

EDITORIAL

## NLP, Shari'ah Governance, and the Future of Islamic Finance: A Regulatory Imperative

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The rapid emergence of Artificial Intelligence (AI), particularly Natural Language Processing (NLP) and Large Language Models (LLMs), is reshaping the global financial industry, and Islamic finance is gradually entering this technological phase. AI-assisted systems are increasingly being used for customer interaction, contract analysis, document classification, shari'ah screening, summarization of fatāwa, compliance review, and support for shari'ah audit functions (Jokhio and Jaffer, 2024).

The broader use of AI-supported customer interaction systems among the gulf Islamic banks, including Dubai Islamic Bank, Abu Dhabi Islamic Bank, and Kuwait Finance House has been highlighted in contemporary literature on AI in Islamic banking and digital financial services. Recent studies note the increasing deployment of multilingual AI chatbots, virtual assistants, and machine-learning-supported customer-service systems to facilitate banking assistance, enhance customer experience, and improve self-service support mechanisms (Hasan et al., 2022; Jan et al., 2023; IFSB, 2024).

Unlike conventional finance, shari'ah compliance is not merely a technical or linguistic exercise. Islamic finance operates within a framework of *fiqh al-mu'āmalāt*, *uṣūl al-fiqh*, *maqāsid al-shari'ah*, and collective juristic reasoning. A shari'ah ruling depends not only on textual interpretation but also on context, economic substance, custom (*'urf*), public interest (*maslahah*), legal consequences, and ethical outcomes. The issues of short sales, exchange of currencies, monetary assets and debt instruments require special scrutiny at the initial and application levels. NLP systems, however sophisticated, fundamentally operate through statistical pattern recognition and semantic associations rather than genuine juristic reasoning (*ijtihad*). Consequently, while such systems may retrieve relevant *fatāwa* or identify contractual clauses, they cannot independently determine whether a financial structure genuinely fulfills the objectives and spirit of shari'ah.

The risks become particularly serious in product development, application of the processes, shari'ah audit, and review and advisory services. Any jurist(s) may opt an easy way to ask AI about any products, instruments or processes, and without going into details of the processes involved in application. Islamic finance already faces criticism for excessive legal formalism and replication of conventional debt-based finance through Islamic contractual forms. Any AI based systems may aggravate this tendency by encouraging *fatwa* extraction and blind certifications rather than principled juristic

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deliberation based on details in application processes. NLP systems may selectively identify permissive opinions while ignoring conditions, exceptions, minority status, or broader socioeconomic implications. In this context, AI could unintentionally facilitate a technologically advanced form of *fatwa* shopping.

Another challenge is the diversity of juristic opinions across schools of thought and jurisdictions, and possible loopholes in regulations regarding the sources of shari'ah based decision making. Islamic finance accommodates legitimate difference of opinions, but AI systems may oversimplify this diversity or present minority views as dominant positions. Moreover, many contemporary financial rulings might be context-sensitive. A contract that appears formally compliant may still violate shari'ah in substance through hidden interest-based risk transfer, synthetic debt creation, or contractual/excessive uncertainty (*gharar*) as in the case of netting of in hedging instruments, instead of fulfillment of the contracts. Such distinctions require human juristic judgment that AI cannot reliably replicate.

This is where collective juristic institutions assume central importance. The resolutions of the International Islamic Fiqh Academy and the shari'ah standards issued by AAOIFI represent some of the most important institutional efforts toward standardization in Islamic finance. While the former serves as juristic opinions applicable for newly emerging issues, the latter represent collective *ijtihad* by the contemporary jurists regarding specific contracts and instruments. These standards provide authenticated and relatively harmonized frameworks for banking, *sukuk*, *takāful*, capital markets, fintech, and emerging financial aspects. AI systems used in Islamic finance must, therefore, rely primarily on such collectively approved standards rather than fragmented institutional *fatāwa* or commercially driven A.I based interpretations. Furthermore, the standards cannot be applied mechanically. Juristic resolutions evolve over time, and their implementation requires contextual understanding and *maqāṣid*-oriented interpretation. Hence, AI must remain a decision-support tool rather than an autonomous shari'ah authority.

In this regard, regulators such as the State Bank of Pakistan, the central bank, and the Securities and Exchange Commission, carry significant responsibility. They must ensure that shari'ah governance remains grounded in collectively recognized juristic methodologies rather than isolated institutional opinions or opaque algorithmic outputs derived from data provided by banks' management, whose primary concern may be business and profitability, with little regard for shari'ah legitimacy. Regulators should require Islamic financial institutions to align shari'ah advisory systems with the given shari'ah governance frameworks, AAOIFI standards, and internationally recognized *fiqh* resolutions. Any departure from these standards must be accompanied by transparent scholarly justification and regulatory disclosure.

If regulators fail to provide timely guidance and governance frameworks for AI deployment, the Islamic finance industry could face serious institutional, reputational, and systemic risks. One immediate danger is the uncontrolled proliferation of AI-generated shari'ah opinions by product developers, fintech operators, and even retail advisory applications without adequate scholarly supervision. This could create confusion among consumers, fragmentation in market practices, and widening inconsistencies in shari'ah rulings across institutions.

The absence of regulatory standards may also allow commercially motivated institutions to exploit AI tools for regulatory arbitrage by selectively training systems on permissive or minority *fatāwa*. Over time, this could weaken the credibility of shari'ah governance and erode public confidence in Islamic finance itself. In cross-border transactions, divergent AI-assisted interpretations may further undermine harmonization efforts and increase legal uncertainty for investors and regulators alike.

Another major risk is the emergence of opaque “black-box shari'ah systems” whose recommendations cannot be adequately explained, audited, or challenged. Since advanced AI models often lack interpretability, institutions may unknowingly rely on flawed or biased outputs. Errors in automated shari'ah screening, contract assessment, or compliance monitoring could expose Islamic financial institutions to legal disputes, reputational damage, and regulatory non-compliance.

Cybersecurity and data governance concerns are equally significant. AI-based advisory systems may process confidential customer data, internal shari'ah deliberations, legal contracts, and strategic institutional information. Without strong regulatory safeguards, risks of data leakage, manipulation, unauthorized *fatwa* generation, or external influence over AI systems may increase substantially.

More fundamentally, excessive reliance on AI may gradually transform Islamic finance from a *maqāṣid*-oriented ethical system into a purely algorithmic compliance culture focused on technical legality rather than justice, transparency, equitable risk-sharing, environmental responsibility, and socioeconomic welfare. Therefore, regulators must act proactively. Comprehensive AI governance frameworks for Islamic finance should include mandatory human oversight, authenticated juristic databases, transparency and explainability requirements, periodic shari'ah audits of AI systems, cybersecurity safeguards, and interdisciplinary capacity building for both scholars and technologists.

The long-term sustainability and credibility of Islamic finance will depend not merely on adopting advanced technologies, but on ensuring that such technologies remain firmly subordinated to collective *ijtihad*, ethical accountability, and the higher objectives of shari'ah.

## REFERENCES:

- Hasan, R., Ali, M., & Hassan, M. K. (2022). Artificial intelligence and digital transformation in Islamic banking: Opportunities and challenges. *Journal of Islamic Marketing*, 13(9), 1845–1863. <https://doi.org/10.1108/JIMA-07-2021-0228>
- Islamic Financial Services Board. (2024). *Islamic financial services industry stability report 2024*. Kuala Lumpur: IFSB.
- Jan, A., Khan, M., & Ullah, S. (2023). Fintech innovation and customer experience in Islamic banking: The role of AI-enabled service systems. *International Journal of Islamic and Middle Eastern Finance and Management*, 16(4), 701–719. <https://doi.org/10.1108/IMEFM-11-2022-0456>

Jokhio, M. N., & Jaffer, M. A. (2024). Generative AI in Shari'ah Advisory in Islamic Finance: An Experimental Study. *Business Review*, 19(2), 74–92. The study was conducted by researchers associated with the Shari'ah Advisory Unit of Faysal Bank and the Institute of Business Administration, Karachi. It experimentally evaluated ChatGPT.

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