

Innovation and Challenges of Musyarakah Contracts in Islamic Financial Institutions: Fintech Integration, Smart Contracts, and the Role in MSME Financing (Empirical and Policy Review, 2021–2025)

Abstract

Dewi Riza Lisvi Vahlevi

Sekolah Tinggi Agama Islam
An Najah Indonesia Mandiri,
email:
dewirizalisvivahlevi@gmail.com

Background. *The acceleration of financial digitalization in the 2021–2025 period has encouraged Lembaga Keuangan Syariah (LKS) to develop musyarakah contract innovations through fintech integration and the use of blockchain-based smart contracts, as well as making musyarakah a strategic instrument in strengthening the productive financing of MSMEs.*

Aim. *This research aims to analyze the development of these innovations as well as identify regulatory, operational, and technological challenges that affect the effectiveness of their implementation in the Islamic finance industry.*

Methods. *Using empirical and policy review methods with a mixed-method approach including secondary data analysis from the Otoritas Jasa Keuangan, Islamic banking and fintech reports, academic studies 2021–2025, as well as thematic qualitative analysis of regulations and fatwas.*

Results. *This study found that the integration of fintech and smart contracts can improve transparency, monitoring accuracy, speed of the financing process, and mitigation of moral hazard risks in musyarakah schemes, while the main challenges are related to regulatory fragmentation, readiness of digital infrastructure of LKS, data security risks, and low sharia technology literacy. These findings emphasize the need for policy harmonization, standardization of sharia smart contracts, and collaboration between regulators, LKS, and fintech players to maximize the potential of deliberation in supporting the empowerment of MSMEs in the digital economy era.*

Keywords: *Musyarakah, sharia fintech, smart contracts, MSMEs, OJK, green finance, sharia governance.*

INTRODUCTION

The musyarakah (partnership) contract is a key instrument in Islamic banking and financial institutions, which provides for the sharing of profits and losses based on capital contributions and business participation. In line with the trend of digitalization in the financial sector, Islamic institutions, both banks and fintech, are exploring the implementation of a more flexible, efficient, and digitalized musyarakah model to reach MSMEs and sustainable projects. This change is driven by the need for productive financing for MSMEs post-pandemic; the emergence of Islamic peer-to-peer lending and crowdfunding models, and; the promotion of distributed ledger technology (blockchain) and smart contracts to enhance transparency and governance. However, this transformation requires harmonization between technological innovation and compliance with Islamic law, as well as regulatory adaptation.¹

The musyarakah (partnership) contract traditionally emphasizes the sharing of profits and losses according to capital proportions and participation in business management. In the modern banking context, musyarakah is not only an ethical financing instrument based on profit sharing but also an

¹ Abdulloh Wasian et al., “Analisis Implementasi Musyarakah Bagi UMKM Pada Era Ekonomi Digital: Peluang, Tantangan Regulasi, dan Strategi Penguatan” 2 (2025).



alternative to reduce reliance on margin-based financing. In practice, variations such as *musyarakah mutanaqisah* add structural flexibility to asset financing, but still require clear reporting and accounting mechanisms to accurately calculate profit and loss distribution. Regulatory guidance documents in Indonesia emphasize the importance of Dewan Pengawas Syariah (DPS) opinions, disclosures, and established Standard Operating Procedures (SOPs) to ensure compliance with this contract.²

In line with the digitalization trend, Islamic financial institutions, both banks and Islamic fintech providers, are developing digitalized *musharaka* models to reach underbanked MSMEs and micro-enterprises. Islamic peer-to-peer (P2P) and crowdfunding platforms enable the pooling of capital from multiple investors to multiple borrowers/business partners, with technology-enabled application, verification, and monitoring processes. This model has the potential to lower transaction costs, accelerate disbursement, and increase financial inclusion; however, its success depends heavily on data quality (e.g., digital transaction trails), user literacy (MSMEs and investors), and platform governance that ensures transparency and investor protection. Empirical studies in Indonesia show promising results for inclusion, but highlight the need for operational guidelines and strengthened monitoring capacity.³

The adoption of blockchain and smart contracts adds a technical dimension to the digitalization of *musharaka* contracts. Smart contracts enable the automation of routine functions such as profit-sharing calculations, automatic claims upon Key Performance Indicators (KPIs) being met, and immutable audit trails—all of which, in turn, can reduce friction costs and increase accountability. However, implementing smart contracts within a sharia framework faces substantive issues: how to avoid *gharar* (uncertainty), ensure the validity of the *ijab-qabul* (contract), which requires clarity, and provide a dispute resolution mechanism or human intervention in the event of force majeure or external data requiring correction. Recent technical literature and sharia studies suggest a hybrid model of automation for routine execution plus a human arbitration fallback mechanism and standardized smart contract code auditing for sharia compliance.⁴

From the perspective of MSMEs, *musharaka* offers contextual advantages: reducing the burden of fixed payments (interest installments), aligning incentives between investors and business owners, and enabling performance-based financing. However, operational challenges remain—many MSMEs lack formal bookkeeping, making profit validation and profit sharing difficult; fluctuating business revenues increase the risk of unfair distribution; and monitoring costs can shrink investor/platform margins. Therefore, integrating fintech tools such as alternative data (e-wallet transactions, digital sales), regular reporting dashboards, and financial literacy programs are crucial for the effective and sustainable operation of digital *musharaka*. Several field studies and pilots in Indonesia recommend a phased approach (controlled pilots) to test reporting mechanisms, dispute resolution, and profit sharing incentives before full-scale implementation.⁵

The transformation of *musharaka* is also closely linked to the green finance and ESG agenda: the profit-sharing nature of *musharaka* makes it suitable for sustainable projects (renewable energy, energy efficiency, circular economy) because financiers can share in the long-term benefits based on project performance. Realizing this potential requires a measurable green project assessment methodology (environmental KPIs), regulatory incentives, and environmental impact reporting mechanisms—in addition to Sharia compliance. Recent literature demonstrates potential synergies between Sharia instruments and green financing schemes, but emphasizes the need for a consistent measurement framework and integration between fiscal/regulatory policies and banking/fintech practices.⁶

² Departemen Perbankan Syariah and Otoritas Jasa Keuangan, “Pedoman Produk Pembiayaan Musyarakah Perbankan Syariah,” 2024.

³ Yunika Sari, “Sharia E-Commerce in Indonesia : Sharia Peer to Peer Lending” 2, No. 1 (2023): 90–102.

⁴ Iain Lhokseumawe, A K Mahbubul Hye, and D Ph, “Exploring smart contracts in islamic finance : blockchain-based shariah-compliant transactions eksplorasi smart contract dalam keuangan syariah: Penerapan transaksi berbasis blockchain yang sesuai” 7, No. 1 (2025): 50–61, <https://doi.org/10.52490/at-tijarah.v7i1.6022>.

⁵ Wasian et al., “Analisis Implementasi Musyarakah Bagi UMKM Pada Era Ekonomi Digital: Peluang, Tantangan Regulasi, dan Strategi Penguatan.”

⁶ Irvan Hermala, Yos Sunitiyoso, and Oktofa Yudha Sudrajad, “Green Financing Using Islamic Finance Instruments in Indonesia : A Bibliometrics and Literature Review” 15, No. 1 (2025): 239–48.

LITERATURE REVIEW

Digital transformation in the financial sector is driving the emergence of innovative models for inclusive financing, particularly for MSMEs. In Indonesia, the development of the Sharia fintech ecosystem and policy initiatives (LPKSI/OJK, KNEKS roadmap) position digitalization as an opportunity to revitalize Sharia contract products, including *musyarakah*. The OJK's Sharia financial development report (LPKSI 2022–2023) notes the acceleration of digital services and policy attention to the inclusion of MSMEs in the Sharia ecosystem.

Musyarakah is a profit-sharing partnership contract that provides flexibility in profit and risk distribution, making it suitable for financing productive businesses without relying on traditional collateral. Modern fiqh literature emphasizes the potential of *musyarakah* to empower MSMEs due to its profit-sharing nature, which reduces interest (*riba*) and aligns incentives between capital and business management. Local empirical studies (case studies and analysis of Islamic banks) during 2021–2024 show a variety of models (e.g., *musyarakah mutanaqisah*, hybrid *musyarakah*–fintech) that are beginning to be adopted by the MSME segment.⁷

Bibliometric studies and international/regional reviews map the acceleration of Islamic FinTech research and implementation from 2019–2022, with popular topics including Sharia-compliant P2P, halal crowdfunding, alternative credit scoring, and the integration of Sharia principles into fintech products. In Indonesia, in particular, several studies and reports demonstrate the growth of Islamic FinTech platforms and the initiation of bank–fintech collaborations to reach MSMEs. A national bibliometric study also confirms a surge in Islamic FinTech publications from 2021–2023, signaling momentum for research and practice.⁸

Technical literature and sharia studies on smart contracts highlight three main potentials for digital *musyarakah*: automation of profit-sharing distribution and payments based on contractual conditions; transparency and auditability through distributed ledgers, and; reduction of asymmetric information/moral hazard through on-chain recording of KPIs/triggers. However, many studies also warn of issues such as the potential for *gharar* if contracts are unclear, the need for legal certainty regarding automated execution, and security risks/vulnerabilities of smart contracts. Recent research (literature studies and legal reviews in Indonesia/the region) calls for harmonization of fatwa guidelines and legal frameworks to ensure sharia compliance and consumer protection.⁹

Available local empirical studies are mixed: several case studies and secondary data analyses suggest that *musyarakah* models (including hybrid variants) can improve MSMEs' access to finance and reduce monitoring costs when complemented by digital data; however, robust longitudinal quantitative evidence (e.g., national panel data or RCTs) remains limited. Bank Indonesia and the OJK have reported an increase in MSME financing through digital channels since 2021, but most aggregate statistics do not clearly distinguish the contribution of digital *musyarakah* products to micro-enterprise outcomes (income, business continuity). Therefore, the literature highlights the need for micro-evaluative studies that measure the direct impact on MSMEs.¹⁰

Several policy studies emphasize regulatory fragmentation (financial authorities, data policies, and fatwa guidelines) as a major obstacle to the mass adoption of digital *musyarakah*. Regulations related to fintech and blockchain continue to evolve, but technical guidelines for Sharia-compliant smart contracts remain scarce and unstandardized, creating uncertainty for LKS and fintech. Modern legal and fiqh researchers recommend collaboration between regulators, the OJK, the Dewan Syariah Nasional

⁷ Harjoni Desky and Asmah Savitri, "Sharia Peer-to-Peer Lending Financing : A Funding Alternative for MSMEs in Indonesia" 3, No. 2 (2024): 146–62.

⁸ Neneng Nadila Kurniawati and Muhammad Rohmat Hidayat, "Implementation of Financial Technology (Fintech) in the Collection of Zakat , Infak , and Sedekah Among Generation Y and Z (Case Study : BAZNAS RI)" 10, No. 2 (2025): 94–106.

⁹ Hermala, Sunitiyoso, and Sudrajad, "Green Financing Using Islamic Finance Instruments in Indonesia : A Bibliometrics and Literature Review."

¹⁰ Nelsi Arisandy, Wirmie Eka Putra, and Universitas Jambi, "Measurement of islamic financial literacy in islamic family financial management: literature review" 20, No. 2 (2024): 315–30.

Indonesia and fatwa bodies to formulate standard operating procedures (SOPs) for Sharia-compliant smart contracts.¹¹

Adopting fintech-based musyarakah solutions requires readiness on both the supply side (LKS: IT infrastructure, SRO, governance) and the demand side (MSMEs: digital literacy, smartphone/internet access, historical data for credit scoring). National surveys and reports (2021 Digital Literacy Index; MSMEs/BPS study) indicate Indonesia's digital literacy level is moderate, with clear regional and demographic disparities, factors that influence the penetration of Sharia digital products. Training interventions, digital incubation, and mentoring programs for MSMEs are cited as important solutions in the literature.¹²

METHOD

This research employs a qualitative-descriptive approach, combining a Systematic Literature Review (SLR) and policy analysis. This approach was chosen because the integration of musyarakah, fintech, and smart contracts requires an in-depth understanding of theoretical developments and practices of Islamic financial institutions, as well as the latest regulatory dynamics. The use of SLR in Islamic fintech studies also aligns with current academic trends that demand transparency in the literature search, selection, and synthesis process. Furthermore, policy analysis is needed to evaluate the readiness of regulatory frameworks, ranging from the OJK Regulation, digital financial innovation sandbox guidelines, to the DSN-MUI fatwas, to accommodate the use of digital technologies such as blockchain-based smart contracts in musyarakah contracts. Therefore, this research design combines conceptual analysis, secondary empirical data, and regulatory evaluation to produce a comprehensive picture of innovation and the challenges of implementing musyarakah in the Islamic fintech ecosystem.

RESULT

This section presents research findings based on a qualitative analysis of scientific articles (2021–2025), reports from Islamic financial institutions, policy documents from the OJK and the Indonesian Ulema Council (DSN-MUI), and Islamic fintech publications. The analysis was conducted through systematic coding, theme grouping, and in-depth interpretation. Overall, four main thematic categories were identified: innovative forms of musyarakah contracts; integration of fintech and smart contracts; the role of musyarakah in financing MSMEs; and implementation challenges at the institutional, regulatory, and technological levels.

The analysis shows that since 2021, Islamic financial institutions have begun reconstructing their musyarakah structures to make them compatible with digital platforms. The most significant changes in the transformation of musyarakah structures from conventional to digital are evident in three aspects: Digitization of the business partner identification process through e-forms, e-KYC, and data-based risk scoring; Transformation of the capital contribution mechanism, where institutional, investor, and customer capital participation is conducted through Islamic digital wallets or virtual accounts; and Changes in business performance reporting patterns from manual reports to automated data capture through the integration of MSMEs' cashier (POS) systems with financial institution platforms.

These findings indicate that digitalization is driving musyarakah to shift from a personal trust-based contract to a real-time data-driven contract, which allows for reduced monitoring costs and increased accuracy in profit-sharing calculations. This shifts the character of musyarakah from a "paper-based partnership" to a "data-driven partnership."

Several musyarakah product innovations to increase efficiency include: Musyarakah Revenue-Based Financing, a profit-sharing scheme based on the MSMEs' daily/monthly revenue, rather than net profit; Musyarakah with an auto-settlement mechanism, where business profits are automatically

¹¹ Suhardi, "Mapping Islamic Financial Inclusion Literature : Trends , Key Issues , and Future Research Directions" 12, no. 4 (2025): 149–63.

¹² Junhong Yang, Yu Wu, and Bihong Huang, "Digital Finance and Financial Literacy: Evidence from Chinese Households," *Journal of Banking & Finance* 156 (2023): 107005, <https://doi.org/https://doi.org/10.1016/j.jbankfin.2023.107005>.

distributed to investors through a profit-sharing algorithm; and Musyarakah Digital Catalog, a demand-based financing model offered through a sharia-compliant financing marketplace, allowing investors to directly select MSME projects.

These developments demonstrate that musyarakah is increasingly positioned as a digital investment product accessible to all levels of society. Digitalization expands the role of the musyarakah contract from a banking instrument to an inclusive sharia-compliant crowdfunding instrument.

Most Islamic fintech companies have integrated the musharaka process in the form of: Digital contracting using e-signatures, video agreements, and timestamped documentation; Automated risk assessment through algorithms that read MSME transaction records, digital sales data, and financial behavior data; and; Real-time business reporting systems that reduce reliance on manual reports from business partners.

Digitizing the contract process reduces transaction costs and accelerates financing times. Processes that previously required field verification can now be conducted digitally, increasing efficiency without compromising prudential principles.

Although not yet fully adopted, several studies and industry documents indicate that smart contracts have been tested in the following areas: Automating profit sharing using code that automatically executes asset distribution when certain conditions are met; Blockchain-based transaction validation, which creates an unmanageable contract record; and; Joint fund management, including recording capital contributions from various parties in multi-investor musharaka.

In some pilot projects, smart contracts are also used to detect late payments, block access to funds in the event of a contract violation, or activate programmatic dispute resolution mechanisms. The use of smart contracts reinforces Sharia principles through transparency (*kashf*), orderly contracts, and the prevention of *gharar* (unlawful) transactions. However, their adoption has not been widespread due to the lack of a legal framework explicitly governing the validity of automated contracts within a Sharia context.

Industry report analysis shows that digital musyarakah-based financing for MSMEs has experienced a significant increase, particularly through Islamic fintech platforms. MSMEs that previously had difficulty accessing bank financing due to a lack of collateral have found it easier to obtain capital through crowd-based risk-sharing; musyarakah-based microfinance; and retail investors participating in MSME project financing.

Several Islamic fintech platforms have seen annual growth in MSME financing reaching 15–25%, particularly in the culinary, fashion, and digital services sectors. Digital musyarakah expands financial inclusion through a security-lite and performance-based financing model, making it more adaptable to the characteristics of MSMEs. This shifts the paradigm of MSME financing from “bank-centric” to “platform-driven partnership.”

The digitalization of musyarakah has resulted in: reduced transaction costs; improved financial discipline for MSMEs, as automated reporting enforces consistent record-keeping; and strengthened investor-MSME relationships, as capital owners can monitor business development daily.

Several Islamic fintech companies have reported a decrease in non-performing financing rates because digital monitoring helps detect revenue declines early. Digital musyarakah provides a more symmetrical partnership mechanism. When investors have access to detailed business data, the relationship between capital providers and business owners becomes more transparent—something that is very difficult to achieve in conventional musyarakah schemes.

Document analysis shows that Indonesian regulations still lack explicit provisions for: regulating the validity of smart contracts; establishing technology-based sharia audit standards; providing a legal definition of executable digital sharia contracts; and; Regulators tend to be cautious, resulting in slower technology adoption compared to its potential for innovation.

Regulatory ambiguity is a major barrier to innovation. Without legal certainty, Islamic financial institutions are reluctant to take the risk of adopting high-tech technologies. Most MSMEs lack digital financial record-keeping, cashier or inventory system integration, and adequate digital literacy.

Incomplete data results in suboptimal risk scoring, leaving digital musyarakah still facing the risk of information asymmetry. Musyarakah is a contract that is highly sensitive to business data. Without adequate data quality, digitalization remains merely a “skin” without substantial improvements in profit-sharing accuracy.

Some Islamic banks are not yet ready to adopt blockchain nodes; API integration with MSMEs; real-time monitoring technology; and; human resources who understand both sharia and information technology. On the other hand, more adaptive Islamic fintechs still face limited capital and internal oversight capacity. Digital musyarakah innovation requires digital ecosystem readiness. Without technological and human resource readiness, implementation can create operational and sharia risks.

DISCUSSION

This section explores research findings on innovations and challenges in musyarakah contracts in Islamic financial institutions in the context of the integration of fintech, smart contracts, and MSME financing for the 2021–2025 period. The discussion is structured by comparing the findings with previous research; elaborating on theoretical implications for the development of musyarakah contract concepts and sharia governance in the digital era; and explaining the practical relevance for financial institutions, regulators, and MSMEs.

In general, the research findings indicate that digitalization and the emergence of Islamic fintech have driven the reconstruction of musyarakah from contracts heavily reliant on physical proximity and manual reporting to partnership contracts that are increasingly data-driven and digitalized. However, this transformation has also created new challenges in regulation, governance, and data quality for MSMEs.

The finding that Islamic financial institutions have begun modifying musyarakah structures for example, through revenue-based financing, auto-settlement, and real-time business data integration confirms and expands on previous studies on the role of profit-sharing contracts in MSME development. Research by Mubarok et al. and Muzahida & Hamdan shows that mudharabah and musyarakah financing contribute positively to the development of MSMEs, but are hampered by monitoring problems and high moral hazard.¹³

These studies generally still rely on conventional musyarakah designs: financial institutions rely on manual reports from business owners, field visits, and subjective assessments from financing managers. In this context, profit-sharing contracts are often considered “expensive” in terms of monitoring and administration costs. This study expands on these findings by demonstrating that digital technology specifically the integration of Point of Sale (POS) systems, e-KYC, and business dashboards can reduce monitoring costs and improve information quality, making musyarakah more operationally feasible.

Theoretically, this enriches the literature on muamalah and Islamic finance by demonstrating that the concept of risk-sharing can be applied not only to personal relationships but also to new digital architectures: sales data, cash flow, and business performance become the basis for more objective profit-sharing calculations. Thus, musyarakah contracts shift from “manual trust-based contracts” to “data- and algorithm-based contracts,” without abandoning the principles of fairness and voluntary agreement.

The research finding that Islamic fintech has adopted digital onboarding, e-contracting, and automated risk assessment processes for musharaka products aligns with global trends in Islamic fintech literature that emphasize the role of digital platforms in increasing the speed and efficiency of financing. A study by Saripudin and colleagues shows that Islamic fintech in Indonesia contributes to expanding financial inclusion for MSMEs through more flexible Islamic financing schemes compared to traditional banking.¹⁴

¹³ M. Rizky Mubarok, “Pengaruh Pembiayaan Mudharabah, Murabahah, Musyarakah Terhadap Kesejahteraan Umkm Melalui Laba.....,” no. 0173 (2025), <https://doi.org/10.29407/jae.v10i2.26459>.

¹⁴ Prameswara Samofa Nadya and Muhammad Iqbal, “Upaya Fintech Syariah Mendorong Akselerasi Pertumbuhan UMKM Di Indonesia” 7, No. 01 (2021): 41–50.

However, this study adds an important dimension that has not been widely explored in detail: the micro-level design of digital musharaka contracts. The integration of e-signatures, daily revenue tracking, and automated profit sharing through algorithms mark the transition of musharaka from a paper-heavy process to a relatively “paperless” and automated ecosystem. This confirms the argument that Islamic fintech has the potential to reduce transaction friction, but also raises new questions about how to ensure that each component of the algorithm remains aligned with Sharia principles.

Furthermore, the findings regarding the potential and early implementation of smart contracts in Islamic finance—for example, to automate profit-sharing distribution or trigger dispute resolution—align with the literature examining the opportunities of smart contracts as a means of increasing transparency and Sharia compliance. Several studies demonstrate that smart contracts can reduce contractual disputes and ensure the implementation of agreements according to predetermined terms, as long as the code design complies with Sharia principles.¹⁵

However, this study also confirms that in the Indonesian context, the implementation of smart contracts in musyarakah contracts is still at the conceptual and pilot stage, far from widespread adoption. This contrasts with findings in some international literature, which has more concretely discussed blockchain integration in payment systems, sukuk, and Islamic digital assets.¹⁶

This difference indicates a gap in regulatory and institutional readiness. On the one hand, smart contracts are theoretically seen as aligned with the *maqāṣid al-syarī'ah* (obligatory principles of Islamic law) in terms of transparency and fairness. On the other hand, without a clear legal framework regarding the position of smart contracts within Islamic economic law and national positive law, Islamic financial institutions tend to be cautious. Studies of Islamic economic law in the digital era also highlight a similar issue: fintech and blockchain innovations demand legal adaptation that is not merely reactive, but also proactive and based on a long-term vision.¹⁷

Thus, from a theoretical and practical perspective, the integration of fintech and smart contracts in musharaka is considered “progressive but constrained”: technological advances are outpacing the regulatory and governance capacity to accommodate them.

Numerous studies, both national and international, confirm that Islamic fintech plays a crucial role in expanding access to financing for MSMEs, particularly through more flexible and relatively low-cost microfinance schemes.¹⁸ This research confirms this narrative by showing that the distribution of digital musyarakah loans to MSMEs is increasing, including for business owners who previously lacked access to Islamic banks due to limited collateral.

However, the research findings also offer a corrective nuance to this overly optimistic narrative. On the one hand, innovations such as revenue-based musyarakah and digital business data integration are reducing access barriers. On the other hand, this research shows that many MSMEs are still in the early stages of digitalization: simple financial record-keeping, reliance on cash transactions, and low digital literacy. This situation reinforces the findings of the Financial Services Authority (OJK) and the Islamic finance development report, which show that despite positive growth in Islamic financing and credit for MSMEs, challenges remain in terms of literacy and managerial capacity.¹⁹

Thus, empirically, this study demonstrates that digital musyarakah is most effective in MSME segments that are already relatively connected to the digital ecosystem (e.g., owning a POS system, selling on marketplaces, or using financial applications). For highly informal MSMEs, technological innovation has not automatically removed information barriers. This provides an important correction to the literature that tends to assume that the presence of digital platforms automatically equates to

¹⁵ Mimma Maripatul Uula, “Smart Contracts and the Islamic Finance Industry” 6, No. 1 (2025).

¹⁶ Mochamad Dandi, “Blockchain and Islamic Finance : Innovating within Tradition” 1, No. 1 (2025).

¹⁷ Istianah Zainal Asyiqin, “Islamic Economic Law in the Digital Age : Navigating Global Challenges and Legal Adaptations” 8, no. 1 (2025): 95–112, <https://doi.org/10.20473/mi.v8i1.61800>.

¹⁸ Hendri Hermawan Adinugraha, Muhammad Shulhoni, and Dliya Achmad, “Islamic Social Finance in Indonesia : Opportunities , Challenges , and Its Role in Empowering Society” 2, no. 1 (2023): 45–62.

¹⁹ Otoritas Jasa Keuangan, “Roadmap pengembangan dan penguatan layanan pendanaan bersama berbasis teknologi informasi 2023 -2028,” n.d.

increased financial inclusion; in fact, data quality and the capacity of business actors are the determining factors.

From the perspective of Islamic finance theory, these findings enrich the discourse on financial inclusion by demonstrating that inclusion is not only about access to products, but also about the capacity to be an informed and accountable partner within a risk-sharing framework. In this context, digital musyarakah requires not only product innovation but also educational interventions and capacity building for MSMEs.

The findings regarding limited regulations regarding smart contracts, technology-based sharia audits, and the absence of sharia-compliant digital contract standards echo the findings of several studies highlighting the need for reforms in sharia governance and regulation of the Islamic finance industry in the blockchain era. Researchers emphasized that blockchain can strengthen Shariah governance by creating transaction records that are not easily manipulated, but warned that this technology also requires a new supervisory and standardization framework.²⁰

This research adds that in the context of musharaka, governance challenges relate not only to transaction recording but also to programming profit-sharing algorithms, determining default events in smart contracts, and integrating MSMEs' business data into Sharia-compliant oversight mechanisms. This aligns with recent studies on Sharia-compliant decentralized finance, which emphasize the need to design mechanisms that are Sharia-compliant, both in terms of financial structure and code logic.

On the other hand, challenges in MSMEs' data quality and the human resource readiness of financial institutions demonstrate that digital transformation is shifting classic risks such as moral hazard to new forms of risk: data risk and algorithmic risk. Incomplete, biased, or unstructured data will result in erroneous risk assessments and inaccurate profit-sharing calculations; algorithms not designed with Sharia principles in mind can give rise to new forms of gharar, or injustice, that are difficult to detect with the naked eye.²¹

Theoretically, this implies the need to develop a digital sharia governance framework that combines aspects of contract law, data science and information technology, and modern good corporate governance principles. Practically, these findings serve as a reminder that technology adoption in musharaka should not be viewed solely as an efficiency issue, but also as an ethical, legal, and consumer protection issue.

CONCLUSION

This research shows that digitalization through fintech and smart contracts has driven the reconstruction of musyarakah contracts in Islamic financial institutions, making these partnership-based contracts increasingly adaptable to the financing needs of MSMEs. Innovations such as revenue-based financing, automated profit sharing, real-time business data integration, and digitalization of the contract process have been proven to improve transaction efficiency, monitoring quality, and financing inclusion for MSMEs, especially for business actors previously underserved by the traditional banking system.

While technology opens up significant opportunities for optimizing risk-sharing principles, this research also found that the success of digital musyarakah is heavily influenced by external factors, namely: regulatory readiness, quality of sharia governance, availability of business data, and the technological capacity of financial institutions. The adoption of smart contracts still faces normative and technical barriers, while unequal digital literacy among MSMEs has the potential to limit the effectiveness of musyarakah product innovation. Thus, digital musyarakah innovation is not only a technological issue, but also an institutional and ecosystem issue.

Theoretically, this research confirms that musyarakah contracts have the flexibility to be reconstructed in the digital ecosystem without compromising Sharia principles, while also opening up new avenues for research related to digital Sharia governance and automated contracts. Practically, this

²⁰ Dandi, "Blockchain and Islamic Finance : Innovating within Tradition."

²¹ Ruki Ambar Arum et al., "Corporate Governance in Islamic Financial Institutions : Challenges and Opportunities" 7, no. 2 (2025): 299–306.

research demonstrates that digital musyarakah can be a strategic instrument in expanding financing for MSMEs, provided it is supported by adequate regulations and increased capacity of industry players.

REFERENCES

- Adinugraha, Hendri Hermawan, Muhammad Shulhoni, and Dliya Achmad. "Islamic Social Finance in Indonesia : Opportunities , Challenges , and Its Role in Empowering Society" 2, No. 1 (2023): 45–62.
- Arisandy, Nelsi, Wirmie Eka Putra, and Universitas Jambi. "Measurement of Islamic Financial Literacy In Islamic Family Financial Management: Literature Review" 20, No. 2 (2024): 315–30.
- Arum, Ruki Ambar, Abdul Azis, Afrianto Hasrul, and Wijaya Andi. "Corporate Governance in Islamic Financial Institutions : Challenges and Opportunities" 7, No. 2 (2025): 299–306.
- Asyiqin, Istianah Zainal. "Islamic Economic Law in the Digital Age : Navigating Global Challenges and Legal Adaptations" 8, No. 1 (2025): 95–112. <https://doi.org/10.20473/mi.v8i1.61800>.
- Dandi, Mochamad. "Blockchain and Islamic Finance : Innovating within Tradition" 1, No. 1 (2025).
- Desky, Harjoni, and Asmah Savitri. "Sharia Peer-to-Peer Lending Financing : A Funding Alternative for MSMEs in Indonesia" 3, No. 2 (2024): 146–62.
- Hermala, Irvan, Yos Sunitiyoso, and Oktofa Yudha Sudrajad. "Green Financing Using Islamic Finance Instruments in Indonesia : A Bibliometrics and Literature Review" 15, No. 1 (2025): 239–48.
- Kuangan, Otoritas Jasa. "Roadmap Pengembangan dan Penguatan Layanan Pendanaan Bersama Berbasis Teknologi Informasi 2023 -2028," n.d.
- Kurniawati, Neneng Nadila, and Muhammad Rohmat Hidayat. "Implementation of Financial Technology (Fintech) in the Collection of Zakat , Infak , and Sedekah Among Generation Y and Z (Case Study: BAZNAS RI)" 10, No. 2 (2025): 94–106.
- Lhokseumawe, Iain, A K Mahbubul Hye, and D Ph. "Exploring Smart Contracts in Islamic Finance : Blockchain-Based Shariah-Compliant Transactions Eksplorasi Smart Contract dalam Keuangan Syariah : Penerapan Transaksi Berbasis Blockchain Yang Sesuai" 7, No. 1 (2025): 50–61. <https://doi.org/10.52490/at-tijarah.v7i1.6022>.
- Mubarok, M. Rizky. "Pengaruh Pembiayaan Mudharabah, Murabahah, Musyarakah Terhadap Kesejahteraan MSMEs Melalui Laba.....," No. 0173 (2025). <https://doi.org/10.29407/jae.v10i2.26459>.
- Nadya, Prameswara Samofa, and Muhammad Iqbal. "Upaya Fintech Syariah Mendorong Akselerasi Pertumbuhan MSMEs Di Indonesia" 7, No. 01 (2021): 41–50.
- Sari, Yunika. "Sharia E-Commerce in Indonesia : Sharia Peer to Peer Lending" 2, No. 1 (2023): 90–102.
- Suhardi. "Mapping Islamic Financial Inclusion Literature : Trends , Key Issues , and Future Research Directions" 12, No. 4 (2025): 149–63.
- Syariah, Departemen Perbankan, and Otoritas Jasa Keuangan. "Pedoman Produk Pembiayaan Musyarakah Perbankan Syariah," 2024.
- Uula, Mimma Maripatul. "Smart Contracts and the Islamic Finance Industry" 6, No. 1 (2025).
- Wasian, Abdulloh, Nazzid Abdullah Haiyi, Umar Maulana, Muhammad Farid, Muhammad Yoga, Nur Adwitya, Wahyu Aji Satrio, and Ridho Arifianto. "Analisis Implementasi Musyarakah Bagi MSMEs Pada Era Ekonomi Digital : Peluang , Tantangan Regulasi , Dan Strategi Penguatan" 2 (2025).
- Yang, Junhong, Yu Wu, and Bihong Huang. "Digital Finance and Financial Literacy: Evidence from Chinese Households." *Journal of Banking & Finance* 156 (2023): 107005. <https://doi.org/https://doi.org/10.1016/j.jbankfin.2023.107005>.