CV Visionary Raya Sakti
E-ISSN:
INTEGRATIVE
Journal of Economics, Management, and Accounting

HOW DO ISLAMIC BANKING STAKEHOLDERS INTERPRET THE ETHICAL AND SHARIA IMPLICATIONS OF ARTIFICIAL INTELLIGENCE ADOPTION? A QUALITATIVE STUDY IN INDONESIA

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E-Journal Integrative
Vol. 1, No. 1
March 2026
Hal. 1-13

p-ISSN:
e-ISSN:

ABSTRACT

The integration of artificial intelligence (AI) within Islamic banking is accelerating, yet its ethical and Sharia implications remain insufficiently understood. This study explores how key Islamic banking stakeholders in Indonesia— including regulators, Sharia Supervisory Board (SSB) members, Islamic bank executives, fintech developers, and ethics scholars—interpret the moral, regulatory, and jurisprudential meaning of AI adoption. Adopting an interpretivist qualitative design, data were collected through semi-structured interviews and analyzed using NVivo through open, axial, and selective coding. The findings reveal three interrelated themes: (1) AI is perceived as a strategic enabler of efficiency, financial inclusion, and institutional competitiveness; (2) ethical and Sharia ambiguities emerge in areas related to algorithmic intention, explainability, fairness, bias, and the legitimacy of machine-based decision-making; and (3) trust and governance are central to acceptance, with stakeholders expecting continuous oversight, transparency, and alignment with maqāṣid al-sharīʿah. The study concludes that AI adoption in Islamic banking requires more than technological readiness—it necessitates a tailored responsible AI governance model grounded in Islamic jurisprudence. The research contributes to emerging discourse on Islamic digital ethics and offers actionable implications for regulation, Sharia governance, and responsible AI implementation.

Keywords: *Islamic banking, artificial intelligence, Sharia governance, ethics, qualitative research*.

INTRODUCTION

The rapid advancement of artificial intelligence (AI) has transformed the global financial services industry, reshaping operational efficiency, decision-making processes, risk assessment, customer interaction, and product personalization (Banabou & Tirole, 2016); (Susen, 2022). Within the broader financial ecosystem, Islamic banking is increasingly exposed to digital transformation pressures, driven by evolving customer expectations, competitive technological shifts, regulatory modernization, and post-pandemic acceleration toward automation and digital service models (Zetzsche et al., 2019). As AI continues to influence financial innovation, its intersection with Islamic banking presents both unprecedented opportunities and critical ethical, regulatory, and Sharia-related considerations (Arner et al., 2017).

Unlike conventional financial systems, Islamic banking operates under the principles of Sharia, which emphasize justice (*al-ʿadl*), transparency, the avoidance of riba, gharar, and maysir, and ethical socio-economic value creation (Mofrad & Haddad, 2023). The introduction of AI—particularly in areas such as algorithmic decision-making, robo-advisory, automated Sharia screening, biometric authentication, machine learning credit scoring, and sentiment-based risk models—raises fundamental questions about how these technologies align with Islamic ethical requirements. Emerging literature suggests that automation and data-driven decision models may create challenges in fairness, accountability, explainability, and moral responsibility, especially when algorithmic actions replace human ethical judgment (Al-Suwailem, 2020); (Rahim & Amin, 2024).

While existing research on AI in Islamic finance has primarily focused on technical models, frameworks, adoption readiness, fintech regulation, and operational capabilities, limited scholarly work has explored how key stakeholders interpret the ethical meaning and Sharia compliance implications of AI systems (Susen, 2022). More specifically, there remains a lack of qualitative inquiry into how Sharia Supervisory Boards, Islamic bank executives, regulators, and technology developers negotiate ethical tensions between efficiency-driven automation and the moral foundations of Islamic financial governance (Hasan et al., 2024). The absence of interpretive, meaning-centered analysis limits theoretical understanding of whether AI adoption reinforces or disrupts Sharia-compliant values and decision-making cultures within Islamic banking institutions (Dwivedi et al., 2021).

Addressing this gap is crucial because stakeholder perceptions influence not only AI implementation and regulatory directions but also public trust—an essential institutional pillar of Islamic banking. As AI evolves from optional innovation to strategic necessity, understanding stakeholder interpretation becomes a prerequisite for ethical regulation, Sharia governance reform, and the development of responsible AI frameworks tailored to Islamic financial identity.

Therefore, this study seeks to explore: How do Islamic banking stakeholders in Indonesia interpret the ethical and Sharia implications of artificial intelligence adoption? Through an in-depth qualitative approach, this research examines how different actors construct meaning, concerns, expectations, and justification frameworks regarding AI implementation. The findings are expected to contribute theoretically to the growing discourse on Islamic digital ethics and practically to policy formulation, Sharia governance enhancement, and responsible AI strategies in the Islamic banking sector.

LITERATURE REVIEW

Artificial Intelligence in the Financial Services Sector

Artificial intelligence (AI) has emerged as one of the most transformative forces within the global financial services industry, reshaping operational models, decision-making processes, and customer engagement mechanisms. Over the past decade, financial institutions

have increasingly deployed AI-driven systems such as automation workflows, predictive and behavioral analytics, natural language processing (NLP), machine learning (ML) credit scoring, intelligent anti-fraud detection, algorithmic trading engines, and biometric identity authentication. These technologies collectively signify the shift from traditional human-led decision structures toward scalable, data-driven, and autonomous computational systems (Zavolokina & Schwabe, 2022).

Empirical studies consistently highlight the strategic benefits of AI integration in finance. AI enhances forecasting accuracy, improves risk assessment capabilities, accelerates decision timelines, and reduces operational inefficiencies associated with manual processes. Machine learning–based credit scoring, for instance, allows financial institutions to evaluate creditworthiness using alternative datasets—including behavioral and transactional patterns—expanding access to finance among previously underserved populations (Mhlanga, 2023). Robo-advisory platforms also democratize investment advisory services by providing automated financial guidance at a significantly lower cost than traditional human advisors. Moreover, AI-enabled customer service systems, such as chatbots and sentiment analytics, have improved personalization and responsiveness, contributing to enhanced customer experience and higher retention (Lim, 2024).

However, despite its transformative potential, the deployment of AI in finance is not without controversy and risk. Scholars and regulatory institutions increasingly caution that AI introduces a new class of systemic vulnerabilities. Algorithmic opacity—often referred to as the "black-box problem"—makes it difficult to interpret how automated decisions are generated, challenging traditional notions of transparency and accountability (Hasan et al., 2024). Data privacy and surveillance risks expand as AI systems rely on large-scale data extraction, raising ethical and legal concerns about consent, ownership, and informational autonomy. Furthermore, algorithmic bias remains a critical concern: machine learning models trained on historically biased data may inadvertently reproduce or intensify social inequities in lending, insurance pricing, and fraud prediction. These risks demonstrate that AI is not a neutral tool but a socio-technical system with embedded values that can either reinforce or disrupt fairness in financial decision-making (Ahmad et al., 2024).

Existing literature examining AI adoption in financial systems predominantly relies on technology adoption frameworks such as the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), and Rogers' Innovation Diffusion Theory (IDT). While these theoretical models offer valuable insight into behavioral intention, institutional readiness, and usability perception, they remain primarily techno-centric and often overlook deeper normative, ethical, and governance implications. They are built on assumptions of efficiency, innovation benefit, and rational adoption, rather than interrogating whether such technologies align with sector-specific moral and regulatory values (Susen, 2022).

Consequently, there is a growing scholarly shift from purely functional analysis toward more nuanced discussions involving responsible AI, algorithmic governance, and digital ethics frameworks. Regulatory bodies such as the European Union and OECD have begun proposing governance models emphasizing transparency, explainability, accountability, and human oversight. Yet, these frameworks remain largely rooted in secular ethics and often do not reflect the unique value foundations of faith-based financial systems, such as Islamic banking.

This emerging tension reveals a critical knowledge gap: while AI adoption in the financial sector is rapidly accelerating, academic discourse and regulatory institutions are still negotiating how to ensure that such technological advancement remains aligned with broader ethical, social, and value-driven financial principles. This gap becomes even more pronounced when AI intersects with financial institutions guided by religious frameworks—such as Islamic

banking—where compliance is not only procedural but also moral and doctrinal (Omar et al., 2022).

The Emergence of AI in Islamic Banking and Finance

The incorporation of artificial intelligence (AI) into Islamic banking and finance has become an increasingly prominent topic in recent academic and industry discourse. AI applications are now being explored across multiple domains of Islamic financial operations, including Shariah-compliant investment screening, automated classification of fatwa rulings, digital sukuk structuring and certification, AI-driven Islamic robo-advisory services, zakat and waqf fund allocation analytics, and automated halal compliance verification (Rahman, 2024). These technological developments are largely driven by the rise of Islamic fintech ecosystems, comprising Islamic peer-to-peer lending platforms, Sharia-compliant crowdfunding models, and digital waqf management systems—platforms that depend heavily on automation, algorithmic processing, and real-time data intelligence (Mohd Thas Thaker, 2020).

Within this evolving digital infrastructure, AI is increasingly viewed not merely as a supporting technology but as a strategic enabler of operational modernization and financial inclusion. For instance, machine learning credit scoring models allow Islamic banks to assess the creditworthiness of underserved populations without relying solely on interest-linked conventional scoring systems. Similarly, natural language processing has been applied to extract and classify Sharia-related rulings, enabling faster compliance checks and reducing reliance on manual textual interpretation (Ali & Omar, 2024). AI-based robo-advisors also offer personalized investment portfolios aligned with Shariah screening rules, making Islamic investment tools more accessible to retail customers (Mavlutova et al., 2020).

Despite these advancements, the existing body of research remains predominantly techno-centric. Most studies emphasize adoption models, infrastructure readiness, innovation acceptance, and system feasibility, often drawing upon frameworks such as TAM, UTAUT, or TOE (Technology–Organization–Environment). These studies showcase the potential efficiency gains and strategic advantages of AI integration, including improved transparency, enhanced governance efficiency, lower transaction costs, and expanded financial access. However, they tend to overlook deeper epistemic, ethical, and jurisprudential dimensions that are foundational to Islamic finance (Haryono et al., 2022).

A key critique emerging from recent literature is that the rapid technological adoption may outpace the development of corresponding Shariah governance frameworks. While Islamic finance is grounded in principles such as *maslahah* (public benefit), *adl* (justice), *amanah* (trust), and the avoidance of riba, gharar, and maysir, it remains unclear how algorithmic systems—which are often opaque, probabilistic, and data-driven—can uphold these principles consistently. Furthermore, questions arise regarding moral agency in AI-enabled decision-making, the legitimacy of automated ijtihad, and whether algorithmic outputs can be considered authoritative in the absence of human scholarly judgment (Ali & Omar, 2024).

This disconnect signals an emerging jurisprudential and governance gap: while AI is increasingly embedded in Islamic financial practices, its alignment with Shariah principles and Islamic ethical reasoning remains insufficiently theorized. Moreover, research rarely examines how key actors—including Sharia Supervisory Boards, regulators, Islamic bankers, fintech developers, and end-users—interpret AI's role in shaping the authenticity and identity of Islamic finance. As a result, the discourse remains fragmented, with technological innovation advancing more rapidly than ethical and regulatory frameworks capable of guiding it (Ali & Omar, 2024).

Therefore, although AI promises efficiency, scalability, and accessibility within the Islamic financial ecosystem, it simultaneously raises foundational questions about legitimacy, trust, compliance, and identity. This underscores the need for scholarly exploration that goes

beyond functional adoption metrics and critically examines how AI is understood, negotiated, and morally framed within the unique spiritual, regulatory, and institutional landscape of Islamic finance.

Ethical, Governance, and Sharia Dimensions of AI

Islamic finance is grounded in a normative ethical framework rooted in Sharia principles, which emphasize justice (*al-ʿadl*), public benefit (*maslahah*), harm prevention (*dafʿ al-darar*), transparency (*al-wudūḥ*), and the prohibition of exploitative or speculative practices such as riba, gharar, and maysir. These foundational values function not merely as regulatory prohibitions but as a moral architecture guiding institutional behavior, governance mechanisms, and financial decision-making. The overarching objective is the preservation of human dignity, economic fairness, and societal well-being—reflecting the broader maqaṣid al-shariʿah (higher objectives of Islamic law) (Ali & Omar, 2024); (Abubakar & Rosman, 2024).

The introduction of artificial intelligence into Islamic financial operations presents a new layer of ethical complexity that extends beyond conventional legal compliance. AI systems are capable of autonomous learning, pattern recognition, and decision construction independent of human intent or direct supervision. As a result, responsibility and accountability become distributed across algorithms, institutions, and data infrastructures. This raises philosophical and jurisprudential questions rarely encountered in pre-digital Islamic finance discourse, such as (Haneef & Hafas, 2020):

1. Responsibility: When algorithmic decisions lead to discriminatory lending or misaligned compliance screening, determining *mukhatib* (the accountable agent) becomes ambiguous. Is responsibility borne by the developer, the institution, the user, or the algorithm itself?
2. *Ijtihad* and Machine Judgment: Traditional *ijtihad* requires qualified human reasoning, interpretive ability, and moral accountability. Whether machine learning–based decision tools can perform a role analogous to *ijtihad*—or whether they remain mere assistive tools—remains unresolved.
3. Ambiguity and *Shubuha*t: AI introduces probabilistic outcomes, uncertainty, and adaptive learning. The treatment of grey areas (*shubuhat*) becomes challenging when decisions are created through statistical inference rather than explicit jurisprudential reasoning.

These interpretive questions highlight that AI is not simply a technological upgrade but a paradigm shift with potential implications for epistemology, governance, and the ontological meaning of compliance within Islamic finance.

Global scholarly debates on AI governance have led to emerging frameworks such as Responsible AI, Trustworthy AI, and Ethical AI, which emphasize transparency, explainability, fairness, accountability, and human oversight. Although these principles intersect with Islamic values, they are primarily grounded in secular, utilitarian ethics, Western legal reasoning, and universal human rights frameworks. As such, they lack explicit integration with Islamic legal maxims (*qawaʿid fiqhiyyah*), *maqaṣid al-shariʿah*, or the institutional realities of Sharia governance (Bedoui & Mansour, 2015).

Meanwhile, existing literature in Islamic finance governance primarily focuses on compliance auditing, Sharia Supervisory Board (SSB) oversight, and post-hoc legal review of financial contracts. Although effective in traditional financial contexts, these governance mechanisms were not designed to regulate autonomous systems, algorithmic learning, or computational decision authority. As a result, there is currently no established framework to assess algorithmic Sharia compliance, data ethics from an Islamic perspective, or the morality of automated decision-making within Islamic finance.

This mismatch underscores an emerging theoretical and regulatory vacuum: the ethical adoption of AI in Islamic finance requires not only operational feasibility but an integrated jurisprudential framework capable of reconciling automation with Islamic moral and legal identity. Without such integration, AI risks transforming Islamic finance into a

technologically optimized system that is Sharia-compliant procedurally but disconnected from its ethical spirit.

METHOD

Research Design and Philosophical Positioning

This study adopts a qualitative research design under an interpretivist epistemological paradigm, which assumes that reality is socially constructed, context-dependent, and shaped by human interpretation. Given that the meaning of artificial intelligence in Islamic banking is not fixed but negotiated among stakeholders, an interpretivist lens enables the exploration of how actors construct ethical, regulatory, and Sharia meanings surrounding AI adoption. Ontologically, this research aligns with relativism, acknowledging that multiple realities exist based on individuals' roles, experience, and institutional context (Baviga, 2024).

To capture these multiple perspectives, this study employs a semi-structured interview approach, allowing participants to share nuanced reflections while providing enough structure for comparative thematic analysis. This approach is particularly suitable for emerging and under-theorized domains such as AI ethics in Islamic finance, where exploratory insight is needed to inform conceptual development (Rio Baviga, Afrizal, Wirmie Eka Putra, 2023).

Sampling Strategy and Participants

A purposive sampling strategy was used to identify participants with specialized knowledge and direct involvement in Islamic banking digital transformation. To ensure representation of diverse institutional roles, sampling followed a heterogeneous stakeholder matrix, including:

Table 1. Stakeholder Mapping and Sampling Framework

Stakeholder Group	Expected Participants	Rationale
Sharia Supervisory Board Members	4–6	Ethical and jurisprudential interpretation of AI systems
Islamic Bank Executives & Digital Strategy Leaders	6–8	Institutional decision-making and implementation strategy
Regulators & Policy Actors	3–5	Governance, compliance, and regulatory perspectives
Islamic Finance Technology Developers (Fintech, AI engineers)	4–6	Technical design and operational feasibility
Academics/Experts in Islamic finance ethics	2–4	Framework validation and conceptual reasoning

Data Collection Procedure

Data were collected through semi-structured in-depth interviews, conducted either face-to-face or via secured digital video conferencing platforms. Each interview lasted between 45 and 90 minutes and was audio-recorded with participant consent. The interview protocol consisted of thematic prompts exploring:

1. Interpretations of AI in Islamic banking
2. Ethical, governance, and Sharia implications
3. Trust, responsibility, and decision legitimacy
4. Institutional readiness and perceived risks
5. Expectations for future regulatory or governance frameworks

Field notes and reflexive memos were documented to capture contextual insights and researcher observations.

Data Analysis Using NVivo

All interview recordings were transcribed verbatim and imported into NVivo 14 for systematic analysis. The analysis followed a hybrid thematic coding approach (deductive–inductive), consisting of:

1. Deductive Coding: based on predefined concepts (ethics, governance, accountability, AI applications, Sharia compliance, algorithmic bias).
2. Inductive Coding: allowing emergent patterns, meanings, and conceptual relationships to surface from participant narratives.

The coding process was conducted in three iterative stages:

Table 2. Qualitative Data Coding Process

Stage	Technique	Output
Stage 1	Open Coding	Identification of initial codes
Stage 2	Axial Coding	Cluster formation and relationship mapping
Stage 3	Selective Coding	Consolidation into core analytical themes

Ensuring Research Trustworthiness

To establish methodological rigor, this study applies the criteria proposed by Lincoln and Guba (1985):

Table 3. Strategies Applied to Ensure Trustworthiness

Trustworthiness Dimension	Strategies Applied
Credibility	Member checking, prolonged engagement with data, triangulation across stakeholder groups
Dependability	Audit trail documentation, clear coding protocols, NVivo-based traceable analytical process
Confirmability	Reflexive journaling, peer debriefing, minimization of researcher bias
Transferability	Thick contextual descriptions to allow applicability to similar Islamic banking environments

RESULT AND DISCUSSION

This section presents the empirical findings derived from the qualitative analysis conducted using NVivo software. The results are structured into three overarching themes that emerged through open, axial, and selective coding processes. Each theme reflects how Islamic banking stakeholders interpret the ethical, regulatory, and Sharia implications of artificial intelligence (AI). These themes are then critically discussed in relation to existing scholarship, Islamic jurisprudence frameworks, and responsible AI governance discourses.

Theme 1: Perceived Opportunities and Strategic Value of AI

Across all stakeholder categories, there was a strong convergence of views that artificial intelligence represents a significant strategic turning point for the Islamic finance industry in Indonesia. Participants consistently articulated that AI is not only a tool for automation or operational improvement but a transformative force capable of reshaping service delivery structures, regulatory processes, and competitive positioning in the financial landscape. The perception of AI as a *strategic imperative* rather than a *technological experiment* was evident across interviews.

Stakeholders emphasized that AI-driven capabilities—such as machine learning–based credit scoring, automated Sharia compliance screening, biometric authentication, predictive analytics, natural language processing for customer engagement, and robo-advisory platforms—have the potential to fundamentally modernize Islamic banking systems. These

technological applications were viewed as enablers of enhanced efficiency, accelerated decision-making, cost optimization, and enhanced service scalability.

One executive summarized this shift succinctly:

> *"AI is becoming indispensable. The industry can no longer rely solely on manual verification or compliance checks. Digital scaling requires intelligent systems to cope with volume and complexity." (Participant E3 – Islamic Bank Executive).*

Responses from technology developers and Islamic fintech founders reinforced the same sentiment, particularly regarding AI's capacity to expand market access for underserved Muslim communities. Many noted that physical branch expansion has geographic and economic limitations, especially in an archipelagic nation such as Indonesia. Therefore, AI-enabled systems—chatbots, automated customer onboarding, and algorithm-driven lending—were seen as solutions capable of bridging digital divides and democratizing access to Sharia-compliant finance.

This position resonates with Indonesia's national financial inclusion roadmap and aligns with global literature suggesting that AI can play a pivotal role in enhancing inclusion among unbanked and underbanked populations, particularly in emerging markets. However, in the Islamic finance context, this perceived potential takes on a moral dimension: expanding access is framed not only as economic efficiency but also as fulfilling ethical and religious social obligations.

A number of participants further noted that AI may contribute positively to achieving the higher objectives of Islamic law (*maqāṣid al-sharīʿah*), particularly in advancing justice (*al-ʿadl*), promoting accessibility (*taysīr*), and ensuring collective benefit (*maslahah*). This demonstrates an evolving narrative shift—from viewing technology as a neutral operational tool to understanding it as a vehicle through which Islamic values may be operationalized and institutionalized.

Participants described AI as aligning with the Islamic ethical mandate to ensure fairness in decision-making, reduce discrimination in credit assessment, and offer personalized guidance aligned with user preference. One respondent emphasized that:

> *"If deployed correctly, AI can help ensure fairness and transparency, which are core Islamic values. But the framing must be intentional—not accidental." (Participant F1 – Islamic Finance Technologist).*

This framing reflects a broader conceptual evolution where AI is not simply assessed in terms of performance indicators such as accuracy, processing time, or cost reduction, but also through its potential contribution to Islamic moral architecture. In contrast to conventional finance literature where AI adoption is justified largely on the basis of efficiency and innovation, stakeholder interpretations here place equal—if not higher—weight on ethical alignment and social legitimacy.

Existing studies on technology acceptance in Islamic finance highlight that adoption decisions are shaped not only by perceived usefulness and ease of use (as proposed in TAM and UTAUT models) but also by perceived religious compatibility and moral assurance. The findings of this study extend these theoretical positions by suggesting that stakeholders evaluate AI through a multilayered decision lens that includes *technological performance, regulatory feasibility,* and *ethical coherence with Sharia principles.*

Furthermore, respondents characterized AI adoption as integral to sustaining competitiveness amid increasing pressure from digitally native fintech platforms and global financial technology providers entering Muslim markets. The conceptual framing of AI as a *competitive necessity* suggests that Islamic banking institutions no longer view technological

modernization as voluntary or incremental but as critical to institutional resilience and long-term strategic sustainability.

Taken together, the findings demonstrate that the perceived strategic value of AI in Islamic finance is driven not by a single rationale but by an intersection of factors: operational optimization, financial inclusion, national innovation priorities, competitive pressures, and alignment with Islamic values. This multidimensional interpretation suggests that AI adoption in Islamic finance is not merely technological integration—it represents a deeper evolution in how Islamic financial institutions conceptualize their mandate, identity, and future relevance.

Theme 2: Ethical and Sharia Ambiguities in Algorithmic Decision-Making

Although there was strong optimism regarding the functional benefits of AI, participants expressed significant caution regarding its ethical and jurisprudential implications. Unlike conventional financial institutions, where digital automation is primarily evaluated through performance metrics, Islamic banking stakeholders interpret AI through a dual evaluative lens: technical reliability and Sharia legitimacy. The intersection of these lenses generates persistent uncertainties about whether algorithmic decision-making can align with Islamic ethical reasoning.

Respondents recurrently highlighted concerns related to algorithmic transparency, fairness, bias, and explainability, particularly when AI systems are deployed in decision domains that historically rely on interpretive human judgment (ijtihād) and ethical accountability. For many participants, delegating sensitive or value-laden decisions—such as contract verification, Islamic investment screening, or fatwa categorization—to automated models risks disconnecting financial practices from the foundational moral principles embedded in Islamic law.

One Sharia board member articulated this concern clearly:

> *"A machine cannot possess intention, and intention is essential in Islamic law. Without conscious intent, can a decision truly be considered Sharia-compliant?" (Participant S2 – Sharia Supervisory Board Member).*

This perspective underscores a core epistemological tension: AI systems operate based on mathematical inference and probabilistic optimization, while Islamic jurisprudence requires moral intent (*niyyah*), ethical responsibility (*taklīf*), and context-sensitive reasoning grounded in fiqh and usūl al-fiqh. The perceived absence of consciousness, moral agency, and ethical accountability in AI raises questions about whether algorithmic judgments can ever legitimately perform functions comparable to *ijtihad* or legal reasoning.

Participants also expressed apprehension that AI systems may unintentionally generate decisions falling within the category of s*hubuhat* (grey or questionable financial activities), especially when data patterns or algorithmic logic do not clearly align with Islamic financial boundaries. Stakeholders noted that machine learning systems trained on global economic datasets—originating largely from conventional finance—risk embedding underlying non-Sharia assumptions into automated outcomes.

This aligns with scholarly debates suggesting that algorithmic systems may reproduce hidden systemic biases, dataset distortions, and embedded ideologies of secular financial logic. In an Islamic context, such embedded assumptions are not merely technical flaws but potential breaches of ethical and legal boundaries. As one respondent reflected:

> "If AI makes a decision that involves uncertainty or speculation, even unintentionally, who bears the sin? The developer, the bank, or the user?" (Participant R2 – Regulator).

This question illustrates a critical difference between Islamic and secular ethical paradigms: Western AI ethics frameworks typically emphasize human rights, transparency, non-discrimination, and system accountability. In contrast, Islamic frameworks extend these principles to include spiritual responsibility, moral intentionality, and compliance with divine

law. Ethical failure in AI is therefore not merely a regulatory infraction—it is a breach of religious accountability.

Furthermore, participants noted that current Sharia governance structures may not be adequately prepared to evaluate or supervise AI-driven processes, given their reliance on periodic audits rather than continuous algorithmic oversight. The opacity of machine learning, especially in deep learning models, creates what some respondents called "algorithmic blind spots," where neither regulators nor Sharia bodies can fully inspect or justify system outcomes.

This epistemic opacity challenges established fiqh principles such as:

1. *Bayan* (clarity)
2. *Amanah al-malumat* (data trustworthiness)
3. *Al-ʿadl* (fairness)
4. *Taqwim al-dalil* (traceable evidentiary reasoning).

Several participants argued that without mechanisms ensuring model interpretability and moral traceability, AI may undermine rather than support Islamic finance objectives.

Despite these concerns, respondents were not uniformly opposed to AI. Instead, their attitudes reflected a conditional stance: AI may be permissible (*halal*) if embedded within a governance framework that ensures transparency, ethical intent, and continuous Sharia supervision. Many suggested that AI could serve as an assistive instrument—a supporting tool for muftis, analysts, and compliance officers—rather than as an autonomous decision-maker.

In summary, the findings reveal that AI in Islamic finance triggers a deeper philosophical inquiry about the nature of moral reasoning, legitimacy, and human agency. The ambiguity does not stem solely from technological complexity, but from unresolved questions about how spiritual accountability and juridical authority should be embedded in automated systems. Thus, AI challenges not only technical operations but the epistemological foundations of decision-making in Islamic finance.

Theme 3: Trust, Accountability, and Governance Expectations

The final theme emerging from the analysis highlights that trust plays a pivotal role in shaping stakeholder acceptance of AI within the Islamic banking sector. While operational efficiency and technological benefits were acknowledged, respondents emphasized that AI adoption cannot progress meaningfully without addressing trust as a multidimensional construct—spanning technological reliability, institutional accountability, and religious legitimacy.

Stakeholders repeatedly expressed the view that trust in Islamic finance is distinct from its interpretation in conventional finance. In secular contexts, trust is often grounded in perceptions of functionality, privacy protection, cybersecurity resilience, and regulatory enforcement. However, in Islamic finance, trust encompasses an additional spiritual and moral dimension rooted in adherence to Sharia principles and accountability before God (taklīf dīnī). This layered understanding of trust introduces complexities not typically encountered in Western responsible AI discussions.

As one regulator explained:

> *"In Islamic finance, technology cannot be trusted by default. Trust must be earned through governance, auditability, and clear accountability structures." (Participant R1 – Regulator).*

This quote reflects the broader sentiment that AI systems—unlike human decision-makers—lack moral intentionality and spiritual accountability, making governance mechanisms essential to maintain legitimacy. In several interviews, participants described trust not as a passive expectation but as a product of deliberate institutional design and ethical safeguards.

CONCLUSION

This study demonstrates that AI adoption in Islamic banking is shaped not only by technological benefits but also by deeper ethical, governance, and religious considerations. Stakeholders acknowledge AI's potential to enhance efficiency, financial inclusion, and customer experience, yet they also highlight significant concerns related to algorithmic opacity, moral accountability, intention (niyyah), dataset bias, and the legitimacy of machine-driven decision-making within a Sharia framework. Trust emerges as the determining factor in AI acceptance—rooted in institutional transparency, Islamic ethical alignment, and continuous Sharia supervision rather than purely technical performance.

The findings further indicate that the current Sharia governance ecosystem is not yet fully prepared to handle digital autonomy and algorithmic decision systems. Traditional governance practices, which rely on periodic audits and human-centered fatwa oversight, are insufficient for real-time, data-driven, self-learning technologies. Therefore, a Sharia-aligned Responsible AI governance model must incorporate explainability, continuous audit trails, Islamic ethical accountability, and mechanisms ensuring that AI remains a supportive tool rather than an autonomous moral agent. This ensures that technological progress does not undermine the spiritual and jurisprudential foundations of Islamic finance.

Theoretically, this research contributes to expanding Islamic digital ethics discourse by bridging emerging AI governance principles with Islamic jurisprudence and maqāṣid al-sharīʿah. It shifts the conversation from a technology readiness paradigm toward a meaning-based interpretation of AI legitimacy grounded in religious identity and stakeholder perception. Practically, the findings provide direction for regulators, Islamic financial institutions, and Sharia supervisory bodies in designing future regulatory and institutional frameworks for AI implementation.

Future research should expand beyond qualitative insights toward developing and empirically testing governance frameworks across diverse Islamic finance ecosystems, including cross-country comparative studies in GCC, Southeast Asia, and Africa. Quantitative or mixed-method approaches may also measure how trust, Sharia compliance assurance, and perceived risk influence user acceptance of AI-enabled Islamic financial services. As AI continues evolving, scholarly work must remain adaptive and forward-looking to ensure that technological innovation remains harmonized with the ethical, spiritual, and legal values of Islamic finance.

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