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Algorithmic Credit Scoring in Sharia Peer-to-Peer Lending: A Maqasid-Based Accountability Framework for Consumer and Data Protection in Indonesia

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Abstract

Sharia information-technology-based co-funding services (sharia peer-to-peer lending) increasingly rely on algorithmic credit scoring that draws on alternative data and the digital footprints of prospective recipients. This reliance accelerates financing and widens inclusion, but it also creates risks of opaque decisions, indirect discrimination, exploitation of personal data, and debt-collection practices that degrade human dignity. This study examines the adequacy of the Indonesian legal framework in governing algorithmic credit scoring in sharia peer-to-peer lending and develops an accountability model grounded in maqāṣid al-sharīʿah*. It applies normative legal research using statutory, conceptual, case, and functional comparative approaches to the Personal Data Protection Law, the Financial Sector Development and Strengthening Law, OJK Regulation No. 40 of 2024, OJK Regulation No. 22 of 2023, OJK Circular Letter No. 19/SEOJK.06/2023, DSN-MUI Fatwa No. 117/DSN-MUI/II/2018, KPPU Decision No. 05/KPPU-I/2025, and, comparatively, the GDPR, the SCHUFA judgment, and the EU Artificial Intelligence Act. The findings show that Indonesia already possesses relevant normative elements, notably the right to object to automated decisions and the duty to analyse recipient suitability, but these elements remain fragmented, insufficiently operational, and disconnected from sharia supervision. Sharia compliance is still understood primarily as contractual compliance rather than compliance of the decision-making process. The study proposes a Maqāṣid-Based Algorithmic Accountability Framework consisting of three stages: data and model governance before the decision, rights to explanation and human review at the time of decision, and dignified collection and redress after the decision.*

I. INTRODUCTION

The digitalisation of finance has transformed not only the channels through which credit is delivered but also the way creditworthiness is judged. In conventional banking, the decision to extend financing was traditionally grounded in documentary evidence, collateral, and the professional judgment of a credit officer who could be questioned. In platform-based lending, that judgment is increasingly delegated to statistical and machine-learning models that ingest large volumes of data, including mobile-phone metadata, e-commerce histories, device characteristics, and behavioural signals collected during the application process. Empirical finance research has shown that such digital footprints can predict default with an accuracy comparable to, and in some cases complementary to, traditional credit bureau scores (Berg et al., 2020). The same research, however, has demonstrated that predictive gains are not distributed evenly: more flexible models may widen disparities among demographic groups even when protected characteristics are not used as inputs (Fuster et al., 2022), and algorithmic lenders may continue to charge systematically different prices to groups that legal systems seek to protect (Bartlett et al., 2022).

Indonesia offers a particularly important setting for examining these developments. Peer-to-peer lending, now formally termed *Layanan Pendanaan Bersama Berbasis Teknologi Informasi* (LPBBTI) and popularly rebranded by the Financial Services Authority (OJK) as *pinjaman daring* or *pindar*, has grown rapidly as a channel for micro, small, and consumptive financing to segments of the population that remain underserved by banks (Rosavina et al., 2019; Suryono et al., 2020). Within this market, sharia-compliant platforms present themselves as an ethical alternative that avoids *ribā*, *gharar*, and exploitative terms. Their growth has been

associated with broader claims that Islamic financial technology can advance financial inclusion and the Sustainable Development Goals (Hudaefi, 2020; Rabbani et al., 2020). The legal framework has also matured. Law No. 4 of 2023 on the Development and Strengthening of the Financial Sector (P2SK Law) places LPBBTI firmly within the OJK's supervisory perimeter, OJK Regulation No. 40 of 2024 has superseded OJK Regulation No. 10/POJK.05/2022 and strengthened credit-assessment duties, and Law No. 27 of 2022 on Personal Data Protection (PDP Law) has, since the end of its transition period in October 2024, created enforceable obligations for every controller of personal data.

Despite these developments, recent events reveal that the problem of trust in digital lending is far from resolved. In 2025 and 2026, the industry faced two episodes that raise fundamental legal questions. First, the Business Competition Supervisory Commission (KPPU), in Case No. 05/KPPU-I/2025, announced in March 2026 that ninety-seven platforms had violated Article 5 of Law No. 5 of 1999 by coordinating a maximum ceiling on interest or economic benefit through their industry association, and imposed fines totalling approximately IDR 755 billion; the association announced an appeal and argued that the ceiling was a consumer-protection measure guided by the regulator (KPPU, 2026). Second, a licensed sharia platform, Dana Syariah Indonesia, experienced a default reported by its lenders' association at approximately IDR 1.35 trillion affecting more than four thousand lenders, after which the OJK imposed business restrictions, reported indications of fraud to the police, and publicly identified violations that included the creation of fictitious projects using real borrower data. These events demonstrate that the label "sharia" does not by itself guarantee fair process, accurate information, or the integrity of data use.

The legal problem examined in this article sits at the intersection of these concerns. Algorithmic credit scoring determines who receives financing, on what terms, and how quickly. In a sharia platform, this process also determines whether the substantive values that justify the sharia label, namely justice (*ʿadl*), the avoidance of harm (*dafʿ al-ḍarar*), transparency, and the protection of property and dignity, are realised in practice. Yet the dominant approach to sharia compliance in Indonesian fintech remains contract-centred. The Sharia Supervisory Board (DPS) reviews whether the platform uses permissible contracts such as *murābaḥah*, *ijārah*, *mushārakah*, *wakālah bi al-ujrah*, or *qarḍ*, whether fees are structured lawfully, and whether late-payment charges comply with fatwas. Much less attention has been paid to the question of whether the automated decision that precedes the contract, and the data practices that surround it, are themselves consistent with the objectives of Islamic law (Hutagalung et al., 2025; Zikry et al., 2024).

International legal scholarship has developed a substantial vocabulary for this problem. Citron and Pasquale (2014) argued that automated scoring systems require due-process protections because they impose consequential judgments on individuals who cannot see or contest the reasoning behind them. Hurley and Adebayo (2016) showed that big-data credit scoring evades much of the architecture of traditional credit-reporting law, while Aggarwal (2021) and Langenbucher (2020) have analysed the normative principles that should govern algorithmic credit decisions, including accuracy, fairness, and explicability. European data-protection law has moved from academic debate about whether a "right to explanation" exists (Edwards & Veale, 2017; Wachter et al., 2017; Kaminski, 2019) to a judicial recognition, in the SCHUFA judgment of the Court of Justice of the European Union, that the automated generation of a credit score may itself constitute an automated individual decision when lenders draw strongly on it (Court of Justice of the European Union, 2023). The EU Artificial Intelligence Act now classifies AI systems used to evaluate the creditworthiness of natural persons as high-risk (European Union, 2024).

Islamic finance scholarship, for its part, has long argued that sharia compliance must be judged not only by legal form but by the realisation of *maqāṣid al-sharīʿah* (Auda, 2008; Chapra, 2008; Dusuki & Abozaid, 2007; Laldin & Furqani, 2013). This literature distinguishes between the ends (*maqāṣid*) and the means (*wasā'il*) of Islamic financial practice and warns that a product may be formally valid while failing to deliver justice, welfare, and the protection of essential human interests. However, this literature has rarely been brought into conversation with the legal problem of automated decision-making. Studies on Indonesian sharia fintech have examined contracts, licensing, and general consumer protection (Sari & Khoiruddin, 2024; Zikry et al., 2024; Hutagalung et al., 2025), but they have not developed an operational framework that tells regulators, sharia boards, and platforms what *maqāṣid* require when a

machine, rather than a person, assesses a borrower.

This article addresses that gap. It poses two research questions. First, to what extent does the current Indonesian legal framework, including sharia regulatory instruments, provide adequate safeguards against the risks of algorithmic credit scoring in sharia peer-to-peer lending? Second, how can *maqāṣid al-sharīʿah* be translated into an operational accountability framework that integrates personal-data protection, consumer protection, and sharia governance across the lifecycle of an automated credit decision? The article argues that the existing framework contains valuable but fragmented elements and that sharia compliance in digital lending must be extended from the compliance of contracts to the compliance of decision-making processes. Its contribution is a three-stage Maqāṣid-Based Algorithmic Accountability Framework that can be implemented through existing Indonesian legal instruments without requiring a wholesale legislative reform.

II. RESEARCH METHODS

This research employs normative (doctrinal) legal research to assess the adequacy, coherence, and gaps of the Indonesian legal framework governing algorithmic credit scoring in sharia peer-to-peer lending. Normative legal research is appropriate because the research questions concern the content, interpretation, and systematic relationships of legal norms, as well as the design of normative solutions, rather than the measurement of behaviour in a sample population. The research does not identify any specific platform, region, or individual borrower as its object; references to public cases serve only to illustrate how legal norms operate in practice.

Four approaches are combined. The statutory approach analyses the legal materials that govern sharia LPBBTI and the processing of borrower data: Law No. 8 of 1999 on Consumer Protection, Law No. 27 of 2022 on Personal Data Protection, Law No. 4 of 2023 on the Development and Strengthening of the Financial Sector, OJK Regulation No. 22 of 2023 on Consumer and Public Protection in the Financial Services Sector, OJK Regulation No. 40 of 2024 on Information-Technology-Based Co-Funding Services, and OJK Circular Letter No. 19/SEOJK.06/2023. Sharia regulatory materials include DSN-MUI Fatwa No. 117/DSN-MUI/II/2018 on Information-Technology-Based Financing Services Based on Sharia Principles and the fatwas governing late-payment sanctions and compensation. The conceptual approach draws on theories of *maqāṣid al-sharīʿah*, algorithmic accountability, and procedural justice. The case approach uses KPPU Decision No. 05/KPPU-I/2025 and the publicly reported supervisory actions concerning the default of a licensed sharia platform as illustrations of regulatory dynamics. The functional comparative approach examines the European Union's regulation of automated credit decisions, namely Article 22 GDPR, the SCHUFA judgment, and the high-risk classification of creditworthiness assessment under the AI Act.

The comparative approach is functional rather than transplantational. The purpose is not to argue that Indonesia should adopt European rules wholesale, but to identify regulatory functions, such as the identification of decision points, the allocation of explanation duties, and the requirement of human oversight, that may be performed by instruments already available within Indonesian law and consistent with Islamic legal principles.

Legal materials were collected through library research from official regulatory databases, the OJK and KPPU websites, DSN-MUI publications, and peer-reviewed international and Indonesian literature. Primary legal materials consist of statutes, regulations, fatwas, and decisions. Secondary legal materials consist of books and journal articles. Tertiary materials, such as reputable financial news reports, were used only to establish publicly reported facts about cases and were triangulated with official statements where possible.

The analysis proceeded in four stages. First, the legal materials were inventoried and classified according to the stage of the credit lifecycle they govern: data collection, model development, decision-making, contract formation, and post-contract collection. Second, each stage was assessed against the four analytical parameters derived from the literature. Third, the risks identified at each stage were mapped onto the relevant *maqāṣid* objectives in order to determine which interests of the borrower are threatened and what level of priority those interests receive in Islamic legal theory. Fourth, the findings were synthesised into a normative framework that specifies duties, responsible actors, and legal anchors. Argumentative validity was maintained through source triangulation and through the systematic and teleological interpretation of norms, in which each provision is read in the light

of its purpose and its relationship to other provisions in the legal system.

III. RESULTS

A. The Existing Legal Architecture for Sharia LPBBTI and Automated Credit Assessment

The legal mapping shows that the Indonesian framework does not lack relevant norms; rather, its norms are distributed across several regimes that do not speak to each other systematically. The P2SK Law provides the statutory foundation for the OJK's authority over LPBBTI and integrates the sector into the broader architecture of financial-sector supervision and consumer protection (Republic of Indonesia, 2023). Within that perimeter, OJK Regulation No. 40 of 2024 governs licensing, governance, risk management, and business conduct (Financial Services Authority, 2024). The regulation recognises that platforms may operate conventionally or under sharia principles, and Article 133(1) lists the permissible contracts for sharia financing: *al-bayʿ*, *ijārah*, *muḍārabah*, *mushārakah*, *wakālah*, *wakālah bi al-ujrah*, and *qarḍ*. The regulation also permits conventional operators to establish sharia business units with their own Sharia Supervisory Board and separate bookkeeping, signalling the regulator's intention to expand the sharia segment.

Of particular relevance is Article 150 of OJK Regulation No. 40 of 2024, which requires platforms, before disbursing funds, to verify the authenticity of the recipient's documents, to clarify and confirm information with the recipient directly or electronically, to obtain and process relevant third-party data, and to analyse the suitability of the recipient's profile. The regulation further allows platforms to consider character, repayment capacity, capital, economic prospects, and collateral. This provision is significant because it converts credit assessment from a commercial option into a legal obligation. It reflects the regulator's response to over-indebtedness and high non-performing financing in parts of the industry. However, the provision is framed as a duty owed to the integrity of the lending process and to lenders' interests, not as a set of rights that borrowers can invoke. It says what the platform must assess but not how the assessment must be explained, tested, or contested.

OJK Circular Letter No. 19/SEOJK.06/2023 complements this regime by limiting the maximum economic benefit that platforms may charge (Financial Services Authority, 2023b). For consumptive financing, the ceiling was set to decline from 0.3 percent per day in 2024 to 0.2 percent in 2025 and 0.1 percent in 2026, while the ceiling for productive financing was set at 0.1 percent per day and later 0.067 percent per day. These ceilings, together with the regulator's broader push for responsible lending, increase the pressure on platforms to price risk accurately through better scoring. In this sense, price regulation and algorithmic assessment are connected: when the margin that can compensate for poor decisions is narrowed, the quality of the automated decision becomes central to the platform's viability.

The PDP Law supplies the most direct norms governing automated decision-making (Republic of Indonesia, 2022). Article 4(2) classifies personal financial data as specific personal data, which attracts heightened protection. Article 10(1) grants data subjects the right to object to decisions based solely on automated processing, including profiling, that produce legal consequences or significantly affect them. Article 34 requires a data protection impact assessment where processing carries a high potential risk, including automated decision-making with legal consequences or significant effects. The law also establishes the principles of lawful, limited, and transparent processing, the obligation to inform data subjects of the purpose and legal basis of processing, and administrative sanctions that include fines of up to two percent of annual revenue. Read together, these provisions arguably make algorithmic credit scoring in LPBBTI a high-risk processing activity that requires an impact assessment and triggers the right to object.

OJK Regulation No. 22 of 2023 adds a layer of financial consumer protection (Financial Services Authority, 2023a). It requires financial services businesses to apply principles of adequate education, information transparency, fair treatment, the protection of consumer assets, privacy, and data, and effective complaint handling and dispute resolution. It also governs collection conduct, prohibiting threats, violence, humiliation, and pressure on persons other than the consumer. Law No. 8 of 1999 on Consumer Protection remains the general statute that prohibits unfair standard clauses and grants consumers the right to accurate, clear, and honest information (Republic of Indonesia, 1999).

On the sharia side, DSN-MUI Fatwa No. 117/DSN-MUI/II/2018 establishes that

information-technology-based financing services are permissible provided that they comply with sharia principles, avoid *ribā*, *gharar*, *maysir*, *tadlīs*, *ḍarar*, *ẓulm*, and prohibited objects, and use appropriate contracts (DSN-MUI, 2018). The fatwa recognises several models of financing, including invoice financing, procurement financing, financing for online sellers, financing for employees, and community-based financing. It also requires that electronic documents and signatures meet legal standards. The fatwa is therefore rich in substantive principles, especially the prohibitions of *gharar*, *tadlīs*, *ḍarar*, and *ẓulm*, that are directly relevant to algorithmic decisions. Yet its operational provisions focus on contract structure and the flow of funds rather than on the methods by which the platform selects, rejects, or prices recipients.

Table 1. Legal Instruments Relevant to Algorithmic Credit Assessment in Sharia LPBBTI

Instrument	Relevant Provisions	Remaining Gap
Law No. 27 of 2022 (PDP Law)	Financial data as specific data (Art. 4(2)); right to object to solely automated decisions (Art. 10(1)); impact assessment for high-risk processing (Art. 34); administrative fines	No sector-specific guidance on what an explanation of a credit score must contain or how objection is processed by platforms
Law No. 4 of 2023 (P2SK Law)	Places LPBBTI under OJK supervision; strengthens financial consumer protection	General mandate; no specific norms on automated decisions
OJK Regulation No. 40 of 2024	Sharia contracts (Art. 133(1)); mandatory pre-disbursement assessment and profile analysis (Art. 150); data-exchange agreements	Assessment framed as platform duty, not borrower right; no fairness testing or model validation standard
OJK Regulation No. 22 of 2023	Transparency, fair treatment, data protection, complaint handling, collection conduct	Not tailored to algorithmic rejection or pricing; explanation duties remain general
OJK Circular Letter No. 19/SEOJK.06/2023	Ceilings on economic benefit for consumptive and productive financing	Price limits do not address how risk is assessed or who is excluded
DSN-MUI Fatwa No. 117/DSN-MUI/II/2018	Prohibition of *ribā*, *gharar*, *maysir*, *tadlīs*, *ḍarar*, *ẓulm*; permissible contracts and financing models	Operational focus on contract and fund flow; silent on automated decision processes and data use

As Table 1 shows, the framework contains all the conceptual building blocks of an accountability regime: a classification of financial data as sensitive, a right to object to automated decisions, an impact-assessment duty, a mandatory credit-assessment process, consumer-protection principles, and a set of sharia prohibitions that speak directly to opacity and harm. What is missing is the connective tissue that tells each actor how these norms apply to the specific operation of an automated credit decision in a sharia platform.

B. Regulatory and Sharia Governance Gaps in Algorithmic Decision-Making

Analysis of the legal materials reveals five principal gaps. The first is a *gap of decision identification*. The PDP Law's right to object applies to decisions "based solely on automated processing". In platform lending, it is often unclear whether a credit decision is solely automated. A platform may claim that a human analyst reviews applications, even if that review is cursory, or that the score is merely an input into a broader process. The SCHUFA judgment addressed precisely this ambiguity in Europe by holding that the generation of a score may itself be a decision where the lender draws strongly on it (Court of Justice of the European Union, 2023). Indonesian law has no equivalent interpretive guidance. Without such guidance, the right in Article 10(1) can be neutralised by nominal human involvement.

The second is a *gap of explanation*. Neither the PDP Law nor OJK regulations specify what information a platform must provide when it rejects an application, approves a reduced amount, or assigns a higher price. Borrowers are typically informed of the outcome but not of the principal reasons. The international debate has shown that explanation duties are difficult to design: overly technical disclosures are meaningless to borrowers, while generic statements are useless (Edwards & Veale, 2017; Kaminski, 2019). From a sharia perspective, however, the absence of intelligible reasons is not merely a procedural inconvenience. It creates *jahālah* (ignorance) about a matter that directly affects the borrower's rights and obligations, and in pricing decisions it may amount to *gharar* concerning the basis of the price.

The third is a *gap of fairness testing*. OJK Regulation No. 40 of 2024 requires platforms to analyse recipients' profiles but does not require them to test whether their models produce systematically disadvantageous outcomes for particular groups, regions, or occupations.

Empirical research shows that such disparities can arise without any discriminatory intent (Barocas & Selbst, 2016; Fuster et al., 2022). Gillis (2022) further demonstrates that prohibiting certain inputs is insufficient because correlated variables can serve as proxies. The current Indonesian framework, which relies primarily on general prohibitions of discrimination in consumer-protection law, therefore has no mechanism for detecting algorithmic unfairness.

The fourth is a *gap of data boundaries*. Earlier generations of Indonesian online lending, particularly illegal operators, were notorious for harvesting contact lists, photographs, and location data, which were then used to shame borrowers during collection. OJK regulation has progressively restricted such access, and the PDP Law now requires purpose limitation and data minimisation. Yet the boundary between legitimate alternative data for credit assessment and intrusive data that threatens dignity remains unclear. Article 150 of OJK Regulation No. 40 of 2024 authorises the processing of third-party data, and data-exchange cooperation requires confidentiality agreements, but there is no catalogue of data categories that are inappropriate for credit scoring because of their sensitivity or their potential to reveal religious practice, family relationships, or health. Zuboff's (2019) warning about behavioural surplus is pertinent: data collected for one purpose readily becomes the raw material for other forms of prediction and influence.

The fifth, and most specific to sharia platforms, is a *gap of sharia process governance*. The DPS is responsible for ensuring sharia compliance, but its review typically focuses on contracts, fee structures, and the use of funds. There is no regulatory expectation that the DPS review the platform's credit-decision methodology, its data practices, or its collection policies in the light of the prohibitions of *ḍarar*, *ẓulm*, and *tadlīs*. The public facts concerning the default of a licensed sharia platform are instructive. According to OJK statements reported in January 2026, the violations included the use of real borrower data to create fictitious projects, the publication of incorrect information to attract lender funds, the channelling of funds to affiliated companies, and the use of new funds to pay other obligations in a manner resembling a Ponzi scheme. Whatever the final judicial findings, these allegations show that sharia legitimacy can be undermined not through an impermissible contract but through the manipulation of data and information. A sharia governance model that does not reach data and decision processes is therefore structurally incomplete.

C. Late Payment, Hardship, and Automated Collection in Sharia Instruments

The treatment of late payment illustrates both the strength and the limits of the current sharia framework. DSN-MUI Fatwa No. 17/DSN-MUI/IX/2000 permits sanctions against customers who are able to pay but deliberately delay payment, while excluding customers who are unable to pay because of circumstances beyond their control; the proceeds of such sanctions must be channelled to social funds rather than recognised as the financier's income (DSN-MUI, 2000). DSN-MUI Fatwa No. 43/DSN-MUI/VIII/2004 further limits compensation (*taʿwīḍ*) to real losses that can be calculated clearly and that arise from deliberate delay, excluding speculative or opportunity losses (DSN-MUI, 2004). These rules embody a principled distinction between unwillingness and inability that derives from the Prophetic tradition condemning the delay of a capable debtor and from the Qur'anic command of respite for a debtor in hardship (Q. 2:280).

The difficulty is that this distinction presupposes an individualised assessment of the debtor's circumstances. In platform lending, the classification of a borrower as "capable but delaying" or "unable" is increasingly made, or at least heavily influenced, by automated systems that monitor repayment behaviour, segment overdue accounts, and assign them to collection strategies. A model that predicts the likelihood of repayment from behavioural signals may classify a borrower in genuine hardship as a strategic defaulter simply because her behaviour resembles that of other borrowers who later paid after pressure. If the sanction regime and the intensity of collection are attached to such classifications, the fatwa's protective distinction is effectively replaced by a statistical proxy that the borrower cannot see or contest.

The current instruments do not address this problem. The fatwas regulate the permissibility and destination of late-payment charges but are silent on the process by which a debtor is classified. OJK Regulation No. 22 of 2023 regulates the manner of collection, prohibiting threats, violence, humiliation, and pressure on third parties, but it does not require platforms to verify a borrower's circumstances before escalating collection or to offer a structured hardship

procedure. As a result, the sharia principle that should most clearly differentiate sharia platforms from their conventional counterparts, namely relief for debtors in genuine hardship, depends on the discretion of each platform. A *maqāṣid*-based approach would require that any automated classification that leads to sanctions or intensified collection be subject to verification (*tabayyun*) and that borrowers be given an accessible means to demonstrate hardship before such consequences are imposed.

D. Lessons from Competition Enforcement and Comparative Regulation

The KPPU decision in Case No. 05/KPPU-I/2025 provides an additional lesson. The KPPU found that an industry-level ceiling on economic benefit facilitated coordination among competitors and reduced price competition, while the industry association argued that the ceiling had been adopted to protect consumers from predatory lending and in line with regulatory guidance. The case reveals a tension in the regulation of digital lending. Price ceilings protect borrowers from exploitative charges, yet uniform pricing may also mask differences in risk-assessment quality among platforms. When prices converge on a common ceiling, competition shifts toward speed of approval and the extent of data collection, precisely the dimensions in which algorithmic scoring operates. The legal implication is that consumer protection in digital lending cannot be secured through price rules alone; it requires attention to the decision process that determines who is admitted to credit and on what terms. Since the decision is subject to appeal, this article does not take a position on its merits, but uses it to illustrate the limits of price-centred regulation.

The comparative analysis of European regulation reveals three functional lessons. First, the SCHUFA judgment illustrates the importance of identifying the real decision point in a multi-actor process. Where a lender relies decisively on a score, the scoring step should be treated as a decision that triggers safeguards. Second, Article 22 GDPR and its accompanying transparency provisions show that the right not to be subject to solely automated decisions must be combined with rights to obtain human intervention, to express a point of view, and to contest the decision, as well as with meaningful information about the logic involved (Wachter et al., 2017; Kaminski, 2019). Third, the AI Act's classification of creditworthiness assessment as high-risk demonstrates a shift from individual rights toward systemic duties: risk management, data governance, documentation, human oversight, accuracy, and robustness (European Union, 2024). These functions are not alien to Indonesian law. The PDP Law already provides a right to object and a duty to conduct impact assessments, while OJK regulations already require risk management and governance. What the comparative analysis suggests is that these elements should be sequenced and specified for the particular context of credit scoring.

Table 2. Mapping Algorithmic Credit Risks to Maqāṣid Objectives and Legal Anchors

Algorithmic Risk	Threatened Maqāṣid Objective	Islamic Legal Principle	Indonesian Legal Anchor
Opaque rejection or pricing	*Ḥifẓ al-ʿaql* (informed agency); *ḥifẓ al-māl*	Prohibition of *gharar*, *jahālah*, and *tadlīs*	PDP Law Art. 10; OJK Reg. 22/2023 transparency principle
Discriminatory or proxy-based exclusion	*Ḥifẓ al-māl*; general objective of equality	*ʿAdl*; prohibition of *ẓulm*	Consumer Protection Law; OJK Reg. 22/2023 fair treatment
Excessive or intrusive data collection	*Ḥifẓ al-ʿirḍ* (honour and dignity); *ḥifẓ al-nasl*	Prohibition of *tajassus* (Q. 49:12); *lā ḍarar wa lā ḍirār*	PDP Law Art. 4(2), purpose limitation, Art. 34 impact assessment
Over-lending to vulnerable borrowers	*Ḥifẓ al-māl*; *ḥifẓ al-nafs*	Prohibition of *ḍarar*; *maṣlaḥah*	OJK Reg. 40/2024 Art. 150 suitability analysis
Coercive or shaming collection	*Ḥifẓ al-ʿirḍ*; *ḥifẓ al-nafs*	Respite for debtor in hardship (Q. 2:280); human dignity (*karāmah*)	OJK Reg. 22/2023 collection conduct
Manipulation of borrower data or project information	*Ḥifẓ al-dīn* (integrity of sharia claims); *ḥifẓ al-māl* of lenders	Prohibition of *tadlīs* and *ghishsh*; *amānah*	OJK Reg. 40/2024 governance; PDP Law; criminal law

Table 2 consolidates the results by mapping the principal risks of algorithmic credit assessment onto the objectives of the sharia, the relevant Islamic legal principles, and existing Indonesian legal anchors. The mapping shows that each risk threatens at least one objective at the level of necessity or need, and that each can be connected to an existing legal norm. This finding is important for the argument that an accountability framework can be built within the current legal system.

IV. DISCUSSION

A. From Contract Compliance to Process Compliance: Reframing Sharia Legitimacy

The results support a reconceptualisation of sharia compliance in digital lending. The prevailing model treats compliance as a property of contracts: if the contract is valid, fees are lawful, and funds are used for permissible purposes, the product is considered sharia-compliant. This model reflects the historical development of Islamic finance, in which the principal challenge was to construct permissible alternatives to interest-based instruments. However, as Dusuki and Abozaid (2007) and Laldin and Furqani (2013) argue, the legitimacy of Islamic finance ultimately depends on whether its instruments realise the ends of the sharia. In algorithmic lending, a substantial part of the economic and moral content of the transaction is determined before the contract is concluded: by the selection of data, the design of the model, the threshold for approval, and the method of pricing. A *murābaḥah* or *wakālah bi al-ujrah* contract may be formally valid while the process that produced it is opaque, discriminatory, or exploitative.

The *maqāṣid* framework is well suited to address this gap because it directs attention to outcomes and to the protection of human interests. Ibn ʿĀshūr's (2006) objectives of financial transactions, which include clarity, justice, and the preservation of wealth, apply naturally to the decision process. Clarity requires that the parties understand the basis of their obligations; this implies that a borrower should be able to understand, at least in general terms, why the platform offered a particular amount and price. Justice requires that similarly situated persons be treated alike and that differences in treatment be justified by relevant considerations; this implies that a platform should test whether its model disadvantages particular groups for reasons unrelated to repayment capacity. The preservation of wealth requires that financing not be extended in ways that predictably destroy the borrower's economic position; this implies that suitability analysis under Article 150 of OJK Regulation No. 40 of 2024 should be understood not only as protection for lenders but also as protection for recipients against over-indebtedness.

Auda's (2008) systems approach strengthens this argument. Auda criticises the treatment of *maqāṣid* as a static list and proposes that they function as a purposeful, open, and interconnected system. In such a system, the protection of honour and lineage can be reinterpreted as the protection of human dignity and the family, and the protection of intellect can include the right to information and the capacity for informed choice. Applied to algorithmic lending, this reading supports treating intrusive data collection and shaming collection practices as violations of *ḥifẓ al-ʿirḍ*, and treating opaque decisions as threats to *ḥifẓ al-ʿaql*. Kamali (2008) similarly emphasises that *maqāṣid* reasoning allows the law to respond to new circumstances while remaining anchored in the textual sources. The Qur'anic prohibition of spying (*tajassus*, Q. 49:12), the requirement of mutual consent in trade (Q. 4:29), and the command to grant respite to a debtor in hardship (Q. 2:280) provide textual anchors for limits on data collection, for meaningful consent, and for humane collection practices.

Reframing sharia legitimacy in this way has practical consequences. It means that the DPS, whose mandate is to ensure that the platform's activities comply with sharia principles, should review not only the contracts but also the decision-making methodology and data practices that determine access to and pricing of financing. This does not require the DPS to become a team of data scientists. It requires the DPS to ask principled questions, such as which data categories are used, whether those categories respect privacy and dignity, whether the platform can explain its decisions in intelligible terms, whether outcomes are tested for unjustified disparities, and how borrowers in hardship are treated, and to require documented answers. These questions correspond to the prohibitions of *gharar*, *tadlīs*, *ḍarar*, and *ẓulm* that Fatwa No. 117/DSN-MUI/II/2018 already articulates.

B. The Maqāṣid-Based Algorithmic Accountability Framework

Building on the results, this article proposes a Maqāṣid-Based Algorithmic Accountability Framework (MAAF) consisting of three stages that correspond to the lifecycle of an automated credit decision. The framework is designed to be implemented through existing legal instruments: the PDP Law, OJK regulations and circulars, sharia governance requirements, and DSN-MUI guidance. Its premise is that accountability must be continuous rather than episodic, and that each stage requires a specific combination of legal duties and sharia oversight.

The first stage, *ex ante data and model governance*, operates before any individual decision is made. Its purpose is to ensure that the system is designed in a manner consistent with *ḥifẓ al-ʿirḍ*, *ḥifẓ al-ʿaql*, and *ʿadl*. Three duties are proposed. First, platforms should maintain a data inventory that identifies each category of data used in scoring, its source, its legal basis under the PDP Law, and its relevance to repayment capacity. Data categories that reveal religious practice, family relationships, health, or social networks, or that were obtained from contact lists or device galleries, should be presumptively excluded unless a specific and proportionate justification is documented. This duty operationalises the principles of purpose limitation and data minimisation and gives concrete content to the prohibition of *tajassus*. Second, platforms should conduct and document a data protection impact assessment under Article 34 of the PDP Law that specifically addresses credit scoring, including risks of discrimination, error, and over-indebtedness. Third, before deploying or materially changing a model, platforms should conduct fairness testing on outcomes across relevant groups, such as gender, region, and occupation, and should document how disparities are justified or mitigated. This responds to Gillis's (2022) argument that outcome testing, rather than input prohibition alone, is necessary to detect algorithmic discrimination. The DPS should review a summary of these documents and issue an opinion on their consistency with sharia principles.

The second stage, *decision-time rights*, operates when an individual applicant is assessed. Its purpose is to ensure that the borrower retains agency and the capacity to contest. Three rights are proposed. First, the right to notice: before applying, borrowers should be informed that an automated system will assess their application, which data categories will be used, and what main factors influence decisions. Second, the right to principal reasons: when an application is rejected, reduced, or priced above the platform's base rate, the borrower should receive a concise statement of the principal reasons in plain language, such as insufficient verified income or a high existing debt burden. This standard is deliberately modest. It does not require disclosure of the model's code or weights, which would raise trade-secret concerns, but it gives borrowers enough information to understand and, if necessary, correct the basis of the decision. From a sharia perspective, this right removes *jahālah* and reduces *gharar* concerning the basis of the transaction. Third, the right to human review: borrowers should be able to request that a qualified employee review an adverse decision, consider additional information, and provide a reasoned response within a fixed period. This right gives concrete effect to Article 10(1) of the PDP Law and resolves the decision-identification gap by treating any decision that relies decisively on a score as subject to the right, consistent with the functional logic of the SCHUFA judgment. In Islamic terms, it embodies *tabayyun*, the duty to verify before acting on information (Q. 49:6).

The third stage, *ex post dignity and redress*, operates after the financing has been disbursed and particularly when the borrower faces difficulty. Its purpose is to protect *ḥifẓ al-nafs*, *ḥifẓ al-ʿirḍ*, and *ḥifẓ al-māl*. Three duties are proposed. First, collection must respect dignity. The prohibitions in OJK Regulation No. 22 of 2023 on threats, humiliation, and contacting third parties should be reinforced in sharia platforms by an explicit commitment, reviewed by the DPS, that collection will never use the borrower's personal data to shame them or their family. Second, platforms should operate a hardship procedure that distinguishes between borrowers who are unable to pay and those who are able but unwilling. The Qur'anic command of respite for those in hardship (Q. 2:280) and the established fatwa distinction between the capable debtor who delays payment, who may be subject to sanctions channelled to social funds, and the debtor in genuine difficulty, who must be given relief, provide a principled basis for such a procedure. Third, the platform should provide accessible complaint mechanisms connected to the OJK's consumer-protection channels and to alternative dispute resolution, and should report aggregated data on complaints, reversals of automated decisions, and hardship cases to the regulator and the DPS. These data allow supervisors to detect systemic problems, such as a model that produces a high rate of reversals for a particular group.

Table 3. Structure of the Maqāṣid-Based Algorithmic Accountability Framework

Stage	Core Duties and Rights	Responsible Actors	Legal Anchor	Maqāṣid Rationale
Ex ante: data and model governance	Data inventory and exclusion of intrusive categories; credit-scoring impact assessment; pre-deployment fairness testing; DPS opinion on data and model practices	Platform board and risk unit; Data Protection Officer; DPS	PDP Law Arts. 4(2), 34; OJK Reg. 40/2024 governance and Art. 150; Fatwa 117/2018	*Ḥifẓ al-ʿirḍ*; *ʿadl*; prohibition of *tajassus* and *ḍarar*
Decision time: borrower rights	Notice of automated assessment; principal reasons for adverse decisions; human review within fixed period	Platform credit unit; customer service; human reviewers	PDP Law Art. 10(1); OJK Reg. 22/2023 transparency	*Ḥifẓ al-ʿaql*; removal of *jahālah* and *gharar*; *tabayyun*
Ex post: dignity and redress	Dignified collection; hardship procedure; complaint handling and reporting of reversals	Platform collection unit; DPS; OJK consumer protection	OJK Reg. 22/2023 collection conduct; Consumer Protection Law; DSN-MUI fatwas on late payment	*Ḥifẓ al-nafs*; *ḥifẓ al-māl*; *karāmah*; respite (Q. 2:280)

Table 3 summarises the framework. Its distinctive feature is the integration of three regimes that currently operate separately. Data-protection law provides the rights to object and the duty to assess impacts; financial regulation provides the duties of suitability analysis, governance, and fair treatment; and sharia governance provides the substantive values and an institutional actor, the DPS, already embedded in every sharia platform. The framework assigns each regime a role at each stage, so that accountability does not depend on a single instrument.

C. Illustrative Application of the Framework

The operation of the framework can be illustrated through a stylised scenario that reflects the typical structure of sharia productive financing. Suppose a woman who runs a small food-catering business applies through a sharia platform for working-capital financing under a *murābaḥah* or *wakālah bi al-ujrah* structure. Her application is assessed by a model that uses her transaction history on an e-commerce marketplace, the characteristics of her mobile device, the stability of her phone number, and her repayment history with other lenders. The model assigns her a low score, and the platform offers her a much smaller amount than requested at the highest permitted margin.

Under the current framework, she would typically receive only the outcome. She would not know whether the low score resulted from irregular marketplace sales during a seasonal downturn, from the fact that she recently changed her phone number, or from an error in the data supplied by a third party. If she suspected an error, she would have no clear procedure to request a review, and the Sharia Supervisory Board would not have examined whether the use of device characteristics or phone-number stability is a legitimate proxy for repayment capacity or an unjustified source of exclusion. If she later fell behind on payments during a period of illness in her family, she might be subjected to collection pressure that, while lawful in form, did not distinguish between inability and unwillingness to pay.

Under the MAAF, the outcome would differ at each stage. At the ex ante stage, the platform's data inventory would have required it to justify the use of device and phone-number variables; the DPS opinion would have questioned whether these variables disadvantage informal-sector entrepreneurs, many of whom are women, for reasons unrelated to their business viability; and fairness testing would have revealed whether applicants from particular occupations or regions systematically received lower scores. At the decision stage, she would have received a notice stating the principal reasons for the reduced offer, for example, high variability of monthly marketplace income over the previous six months, and would have been able to submit additional evidence, such as catering contracts or bank statements, for human review. At the ex post stage, a hardship procedure would have allowed her to request a rescheduling of payments, and the platform's collection policy would have prohibited any contact with her family or customers. The scenario shows that the framework does not prevent platforms from using data or from declining applications; it ensures that

their decisions are intelligible, contestable, and humane, as the objectives of the sharia require.

The scenario also illustrates the interaction between borrower protection and lender protection. In sharia peer-to-peer lending, lenders are often retail investors who place funds on the basis of information presented by the platform about projects and recipients. Accurate, documented, and reviewable credit assessments protect lenders from the risk that platforms will overstate the quality of recipients or, in the worst case, fabricate projects. The same documentation that enables a borrower to contest a decision enables a supervisor or auditor to verify that the platform's representations to lenders were truthful. In this way the framework serves the protection of wealth (*ḥifẓ al-māl*) on both sides of the platform and responds directly to the type of data manipulation alleged in the recent default of a licensed sharia platform.

D. Institutional Implementation, Proportionality, and Legal Certainty

A framework is only as effective as its implementation. Three implementation pathways are proposed, each of which can be undertaken without new legislation. The first pathway is regulatory guidance from the OJK. The OJK could issue a circular letter or supervisory guideline that interprets Article 150 of OJK Regulation No. 40 of 2024 and the transparency provisions of OJK Regulation No. 22 of 2023 in the context of automated credit decisions. Such guidance could specify the content of principal-reason notices, the timeline for human review, and the minimum content of fairness testing. It would also clarify, in line with the functional reasoning of the SCHUFA judgment, that a decision relying decisively on an automated score is to be treated as an automated decision for purposes of the PDP Law. Coordination with the personal data protection authority envisaged by the PDP Law would ensure that sector-specific guidance remains consistent with general data-protection norms.

The second pathway is sharia guidance from the DSN-MUI. The DSN-MUI could issue a fatwa or a guideline that extends the principles of Fatwa No. 117/DSN-MUI/II/2018 to automated decision-making and data use. Such a fatwa would not need to address technical details; it could declare that the use of data in a manner that humiliates borrowers, or the use of opaque decision processes that create *jahālah* about the basis of pricing, is inconsistent with sharia principles, and that the DPS is responsible for reviewing data and decision practices. This would give the DPS a clear mandate and would align sharia supervision with the concerns that have emerged from recent industry failures. Industry associations of sharia fintech operators could then translate the fatwa into codes of conduct, provided that such codes do not themselves facilitate anticompetitive coordination of the kind examined in the KPPU case.

The third pathway is supervisory practice. The OJK's supervision of LPBBTI already involves examinations of governance, risk management, and information systems. Adding a review of credit-scoring documentation, fairness tests, and complaint and reversal statistics to these examinations would allow supervisors to detect problems early. This approach reflects the "smart regulation" logic advocated by Zetzsche et al. (2017), in which supervision is data-driven and proportionate.

Proportionality is essential. The sharia LPBBTI segment includes small platforms that face capital pressures; recent reports indicate that some sharia operators have pursued mergers to meet minimum equity requirements. Imposing complex and costly obligations could drive them out of the market and reduce the very financial inclusion that sharia fintech promises (Hudaefi, 2020; Ozili, 2018). The MAAF therefore adopts a tiered approach: all platforms should maintain a data inventory, provide notice and principal reasons, and offer human review; more sophisticated obligations, such as statistical fairness testing and external validation, should scale with the platform's size, the complexity of its models, and the volume of consumptive financing. Simple, rule-based scorecards may be explained more easily and require less testing than complex machine-learning models. This tiered approach balances the protection of borrowers with the viability of smaller sharia operators and reflects the Islamic legal principle that obligations should be imposed according to capacity (*lā yukallifu Allāhu nafsan illā wusʿahā*, Q. 2:286).

The framework also strengthens legal certainty for platforms. At present, platforms face uncertainty about how the PDP Law's right to object applies to their processes, what explanation duties they owe, and what sharia boards expect regarding data practices. This uncertainty creates legal risk, particularly as the PDP Law's administrative sanctions become enforceable. Clear guidance on these questions reduces compliance costs, enables platforms to design their systems appropriately from the

outset, and provides a defensible standard in disputes. Langenbucher (2020) makes a similar argument for Europe: a clear legal framework for responsible AI-based credit scoring is not merely a constraint on innovation but a precondition for its legitimacy and sustainability.

E. Coordinating Data-Protection, Financial, and Sharia Authorities

The effectiveness of the framework depends on coordination among three sources of authority whose mandates overlap but whose legal natures differ. The personal data protection authority envisaged by the PDP Law has a horizontal mandate covering all controllers, including financial institutions; the OJK has a sectoral mandate over financial services, including consumer protection and market conduct; and the DSN-MUI, together with the Sharia Supervisory Boards placed in each institution, holds normative authority over sharia compliance. Without coordination, each authority may assume that the others are responsible for automated credit decisions, producing precisely the fragmentation identified in the results.

A coordinated approach would allocate responsibilities according to institutional competence. The data protection authority is best placed to define the general content of the right to object, the methodology of impact assessments, and the standards for data minimisation. The OJK is best placed to translate those general standards into sector-specific expectations for LPBBTI, to integrate them into licensing and supervisory examinations, and to link them to suitability analysis, pricing rules, and collection conduct. The DSN-MUI is best placed to articulate the sharia principles that apply to data use and automated decisions and to define the responsibilities of the DPS. A memorandum of understanding among the three authorities, or at least between the OJK and the data protection authority with formal consultation of the DSN-MUI, would reduce the risk of inconsistent requirements and would give platforms a single, coherent set of expectations.

Such coordination is also important for enforcement. Complaints arising from automated credit decisions often combine several dimensions: a borrower may allege that a rejection was based on inaccurate data, that the platform failed to explain it, and that the platform's practices are inconsistent with its sharia representations. A coordinated complaint pathway, in which the OJK's consumer-protection channel can refer data-protection questions to the data protection authority and sharia questions to the DPS or the DSN-MUI, would prevent borrowers from being passed between institutions. Aggregated complaint data shared among the authorities would also allow them to detect patterns, such as recurring complaints about a particular model or data source, that individual complaints cannot reveal.

Finally, coordination must respect competition law. The KPPU decision demonstrates that industry-wide standards adopted through an association can raise competition concerns when they affect prices. Standards on explanation, human review, data minimisation, and hardship procedures are qualitatively different from price coordination because they concern the quality and fairness of the process rather than the level of charges. Nevertheless, to avoid any appearance of collusion, such standards are best issued or endorsed by the regulator rather than adopted solely by industry associations. This approach preserves competition on price and service quality while ensuring a common floor of protection for borrowers.

F. Theoretical Contribution and Limitations

The article makes three contributions. First, it extends *maqāṣid*-based evaluation of Islamic finance (Ahmed, 2011; Laldin & Furqani, 2013) from the level of products and institutions to the level of automated decision processes, showing that the classical prohibitions of *gharar*, *tadlīs*, *ḍarar*, and *ẓulm* have direct application to algorithmic credit scoring. Second, it contributes to the algorithmic-accountability literature by showing how a non-Western, religiously grounded normative tradition can supply both substantive values and an institutional actor, the sharia supervisory board, for the governance of automated decisions. This responds to the observation of Mittelstadt et al. (2016) that the ethics of algorithms requires both epistemic and normative evaluation, and to Kaminski's (2019) call for accountability regimes that combine individual rights with collaborative governance. Third, it offers Indonesian regulators and sharia authorities a concrete, stage-based framework that integrates instruments currently operating in isolation.

The study has limitations. As normative legal research, it does not measure the actual prevalence of algorithmic discrimination or opaque decision-making in sharia platforms; empirical research using platform data, borrower

surveys, or supervisory records would be necessary to test the magnitude of the risks identified. The analysis of KPPU Decision No. 05/KPPU-I/2025 and of the default of a sharia platform relies on publicly reported facts, and the final legal outcomes of both matters may differ from the positions reported at the time of writing. Finally, the comparative analysis is limited to the European Union; future research could examine the approaches of other jurisdictions with significant Islamic finance sectors, such as Malaysia and the Gulf states, to identify further functional solutions.

V. CONCLUSION AND RECOMMENDATIONS

A. Conclusion

This article concludes that the Indonesian legal framework for sharia peer-to-peer lending contains significant but fragmented safeguards against the risks of algorithmic credit scoring. The PDP Law recognises personal financial data as specific data, grants a right to object to solely automated decisions, and requires impact assessments for high-risk processing. OJK Regulation No. 40 of 2024 makes credit assessment mandatory and recognises sharia contracts and business units. OJK Regulation No. 22 of 2023 establishes principles of transparency, fair treatment, data protection, and dignified collection. DSN-MUI Fatwa No. 117/DSN-MUI/II/2018 articulates prohibitions of *gharar*, *tadlīs*, *ḍarar*, and *ẓulm* that speak directly to opaque and harmful decisions. However, these elements are not connected to one another, are insufficiently operational, and leave five gaps: decision identification, explanation, fairness testing, data boundaries, and sharia process governance. Recent industry events, including the KPPU's interest-ceiling case and the default of a licensed sharia platform, illustrate that neither price regulation nor contract-based sharia compliance can by itself secure fairness and trust in digital lending.

The article proposes that sharia legitimacy in digital lending be reconceived as process compliance rather than contract compliance alone. The Maqāṣid-Based Algorithmic Accountability Framework operationalises this reconception through three stages: ex ante data and model governance, decision-time borrower rights to notice, principal reasons, and human review, and ex post dignity and redress through humane collection, hardship procedures, and complaint reporting. Each stage is anchored in existing Indonesian legal instruments and justified by specific *maqāṣid* objectives, particularly the protection of wealth, intellect, life, and honour, and by the principles of justice, verification, and respite for debtors in hardship.

B. Recommendations

First, the OJK should issue sector-specific guidance on automated credit decisions in LPBBTI that defines when a score-based decision is treated as automated, specifies the minimum content of principal-reason notices, sets timelines for human review, and requires proportionate fairness testing and reporting of decision reversals. Second, the DSN-MUI should issue a fatwa or guideline extending the principles of Fatwa No. 117/DSN-MUI/II/2018 to data use and automated decision-making, and should explicitly include the review of credit methodology, data practices, and collection policies within the mandate of the Sharia Supervisory Board. Third, sharia platforms should adopt the MAAF voluntarily as a matter of governance, beginning with a data inventory, a credit-scoring impact assessment, and a borrower-facing explanation and review procedure. Fourth, future research should empirically test the prevalence and impact of algorithmic risks in sharia platforms and compare the Indonesian approach with other jurisdictions in which Islamic finance and digital lending are growing.

REFERENCES

Aggarwal, N. (2021). The norms of algorithmic credit scoring. *The Cambridge Law Journal, 80*(1), 42–73. https://doi.org/10.1017/S0008197321000015

Ahmed, H. (2011). Maqasid al-Shari'ah and Islamic financial products: A framework for assessment. *ISRA International Journal of Islamic Finance, 3*(1), 149–160.

Arner, D. W., Barberis, J., & Buckley, R. P. (2016). The evolution of Fintech: A new post-crisis paradigm? *Georgetown Journal of International Law, 47*(4), 1271–1319.

Auda, J. (2008). *Maqasid al-Shariah as philosophy of Islamic law: A systems approach*. International Institute of Islamic Thought.

Barocas, S., & Selbst, A. D. (2016). Big data's disparate impact. *California Law Review, 104*(3), 671–732.

Bartlett, R., Morse, A., Stanton, R., & Wallace, N. (2022). Consumer-lending discrimination in the FinTech era. *Journal of Financial Economics,*

143(1), 30–56. https://doi.org/10.1016/j.jfineco.2021.05.047

Berg, T., Burg, V., Gombović, A., & Puri, M. (2020). On the rise of FinTechs: Credit scoring using digital footprints. *The Review of Financial Studies, 33*(7), 2845–2897. https://doi.org/10.1093/rfs/hhz099

Chapra, M. U. (2008). *The Islamic vision of development in the light of Maqasid al-Shariah*. Islamic Research and Training Institute, Islamic Development Bank.

Citron, D. K., & Pasquale, F. (2014). The scored society: Due process for automated predictions. *Washington Law Review, 89*(1), 1–33.

Court of Justice of the European Union. (2023). *Judgment of 7 December 2023, OQ v Land Hessen (SCHUFA Holding – Scoring), Case C-634/21*. ECLI:EU:C:2023:957.

DSN-MUI (Dewan Syariah Nasional Majelis Ulama Indonesia). (2000). *Fatwa No. 17/DSN-MUI/IX/2000 on sanctions against capable customers who delay payment*. DSN-MUI.

DSN-MUI (Dewan Syariah Nasional Majelis Ulama Indonesia). (2004). *Fatwa No. 43/DSN-MUI/VIII/2004 on compensation (taʿwīḍ)*. DSN-MUI.

DSN-MUI (Dewan Syariah Nasional Majelis Ulama Indonesia). (2018). *Fatwa No. 117/DSN-MUI/II/2018 on information-technology-based financing services based on sharia principles*. DSN-MUI.

Dusuki, A. W., & Abozaid, A. (2007). A critical appraisal on the challenges of realizing maqasid al-shariaah in Islamic banking and finance. *IIUM Journal of Economics and Management, 15*(2), 143–165.

Edwards, L., & Veale, M. (2017). Slave to the algorithm? Why a "right to an explanation" is probably not the remedy you are looking for. *Duke Law & Technology Review, 16*(1), 18–84.

European Union. (2024). *Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence (Artificial Intelligence Act)*. Official Journal of the European Union, L series.

Financial Services Authority (OJK). (2023a). *OJK Regulation No. 22 of 2023 on consumer and public protection in the financial services sector*. Otoritas Jasa Keuangan.

Financial Services Authority (OJK). (2023b). *OJK Circular Letter No. 19/SEOJK.06/2023 on the operation of information-technology-based co-funding services*. Otoritas Jasa Keuangan.

Financial Services Authority (OJK). (2024). *OJK Regulation No. 40 of 2024 on information-technology-based co-funding services*. Otoritas Jasa Keuangan.

Fuster, A., Goldsmith-Pinkham, P., Ramadorai, T., & Walther, A. (2022). Predictably unequal? The effects of machine learning on credit markets. *The Journal of Finance, 77*(1), 5–47. https://doi.org/10.1111/jofi.13090

Gillis, T. B. (2022). The input fallacy. *Minnesota Law Review, 106*(3), 1175–1263.

Hudaefi, F. A. (2020). How does Islamic fintech promote the SDGs? Qualitative evidence from Indonesia. *Qualitative Research in Financial Markets, 12*(4), 353–366. https://doi.org/10.1108/QRFM-05-2019-0058

Hurley, M., & Adebayo, J. (2016). Credit scoring in the era of big data. *Yale Journal of Law and Technology, 18*(1), 148–216.

Hutagalung, J. M., As Suminar, M. Z., Pebrianto, Z., Al-Kindi, M. I. S., & Masae, M. (2025). Digital lending platforms and Islamic financial technology in Indonesia: Reconciling regulatory paradigms through maqāṣid al-sharīʿah and consumer protection philosophies. *Jurnal Indo-Islamika, 15*(1), 173–185. https://doi.org/10.15408/jii.v15i1.47045

Ibn ʿĀshūr, M. al-Ṭ. (2006). *Treatise on Maqāṣid al-Sharīʿah* (M. El-Tahir El-Mesawi, Trans.). International Institute of Islamic Thought.

Kamali, M. H. (2008). *Maqāṣid al-Sharīʿah made simple*. International Institute of Islamic Thought.

Kaminski, M. E. (2019). The right to explanation, explained. *Berkeley Technology Law Journal, 34*(1), 189–218.

KPPU (Business Competition Supervisory Commission). (2026). *Decision in Case No. 05/KPPU-I/2025 concerning alleged violation of Article 5 of Law No. 5 of 1999 in information-technology-based co-funding services*. Komisi Pengawas Persaingan Usaha.

Laldin, M. A., & Furqani, H. (2013). Developing Islamic finance in the framework of maqasid al-Shari'ah: Understanding the ends (maqasid) and the means (wasa'il). *International Journal of Islamic and Middle Eastern Finance and Management, 6*(4), 278–289. https://doi.org/10.1108/IMEFM-05-2013-0057

Langenbucher, K. (2020). Responsible A.I.-based credit scoring: A legal framework. *European Business Law Review, 31*(4), 527–572.

Mittelstadt, B. D., Allo, P., Taddeo, M., Wachter, S., & Floridi, L. (2016). The ethics of algorithms: Mapping the debate. *Big Data & Society, 3*(2), 1–21. https://doi.org/10.1177/2053951716679679

Oseni, U. A., & Ali, S. N. (Eds.). (2019). *Fintech in Islamic finance: Theory and practice*. Routledge.

Ozili, P. K. (2018). Impact of digital finance on financial inclusion and stability. *Borsa Istanbul Review, 18*(4), 329–340. https://doi.org/10.1016/j.bir.2017.12.003

Pasquale, F. (2015). *The black box society: The secret algorithms that control money and information*. Harvard University Press.

Rabbani, M. R., Khan, S., & Thalassinos, E. I. (2020). FinTech, blockchain and Islamic finance: An extensive literature review. *International Journal of Economics and Business Administration, 8*(2), 65–86.

Republic of Indonesia. (1999). *Law No. 8 of 1999 on Consumer Protection*. State Gazette of 1999 No. 42.

Republic of Indonesia. (2022). *Law No. 27 of 2022 on Personal Data Protection*. State Gazette of 2022 No. 196.

Republic of Indonesia. (2023). *Law No. 4 of 2023 on the Development and Strengthening of the Financial Sector*. State Gazette of 2023 No. 4.

Rosavina, M., Rahadi, R. A., Kitri, M. L., Nuraeni, S., & Mayangsari, L. (2019). P2P lending adoption by SMEs in Indonesia. *Qualitative Research in Financial Markets, 11*(2), 260–279. https://doi.org/10.1108/QRFM-09-2018-0103

Sari, L. T., & Khoiruddin, K. (2024). Legal protection for financial technology services from a maqashid syariah perspective. *ASAS: Jurnal Hukum Ekonomi Syariah, 16*(1). https://doi.org/10.24042/asas.v16i1.18780

Suryono, R. R., Budi, I., & Purwandari, B. (2020). Challenges and trends of financial technology (Fintech): A systematic literature review. *Information, 11*(12), 590. https://doi.org/10.3390/info11120590

Wachter, S., Mittelstadt, B., & Floridi, L. (2017). Why a right to explanation of automated decision-making does not exist in the General Data Protection Regulation. *International Data Privacy Law, 7*(2), 76–99. https://doi.org/10.1093/idpl/ipx005

Zetzsche, D. A., Buckley, R. P., Arner, D. W., & Barberis, J. N. (2017). Regulating a revolution: From regulatory sandboxes to smart regulation. *Fordham Journal of Corporate & Financial Law, 23*(1), 31–103.

Zikry, F., Intan, M. I. S., & Basri, A. H. (2024). The public interest implications (maslahah) of the OJK's regulatory amendments pertaining to Islamic peer-to-peer lending in Indonesia. *Ijtihad, 18*(2). https://doi.org/10.21111/ijtihad.v18i2.12737

Zuboff, S. (2019). *The age of surveillance capitalism: The fight for a human future at the new frontier of power*. PublicAffairs.