

## The Role of Fintech in the Transformation of the Cashless Society of the Sharia Financial Sector with A Literature Review Approach

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### Abstract

*The development of financial technology (fintech) has driven a significant transformation in the Islamic finance sector, particularly toward a cashless society, where transactions are conducted without cash. This study aims to analyze the role of fintech in this transformation through a literature review and bibliometric analysis using data from 21 Scopus journals, 26 from Google Scholar, and 15 from Crossref. Of the 62 journals analyzed, approximately 70% indicate that fintech plays a significant role in increasing financial inclusion, operational efficiency, and the development of Sharia-compliant financial products. Innovations such as digital payments, peer-to-peer lending, and Sharia-compliant investments are key drivers of this transition. Analysis using Vosviewer also reveals the dominance of the keyword "fintech," which is closely correlated with Islamic banking, although specific studies related to a cashless society are still limited. However, challenges such as regulation, data security, and public literacy remain obstacles that need to be overcome. Overall, fintech is a key catalyst in the digitalization of inclusive and sustainable Islamic finance.*

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## INTRODUCTION

Digital transformation has changed the way we transact, leading to a shift towards a cashless society, where cash is increasingly being replaced by electronic payment methods. In this context of change, financial technology or fintech plays a key role as a major driver, offering innovative solutions that utilize cutting-edge technologies such as blockchain, artificial intelligence, and big data. Fintech not only accelerates payment processes and enhances security but also reduces transaction costs, making financial services more efficient and practical. One example of fintech technology application that we can see today is the ability to pay UKT (Fixed Tuition Fees), which previously had to be done through an ATM or bank teller, can now be done using a mobile app on a smartphone. Similarly, electricity bill payments, which previously required a visit to the nearest PLN office, can now be made through a wallet app and mobile banking (Amaniska et al., 2019).

Over the past few decades, the global financial system has witnessed the emergence and rapid growth of Islamic finance, reflecting the high demand for ethical financial solutions and the growing influence of Islamic principles in the economic world (Alaoui & El Marzouki, 2022). The Islamic finance sector, which operates based on Islamic Sharia principles such as the prohibition of *riba* (interest) and *gharar* (uncertainty), has also felt the significant impact of this digital revolution. Along with the rapid growth and increasing interest in Islamic financial products, the integration of fintech in this sector opens up great opportunities to expand access, improve operational efficiency, and enhance transaction transparency. The Islamic banking model, which emphasizes justice, balance, and ethics, has the potential to benefit greatly from the application of financial technology that is consistent with these principles.

Sharia finance plays a role in improving the stability and resilience of the financial system by promoting a culture of prudent risk management and aligning financial incentives with real economic activity. However, despite its many benefits, the integration of sharia finance into the transformation process towards a cashless society within the framework of sharia finance faces specific challenges. One of the main challenges is ensuring that fintech solutions not only comply with Islamic principles but also overcome any regulatory barriers that may exist. In other words, while fintech can offer various advantages, its implementation in the Islamic finance sector must be done carefully to remain consistent with Islamic ethical and legal principles.

This study aims to explore in depth the role of fintech in the transformation of Islamic finance toward a cashless society. Previous studies, such as those conducted by Norrahman (2023), have shown the great potential of fintech in accelerating access to Islamic finance, but there

are still gaps that need to be filled, particularly regarding the implementation of a cashless society in this context. Research by Azifi & Dharma (2024) also highlights the compatibility of e-money features with *maqashid syariah*, but does not specifically discuss the role of fintech in promoting a cashless society in the Islamic finance sector.

By understanding the role of fintech in this context, this study aims to provide significant insights and contributions through a literature review on the development of the Islamic finance ecosystem. In this ever-evolving digital age, an in-depth exploration of the role of fintech will provide valuable insights to drive the advancement of the Islamic finance sector globally.

## **METHODS**

This research utilizes a descriptive qualitative approach and bibliometric analysis to examine articles pertaining to the research's area in order to pinpoint concepts, trends, and keywords. The data is then analyzed using VOSviewer to obtain a visual mapping of the data to identify trends, thereby elucidating the phenomena currently occurring in the Islamic Fintech industry. The researcher adopted literature review as the primary method for collecting data related to the interaction between cashless society and the Islamic financial sector. Our literature analysis focuses on cashless societies operating within the framework of Islamic finance. We conduct a thorough analysis of various literature sources, including research articles, industry reports, regulatory publications, and relevant books.

This research used 62 scientific articles obtained through Google Scholar, Scopus, and Crossref. This number is considered adequate to provide a comprehensive picture of the development of fintech, cashless society, and Islamic banking. The selection of 62 articles was based on consideration of the adequacy of data to be analyzed, representation of sources from national and international reputable journals, and a variety of perspectives covering aspects of regulation, technology, implementation, and socio-economic impacts. In addition, this number allows for in-depth analysis without losing focus on the main topic of the study. Thus, the use of 62 articles provides a combination of breadth and depth of literature, so that the research findings can be academically accounted for and relevant to the context of Islamic finance development in the digital era.

This study only uses articles, where the selection of articles is based on inclusion and exclusion criteria to ensure that the literature sources obtained are relevant and credible. Articles were included if they discussed topics related to fintech, cashless society, and Islamic banking, were published in reputable journals or proceedings, were indexed in the Google Scholar, Scopus, and Crossref databases, were within the latest publication

time frame, and were available in Indonesian or English. Meanwhile, articles that are merely opinions, news, or non-academic reports, lack full access, or are duplicates of the same publication are excluded from the analysis. The selection process begins with reviewing the title and abstract, followed by a thorough examination of the article's content, resulting in 62 literature collections that align with the research objectives.

Data collected from various sources is processed to obtain a comprehensive perspective on the role of Fintech in transforming the cashless society in the Islamic finance sector. This research method provides a solid foundation for analyzing the overall impact and emerging patterns of change. With the results of the literature analysis and the data collected, we hope to identify key issues, trends, and significant implications, thereby providing in-depth insights in this research journal.

## **RESULT AND DISCUSSION**

Fintech's contribution to the evolution of a cashless society refers to changes in people's habits in conducting financial transactions. In line with the definition of a one example of a cashless society is one in which digital currency has supplanted cash. To put it another way, only digital electronic forms of legal currency (money) are recognized, tracked, and traded. (Fabris, 2019). This development takes a considerable amount of time because it involves changing habits within society. Additionally, Fintech acts as a catalyst for cultural and mental shifts related to the use of cash. Increased public awareness of Sharia principles and the adoption of financial technology are integral parts of this transformation. Education combined with technological innovation creates an environment that supports the shift toward a cashless society in the Islamic finance sector.

Sharia economics is a financial and economic framework that applies the fundamental ideals and precepts of sharia in economic and financial activities (Bank Indonesia, 2024). It is a branch of economics that applies the fundamental tenets and ideals of sharia, which are derived from the Qur'an, the Sunnah, the Ijma, and Qiyas. The approach is universally applicable to all facets of life, including banking and economic and financial operations. From a theoretical standpoint, Islamic economics offers a compromise between the capitalism and socialist systems. As a result, the Islamic economic system incorporates the moral precepts of both economic systems. Sharia banking products have been adapted to Sharia contracts and recognized by the National Sharia Council-Indonesian Ulema Council (DSN-MUI), including savings, deposits, investments, financing, etc.

## 1. Fintech Development

Fintech is a financial innovation made possible by technology to develop new business models, applications, procedures, or products that significantly affect markets, financial institutions, and the delivery of financial services, according to the Financial Stability Board's rules (Financial Stability Board, 2017). In practice, the development of fintech has resulted in decentralization in the financial system. Decentralization of the financial system indicates a situation where the functions of centralized financial institutions are reduced or even eliminated. Considering the findings of the FSB's investigation, decentralization in the monetary system generally manifests itself in three aspects (Financial Stability Board, 2019): (1) Decentralization of decision-making, which involves the transfer of decision-making processes from a single intermediary institution or specific infrastructure to a system that allows users to make decisions regarding financial transactions; (2) Decentralization of risk-taking, which involves a shift from the retention of certain risks (such as credit and liquidity risks) from the traditional balance sheet of intermediaries to a more direct matching between users and financial service providers; (3) Decentralization of record keeping, which involves a shift from centralized data and record keeping to a system that has the capability to store and access data from the entire consortium of users.

In 2018, the value of investment in the fintech sector globally reached USD 111.8 billion, with the United States dominating as the country with the largest investment, reaching USD 52.5 billion. Despite the COVID-19 pandemic, positive developments were still seen in the value of global fintech investment in the period 2020 to 2021. According to KPMG data, global fintech investment reached 98 billion USD in the first half of 2021, an increase compared to the same period in 2020, which was 87 billion USD (KPMG, 2021).

Currently, various technologies are being applied in financial services, including distributed ledger technology, Big Data, the Internet of Things (IoT), cloud computing, artificial intelligence, biometric technology, and augmented/virtual reality. Fintech plays a key role in driving the financial services industry towards innovative business models. New business models initiated by fintech have proven to provide solutions to barriers to accessing financial services.

In Indonesia, the implementation of fintech as a solution to financial access issues has attracted the attention of the Financial Services Authority (OJK). The OJK recognizes the Indonesian people's need for alternative financial services that are more flexible, transparent, and can cover a larger population than traditional financial services (Nuryakin et al., 2019). Awareness of the importance of alternative funding sources is

reflected in efforts such as the establishment of the Indonesian Fintech Association (AFTECH) and the Bank Indonesia Fintech Office. These steps can be interpreted as support for the growth and development of technology companies in Indonesia, which will ultimately drive the development of fintech.

Based on data regarding the development of P2P lending fintech, it can be concluded that the loan provision market share, which was previously dominated by banks, is now shifting. P2P lending fintech companies have emerged as new players in providing loan products, especially microloans for the community. The payment sector ranks second as the type of fintech service with the highest usage in Indonesia. Data from the Indonesian Fintech Association shows that the payment sector has experienced significant growth, with a growth rate of 15% for e-money transaction values and 7% for e-money volume. According to the 2020 Indonesian Fintech Report, the number of startups in the payment sector reached 23%, placing it in second place after P2P lending startups.

The Ministry of Communication and Information Technology regulates all electronic transactions involving fintech. Kominfo determines which transactions are legal for fintech companies to conduct and prohibits certain types of electronic transactions. These regulations are governed by Law No. 19 of 2016 concerning Electronic Information and Transactions (ITE Law), which also regulates personal data protection. Every transaction conducted by fintech companies must adhere to the principle of respecting consumer data, including in terms of data collection, processing, and deletion (University of Padjadjaran, 2021).

## **2. Application and Implications of Fintech**

The implications of fintech advances and the decentralization of the financial system on regulatory challenges in Indonesia include the spread of fintech regulations across various laws. The existence of regulations that are not yet comprehensive has the potential to result in weaknesses in providing legal certainty and protection, especially for users. This challenge requires a swift response from regulators, who are expected to create a comprehensive regulatory framework to keep pace with and anticipate fintech developments. The fintech regulatory system must also ensure legal certainty while supporting economic growth and the sustainability of financial innovation.

Additionally, a regulatory solution that can be implemented in Indonesia to address the development of fintech and the decentralization of the financial system is the establishment of a fintech law. The fintech law should be designed with a principle-based approach to keep pace

with and anticipate the dynamics of fintech, provide legal certainty and protection, and encourage the continuation of innovation and economic growth. A principle-based regulatory model, as implemented in the United Kingdom as part of financial services sector regulatory reform, is expected to achieve three philosophical legal objectives: fairness, utility, and legal certainty (Rahadiyan, 2022).

### **3. Cashless Society in Fintech**

The digital economy refers to an economy that relies on digital technology, often seen through business activities in markets via the internet and the world wide web (British Corporate Society, 2012). Various sectors have experienced significant disruption due to the penetration of the internet into conventional business processes, as reported by UNCTAD (2017). Some of the affected sectors include:

- 1) Advanced Production Equipment and Supplies, Use of Robots, and Business Process Automation in Factories: With increased flexibility, speed, intelligence, and cost reduction, the use of robots in industry is becoming more widespread. The latest technology allows robots to collaborate with humans without replacing them, making the production process more efficient and safer.
- 2) New Data Sources via Mobile Gadgets and the Internet of Things (IoT): The Internet of Things (IoT) provides real-time and accurate information about production performance and results. This gives SME entrepreneurs access to accurate information about their business processes, increasing productivity in the industry.
- 3) Cloud Computing: The development of cloud computing is a key factor in establishing a digital economy platform. Cloud computing enables data storage and access via the internet, freeing businesses from dependence on physical devices and allowing for unlimited flexibility.
- 4) Big Data Analytics: Through the Internet of Things (IoT), data from various sources can be accurately calculated and monitored online. Big data analytics enables accurate and real-time data-driven decision making, known as data-driven decision making (DDD).
- 5) Artificial Intelligence (AI): Artificial intelligence encompasses various capabilities such as voice recognition, pattern learning, planning, and problem-solving. This innovation has a significant impact on human ability to automate and improve efficiency in various business activities.

With big data analysis and the existence of fintech, it will be easier to identify individual financial patterns and characteristics. In addition, this data will accurately synchronize with the amount of money

circulating in society, real-time purchasing patterns, and accurately predict tax receipts and payments (Junedi, 2020).

#### **4. The Transformation of a Cashless Society in the Sharia Finance Sector**

In 2015, Islamic banking in Indonesia successfully achieved a significant market share, reflecting rapid development and increasing acceptance by the public. This convergence enabled development that was tailored to the conditions and readiness of the players without being overly demanding, while maintaining the purity of Islamic products that are acceptable to the wider community and recognized globally. This cautious approach is consistent with Islamic banking norms that are upheld (Amalia Ramadhani Suci Ardi et al., 2023).

##### **1) Market Driven**

The expansion of the Islamic banking network is inseparable from the interaction between the public need for Islamic banking products and services and the availability of offers from investors or banking institutions. Sharia banks must have the ability to understand market dynamics and provide the best services. This does not mean that sharia banks must bow to market pressures; rather, they must be able to uphold sharia principles, highlight their advantages, and educate the public about the uniqueness of sharia banks.

##### **2) Fair Treatment**

The Islamic banking industry does not have specific regulations during its establishment and development process. Regulations applicable to Islamic banking will be adjusted to the characteristics of the business. As a result, differences in regulations between conventional banking and Islamic banking may arise as a logical consequence of this adjustment.

##### **3) Gradual and Sustainable Approach**

The growth of Islamic banking is carried out gradually and sustainably from an institutional and legal perspective. Regulations and the development of Islamic banking infrastructure must be formulated based on current conditions, especially in a context where the implementation of Islamic law has not yet been fully realized. Ignoring this reality could render efforts to develop Islamic banking ineffective and negatively impact industry growth. In addressing the challenges of establishing a developing Islamic banking system, regulations and supporting infrastructure for Islamic banking are updated gradually, considering the urgency and priority of the many tasks that must be completed (Perkasa et al., 2022).

Support for legal and regulatory aspects will accelerate the growth of Islamic financial institutions because they have a clear legal basis and provide certainty. Digital transformation has become an urgent need in the banking sector, including Islamic banking (Dz, 2018). The demand



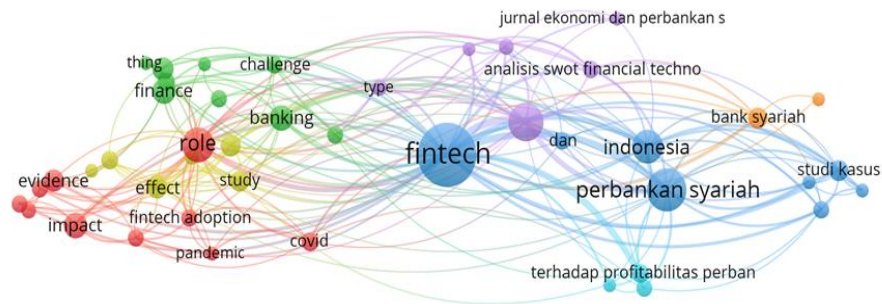
for digital acceleration has increased in recent years, motivated by shifting consumer demands for quick, easy, and safe banking services. Concrete steps in Indonesia progress in Islamic banking include the formulation in the A Comprehensive Plan for the Growth of the Islamic Banking Industry by Bank Indonesia. This strategy covers various strategic aspects, such as setting a vision in 2010 to become ASEAN's foremost Islamic banking sector, establishing a new representation of universal and inclusive national Islamic banking, more accurate market mapping, developing more diverse products, improving services, and a new communication strategy that positions Islamic banking beyond the conventional concept as a financial institution. Digital transformation in the Islamic banking information system has had a significant impact. Significant developments in the financial sector, especially Islamic banking, have been brought about by the use of technology. The creation of Indonesia's Islamic banking system within the framework of a dual banking system, also known as the Indonesian Banking Architecture (API), is one example of this transition (Rusydiana et al., 2021).

Digital transformation also plays an important role in improving financial literacy (Norrahan Rezki Akbar, 2023). Bank Indonesia has been actively conducting outreach and efforts to improve financial literacy in order to increase public understanding of Islamic banking products and services. In line with the acceleration of digital transformation in banking, Bank Indonesia has developed a Blueprint for Digital Transformation in Banking that encompasses five key elements: data, technology, risk management, collaboration, and institutional framework. The implementation of this Blueprint is expected to motivate the national banking sector to build resilience, competitiveness, and greater contribution. Through the use of technology and innovation, Islamic banking can provide better, more efficient, and more inclusive services to the public. Digital transformation also plays a role in improving financial literacy and expanding access to Islamic financial services.

## **5. Literature Review The Role of Fintech in the Transformation of a Cashless Society in the Sharia Finance Sector**

### **a. Network Visualization**

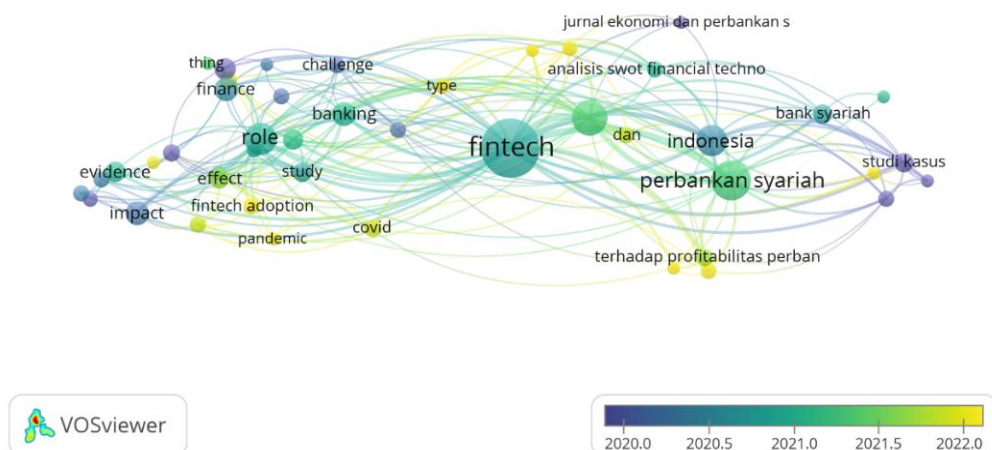
The following visualization using VOSviewer shows that the keyword “fintech” dominates the research network with strong links to Islamic banking.



**Figure 1. Network Visualization**

**b. Overlay Visualization**

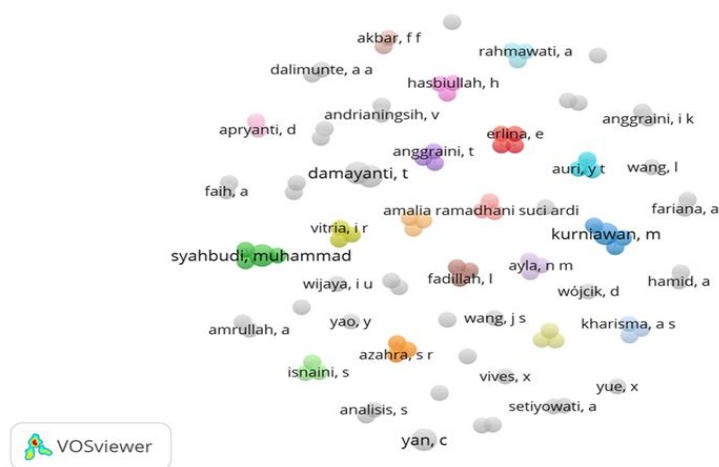
The overlay visualization shows that the keyword Fintech was most frequently used at the end of 2020. In 2021, the focus shifted to topics such as “opportunities and challenges of fintech” and “online loans” related to the Cashless Society.



**Figure 2. Overlay Visualization**

**c. Network Co-Authorship Visualization**

The following network visualization map shows 29 clusters of author collaboration on the topic of the Role of Fintech in the Transformation of a Cashless Society in the Islamic finance sector, with the red clusters being the most dense. The most productive authors with the most extensive collaboration networks are Syahbudi Muhammad and Kuriawan M, who are from UIN Sumatera Utara and Universitas Bina Sarana Informatika.



**Figure 3. Network Co-Authorship Visualization**

The data is the result of mapping from sources summarized by the author as follows (Iriyani et al., 2023)

**Table 1. List of Google Scholar Publications**

Author(Year)	Title	Journal	Result
Abidah, A Saiban, K Munir, M 2022	Peran Al-Quran Dan As-Sunnah Dalam Perkembangan Ekonomi Syariah: Kajian, Peluang Dan Tantangan Fintech Syariah.	Muslim Heritage	The role of the Qur'an and Sunnah as the main sources of law in Islamic economics, especially in relation to the development of Islamic fintech, as well as its opportunities and challenges.
Khoiroh, F N Latifah, E 2023	Fintech (Financial Technology) Dalam Sistem Pembayaran Non Tunai Di Perbankan Syariah (Studi Kasus Pada Bank Muamalat KCP Lamongan)	Public Service and Governance	The application of fintech in non-cash payment systems at Bank Muamalat KCP Lamongan, including the services offered and their implementation.
Fajria, R N 2019	Potensi Sinergitas Fintech Dengan Bank Syariah Dalam Meningkatkan Kinerja Perbankan Syariah Di Indonesia	MALIA: Journal of Islamic Banking and Finance	Exploring the potential for collaboration between fintech and Islamic banks to improve the performance of Islamic banking in Indonesia.

Author(Year)	Title	Journal	Result
Pajaria, Y 2021	Hambatan Dan Tantangan Inklusi Perbankan Syariah Dalam Digitalisasi Perbankan Di Era Financial Technology (Fintech)	KHOZAN A: Journal of Islamic Economic	Identify the obstacles and challenges faced by Islamic banking in adopting digitalization in the fintech era.
Subagiyo, R 2019	Era Fintech: Peluang Dan Tantangan Bagi Ekonomi Syariah.	El-Jizya: Jurnal Ekonomi Islam,	Discusses the impact of financial technology (fintech) developments on the Islamic economy, including the opportunities and challenges faced. This study shows that fintech can be a solution for needs that cannot be served by traditional financial institutions.
Isnaini, S. Lubis, N. Khairani, D 2023	Analisis SWOT Financial Technology (Fintech) perbankan syariah pada PT. Bank Sumut Cabang Syariah Padangsidempuan.	SEROJA	This study conducted a SWOT analysis to evaluate the strengths, weaknesses, opportunities, and threats faced by PT. Bank Sumut Syariah Padangsidempuan Branch in adopting fintech. The results show that although there are great opportunities in the application of fintech, there are also challenges.
Setiyowati, A SM, A Y 2023	Peluang Dan Tantangan Perbankan Syariah Di Tengah Maraknya Financial Technology (Fintech) Berbasis Pinjaman Online	Jurnal Ilmiah Ekonomi Islam	Examines the opportunities and challenges faced by Islamic banking amid the rapid development of online lending-based fintech. This study highlights how Islamic banking can leverage fintech to improve services, while overcoming challenges related to regulation and competition with online lending platforms.

Author(Year)	Title	Journal	Result
Khan, Muhammad Sholeh Syahbudi, Muhammad Aisyah, Siti 2024	Factors Influencing The Impulsive Buying Behavior of UINSU Students in Online Stores from an Islamic Economic Perspective , With Rational Choice as an Intervening Variable	Jurnal Manajemen Bisnis	Analyzing the factors that influence the impulsive purchasing behavior of UINSU students in online stores, with an Islamic economic perspective and rationality as intervening variables. This study uses a quantitative approach with path analysis to test the relationship between these variables.
Kurnyasih, Antin Syahbudi, Muhammad 2022	Pengaruh E-commerce dalam Memajukan Usaha Mikro, Kecil dan Menengah di Kota Binjai Tahun 2022	El-Mal	This study evaluates the impact of electronic commerce on the development of Micro, Small, and Medium Enterprises in Binjai City in 2022. The study show that the implementation of electronic commerce can increase market access and operational efficiency for MSMEs.
Muchlis, R 2019	Analisis SWOT financial technology (fintech) pembiayaan perbankan syariah di Indonesia (studi kasus 4 bank syariah di kota Medan)	AT-TAWASSUTH	Conducting a SWOT analysis of the application of fintech in Islamic banking financing in Indonesia, with a case study of four Islamic banks in Medan. The main finding is that fintech can improve service efficiency.
Novika, V Anggraini, T Harahap, M I 2023	Pengaruh Usability Aplikasi Transaksi	Madani	This study examines the effect of the ease of use of the Madani transaction application on user satisfaction. The results show that usability significantly contributes to increased user satisfaction with the application.
Siti Rukmana, Mustofa 2022	Optimalisasi Peranan Financial Technology (Fintech Sharia) Menuju Era Digitalisasi Koperasi	e-Jurnal Ekonomi Bisnis dan Akutansi	This shows that sharia fintech can encourage the digitization of cooperatives to become more competitive with modern financial services. The use of applications that comply with

Author(Year)	Title	Journal	Result
			OJK regulations is considered important to improve efficiency.
Widya, Cory Vidiati dan Ginna Novarianti 2024	Inovasi dan Pengembangan Fintech Syariah sebagai Solusi Keuangan Modern yang Berlandaskan Prinsip Syariah	J-Coop: Journal of Co-operative	Sharia fintech has the potential to increase financial inclusion, but is hampered by low sharia financial literacy and unsupportive regulations. They recommend improving literacy, more flexible regulations, and adopting technology.
Amalia Ramadhani Suci Ardi, Indah Rayansi, & Muhammad Syahbudi 2023	Perkembangan Pemikiran Ekonomi Islam Era Modern	Al-Iqtishod	Exploring the evolution of Islamic economic thought in a modern context, discussing the adaptations and challenges faced in its application in the contemporary era.
Barus, Elida Elfi 2021	Collaboration In Developing Islamic Micro Finance Institutions (IMFs) Based On Financial Technology	At-tijarah	Discusses the importance of cooperation between Islamic fintech firms, Islamic financial institutions, when regulatory authorities in developing technology-based Islamic Microfinance Institutions (LKMI).
Setiawati, K Baihaqi, S A Azahra, S R 2024	Keuangan Islam: Peran Fintech dalam Perbankan Syariah	SYARIAH Jurnal Ilmu Hukum	This study analyzes the role of fintech in Islamic financial innovation, particularly in Islamic banking. The results show that fintech can expand access and strengthen Islamic financial inclusion, although challenges such as sharia compliance risks and consumer protection need to be addressed.
Saputri, A H Rahmawati, A Ramadhani, F	Potensi Fintech Dalam Upaya Peningkatan Kinerja Perbankan Di Bank Syariah Indonesia	Neraca: Jurnal	Exploring the potential of fintech in improving banking performance at Bank Syariah Indonesia. This study found that the adoption of financial

Author(Year)	Title	Journal	Result
2024			technology can improve operational efficiency and service quality, which in turn can improve the financial performance of Islamic banks.
Kholifah, N Andrianingsih, V 2020	Peluang Dan Tantangan Implementasi Financial Technology (Fintech) Pada Perbankan Syariah Dalam Meningkatkan Keuangan Inklusif	Ulumuna: Jurnal	Discusses the potential and difficulties of integrating fintech into Indonesian Islamic banking to increase financial inclusion. According to this study, those who are currently underserved by the traditional banking system may find that fintech might increase their access to financial services.
Antoni, S 2023	Factors Influencing Interest in Using Dana and Ovo E-Wallets in the Millennial Generation	Ekspansi	This study examines the factors that influence the interest of millennials in Indonesia in using e-wallets such as Dana and OVO. Factors such as ease of use, security, convenience, this study.
Tiyan, L Kurniawan, M Asriani, A 2021	Analisis swot financial technology (fintech) perbankan syariah dalam optimalisasi penyaluran pembiayaan dan kualitas pelayanan bank syariah	Al-Mashrof: Islamic	Providing a SWOT analysis of the application of fintech in Islamic banking in Indonesia. This study discusses how fintech can optimize financing distribution and improve service quality in Islamic banks.
Norrahman Rezki Akbar 2023	Peran Fintech Dalam Transformasi Sektor Keuangan Syariah	JIBEMA	This study examines how fintech is changing Indonesia's Islamic banking industry, with a particular emphasis on how it might increase accessibility and efficiency.
Lesmana, C I Budianto, L 2024	The Role Of Financial Technology In Increasing Islamic Financial Inclusion:	al-Afkar, Journal For Islamic Studies	This article analyzes the role of fintech in improving Islamic financial inclusion in Indonesia. The study discusses the potential

Author(Year)	Title	Journal	Result
	Analysis Of Potential And Challenges		of fintech to provide access to communities that are underserved by traditional financial systems.
Afif, M Samsuri, A 2022	Integration of fintech and islamic banking in indonesia: opportunities and challenges	Cakrawala	Investigating how fintech can be integrated with Islamic banking in Indonesia. This study highlights opportunities for expansion as well as challenges faced in adapting fintech solutions to comply with Islamic banking principles.
Ritonga, I L Dalimunte, A A 2022	Efisiensi Penerapan Fintech dan Digitalisasi dalam Memaksimalkan Market Share Perbankan Syariah Pada Masa Pandemi Covid	ALEXANDRIA Journal	This study analyzes the application of fintech and digitalization in expanding the market share of Islamic banking during the COVID-19 pandemic in Indonesia. This study shows how this technology helps Islamic banks maintain operations.
Azifi, M R Dharma, B 2023	Analysis of Cashless Transaction Behavior With Maqashid Syariah Approach	International Journal of Economics	Examines cashless transaction behavior in Indonesia through the Maqashid Syariah (main objectives of Sharia) approach. This study attempts to assess the extent to which these digital transactions are in line with the principles of Islamic economics.
Asnawi, N 2022	An Analysis of Islamic Business Ethics in E-Wallet in Indonesia with A Case Study of Go-Pay	Journal of Islamic Economics Lariba	This study discusses the application of Islamic business ethics in the case of Go-Pay. This article evaluates how Go-Pay conducts its operations in accordance with Islamic economics.

**Table 2. List of Scopus Publications**

Author(Year)	Title	Journal	Result
Mohaiyadin, N. M. H.,	Addressing Accountability and	Journal of Islamic	The blockchain approach to improving accountability and



Author(Year)	Title	Journal	Result
Aman, A., Palil, M. R., dan Said, S. M. 2022	Transparency Challenges in Waqf Management Using Blockchain Technology	Monetary Economic s and Finance	transparency in zakat/waqf management—a topic relevant to Islamic fintech.
Rusydiana, Aam Slamet Sukmana, Raditya Laila, Nisful 2021	Waqf on Education: A Bibliometric Review based on Scopus	Journal of Islamic Economic Literature s	This study conducted a bibliometric review of waqf research in education indexed in Scopus. The results show that Malaysia is the country with the largest research contribution in this field, with leading institutions such as the Department of Arabic Studies.
Rabbani, M R 2021	The Response of Islamic Financial Service to the COVID-19 Pandemic: The Open Social Innovation of the Financial System	Technolo gy, Market, and Complexi ty	Examining the contribution of Islamic finance to the post-COVID-19 recovery and the ways in which fintech can mitigate the pandemic's economic effects. The study highlights the importance of open social innovation in Islamic finance to support economic recovery.
Zhang, Y., Yi Han, Jiayin Chen, Mengxi Qian 2021	The contribution of Fintech to sustainable development in the digital age: Ant forest and land restoration in China	Corporat e Governan ce: An Internatio nal Review	Discussing the contribution of financial technology (fintech) to sustainable development. The focus is on Ant Forest, a program from Ant Financial in China that encourages users to reduce carbon emissions through green activities. These activities collect virtual green energy that is used to plant physical trees, contributing to land restoration.
Vladimir I, Meri Dzhikiya 2023	Development of Environmental Economy and Management in the Age of AI Based of Green Finance	Environ mental Economy and Manage ment	This study explores the importance of green finance in the era of artificial intelligence for the economy and environmental management.

Author(Year)	Title	Journal	Result
Huynh, T L D 2020	Diversification in the age of the 4th industrial revolution: The role of artificial intelligence, green bonds and cryptocurrencies	Technological Forecasting and Social Change	This study found because these assets' portfolios show significant tail reliance, that means there is a high probability of significant collective losses during periods of economic turbulence.
Khudhori, K U Hendri, L 2021	Islamic banking and fintech: Sustainable collaboration	Al-Intaj	This article discusses Fintech and Islamic banking working together to make the financial sector more sustainable.
Wójcik, D 2021	The Effect of Fintech Adoption on Green Finance and Environmental Performance of Banking Institutions During the COVID-19 Pandemic: The Role of Green Innovation	Progress in Human Geography	This study highlights the significance of green innovation in enhancing sustainable finance practices by analyzing the effects of fintech adoption on green finance and banks' environmental performance during the COVID-19 pandemic.
Fan, L 2020	The Utilization of Robo-Advisors by Individual Investors: An Analysis Using Diffusion of Innovation and Information Search Frameworks.	Journal of Financial Counseling and Planning	This study analyzes the factors that influence the use of robo-advisors by individual investors. The results show that factors such as the need for better financial knowledge and larger asset amounts are positively associated with the adoption of robo-advisors.

Author(Year)	Title	Journal	Result
Rabbani, M R 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	This study highlights the role of Islamic finance in overcoming the economic impact of the COVID-19 pandemic. It proposes that Islamic finance can be an effective tool to help affected economies recover from the crisis caused by the pandemic.
Shin, Y J 2019	Feasibility of the fintech industry as an innovation platform for sustainable economic growth in Korea	Sustainability (Switzerland)	This study explores the potential of Korea's fintech sector as a platform for innovation and long-term economic growth.
Hassan, M K 2020	Challenges for the islamic finance and banking in post COVID era and the role of Fintech.	Journal of Economic Cooperation and Development	This study highlights the challenges faced by the Islamic finance and banking industry in the aftermath of the COVID-19 pandemic. The author emphasizes that fintech can improve financial inclusion, operational efficiency,.
Abdul-Rahim, R 2022	Benefit-Risk Perceptions of FinTech Adoption for Sustainability from Bank Consumers' Perspective	Sustainability (Switzerland)	This study explores perceptions of the benefits and risks of adopting FinTech from the perspective of bank consumers, with a focus on the moderating role of fear of COVID-19.
Rabbani, M R Hassan, M K Khan 2022	A Fintech-Based Zakat Model Using Artificial Intelligence	FinTech in Islamic	This article proposes a FinTech-based zakat model that utilizes artificial intelligence to improve the efficiency of zakat collection and distribution.

Author(Year)	Title	Journal	Result
Hasan, R., Hassan, M K, Sirajo Aliyu 2020	Fintech and Islamic Finance: Literature Review and Research Agenda	4th Muzakar ah Fiqh & Internatio nal Fiqh	Fintech has great potential to develop Islamic finance by improving efficiency, but the main challenges remain compliance with sharia principles and the need for clear and harmonious regulations.
Billah, M M S Ahmad, S Haq, 2021	Big Data and Fintech in Islamic Finance: Prospects and Challenges	Islamic FinTech: Insights and Solutions	This study discusses the prospects and challenges of integrating big FinTech and data in Islamic banking..
Glavina, S Aidrus, I Trusova, A 2021	Financial Technology (FinTech) and Its Impact on Financial Performance of Islamic Banking	Journal of Risk and Financial	This study analyzes adoption of financial technology's effects on the financial performance of Islamic banks.
Siska, E 2022	Emergence of i-FinTech in the Contemporary Socio-Economic Reality	ARBITR ASE: Journal of Economic s and Accounti ng	This article highlights the emergence of i-FinTech and its efect on the current socio-economic reality.
Usman, H 2022	Fintech, Digital Currency, and the Future of Islamic Finance	Journal of Islamic Marketin g.	This book explores Fintech and digital currencies' potential contribution to the expansion of Islamic finance.
Alam, N Nazim, S 2021	Integrating Trust, Religiosity, and Image into Technology Acceptance Model: The Case of Islamic Philanthropy in Indonesia	Cham: Springer Internatio nal Publishin g	This study integrates the factors of Integrating image, religion, and trust into a model of technology acceptance to understand technology adoption in Islamic philanthropy in Indonesia.

Author(Year)	Title	Journal	Result
Mirza, N 2023	The Role of Fintech in Promoting Green Finance and Profitability: Evidence from the Banking Sector in the Eurozone	Economic Analysis and Policy	This study analyzes how fintech can support green financing and increase bank profitability in the eurozone.

**Table 3. List of Cossref Publications**

Author(Year)	Title	Journal	Result
Sry Lestari, Winda Sari Siregar, & Nurul Madaniah Ayla 2021	Pengaruh Fintech Terhadap Kinerja Keuangan Perbankan Syariah	Islamic Circle	Fintech services have been proven to improve the financial performance of Islamic banks, based on quantitative analysis of these three financial indicators.
Gilang Subagja, Abdy Ihdalumam, Cory Vidiati 2025	Peluang dan Tantangan Fintech di Indonesia (Maslahah: Jurnal Manajemen dan Ekonomi Syariah)	Maslahah Jurnal Manajemen dan Ekonomi Syariah	The descriptive analysis approach discusses the development of fintech in Indonesia, with particular opportunities for sharia fintech and regulatory challenges, especially coordination between BI and OJK.
Muhammad Hasan Mun'im 2024	Peluang dan Tantangan Financial Technology (Fintech) Dalam Transformasi perbankan Syariah Di Indonesia	Amal Jurnal Ekonomi Syariah	Fintech expands access, improves efficiency, and promotes service innovations such as mobile banking, P2P lending, and blockchain but faces challenges such as sharia compliance, and human resources.

Author(Year)	Title	Journal	Result
Bashori, Y A Umami, K Wahid, S H 2024	Maqasid Shariah-Based Digital Economy Model: Integration, Sustainability And Transformation	Malaysian Journal of Syariah	Developing a digital economy model based on maqasid syariah for integration, sustainability, and transformation, ensuring that digital technology is in line with sharia values for the welfare of the people.
Padli, M S 2021	Integrasi Perbankan Dan Fintech Syariah Guna Mendukung Merger Bank BumN Syariah Dan Kesejahteraan Sektor Pertanian Indonesia Era Covid-19	Muslim Heritage	Recommending the integration of Syaria banking and fintech to support the merger of BUMN Islamic banks and improve the well-being of Indonesia's farming industry over the COVID-19 pandemic.
Wulandari, Vitria, I R Adela, D 2023	Padangsidimpuan: Analisis Swot Financial Technology (Fintech) Perbankan Syariah Pada Pt. Bank Sumut Cabang Syariah	UPMI Proceeding Series	Analyzing the SWOT of fintech in Islamic banking at PT. Bank Sumut, identifying strengths, weaknesses, opportunities, and threats in its implementation.
Amrullah, A Hasan, A 2021	Fintech Keuangan Syariah Dalam Perspektif Konsep Syariah	Iqtishadia	Analyzing Islamic finance fintech from a Sharia perspective, emphasizing the compatibility of fintech practices with Sharia principles in the financial sector.
Arum, H S Mawardi, M 2024	Waste and Overconsumption in Modern Finance: an Analysis of Qs Values. Al-Isra: 26-27	Al-Muzdahir: Jurnal Ekonomi Syariah	Assessing wastefulness and excessive consumption in modern finance through QS value analysis, with the aim of understanding its impact on the Islamic economy.

Author(Year)	Title	Journal	Result
Mubarok, E S 2023	Sosialisasi Financial Technology (Fintech) Sebagai Layanan Perbankan Syariah: Socialization of Financial Technology (Fintech) as a Sharia Banking	Jurnal Abdimas Le Muhtamam	Discussing the socialization of Fintech as a service for sharia banking to increase public understanding and acceptance of sharia financial technology.
M. Masykur Hadi, M. F. Ulum, Ardi Surya, Aisah Aprillia S, Aulia Vivi F 2024	Era Fintech: Peluang dan Tantangan (Financial Technology) Syariah di Indonesia	El-Mal Jurnal Kajian Ekonomi dan Bisnis Islam	Promoting sharia fintech as a digital innovation that facilitates access to sharia financial services. Discusses opportunities such as financial inclusion and efficiency, as well as challenges that still need to be addressed.
Rozi, F., Safitri AR, S. W., Khowatim, K., & Rochayatun 2024	Peran Financial Technology (Fintech) Syariah dalam Perekonomian Negara di Indonesia	Jurnal Ilmiah Ekonomi Islam	Sharia fintech increases financial inclusion and empowerment of MSMEs in Indonesia. However, challenges such as regulation, data security, and public education need to be addressed.
Syahrudin, Muhammad dan Elida Elfi Barus 2019	Pengembangan Strategis Koperasi Syariah Berbasis Teknologi Financial Dengan Pendekatan Interpretatif Structural Modelling	Sensasi	Discussing the strategic development of fintech-based Islamic cooperatives using the Interpretative Structural Modelling (ISM) approach. This study emphasizes the importance of technology in improving efficiency.

Author(Year)	Title	Journal	Result
Muhammad Arief Aditya Asri Noer Rahmi 2022	Pengaruh Financial Technology terhadap Profitabilitas Bank Umum Syariah Indonesia	Jurnal Keuangan dan Perbankan	Financial Technology (Fintech) has a significant impact on the profitability of Islamic commercial banks in Indonesia.
Suhri, M 2019	Perencanaan Keuangan Islam Secara Sederhana Oleh Ibu Rumah Tangga Dalam Bisnis E-Commerce Pada Pengguna Online Shop di Kecamatan Empang Kabupaten Sumbawa	TAFATQUH	Analyzing Islamic financial planning by housewives in e-commerce businesses in Empang Subdistrict, Sumbawa Regency. The results of the study show the importance of understanding how to improve family welfare through online businesses.
Fajaruddin, A Azizy, D F 2023	The Concept of Cryptocurrency in Islam	Finansia	Discussing the concept of cryptocurrency in Islam. This study examines whether cryptocurrency is acceptable from a Sharia perspective, taking into account aspects such as uncertainty (gharar) and speculation associated with cryptocurrency transactions.

**Table 4. Data Sources**

No.	Jurnal	Jumlah Jurnal
1	Scopus	21
2	Google Scholar	26
3	Crossref	15
<b>Total</b>		<b>62</b>



## **6. Literature Review: Fintech Function in the Transformation of a Cashless Society in the Sharia Economy**

The literature review conducted yielded results similar to those in the previous chapter. The Vosviewer mapping test produced visualization results, showing the relationships between keywords in publications, illustrating researcher collaboration and research trends. The keyword “fintech” was dominant with 53 links and 5 occurrences, followed by “Islamic banking” with 31 links in 3 clusters. Research on the role of fintech in the cashless society of the Islamic finance sector is still limited (Barus, 2021).

### **a. Google Scholar**

A literature review using Google Scholar sources shows that fintech plays an important part of the cashless society, especially in the context in Indonesia. Here are some key points that can be summarized:

#### **1) Increased Access and Financial Inclusion**

With fintech, such as e-wallets and digital payment services, people can access financial services without needing to have a traditional bank account. As in the research:

- a) Apriyanti, D E (2019) “Peran Fintech Dalam Meningkatkan Keuangan Inklusif Terhadap Perbankan Syariah Pada PT. Bank Aceh S. Parman Medan.”
- b) Lesmana, C I & Budianto, L (2024) “The Role Of Financial Technology In Increasing Islamic Financial Inclusion.”

#### **2) Ease of Transactions**

People can conduct transactions anytime and anywhere using digital applications or platforms, supporting the shift toward a cashless society. As in the research:

- a) Antoni, S (2023) “Factors Influencing Interest in Using Dana and Ovo E-Wallets in the Millennial Generation”
- b) Novika, V; Anggraini, T; Harahap, M I (2023) “Pengaruh Usability Aplikasi Transaksi Madani.”

#### **3) Improved Efficiency and Security**

Digital transactions are faster, safer, and can be done without direct contact, which is increasingly relevant in the COVID-19 pandemic era. As in the research:

- a) Ritonga, I L & Dalimunte, A A (2022) “Efisiensi Penerapan Fintech dan Digitalisasi dalam Memaksimalkan Market Share Perbankan Syariah.”
- b) Saputri, A H; Rahmawati, A; Ramadhani, F (2024) “Potensi Fintech Dalam Upaya Peningkatan Kinerja Perbankan.”

#### **4) Compliance Using the Principles of Sharia in Digital Finance**

In relation to Islamic banking, fintech provides alternatives for Muslims to conduct transactions that comply with Islamic provisions without violating Sharia financial law, thereby expanding the scope of Sharia financial inclusion. As in the research:

- a) Asnawi, N (2022) "Etika Bisnis Islam dalam E-Wallet (Go-Pay)."
- b) Setiawati, K; Azahra, S R; Baihaqi, S A (2024) "Peran Fintech dalam Perbankan Syariah."

#### 5) Challenges and Regulations

Although fintech supports the shift towards a cashless society, challenges such as unclear regulations and consumer protection in digital transactions are important concerns. As in the research:

- a) Isnaini, S. et al. (2023) dan Muchlis, R (2019) "Analisis SWOT Fintech."
- b) Tiyan, L; Kurniawan, M; Asriani, A (2021) "Analisis SWOT Fintech dalam Penyaluran Pembiayaan."

#### b. Scopus

Based on an analysis of Scopus sources, the role of FinTech in a cashless society, according to the latest research you mentioned, is as follows:

##### 1) Broader Financial Inclusion

Communities that were previously unable to receive financial services through traditional banking now have greater access thanks in large part to fintech. As in the research:

- a) Usman, H (2022) "Fintech, Digital Currency, and the Future of Islamic Finance."
- b) Rabbani, M R; Hassan, M K; Khan, S (2022) "A Fintech-Based Zakat Model Using Artificial Intelligence."

##### 2) Efficiency and Convenience of Cashless Transactions

FinTech such as e-wallets, mobile banking, and digital payment platforms enable faster, and more efficient transactions, thereby supporting the shift towards a cashless society. As in the research:

- a) Siska, E (2022) "Emergence of i-FinTech in the Contemporary Socio-Economic Reality."
- b) Hassan, M K (2020) "Challenges for the Islamic Finance and Banking in Post COVID Era and the Role of Fintech."

##### 3) Sustainable and Environmentally Friendly Finance

FinTech also encourages green finance through the adoption of environmentally friendly technology. The implementation of

fintech supports green finance, which optimizes investing in sustainable initiatives. As in the research:

a) Mirza, N (2023) "The Role of Fintech in Promoting Green Finance and Profitability."

b) Guang-Wen, Z (2023) "Development of Environmental Economy and Management in the AI Era: The Importance of Green."

4) Utilization of Technology in Islamic Zakat and Philanthropy

Artificial intelligence (AI) applications in fintech enables increased transparency and efficiency of the management of Funds from zakat, infaq, and sadaqah. As in the research:

a) Mohamed, H (2019) "Blockchain, fintech, and Islamic finance: Building the future in the new Islamic digital economy."

b) Alam, N; Nazim, S (2021) "Integrating Trust, Religiosity, and Image into Technology Acceptance Model."

5) Positive Impact on Bank Performance

More efficient digital banking platforms help Islamic and conventional banks attract more customers, reduce operating costs, and accelerate cashless financial services. As in the research:

a) Glavina, S; Aidrus, I; Trusova, A (2021) "Financial Technology and Its Impact on Financial Performance of Islamic Banking."

b) Fan, L (2020) "The Utilization of Robo-Advisors by Individual Investors: An Analysis Using Diffusion of Innovation and Information Search Frameworks."

c. Crossreff

Based on an analysis of Scopus literature sources, Fintech Improves Accessibility and Efficiency. This greatly supports the formation of a cashless society by making it easier for people to conduct digital transactions.

1) Regulatory and Security Challenges

Transaction security and personal data protection are critical issues that must be addressed to ensure a smooth transition to a cashless society. As in the research:

a) Destiya, J (2019) "Peluang dan Tantangan Fintech Bagi Perbankan Syariah."

b) Wulandari, W; Vitria, I R; Adela, D (2023) "SWOT Fintech di Bank Sumut."

2) Positive Impact on Profitability and Financial Performance

Fintech can improve operational efficiency, expand the customer base, and make financial services more efficient, ultimately leading to improved financial performance. As in the research:

- a) Prastika, Y (2019) "Pengaruh Fintech terhadap Profitabilitas Perbankan Syariah."
  - b) Wijaya, I U (2020) "Pengaruh Fintech terhadap Kinerja Keuangan Perbankan Syariah."
- 3) Support for the Cooperative and E-Commerce Sectors
- Fintech supports transformation in the Islamic cooperative and e-commerce sectors, this encourages digital economic growth that supports a cashless society. As in the research:
- a) Suhri, M (2019) "Perencanaan Keuangan Islam oleh Ibu Rumah Tangga di E-Commerce,"
  - b) Syahbudi, Muhammad dan Elida Elfi Barus (2019) "Koperasi Syariah Berbasis Fintech."

## CONCLUSION

The advancement of fintech, or financial technology, has been a major catalyst in the transformation of the Islamic finance sector towards a cashless society, marked by increased adoption of non-cash transactions, operational efficiency, and broader financial inclusion. Through a literature examination and bibliometric evaluation of 62 journals sourced from Scopus, Google Scholar, and Crossref, it was found that approximately 70% of the research confirmed the significant Fintech's function in supporting the development of Islamic-based financial services. Technological innovations like electronic payment methods, Islamic Lending from peer to peer, and halal investment platforms have been the main drivers in accelerating the digitalization of this sector. Analysis using Vosviewer also shows the dominance and strong correlation between the keywords "fintech" and "sharia banking," although specific studies on Fintech's function within the framework of a cashless society are still limited. Several challenges remain, including inadequate regulations, data security risks, low digital literacy, and the urgency of consistently applying the principles of maqashid sharia. Therefore, the success of fintech implementation within an inclusive, sustainable, and Islam-aligned Islamic financial ecosystem heavily depends on stakeholder collaboration, enhanced community capacity, and adaptive policy support aligned with technological advancements.

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