



## SHARIA FINTECH: CURRENT ISSUES AND FUTURE OPPORTUNITIES

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**Abstract:** The research focuses on sharia fintech as well as prospective topics for future research. As a bibliometric and visualization tool for the Google Scholar database, 380 papers were analyzed. Cluster analysis, analysis of events along with all keywords. The results show that publications related to Islamic fintech have increased rapidly since the beginning of 2016. The most prolific journals, cities, regions, institutions, and authors are JIEI, Jakarta, West Java, STIE AAS, and T Trimulato. The keywords that appear the most are Sharia Fintech, Indonesia, Fintech, and Sharia. This study found six main research trends: Principles and Practices of Islamic Finance, Innovative Financial Technology, Studies or Research on Financial Technology, Fintech Association and MSME Development in Indonesia, Covid Analysis and Case Studies in the Context of Sharia Fintech, and Sharia Peer Lending. The study provides a comprehensive analysis of the trends in Islamic fintech research, as well as identifying future research directions.

**Keywords:** Sharia Fintech; Bibliometric Analysis; Financial Technology

**Abstrak:** Penelitian ini berfokus pada fintech syariah serta topik prospektif untuk penelitian masa depan. Sebagai alat bibliometrik dan visualisasi untuk database Google Scholar, 380 makalah dianalisis. Analisis kluster, analisis kejadian bersama semua kata kunci. Hasilnya menunjukkan bahwa publikasi terkait fintech syariah meningkat pesat sejak awal tahun 2016. Jurnal, kota, wilayah, institusi, dan penulis paling produktif adalah JIEI, Jakarta, Jawa Barat, STIE AAS, dan T Trimulato. Kata kunci yang paling banyak muncul adalah Fintech Syariah, Indonesia, Fintech, dan Syariah. Penelitian ini menemukan enam tren penelitian utama: Prinsip dan Praktik Keuangan Islam, Teknologi Keuangan yang Inovatif, Studi atau Penelitian tentang Teknologi Keuangan, Asosiasi Fintech dan Pengembangan UMKM di Indonesia, Analisis Covid dan Studi Kasus dalam Konteks Fintech Syariah, dan Peer Lending Syariah. Studi ini memberikan analisis komprehensif mengenai tren penelitian fintech syariah, serta mengidentifikasi arah penelitian di masa depan.

**Kata Kunci:** Fintech Syariah; Analisis Bibliometrik; Financial Technology

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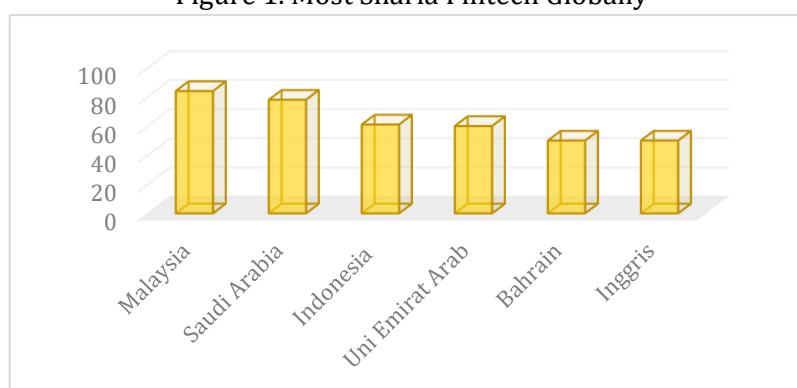
## Introduction

The growth in the number of internet users in Indonesia has grown quite rapidly, from 110.2 million people in 2015 to 215.63 million people in 2023 or a growth of 95.7%. Meanwhile, Digital Banking transactions in Indonesia grew 158% in the last 5 years (2018-2023) with the value of the last digital banking transaction reaching IDR 4,264.8 trillion. This value includes internet banking, SMS/mobile banking, and phone banking.<sup>1</sup>

Sharia Banking and Fintech are expected to work together harmoniously to achieve the development of MSMEs in a more effective and productive direction. That is a market potential that is still very wide open that can be served through synergy between Banking and Fintech for people who have not been accessed by banking services. As for the unbankable community who need access to capital, the majority are micro, small and medium enterprises (MSMEs). The Deloitte Global Fintech Report revealed that in the development of technology in the banking world, financial technology (Fintech) is one of the technologies that still dominates today. Through the Financial Services Authority Regulation (POJK) No. 77/POJK.01/2016 concerning Borrowing and Borrowing Money Based on Information Technology Services (LPMUBTI), OJK uses this term by calling Fintech as the provision of financial services to bring together lenders and borrowers in order to enter into loan agreements in Rupiah currency directly through an electronic system using the internet network.

The growth of fintech shows positive numbers over time. Reporting from Katadata, referring to the Global Fintech Islamic Report 2021, Islamic Fintech services in Indonesia are in fourth place.<sup>2</sup> In the report, the sharia Fintech market in Indonesia reached Rp 41.7 trillion or US\$ 2.9 billion. Meanwhile, in 2023, the Global Islamic Fintech Report noted that Indonesia is already in third place, below Malaysia and Saudi Arabia, which have GIFT (Global Islamic Fintech) indices of 84.5, 77.8, and 61.1 percent, respectively.<sup>3</sup>

Figure 1. Most Sharia Fintech Globally



Source: Global Islamic Fintech Report 2023/2024

<sup>1</sup> Yuli Nurhanisah, "Pengguna Internet di Indonesia Makin Tinggi," <https://indonesiabaik.id/infografis/pengguna-internet-di-indonesia-makin-tinggi>, (23 June 2024).

<sup>2</sup> Dini Hariyanti, "Pertumbuhan Tekfin Syariah Indonesia Tertinggi Keempat di Dunia," <https://katadata.co.id/finansial/keuangan/609a0975eccc68/pertumbuhan-tekfin-syariah-indonesia-tertinggi-keempat-di-dunia>, (23 June 2024).

<sup>3</sup> Abidah Naqiya, "Sistem Fintech Syariah Indonesia Terbaik Ketiga di Dunia pada 2023/2024," <https://id.technasia.com/sistem-fintech-syariah-indonesia>, (23 June 2024).

Tech in Asia data as of December 14, 2023 shows that there are 61 sharia fintech platforms in Indonesia. This number is equivalent to 20 percent of around 300 licensed fintechs in Indonesia. The emergence of Islamic Fintech in Indonesia is a response to the development of conventional Fintech companies that use interest instruments in their operations.<sup>4</sup> Sharia Fintech services in Indonesia are regulated in the fatwa of the National Sharia Council-Indonesian Ulema Council (DSN-MUI) number 117/DSN-MUI/II/2018 concerning Information Technology-Based Financing Services based on Sharia Principles.

One of the drawbacks that may occur is the possibility of financial exclusion, as those who do not have access or are familiar with technology may be left behind. There are also issues in ensuring that fintech platforms follow Sharia principles and laws, which can be complex and require close monitoring.<sup>5</sup> Furthermore, the convergence of technology and Islamic finance offers various benefits but also raises problems that must be addressed through careful analysis and regulation.

Based on the latest OJK Regulation (POJK) no. 10/2022 concerning Information Technology-Based Joint Funding Services, P2P lending fintech operators are required to meet a minimum equity of IDR 2.5 billion. OJK noted that there are 76 P2P lending fintech players who have met the minimum equity requirements in July 2023. The minimum equity provision itself is regulated in stages, where organizers are required to meet equity of IDR 7.5 billion in July 2024 and IDR 12.5 billion in July 2025. OJK as a supervisor also enforces compliance by issuing an administrative letter in the form of a written warning to organizers who have not met these provisions. Meanwhile, OJK noted that there are still 26 P2P lending fintech players who have not met the minimum equity of IDR 2.5 billion as of July 2023. In terms of equity fulfillment, the regulator has asked for an action plan to fulfill the minimum equity to P2P lending fintechs that have not met these requirements. Not only that, the OJK continues to monitor the development of fintech P2P lending which has a risk of bad loans or a 90-day default rate (TWP90) above 5 percent.

Islamic finance has become an increasingly popular and important topic of study in recent years, with a growing body of literature discussing its ideas and practices. At the same time, the growth of financial technology (fintech) has created new potential and difficulties for the Islamic finance industry.<sup>6</sup> Although more and more literature is studying the convergence of Islamic finance and fintech, there is still much to learn about future developments and trends in this field.<sup>7</sup> The Fintech system and Islamic banking are superior to conventional banks in several ways. Fintech businesses leverage technology to provide faster, easier, and more customizable financial services at a lower cost. It will be interesting

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<sup>4</sup> Rifki Muhammad Dan Rima Lanaula, "Challenges Of Islamic Supervisory In The Islamic Financial Technology Industry," *Economica: Jurnal Ekonomi Islam* 10, no. 2 (2019): 318.

<sup>5</sup> Umar A Oseni And Syed Nazim Ali, "Fintech In Islamic Finance," *IJUM Law Journal* 26, no. 2 (2018): 14; Mustafa Raza Rabbani, And Shahnawaz Khan, "Introduction To Islamic Fintech: A Challenge Or An Opportunity?," *Springer International Publishing*, (2022): 25.

<sup>6</sup> Ibrahim Musa Unal And Ahmet Faruk Aysan, "Fintech, Digitalization, And Blockchain In Islamic Finance: Retrospective Investigation," *MDPI Journal*, (2022): 388.

<sup>7</sup> Muhamed Zulkhibri, "Financial Inclusion, Financial Inclusion Policy And Islamic Finance," *Macroeconomics And Finance In Emerging Market Economies*, (2019): 22.

to observe how fintech and the Islamic banking system continue to evolve and innovate in the financial sector in tandem with their competition with traditional banks.<sup>8</sup>

Sharia fintech is a technology-based business with innovative financial services or products that use sharia schemes. Islamic fintech promotes responsible, ethical finance and provides opportunities to influence all forms of finance globally. Islam is also able to improvise and innovate while still paying attention to sharia principles. Because basically sharia fintech has the goal of helping each other in goodness. Its application and use are also guaranteed to remain in accordance with Islamic values which will provide benefits and advantages to all communities, both in this world and in the hereafter.

The purpose of this research is to provide data related to trends, trend analysis, recommendations, representation of images/patterns, and add to research on Sharia Fintech in Indonesia. The benefits of this research are expected to be useful for presenting the latest research and literature to be more relevant, enriching Sharia Fintech research in different contexts, providing further research direction through highlighting the most important concepts that may have an impact on sharia fintech, encouraging future research and policy development in this field, thus encouraging the growth and development of the sharia fintech industry in the next few years.

Some researchers have previously conducted bibliometric studies, the first of which was to study articles in the Web of Science database related to Islamic finance and financial technology,<sup>9</sup> the second conducted a Fintech Islamic Research Mapping study Using Biblio Shiny-R,<sup>10</sup> the third conducted a bibliometric study of Islamic Finance and Blockchain,<sup>11</sup> and the fourth conducted a bibliometric study entitled The Impact of Financial Technology on UKM Financing.<sup>12</sup> Bibliometric Study on the Development of Crowdfunding and Peer-to-Peer Lending. The reason for this research is the interest in the world of fintech as something new in Indonesia, but its development is very rapid and dominates the community. Many cases arise from the presence of fintech, such as interest that accumulates to exceed the initial loan, the terror of loan sharks that tarnish their good name, mental health problems for the borrower, and even suicide due to default and debt entanglement. It all started with a newcomer, called fintech.<sup>13</sup>

Unlike sharia fintech, this will not happen, because in Islamic law, the practice of riba is strictly prohibited. So this sharia fintech is very safe because it is not subject to

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<sup>8</sup> Thuy Nguyen, "Determinants Of Digital Banking Services In Vietnam: Applying UTAUT2 Model," *Asian Economic And Financial Review* 10, no. 6 (2020): 65.

<sup>9</sup> Hanan Ahmad Qudah, Khawla Kassed Abdo, Laith Akram Al-Qudah, Hussein Mohammad Aldmour, And Mohammad Zakaria Al Qudah, "Factors Affecting Credit Policy In Islamic Banks Of Jordan," *Academy Of Accounting And Financial Studies* 21, no. 25 (2021): 307.

<sup>10</sup> Aisyah Assalafiyah, Aam Slamet Rusydiana, And Lina Marlina, "Mapping Research On Islamic Fintech Using Biblioshiny-R," *Journal Of Islamic Economic Literatures* 3, no. 2 (2022): 15.

<sup>11</sup> Arinda Putri, Sylviana Damayanti, And Raden Rahadi, "Islamic Finance And Blockchain: A Bibliometric Analysis," *International Journal Of Current Science Research And Review* 05, no. 12 (2022): 4517.

<sup>12</sup> Irwan Moridu, Eva Andriani, Eva Yuniarti Utami, Dan Yudith F. Lerrick, "Dampak Teknologi Finansial Pada Pembiayaan UKM- Studi Bibliometrik Tentang Perkembangan Crowdfunding Dan Peer-To-Peer Lending," *Sanskara Ekonomi Dan Kewirausahaan (SEK)* 2, no. 01 (2023): 37.

<sup>13</sup> Laura E. Stevenson And James A. Green, "The Socioeconomic Impact Of Fintech: Unintended Consequences For Low-Income Consumers," *Journal Of Economic Inequality*, (2024).

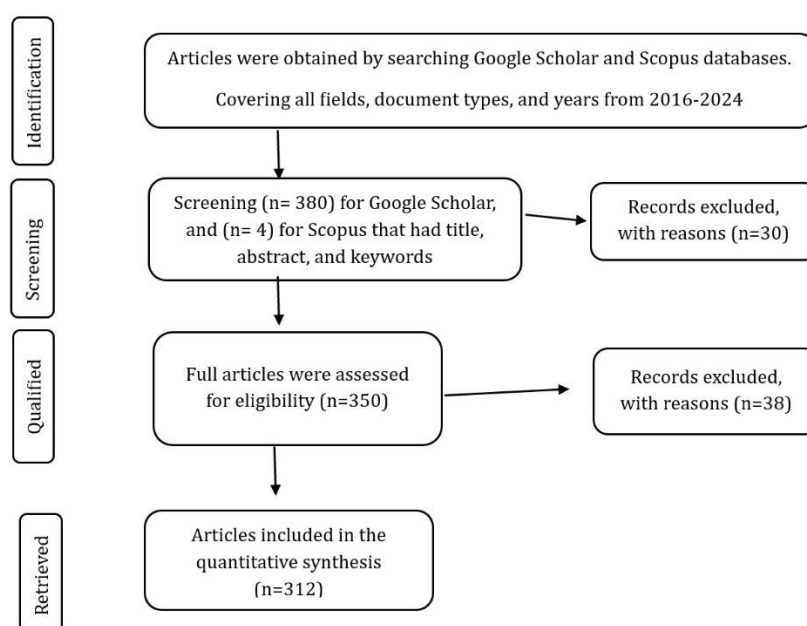
interest. In Islamic law, the profits obtained will be divided based on the agreed tenor. This is what is interesting in the Islamic financial system. The distribution of profits and risks will be staked together, because it is based on the principle of ta'awun (please help).<sup>14</sup> The novelty of this study is, first, the existence of further analysis of the bibliometric findings obtained, both analysis of findings per graph or pattern, as well as additional analysis per cluster. Second, this study does not present too many unfamiliar graphic models, so that the findings produced are more informative and do not cause confusion for readers or information users. Third, focusing on Indonesia, so that it can reflect the condition of fintech research in Indonesia as a whole, and be more beneficial to the country and future academics.

Through a bibliometric assessment of future trends, this paper tries to answer various issues about Islamic fintech: First, identifying trends in the number of Islamic Fintech research from year to year; Second, exploring trends in research journals based on productivity; Third, identify relevant affiliate trends; Fourth, mapping the trend of the distribution of research areas; Fifth, analyze what topics are most often used to investigate Islamic Fintech.

## Methods

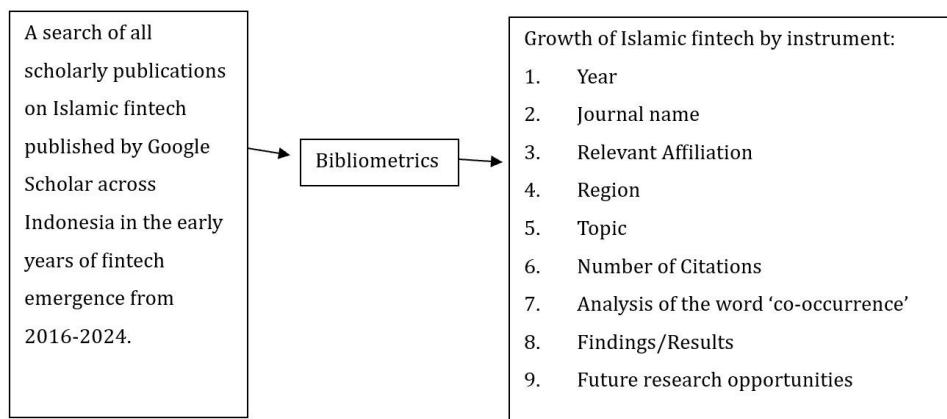
This research uses publication data related to sharia fintech sourced from the Publish or Perish database. The search term is "Sharia Fintech" in the complete data. As a result, there were 380 Google Scholar publications and 4 Scopus publications as of June 9, 2024. Due to the lack of metadata in the Scopus literature, Scopus was eliminated from this study. Bibliometric mapping was analyzed using VOSviewer and Excel devices. The methods and framework in this study are summarized in figures 2 and 3.

Figure 2. Step Method



<sup>14</sup> Ahmad B. Ibrahim And Sara A. Hussein, *Ethical Financing: The Advantages Of Islamic Fintech Over Conventional Models*, (UK: Palgrave Macmillan, 2024).

Figure 3. Research Outline



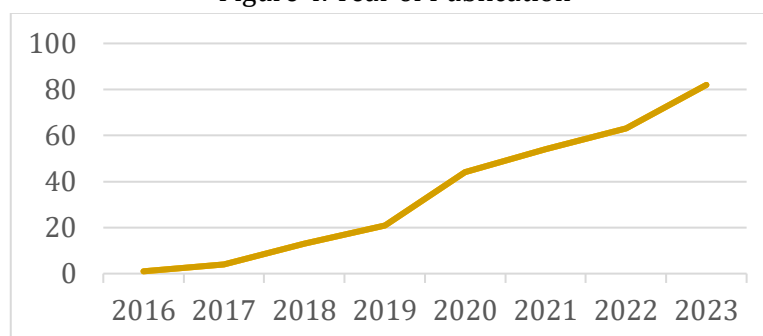
### Result And Discussion

Multiple units of analysis, including authors, citations, journals, affiliates, publishers, and regions, can be calculated for the total number of publications in a given time period to measure publishing activity in the field of Islamic fintech. These measurements can shed light on the scope and organization of research in the field, as well as the leading journals, universities, and regions that contribute to the research.<sup>15</sup> This section examines the development of the literature on Islamic fintech between 2016 and 2024 using the findings of the most significant bibliometric analysis. We examined the most important academic institutions and their relationships based on 312 papers published in 131 scientific journals.

### Year of Publication

The results of this study show how knowledge about Sharia Fintech has grown exponentially in recent years. With an average of 5 to 6 publications per year for the first three years, publishing activity is quite low. However, since 2019, there has been a sharp spike in the number of publications. Details of the increase in publishing activity are shown in Figure 4.

Figure 4. Year of Publication



Source: PoP, Data Processed by the Author in 2024

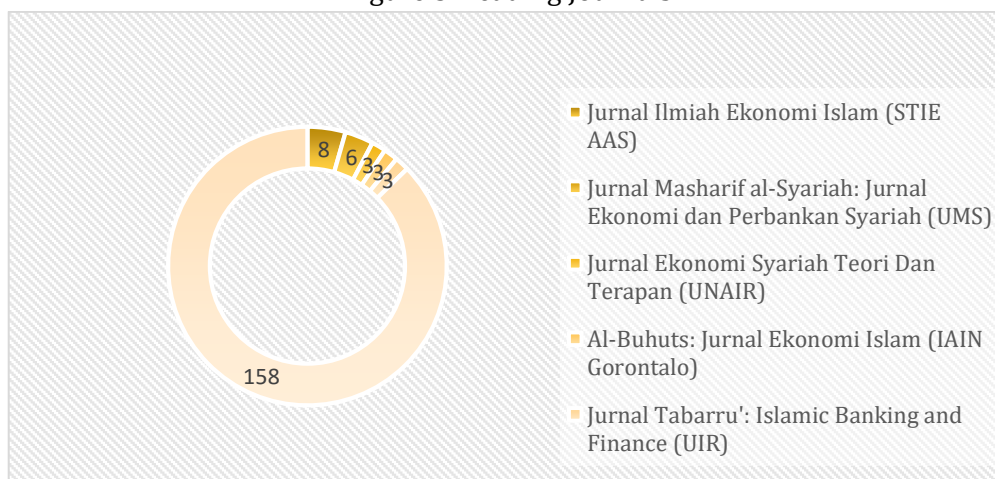
<sup>15</sup> Irene Bautista-Bernal, Cristina Quintana García, And Macarena Marchante- Lara, “Research Trends In Occupational Health And Social Responsibility: A Bibliometric Analysis,” *Safety Science*, (2021): 137.

The results of the bibliography show the number of publications by year, from 1 article in 2016, to 4 articles in 2017 (YoY 300%), increased to 13 articles in 2018 (YoY 225%), 21 articles in 2019 (YoY 62%), 44 articles in 2020 (YoY 110%), 54 articles in 2021 (23%), 63 articles in 2022 (YoY 17%), and 82 articles in 2023 (30%), while in early June 2024 a total of 30 articles have been collected. The number of publications continues to increase as time goes by. The current increase in publishing activity highlights the growing need for future studies on Islamic fintech. There are several reasons why fintech research is booming, such as technological innovations that provide cheaper and more accessible financial solutions, changes in consumer behavior in personal financial management, and financial inclusion for rural residents or small entrepreneurs.

### Leading Journals

Of the 146 journals cited, each of the 37 journals received more than the average number of citations (13.5). Details of the top five leading journals are shown in Figure 5.

Figure 5. Leading Journals



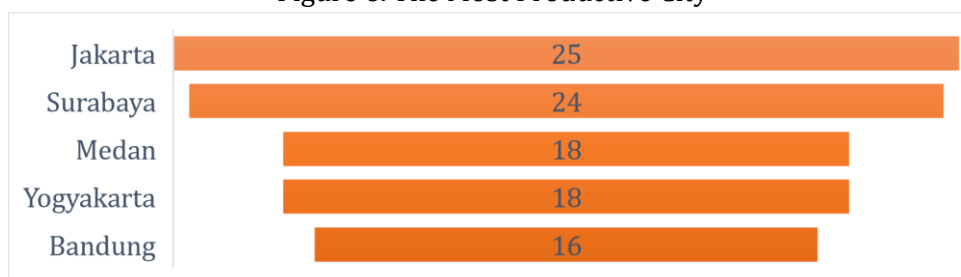
Source: PoP, Data Processed by the Author in 2024

In line with the need for a lot of exploration in the field of Sharia Fintech considering that this field is still relatively new, it can be seen that the journals that accommodate a lot of research are journals indexed by SINTA 3-5. Each of the leading journals based on their order consists of: Scientific Journal of Islamic Economics (SINTA 3) with 320 citations, Journal of Masharif al-Syariah - Journal of Sharia Economics and Banking (SINTA 5) with 110 citations, Journal of Theoretical and Applied Sharia Economics (SINTA 3) with 23 citations, Al-Buhuts - Journal of Islamic Economics (SINTA 4) with 29 citations, and Journal of Tabarru' - Islamic Banking and Finance (SINTA 4) with 25 citations.

### Regional Analysis

Based on regional analysis, it was found that authors, educational institutions, journal publications, and citations in the field of Sharia Fintech came from the high attention and development of science and technology given by most of the specific regions to the number of articles published. Details of the ten most productive cities are shown in Figure 6.

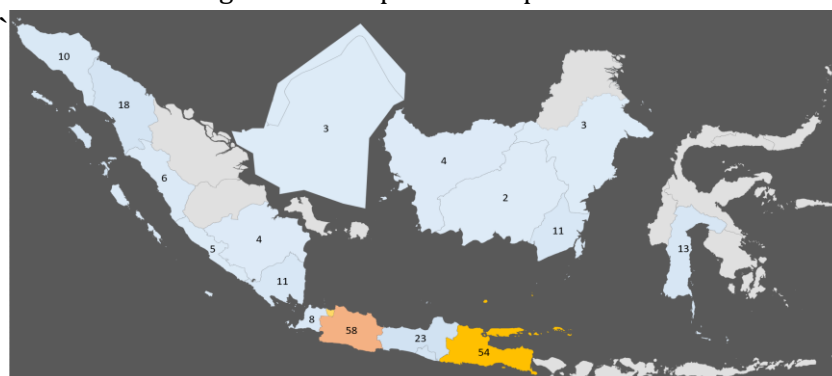
Figure 6. The Most Productive City



Source: PoP, Data Processed by the Author in 2024

Jakarta ranked first, followed by Surabaya, Medan, Yogyakarta, and Bandung. This finding is relevant to the fact that in these big cities, there are economic and business centers, so science and technology are developing rapidly, followed by a growing digital infrastructure, such as easy internet access, as well as many education and research centers.<sup>16</sup> Next, a second analysis was carried out based on the most productive provinces as reflected in Figure 7.

Figure 7. Most productive provinces



Source: PoP, Data Processed by the Author in 2024

The second area analysis used is the distribution of knowledge based on the province of the number of articles published. The results obtained are that West Java is ranked first, followed by East Java, DKI Jakarta, Central Java, and North Sumatra. This result is in line with the large number of people living in the region based on data from the Central Statistics Agency (BPS) as of December 2023, namely West Java (49.9 million), followed by East Java (41.64 million), Central Java (38.13 million), North Sumatra (15.47 million), Banten (12.47 million), and Jakarta (11.34 million).

### Most Productive and Most Influential Authors/Institutions

The results of this study found that the most productive author in the field of sharia fintech is T Trimulato, he contributed a lot of sharia fintech research with the topic "Excellent Service for Sharia Fintech in the Midst of Covid-19 Conditions, Linkage of Sharia

<sup>16</sup> Clara J. Setiawan And Rahmat H. Pratama, "Urbanization And Technology Advancement In Indonesian Economic Hubs: Jakarta, Surabaya, Medan, Yogyakarta, And Bandung," *Indonesian Journal Of Urban Studies*, (2023).



Banks and Sharia Fintech, Digital-Based Financing Distribution and Financing Risks, and MSME Development Through Sharia Fintech". The results of the research on the most productive and influential authors/institutions are shown in Table 1.

Table 1. Most Productive and Most Influential Authors/Institutions

Authors	Citations	Institutions
M Ansori	335	Nahdlatul Ulama Islamic University of Jepara
H Hiyanti	229	University of Indonesia
L Nugroho	229	University of Indonesia
C Sukmadilaga	229	University of Indonesia
D Yarli	136	Tazkia Bogor Islamic Economics College (STEI)
ATRC Yudha	105	Scopindo Media Library
AS Rusydiana	103	Bogor Agricultural University
W Lutfiah	90	Universitas Airlangga
AB Alwi	90	Universitas Airlangga
DD Setiani	90	Sunan Ampel State Islamic University Surabaya
T Trimulato	5	Academy of Accountancy Surakarta (STIE AAS)
H Suhendar	4	Pekalongan State Islamic Institute
L Rahmawati	3	Sunan Ampel State Islamic University Surabaya
W Yuspin	3	University of Muhammadiyah Surakarta
ATRC Yudha	3	Scopindo Media Library
M Iqbal	3	Perbanas Institute
K Islamiyah	2	State Islamic University of Jakarta
S Yahya	2	Universitas Airlangga
P Lestari	2	Jenderal Soedirman University
AR Amiruddin	2	Scopindo Media Library

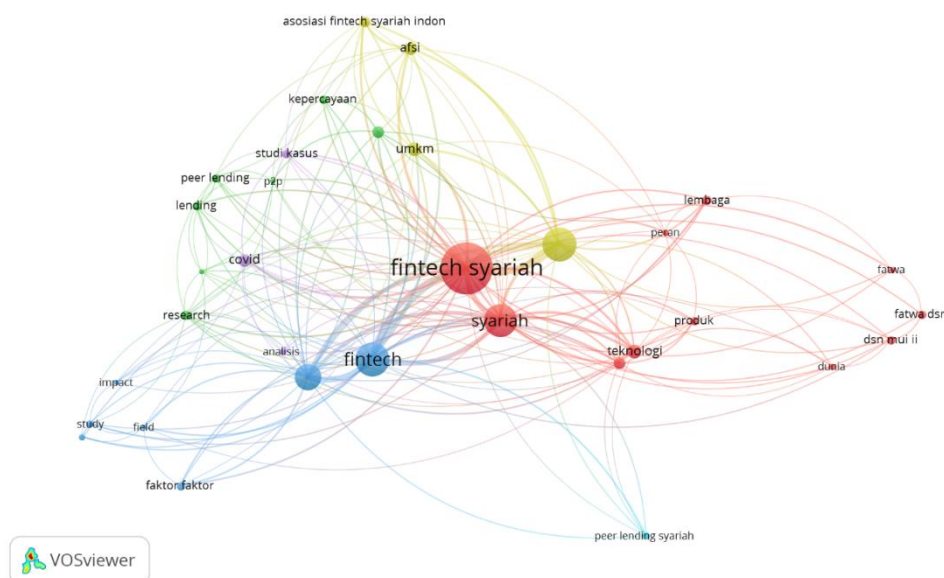
**Source:** Vosviewer, Data Processed by the Author in 2024

The data in Table 1 shows that M Ansori and H Hiyanti received the most citations for their publications, with 335 and 229, respectively. M Ansori raised an article entitled "The Development and Impact of Financial Technology (Fintech) on the Sharia Financial Industry in Central Java", with a qualitative research method, collecting information from the Financial Services Authority and the Sharia People's Financing Bank, while H Hiyanti wrote about "Opportunities and Challenges of Sharia Fintech (Financial Technology) in Indonesia", with descriptive analysis using an interactive model.

### The Emergence of Concurrent Keywords

Using bibliometric analysis and an emphasis on the word "co-occurrence", VOSviewer is used to find commonly recurring words and phrases. To determine how often this phrase appears in all literature, the sum of the entire dataset is used. By selecting the most popular terms to represent the Islamic fintech trend and setting a minimum repetition criterion of 3, the relevance of the keyword is determined. The results of the research on the emergence of concurrent keywords are shown in Figure 8.

Figure 8. The Emergence of Keyword Network Visualization in Sharia Fintech in 2024



**Source:** Vosviewer, Data Processed by the Author in 2024

The results in Figure 8 show the highest prevalence and rapid growth of items in the literature. The number of articles that come up with keywords is calculated using their occurrence in the title, abstract, and keyword fields. To help academics gain a thorough understanding of the evolution of a field, over time, the use of a bibliometric approach has become increasingly popular in regular academic studies. In addition, data depiction becomes easier to understand and access visualization tools such as VOSviewer. A number of studies have used bibliometrics to look at several aspects of Islamic fintech, including its development, current circumstances, and potential future possibilities. These clusters are found and categorized according to their quantity and quality of association. Each cluster in Figure 6 is connected to each other. While groupings around the map have fewer keyword links, groupings in the middle of the map have keyword correlations.

In this study, the authors examined the occurrence of keywords using VOSviewer, a program that generates visual representations of a network of objects. The number of interconnectedness and intensity of each interconnectedness are taken into account, and the size of the circle associated with each item represents the importance of the words presented. Using this method, the author can determine the areas of Islamic fintech research that have advanced and estimate future developments in these fields. Further keyword grouping analysis is available in Table 2.

Table 2. Keyword Grouping

Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6
DSN MUI	Innovation	Factors	AFSI	Analysis	Sharia Peer Lending
World	Belief	Field	Indonesian Sharia Fintech Association	Covid	
Fatwa	Lending	Financial Technology	Indonesia	Case Studies	
Sharia Fintech Finance	Sharia Lending P2P	Fintech Impact	MSMEs		
Institution	Peer Lending	Interest			
Role	Research	Study			
Product					
Sharia Technology					

**Source:** Vosviewer, Data Processed by the Author in 2024

Based on the search for the occurrence of keywords, 67 words were obtained that met the minimum repetition criteria of 3, and 33 words were selected based on relevance to the research topic. Of the 33 words selected, six different clusters were produced in sharia fintech research topics.

### Cluster 1: Principles and Practices of Islamic Finance

Ten items make up the study group "Principles and Practices of Islamic Finance". The red cluster on the map, according to the data, is an indication of that grand idea that requires in-depth investigation in the future. This cluster covers the entire rightmost center map, showing direct connections to the blue cluster as well as indirect connections to the green and yellow clusters. Table 3 lists the terms cluster 1 along with their frequency and relationship.

Table 3. Kata Kunci Kluster 1 dalam Topik Fintech Syariah

Keywords (Cluster 1)	Link	The Power of Local Links	Event
DSN MUI	8	13	6
World	6	9	4
Fatwa	5	10	4
Fatwa DSN	4	8	6
Sharia Fintech	32	321	215
Finance	14	40	11
Institution	8	19	8
Role	9	10	4
Product	7	16	6
Sharia	28	184	90
Technology	15	54	16

**Source:** Vosviewer, Data Processed by the Author in 2024

The findings emphasize the importance of examining these ideas thoroughly to understand the consequences. Islamic financial principles and practices encompass a number of key concepts that form the basis for a financial system that complies with Sharia principles. In it there is sharia law, namely the Islamic financial system based on Sharia law, which includes Islamic principles in all aspects of life, including economics and finance.<sup>17</sup> The prohibition of usury, namely interest in the conventional sense, is prohibited in Islam. This means that no interest is charged or received in financial transactions. Instead, there is a mechanism for the parties who provide capital to share profits or benefit from real assets.<sup>18</sup>

The principle of profit sharing, namely the Islamic financial system, encourages the principle of profit-sharing in investment and financing, where the party providing capital (investors) and the party using capital (entrepreneurs) share profits according to the previous agreement.<sup>19</sup> Asset-based transactions, i.e. Islamic financial transactions must be based on real assets or services, must not be speculative or high-risk that cannot be predicted. The prohibition of investment in haram businesses, that is, investment in businesses that are considered haram according to Islamic law, such as the alcohol, tobacco, gambling, and so on industries, is not allowed. Prudence and social responsibility, i.e. Islamic financial practices promote transparency, fairness, and social responsibility in every transaction and economic activity. Consistency with Islamic law principles, i.e. all financial products and services must be consistent with Sharia principles, which includes supervision and certification by authorized Islamic financial institutions.

## **Cluster 2: Innovative Financial Technology**

The seven items make up the "Innovative Financial Technology" study group, which focuses primarily on important issues such as "Financial Inclusion", "Improving User Experience", "Adoption of New Technology", "Development of New Products and Services", and "Sustainability". Conducting a detailed investigation of the green clusters shown on the map will be important in the future. Although it basically shows little relationship with the yellow color and the red cluster, it has a slender relationship with the blue cluster. Table 4 lists the terms cluster 2 along with their frequency and relationship.

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<sup>17</sup> Mohamed Ariff And Munawar Iqbal, *Principles Of Islamic Finance: A Guide To Shariab-Compliant Financial Products*, (UK: Routledge, 2019).

<sup>18</sup> Miftahul Huda, "Bank Interest Halal: Distinction Interpretation Of Contemporary Ulama Thought Umer Caphra And Muhammad Sayyid 'Thanthawi," *FINANSIA : Jurnal Akuntansi dan Perbankan Syariah* 5, no. 2 (2022).

<sup>19</sup> Muhammad Ramadhan, Zaki Mubarak, And Lisda Aisyah, "Analisis Bagi Hasil, Kualitas Pelayanan, Dan Minat Nasabah Dalam Menggunakan Produk Deposito Syariah", *FINANSIA : Jurnal Akuntansi dan Perbankan Syariah* 5, no. 2 (2022).

Table 4. Cluster 2 Keywords in Sharia Fintech Topics

Keywords (Cluster 2)	Link	The Power of Local Links	Event
Innovation	10	12	3
Belief	7	13	6
Lending	9	18	7
Sharia Lending	11	27	11
P2P	9	13	3
Peer Lending	10	16	7
Research	13	22	8

**Source:** Vosviewer, Data Processed by the Author in 2024

Fintech is any form of technology used to provide financial solutions in a new, more efficient, and more inclusive way. Technological advances occur in every sector due to the digital revolution, where users can easily approach and use services at any time, especially in the banking sector. One of the latest and new aspects of the digital revolution around the world is mobile payments, which allow users to make financial transactions independently.<sup>20</sup> This includes a range of technologies and platforms that are transforming the traditional way in which financial services are provided and accessed by individuals, businesses, and financial institutions, such as P2P Lending, which is a platform that connects borrowers directly with lenders, eliminating traditional intermediaries such as banks and allowing more access to those in need of loans. Mobile payments, which are apps and platforms that allow users to make payments through their mobile devices, reduce reliance on cash and credit card transactions. Blockchain and cryptocurrency, i.e. blockchain technology is used to secure and verify financial transactions digitally without the need for intermediaries.<sup>21</sup> Cryptocurrencies such as bitcoin are examples of the implementation of blockchain technology.

Robo-advisors, which are automated investment platforms that use algorithms to provide investment advice to investors, reduce management costs and improve access to investment services for individuals. Insurtech, which is a technology used to transform the insurance industry by providing faster claims processes, more accurate risk assessments, and more affordable insurance products. Digital banking, i.e. digital banks that eliminate physical branches and provide banking services through digital platforms, such as mobile applications or websites, increasing accessibility and convenience for customers. Big data and analytics, which is the use of big data to analyze consumer behavior, improve risk management, and develop more personalized and effective financial products<sup>22</sup>. The Internet of Things (IoT) in finance, which is connecting physical devices such as cars or smart home devices to facilitate payments, financial management, and asset management more efficiently. Crowdfunding, which is a tool that allows individuals or businesses to raise

<sup>20</sup> Priyanka Yadav, "Financial Equality Through Technology: Do Perceived Risks Deter Indian Women From Sustained Use Of Mobile Payment Services?," *International Journal Of Information Management Data Insights* 4, no. 2 (2024).

<sup>21</sup> Ashish Kumar And Arun G. Pande, *Fintech: The Innovation And Transformation Of Financial Services*, (Germany: Springer, 2022).

<sup>22</sup> Bayo Olushola Omoyiola, "The Social Implications, Risks, Challenges And Opportunities Of Big Data," *Emerald Open Research* 4, no 23 (2023).

funds from many people through an online platform, for a specific project or cause. Regtech, which is a technology that helps financial institutions comply with rules and regulatory standards more efficiently, including better transaction supervision and reporting.<sup>23</sup>

### Cluster 3: Study or Research on Financial Technology

The seven items make up the cluster group "Studies or Research on Financial Technology", which focuses mainly on important issues such as "Financial Innovation", "Regulatory Influence", "Financial Literacy and Education", and "Industry Collaboration". Based on the map provided, it appears that the blue term group presents a significant problem and requires in-depth analysis in the near future. Table 5 lists the terms cluster 3 along with their frequencies and relationships.

Table 5. Keywords of Cluster 3 in Sharia Fintech Topics

Keywords (Cluster 3)	Link	The Power of Local Links	Event
Factors	6	16	6
Field	8	13	3
Financial Technology	24	168	57
Fintech	27	248	92
Impact	7	7	3
Interest	6	11	4
Study	8	14	5

**Source:** Vosviewer, Data Processed by the Author in 2024

The study or research on financial technology (fintech) focuses on various issues and aspects relevant to the development and application of technology in the financial industry, such as innovation in financial services, i.e. how new technologies such as blockchain, artificial intelligence, and IoT are changing the way financial services are provided and accessed by consumers and businesses. Regulation and compliance, i.e. how regulations and policies can accommodate fintech innovations without sacrificing security and compliance with industry and legal standards. Security and privacy, i.e. how technology can be used to improve data security and user privacy in the context of digital financial transactions.<sup>24</sup> Financial inclusion, which is how fintech can improve access to financial services for previously underserved or marginalized populations, including in rural areas or in developing countries.

Economic and social influence, namely the economic impact of fintech adoption on the financial system, economic growth, and wealth distribution. Business models and sustainability, which is how fintech is changing business models in the financial industry, including the development of sustainable business models and considering sustainability aspects. Financial education and literacy, namely how fintech can be used to improve financial education and literacy in the community, as well as facilitate better access to

<sup>23</sup> Luis Hernan Contreras Pinochet, "The Influence Of The Attributes Of "Internet Of Things" Products On Functional And Emotional Experiences Of Purchase Intention," *Innovation & Management Review* 15, no. 3 (2018).

<sup>24</sup> Daniel K. Zwick And Lydia M. Walsh, *Fintech And The Future Of Finance: Trends, Challenges, And Opportunities*, (UK: Cambridge University Press, 2023).

information.<sup>25</sup> Equity and access, which is how fintech can promote equal access to financial services for individuals from various backgrounds, including people with special needs or in vulnerable situations. Investment and risk management, which is how technology can be used to improve risk management in investment, as well as new investment product innovations driven by fintech. Collaboration between financial institutions and technology, which is how traditional financial institutions collaborate with technology companies and fintech startups to create a more dynamic and innovative ecosystem.<sup>26</sup>

#### Cluster 4: Association of Fintech and MSME Development in Indonesia

Four items form the cluster group "Association of Fintech and MSME Development in Indonesia", which focuses mainly on issues such as "Financial Access", "Financial Inclusion", "Alternative Funding", and "Financial Education". Table 6 lists the terms cluster 4 along with their frequencies and relationships.

Table 6. Keywords of Cluster 4 in Sharia Fintech Topics

Keywords (Cluster 4)	Link	The Power of Local Links	Event
AFSI	12	48	14
Indonesian Sharia Fintech Association	10	35	9
Indonesia	23	184	94
MSMEs	11	39	17

**Source:** Vosviewer, Data Processed by the Author in 2024

The yellow sentence group consists of complex concepts that require additional research, according to the map provided. The poor relationship that this cluster has with other clusters. The map also shows a possible lack of integration with the larger conceptual framework

The Association of Fintech and MSME Development in Indonesia focuses on several key issues relevant to the role of fintech in supporting the MSME sector, including access to finance, one of the main issues is how fintech can increase MSMEs' access to financial services, especially for those who have difficulty getting access to conventional banks. Financial inclusion, namely fintech has the potential to expand financial inclusion among MSMEs by providing more affordable and accessible financial services.<sup>27</sup> Alternative funding, namely fintech can provide alternative funding solutions for MSMEs through P2P lending platforms, crowdfunding, or other models that allow MSMEs to get capital faster and easier. Financial education, namely fintech associations can play an important role in improving the financial literacy of MSMEs, providing education about financial management, the use of technology, and an understanding of available fintech products and services.

<sup>25</sup> Michael J. Schermerhorn, "The Role Of Financial Education In Financial Literacy And Financial Behavior," *Journal Of Economic Education*, (2019).

<sup>26</sup> Jonathan E. Shaw And Olivia R. James, *Strategic Alliances In Financial Services: Leveraging Fintech Innovations*, (UK: Cambridge University Press, 2021).

<sup>27</sup> Michael P. Arney And Stephanie J. Johnson, *Fintech For Smes: How Digital Technologies Are Revolutionizing The Financial Services For Small And Medium Enterprises*, (UK: Palgrave Macmillan, 2021).

### Cluster 5: “Analisis Covid dan Studi Kasus dalam Konteks Fintech Syariah”

The three items form the cluster group "Covid Analysis and Case Studies in the Context of Sharia Fintech", which focuses mainly on issues such as the Impact of the Pandemic on the Growth of Sharia Fintech, and Case Studies on Sharia Fintech in Indonesia. Table 7 lists the terms cluster 5 along with their frequencies and relationships.

Table 7. Keywords of Cluster 5 in Sharia Fintech Topics

Keywords (Cluster 5)	Link	The Power of Local Links	Event
Analysis	8	12	4
Covid	12	24	13
Case Studies	10	17	6

**Source:** Vosviewer, Data Processed by the Author in 2024

The purple sentence group consists of complex concepts that require additional research, according to the map provided. The poor relationship that this cluster has with other clusters. The map also shows a possible lack of integration with the larger conceptual framework. Therefore, in-depth investigation and analysis are needed to understand the intricacies and potential connections between the purple cluster and other clusters.

Keyword analysis refers to the process of examining and evaluating information to understand and reveal meanings, relationships, and patterns in a specific context, in this case, analysis of issues related to Islamic fintech. The keyword covid describes the Covid-19 pandemic which affects various aspects of life, including the development and impact of sharia fintech. The keyword case study refers to in-depth research or investigation regarding specific cases or relevant scenarios in the development of sharia fintech.<sup>28</sup> This cluster illustrates the focus on the analysis carried out on the impact of Covid-19 on the development of sharia fintech, as well as case studies that illustrate implementation or challenges in this context.<sup>29</sup>

### Cluster 6: Sharia Peer Lending

This cluster has only one item, namely Sharia Peer Lending, which has 8 links, 13 local link strengths, and 5 events. The last cluster which is turquoise blue consists of concepts that are still rare and urgently need additional research in the future. Sharia P2P lending is a funding model that connects borrowers directly with investors or lenders, using sharia principles in financial transactions. By focusing on these issues, sharia peer lending not only strives to provide innovative and inclusive financial solutions, but also to promote sharia values in business and financial practices.

### Conclusion

The study contributed to the literature on sharia fintech by conducting a comprehensive review. Keyword analysis found six areas of study that are currently being explored, namely: principles and practices of Islamic finance, innovative

<sup>28</sup> Paolo Sironi, *Fintech Innovations: Case Studies And Analysis*, (USA: Wiley, 2021).

<sup>29</sup> Rizki Maulana And Jaka Sriyana, “The The Effect Of A Countercyclical Covid 19 Policy On The Main Financial Ratios In Islamic Rural Banks”, *Jurnal Ekonomi Dan Keuangan Islam* 9, no. 1 (2023).



financial technology, financial technology studies, fintech associations and MSME development, covid analysis and case studies, and sharia peer lending. In addition, it was found that sharia fintech articles are mostly published in Jakarta. The most famous author is T Trimulato. STIE AAS and JIEI are the most significant universities and journals in terms of citation publishing. The number of scientific publications has soared due to unexpected challenges and globalization since 2016. For further research, it is good to investigate the role of Islamic finance in promoting sustainable development and solving challenges in society and the environment so that it can bear fruit.

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### Author Contributions Statement

DA contributes to developing research concepts and problems together with K. DA also contributes in selecting previous comprehensive research to identify research gaps with MS. In addition, DA and K choose research methods and collect research data. Furthermore, the DA processed the research data and outlined its research findings based on suggestions and inputs from K and MS.

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