

**ISLAMIC FINTECH AND THE DIGITAL TRANSFORMATION OF ISLAMIC FINANCE:
GLOBAL TRENDS, CHALLENGES AND PROSPECTS FOR UZBEKISTAN**

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Abstract. The rapid digitalization of financial services is reshaping the structure, delivery and governance of Islamic finance. This thesis critically reviews the development of Islamic fintech and examines how blockchain, artificial intelligence (AI), digital payments, crowdfunding, peer-to-peer (P2P) financing and other digital technologies interact with Shariah requirements. The study is based on a structured narrative review of academic and institutional literature published primarily during 2018–2026, with earlier foundational works retained where they provide essential theoretical context. The review identifies five interrelated findings. The Uzbekistan case demonstrates a rapidly developing institutional environment: the Central Bank has introduced regulatory arrangements for Islamic financing services provided by microfinance organizations, created functions for regulating Islamic finance and is working with the Islamic Financial Services Board on a 2026–2030 national development roadmap. These developments indicate that Uzbekistan is moving from exploratory discussion toward institutional implementation. The thesis therefore argues that the development of Islamic fintech in Uzbekistan should follow a coordinated model combining regulatory modernization, Shariah governance, controlled experimentation, digital infrastructure, consumer protection and professional capacity building.

Keywords: Islamic fintech; digital transformation; Islamic finance; Shariah compliance; blockchain; artificial intelligence; crowdfunding; peer-to-peer financing; financial inclusion; Shariah governance; Uzbekistan; regulatory sandbox.

Introduction

Islamic finance has developed from a specialized segment serving Shariah-conscious customers into a global financial industry whose principles emphasize the avoidance of riba, excessive gharar and maysir, alongside asset-backing, contractual clarity, ethical investment and risk-sharing. Its digital transformation is therefore not simply a question of transferring conventional financial services to online channels. Digital technologies can alter how contracts are formed, how risks are assessed, how compliance is monitored and how financial institutions interact with customers.

The literature increasingly treats Islamic fintech as a distinct field at the intersection of financial technology and Islamic financial principles. A bibliometric and content review of Scopus-indexed literature identified 85 Islamic FinTech documents for 2017–2022 and grouped the field into several streams including crowdfunding, payments, blockchain and cryptocurrency. The review also identified legal regulation and financial literacy as major obstacles to wider adoption (Aysan and Unal, 2022). More recent reviews similarly emphasize regulatory harmonization, Shariah governance, financial inclusion, technological innovation and the need for stronger empirical evidence (Shahzadi, 2025; 'Emerging trends in Fintech and Islamic finance', 2026).

The central research problem is that technological innovation can simultaneously create efficiency gains and new forms of Shariah, legal and consumer risk. A blockchain platform may improve transaction traceability while its underlying asset or settlement mechanism remains non-compliant. An AI model may improve credit assessment while embedding bias or operating without sufficient explainability. Crowdfunding may expand financial inclusion while creating conflicts of interest or weak investor protection. Consequently, the relevant question is not whether Islamic finance should digitalize, but under what institutional and governance conditions digitalization can support the objectives of Islamic finance.

The Uzbekistan case is particularly important because the country's institutional position has changed rapidly. The Central Bank now identifies regulation and supervision of Islamic finance, development of the relevant legal framework, Islamic-finance accounting rules and capacity building among its functions (Central Bank of the Republic of Uzbekistan, 2026a). In 2024, the Central Bank approved a regulation governing Islamic financing services provided by microfinance organizations, including Ijarah, Mudarabah, Murabahah, Musharakah and Salam, based on AAOIFI standards and adapted to the national context (Central Bank of the Republic of Uzbekistan, 2024). In 2026, the Central Bank and IFSB also discussed a draft 2026–2030 roadmap for development of Uzbekistan's Islamic finance industry (Central Bank of the Republic of Uzbekistan, 2026b). These developments make Uzbekistan a relevant emerging-market case for examining the transition from conceptual interest to institutional development.

Table 1.
Key Opportunities, Risks and Policy Implications of Islamic Fintech for Uzbekistan

Theme	Main opportunity	Main risk/gap	Implication for Uzbekistan
Blockchain	Traceability, automation, transparent records	Asset, contract and legal enforceability questions	Develop controlled pilot with legal and Shariah review
Artificial intelligence	Compliance monitoring, risk management, efficiency	Bias, opacity, privacy and accountability	Adopt human-in-the-loop Shariah and AI governance
Crowdfunding/P2P	SME finance and financial inclusion	Weak oversight, disclosure and investor protection	Create proportionate licensing, disclosure and Shariah standards
Digital payments	Lower transaction costs and wider access	Cybersecurity and consumer vulnerability	Strengthen digital identity, cybersecurity and literacy



Islamic finance governance	Standardization and trust	Fragmented interpretations and limited specialists	Build national Shariah governance and professional capacity
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Source: Compiled by the author based on Aysan and Unal (2022), Hassan et al. (2021), IFSB (2023), Omar and Sa'ad (2024), Shafii, Alwi and Salleh (2025), Desky and Hye (2025), and Central Bank of the Republic of Uzbekistan (2024, 2026).

The Uzbekistan case requires a more nuanced interpretation than the earlier version of this thesis suggested. It is no longer accurate to characterize the country simply as lacking an Islamic finance regulatory framework. Since 2024, the Central Bank has had a specific regulation governing Islamic financing services offered by microfinance organizations. The regulation recognizes services including Ijarah, Mudarabah, Murabahah, Musharakah and Salam and was developed with reference to AAOIFI standards and national conditions (Central Bank of the Republic of Uzbekistan, 2024).

The institutional framework is continuing to develop. The Central Bank's current functions explicitly include regulating and supervising Islamic finance services, developing the associated regulatory and legal framework, improving supervision according to international standards, developing accounting rules for Islamic finance operations and strengthening staff capacity (Central Bank of the Republic of Uzbekistan, 2026a). The Central Bank also reports that its licensing functions include applications for banks conducting Islamic banking activities and approval of candidates for Islamic Finance Boards (Central Bank of the Republic of Uzbekistan, 2026c).

At the strategic level, the Central Bank and the IFSB discussed a draft roadmap for developing Uzbekistan's national Islamic finance industry for 2026–2030. The process involved financial, governmental, educational and religious institutions and addressed Islamic banking, the Islamic capital market, takaful, legislation and capacity building (Central Bank of the Republic of Uzbekistan, 2026b). This indicates that Uzbekistan is moving toward an ecosystem approach rather than a narrow product-level reform.

For Islamic fintech specifically, the principal opportunity is to connect this emerging regulatory infrastructure with digital delivery channels. Uzbekistan can use controlled pilots for digital Islamic financing, digital onboarding, automated compliance monitoring and Shariah-compliant crowdfunding while building consumer-protection requirements into the design stage. The country's policy sequence should therefore be: regulatory clarification; Shariah governance; pilot implementation; technology-risk supervision; and gradual scaling.

The strongest near-term opportunities are likely to be digital Islamic microfinance for SMEs, digital Murabahah and Ijarah processes, Shariah-compliant crowdfunding, digital zakat and waqf infrastructure, and technology-supported Shariah compliance. These areas should be developed through supervised experimentation rather than unrestricted market entry. The objective should be to establish trust and demonstrable compliance before pursuing rapid scale.

Conclusion

The literature indicates that Islamic fintech represents more than the digital delivery of conventional financial products. It is a structural transformation that can alter contractual processes, risk management, compliance, distribution and financial inclusion. Blockchain, AI, digital payments, crowdfunding and P2P technologies offer meaningful efficiency and inclusion benefits, but none is inherently Shariah-compliant merely by virtue of being digital.

The principal finding of this review is that technology and governance must develop together. Blockchain requires asset and contract governance; AI requires explainability, accountability and human Shariah oversight; crowdfunding and P2P platforms require strong disclosure and investor protection; and digital inclusion requires cybersecurity and financial literacy. The literature therefore supports a governance-centered rather than technology-centered model of Islamic fintech development.

Uzbekistan provides an emerging example of this institutional transition. The regulatory environment has moved beyond simple absence: Islamic financing services for microfinance organizations are regulated, the Central Bank has explicit Islamic-finance supervisory and developmental functions, and a 2026–2030 national roadmap is being developed with IFSB support (Central Bank of the Republic of Uzbekistan, 2024; Central Bank of the Republic of Uzbekistan, 2026a; Central Bank of the Republic of Uzbekistan, 2026b). The next challenge is to connect these institutional advances with responsible digital innovation. If Uzbekistan combines regulatory clarity, Shariah governance, supervised experimentation, consumer protection, cybersecurity and professional capacity, Islamic fintech can become a practical instrument for financial inclusion and SME financing rather than merely an emerging technological concept.

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