

THE ROLE OF DIGITAL INNOVATIONS IN IMPROVING ISLAMIC BANKING SERVICES

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RAQAMLI INNOVATSIYALARNING ISLOMIY BANK XIZMATLARINI YAXSHILASHDAGI O‘RNI

Annotatsiya. Mazkur tezis raqamli innovatsiyalarning — mobil banking, fintech platformalari, blokcheynga asoslangan aqlli shartnomalar, sun‘iy intellekt, ochiq banking va raqamli identifikatsiyaning — islomiy bank xizmatlarini yaxshilashdagi o‘rnini kontseptual tahlil qilishga bag‘ishlangan, xususan O‘zbekiston misolida. 2026-yil 27-martda O‘zbekistonda islomiy bank faoliyatini joriy etuvchi birinchi qonun (O‘RQ-1126-son) qabul qilindi, bu esa an‘anaviy banklar bilan bir qatorda islomiy banklar, islomiy “oynalar” va islomiy mikromoliya tashkilotlari faoliyat yuritishiga imkon beruvchi ikki bosqichli bank tizimini yaratdi. Tadqiqot natijalari shuni ko‘rsatadiki, raqamli vositalar foyda-zararni taqsimlash shartnomalaridagi nazorat xarajatlarini kamaytirish, aktivga asoslangan bitimlar shaffofligini oshirish hamda diniy sabablarga ko‘ra bank xizmatlaridan foydalanmagan aholini moliyaviy inklyuzivlikka jalb etish imkonini beradi. Tezisda O‘zbekiston uchun asosiy imkoniyatlar va xavflar aniqlanib, amaliy tavsiyalar taklif etiladi.

Kalit so‘zlar: islomiy banking, raqamli innovatsiyalar, fintech, moliyaviy inklyuzivlik, shariatga muvofiqlik, raqamli transformatsiya, blokcheyn, O‘zbekiston.

Abstract. This thesis offers a conceptual analysis of the role of digital innovations — mobile banking, fintech platforms, blockchain-based smart contracts, artificial intelligence, open banking and digital identification — in improving Islamic banking services, with particular reference to Uzbekistan. On 27 March 2026, Uzbekistan adopted its first law introducing Islamic banking activity (Law No.O‘RQ-1126), creating a dual banking system in which Islamic banks, Islamic windows and Islamic microfinance institutions may operate alongside conventional banks. The findings show that digital tools reduce the monitoring costs of profit-and-loss sharing contracts, enhance the transparency of asset-backed transactions, and extend financial inclusion to population segments that have avoided interest-based banking for religious reasons.

The thesis identifies key opportunities and risks for Uzbekistan and proposes practical recommendations.

Keywords: Islamic banking, digital innovation, fintech, financial inclusion, Sharia compliance, digital transformation, blockchain, Uzbekistan.

Relevance of the topic. The global banking sector is undergoing a profound digital transformation, and Islamic banking — grounded in the prohibition of interest (riba), excessive uncertainty (gharar) and speculation (maysir) — is increasingly part of this shift. The relevance of this topic for Uzbekistan has grown sharply since 27 March 2026, when the President signed Law No. O‘RQ-1126, establishing a dual banking system in which Islamic banks, Islamic “windows” within conventional banks, and Islamic microfinance institutions may operate legally for the first time. This reform coincides with rapid growth in digital financial services: the share of the population making at least one digital payment rose from 39% in 2021 to 71.17% in 2025 (Central Bank of Uzbekistan, 2026). The convergence of these two processes — the legal introduction of Islamic banking and the accelerated digitalization of finance — makes it both timely and practically necessary to examine how digital innovation can support the development of a Sharia-compliant financial sector in the country.

Aim of the research. The paper aims to conceptually analyze the role of digital innovations — mobile and internet banking, fintech platforms, blockchain-based smart contracts, artificial intelligence, open banking, and digital identification — in improving the efficiency, transparency, accessibility and Sharia-compliance of Islamic banking services, with specific reference to the emerging institutional and regulatory environment in Uzbekistan.

Research methods. Given that Uzbekistan's Islamic banking sector is only now transitioning from legislation to licensed operation, the study adopts a qualitative, conceptual and comparative method, based on a desk review of Islamic finance theory (Chapra, 2000; Iqbal & Mirakhor, 2011), the text of Law No. O‘RQ-1126 and related Central Bank regulations, and industry data on digital financial services, supplemented by comparative reference to more mature Islamic banking markets such as Malaysia, Turkey and the UAE.

Main result. The analysis shows that digital tools are structurally well suited to Islamic finance because they directly address the operational burdens created by Sharia-compliant contracting. Blockchain-based smart contracts can encode and automatically enforce the terms of profit-and-loss sharing (mudarabah, musharakah) and asset-backed sale (murabaha) contracts, reducing monitoring and Sharia-compliance verification costs. Artificial intelligence supports credit assessment using alternative

data rather than interest-rate-based risk pricing, which is particularly valuable given the limited formal credit history of many Uzbek SMEs. Digital and biometric identification extends formal financial access to population segments that have historically avoided interest-based banking for religious reasons. In Uzbekistan specifically, the simultaneous development of the Islamic Banking Law, the Central Bank's Council on Islamic Finance, and the forthcoming National Strategy for Financial Technology Development for 2026–2030 creates a rare opportunity to design Islamic finance regulation and fintech regulation coherently from the outset, allowing new Islamic banks and windows to build digitally native operations rather than digitizing legacy infrastructure.

Scientific conclusion. Digital innovation is not merely a convenience for Islamic banking but a structural enabler of its core contractual principles — transparency, asset-backing and genuine risk-sharing. For Uzbekistan, realizing this potential requires coordinated policy between Islamic finance and fintech regulators, a dedicated regulatory sandbox for Islamic fintech products, technical standardization of digitally encoded Sharia-compliant contracts, and investment in combined Sharia-and-technology expertise among bank staff and regulators. These findings provide a conceptual basis for subsequent empirical research once licensed Islamic banks in Uzbekistan become operational.

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