRef]

Unal, Ibrahim Musa, and Ahmet Faruk Aysan. 2022. Fintech, Digitalization, and Blockchain in Islamic Finance: Retrospective Investigation. *FinTech* 1: 29. [CrossRef]

Wenner, Greg, Joshua Bram, Martin Marino, Eric Obeysekare, and Khanjan Mehta. 2018. Organizational models of mobile payment systems in low-resource environments. *Information Technology for Development* 24: 681–705. [CrossRef]

World Bank. 2020. *Leveraging Islamic Fintech to Improve Financial Inclusion*. Washington, DC: World Bank. [CrossRef]

Xie, Lin, Zhenhao Chen, Hongli Wang, Chaojun Zheng, and Jianyuan Jiang. 2020. Bibliometric and visualized analysis of scientific publications on atlantoaxial spine surgery based on Web of Science and VOSviewer. *World Neurosurgery* 137: 435–42. [CrossRef]

Xu, Zeshui, Xindi Wang, Xinxin Wang, and Marinko Skare. 2021. A comprehensive bibliometric analysis of entrepreneurship and crisis literature published from 1984 to 2020. *Journal of Business Research* 135: 304–18. [CrossRef]

Ye, Nan, Tung-Boon Kueh, Lisong Hou, Yongxin Liu, and Hang Yu. 2020. A bibliometric analysis of corporate social responsibility in sustainable development. *Journal of Cleaner Production* 272: 122679. [CrossRef]

Zouari, Ghazi, and Marwa Abdelhedi. 2021. Customer satisfaction in the digital eral. evidence from Islamic banking. *Journal of Innovation and Entrepreneurship* 10: 9. [CrossRef]

Zulkhibri, Muhamed. 2019. Fintech and the Future of Islamic Finance: Opportunities and Challenges. *Journal of Islamic Monetary Economics and Finance* 5: 629–52.