

Contestability and Consumer Redress in Automated Islamic FinTech Decisions: A Maqasid-Based Framework for Saudi Arabia

Talal Abdullah Hassan Bakhsh^{1*}, Auwal Adam Sa'ad²

¹ PhD Candidate, Institute of Islamic Banking and Finance (IiBF), International Islamic University Malaysia (IIUM), Kuala Lumpur, Malaysia, lahjan@gmail.com

² Institute of Islamic Banking and Finance (IiBF), International Islamic University Malaysia (IIUM), Kuala Lumpur, Malaysia, auwal@iium.edu.my

*Corresponding Author's E-mail: lahjan@gmail.com

Abstract: *Automated eligibility screening, credit-data use, payment administration, and complaint triage are reshaping consumers' interactions with financial technology (FinTech). Formal disclosure and Shariah product approval, although important, do not by themselves establish whether an affected consumer can identify an erroneous decision, challenge its grounds, secure an authorized reassessment, or obtain an effective remedy. This conceptual article asks how contestability and consumer redress can be specified for Islamic FinTech services in Saudi Arabia without conflating ethical recommendations with existing legal rights. Using a problem-driven integrative synthesis of maqasid al-Shariah scholarship, algorithmic contestability research, and verified Saudi financial-consumer rules, it develops the Maqasid-Based Contestability and Redress Framework (MCRF). The framework connects six functions: decision traceability, intelligible notice, evidence-enabled challenge, empowered human review, proportionate remedy, and institutional learning. A rights-evidence-remedy matrix translates the functions into auditable control questions, while two explicitly hypothetical BNPL scenarios demonstrate their use. The analysis distinguishes contesting a potentially erroneous determination from obtaining recourse by changing one's future circumstances, and shows why a mere appeal button does not guarantee meaningful review. Its contribution is a procedural-accountability framework complementing, rather than duplicating, contract-focused digital gharar and institution-focused Shariah governance models. No platform, legal-compliance audit, or consumer outcomes are empirically evaluated; effectiveness and Shariah rulings remain matters for subsequent research and competent review.*

Keywords: Islamic FinTech; consumer redress; algorithmic contestability; maqasid al-Shariah; procedural justice; BNPL; Saudi Arabia.

1. Paper type: Conceptual and normative research article

2. Introduction

Digital financial services increasingly make consequential decisions without face-to-face encounters. Eligibility screening, affordability assessment, transaction monitoring, payment scheduling, credit-record updates, and complaint triage may depend upon rule-based automation, statistical models, or

human-machine workflows. These functions can improve speed and consistency, but they can also distance the affected consumer from the information, evidence, and decision-maker needed to challenge an error. The difficulty is not limited to sophisticated artificial intelligence: a poorly configured deterministic rule or an outdated credit record may generate equally consequential mistakes. The procedural question is therefore whether the system remains answerable when an outcome is disputed, regardless of the technology producing it (Kinchin, 2024; Lyons et al., 2021; Mittelstadt et al., 2016).

For Islamic financial services, the challenge extends beyond functional reliability. Shariah conformity involves contractual rules and the responsibilities attached to financial transactions; a maqasid-oriented analysis additionally asks whether operational practices preserve legitimate interests, prevent avoidable harm, and maintain fairness. However, maqasid reasoning cannot substitute for a legally grounded Shariah assessment or override explicit rules. As Auda (2008) argues, a systems perspective can illuminate interactions among purposes and institutions, while Güney (2024) cautions that unconstrained invocations of maqasid risk subjective or legally inconsistent conclusions. The present study employs maqasid as a disciplined evaluative orientation for procedures, not as a mechanism for declaring particular financing arrangements permissible.

Saudi Arabia offers a clearly delimited institutional setting. The Saudi Central Bank (SAMA) has adopted Financial Consumer Protection Principles and Rules that address fair treatment, transparent information, and complaints handling (SAMA, 2022). Its Rules for Regulating Buy-Now-Pay-Later (BNPL) Companies address documented creditworthiness assessment, consumer consent, contractual transparency, cancellation and refund procedures, and dispute resolution (SAMA, 2023). Separately, the Credit Information Law identifies specified avenues for obtaining reasons for refusal, correcting credit information, and challenging unresolved errors (Kingdom of Saudi Arabia, 2008). These provisions support a substantial discussion of accountability, but do not justify asserting that every automated outcome carries a universal statutory right to a particular algorithmic explanation or a new decision by a human reviewer.

The missing analytical link is the path between an adverse or disputed digital outcome and a demonstrable correction process. Consumer-protection rules establish obligations; Shariah governance identifies supervisory responsibilities; computer-science research examines explanation, contestability, and recourse. Yet putting these streams together requires specifying who is entitled to challenge what, what evidence is preserved, how a challenge reaches a competent reviewer, what changes can be made, and how repeated failures are detected. The resulting contribution is intentionally narrower and more operational than another general theory of digital gharar, institutional legitimacy, or trustworthiness.

2.1 Research problem and questions

The research problem is the absence of an explicitly Shariah-sensitive procedural framework connecting potentially contestable automated FinTech decisions to documented reasons, review authority, remedies, and feedback controls within the Saudi consumer-finance setting. Its primary research question is: How can consumer contestability and redress be operationalized for automated Islamic FinTech decisions in a way that is grounded in maqasid, responsive to Saudi consumer-protection rules, and auditable in practice? Subsidiary questions concern (i) the difference between explanations, corrective challenges, and forward-looking recourse; (ii) the minimum institutional and technical conditions for meaningful review; and (iii) indicators suitable for subsequent legal, Shariah, and empirical validation.

2.2 Scope and contributions

The article focuses on consumer-facing financing workflows, particularly BNPL and analogous digital financing journeys, where adverse eligibility decisions, inaccurate account data, or disputed payment outcomes are plausible. It does not assume that every Saudi FinTech operator offers a Shariah-compliant product, nor that the same SAMA rules and complaint service-level standards apply identically to all licensed activities. The proposed framework is relevant to providers describing their services as Shariah-aligned and to reviewers assessing such claims; its exact legal application is product- and license-specific. The study contributes (1) a precise separation of explanation, contestation, recourse, and redress; (2) a maqasid-informed procedural rationale constrained by positive legal and fiqh requirements; (3) an auditable lifecycle architecture that joins decision records with an effective review channel; and (4) testable propositions and indicators, rather than unobserved claims about consumer trust or compliance performance.

3. Literature Review and Theoretical Foundations

3.1 Automated financial decisions as socio-technical processes

Algorithmic governance research warns against treating a model output as an isolated event. A consequential decision is generated by data acquisition, variable definitions, policy thresholds, model configuration, interface communication, institutional responsibilities, and subsequent human action. Errors can therefore originate in input quality, outdated records, mismatched business rules, missing exceptions, or the way reasons are explained to consumers. The NIST AI Risk Management Framework encourages contextual mapping, measurement, management, and governance of AI-related risks; its voluntary and cross-sector character makes it a useful design reference, not a Saudi legal instrument (Tabassi, 2023). Within financing, the distinction between predictive quality and procedural fairness matters. A screening rule may be statistically defensible yet operate on stale information. A credit refusal may be permissible, even prudent, when repayment capacity is inadequate; that does not excuse an inability to correct a misattributed record. Conversely, an explanation may be accurate without giving the consumer a realistic method of supplying missing evidence. A procedural model must therefore examine the full sequence from decision generation to remedy (Kinchin, 2024; Karimi et al., 2022; Mittelstadt et al., 2016).

3.2 Explanation, contestation, recourse, and redress

Four notions require separation. An explanation communicates reasons or relevant factors for an outcome in terms intelligible to the affected party. Contestation is the opportunity to question the correctness, appropriateness, or application of the decision by submitting relevant counter-evidence for review. Algorithmic recourse, in a narrower technical sense, typically concerns actionable changes an individual could make to obtain a different outcome in the future; it is not the same as proving the original decision wrong (Karimi et al., 2021, 2022). Redress concerns the response to a substantiated grievance, potentially including correction, reversal, reimbursement, restoration of an account record, or referral to an appropriate dispute-resolution forum.

Wachter et al. (2018) show that useful counterfactual information may support understanding and action without disclosing a model's entire internal logic. However, not every counterfactual is feasible, fair, or responsive to a mistake. Lyons et al. (2021) demonstrate the contestability concept's competing interpretations, and Kinchin (2024) emphasizes the procedural importance of voice in

algorithmic justice. Together, these arguments support a design rule: meaningful contestation requires more than a reason code and more than advice on how the individual might alter future behavior. It requires the capacity to present contrary information and obtain an appropriately authorized decision on that information. Empirical research in a public-sector setting documents the need for cooperative sense-making, assistance in challenge acts, and clear responsibility attribution (Yurrita et al., 2025). Those findings motivate design questions here; they are not treated as direct evidence about Saudi consumer-finance users.

3.3 The maqasid lens and its limits

Within Islamic finance, the protection of wealth (hifz al-mal), justice in exchange, honest dealing, the avoidance of wrongful harm, and the settlement of disputes supply relevant evaluative considerations (Auda, 2008; El-Gamal, 2006). An unexplained error that wrongly records a consumer as delinquent can threaten legitimate financial interests. A remedy that restores accurate information may be normatively desirable even where the originally approved contractual form was sound. These claims concern ethical alignment of procedures, not a categorical fiqh ruling that all digital uncertainty constitutes prohibited gharar. Two constraints are essential. First, a maqasid consideration should be connected to a concrete interest, an identifiable risk, and a feasible safeguard; it should not become a generic label validating any preferred technical design. Second, the legality of fees, penalties, contracts, and treatment of defaults remains subject to applicable Shariah interpretations and positive law. Güney (2024) provides a relevant caution against using broad purposes in ways that displace juristic constraints. Accordingly, MCRF treats the Shariah board or qualified reviewer as an institutional decision-maker for substantive questions and reserves its own contribution for the evidence and procedure needed to make such review effective.

3.4 Procedural justice and financial consumer protection

The G20/OECD High-Level Principles on Financial Consumer Protection place complaints handling and redress among the foundations of consumer safeguards, including accessibility, fairness, timeliness, and avenues beyond unresolved internal complaints (OECD, 2022). In Saudi Arabia, this general orientation has a concrete counterpart in the SAMA consumer-protection principles, though the details of complaint channels, response periods, and escalation depend on the applicable sectoral rule and circular. A key theoretical proposition follows: the reliability of the decision-making process is judged not only before harm occurs but also by whether a consumer can expose and correct errors after the initial outcome.

4. Research Methodology

4.1 Design and source strategy

The paper adopts conceptual research and normative institutional analysis. Following Jaakkola (2020), theory integration is organized around a specified problem and a transparent account of the role assigned to each literature stream. This is neither a systematic literature review nor an empirical investigation. It draws purposively on primary Saudi legal and regulatory texts, authoritative international consumer and AI guidance, peer-reviewed work on procedural justice and algorithmic recourse, and core maqasid scholarship. The selection prioritizes documents with a direct analytical contribution to a particular part of the consumer decision–challenge–remedy pathway; the search did not claim exhaustive coverage or apply a reproducible PRISMA screening protocol.

Table 1. Evidence domains and their distinct analytical uses

Evidence domain	Representative sources	Analytical function
Saudi positive rules	SAMA (2022, 2023, 2025); Kingdom of Saudi Arabia (2008)	Identify existing obligations, entitlements and institutional limits; do not infer rights absent from the instruments.
Islamic legal and ethical reasoning	Auda (2008); El-Gamal (2006); Güney (2024)	Frame protected interests and guard against substituting maqasid rhetoric for applicable fiqh requirements.
Procedural justice and contestability	Kinchin (2024); Lyons et al. (2021); Wachter et al. (2018)	Define notice, meaningful challenge, hearing, and reasons for an outcome.
Technical and consumer assurance	Karimi et al. (2021, 2022); OECD (2022); Tabassi (2023)	Translate conceptual principles into feasible evidence artifacts, control points and testable measures.

4.2 Analytical procedure

The analysis proceeds through five traceable steps. First, it identifies a recurring failure mode: an adverse or disputed digital financial outcome for which the consumer cannot obtain a reasoned correction. Second, it differentiates the relevant concepts so that transparency, appeal, recourse and remedy are not treated as synonyms. Third, it maps verified Saudi rules to those functions, distinguishing explicit requirements from voluntary institutional enhancements. Fourth, it derives a procedural sequence from protected interests: information sufficient to understand an outcome, an accessible challenge channel, preserved evidence, review by a person empowered to alter the outcome, and an appropriate remedy. Fifth, it tests the framework's internal coherence against two expressly hypothetical cases and states propositions and potential falsification conditions for later research.

The source-to-design transition is interpretive, not statistical. No coding frequencies, expert consensus, questionnaire responses, live algorithmic logs, compliance scores, or measured consumer effects are presented. Table 1 makes the source domains visible; Tables 2–4 make the interpretive assumptions and proposed implementation outputs auditable.

4.3 Standards for claims and generalizability

Claims are categorized as (i) provisions supported by cited Saudi sources; (ii) normative recommendations proposed by this article; or (iii) empirical hypotheses to be tested. None of the latter two categories is described as current law or observed platform performance. Specific product classification, institutional licensing, Shariah contract form, and the currently applicable circular must be checked separately before implementation.

5. Saudi Regulatory Baseline and Its Limits

SAMA's Financial Consumer Protection Principles and Rules, issued in 2022, require supervised institutions to address equitable treatment, clear and comprehensible disclosure, data privacy, and clear complaint mechanisms (SAMA, 2022). The rulebook also specifies complaint-handling procedures that include reference numbers and communication requirements. These provisions ground the importance of transparent interaction and traceable complaints; they do not, by

themselves, prescribe MCRF's complete technical review architecture. The 2023 BNPL Rules are more transaction-specific. Article 19 addresses verification and documentation of credit records with consent, scientifically documented creditworthiness assessment procedures, and appropriate acknowledgments. Article 26 specifies terms such as installment amounts and dates, consequences of delay, cancellation and refund procedures, and a dispute-resolution mechanism. These provisions directly bear on the kinds of decisions and records a BNPL consumer may wish to question (SAMA, 2023). Importantly, a requirement to document assessment criteria is not identical to a generalized obligation to disclose proprietary scoring parameters to every applicant.

A further anchor is the Credit Information Law (2008), Article 9. Its text provides, *inter alia*, that a member furnish grounds for a declined credit transaction upon the consumer's request and that consumers may seek correction of errors in their credit records and complain when errors are not corrected, subject to the law's terms. Those provisions are particularly relevant when an automated refusal relies on credit information. The article should not be read as transferring identical powers or processes to unrelated types of platform decisions without further legal analysis. In July 2025, SAMA announced the first phase of a complaints management system and specified handling and escalation periods for complaints within that system (SAMA, 2025). It would be unsound to assert that these operational deadlines universally attach to every present or future FinTech service: their coverage must be established from the circular, the institution's status, and any later implementing instructions. The framework therefore requires a maintained sector-specific legal-obligation register rather than hardcoding one response-time rule for all providers.

Table 2. Saudi sources mapped to existing provisions and additional design proposals

Source / provision	Document-supported baseline	MCRF recommendation (not asserted as statutory right)
SAMA 2022; Principles 1, 2 and 7; complaint rules	Fair treatment; intelligible disclosure; accessible, documented complaint arrangements.	Provide decision-specific reason categories and a consumer-readable challenge entry point linked to the transaction.
SAMA 2023; BNPL Arts. 19 and 26	Documented credit assessment, relevant consent, clear terms, cancellation/refund and dispute processes.	Retain versioned decision evidence and connect disputed installment or eligibility outcomes to a competent reviewer.
Credit Information Law 2008; Art. 9	Specified explanations for declined credit transactions on request, records access/correction, and complaint avenues.	Offer a dedicated credit-record correction workflow with provenance and documented downstream updates.
SAMA 2025; complaints-system first phase	Complaint tracking, handling and escalation measures for institutions/complaints within the circular's scope.	Monitor timeliness by the actually applicable rule and distinguish complaint closure from substantiated remediation.

The table is a source map rather than a definitive legal opinion. A Saudi-licensed bank, finance company, payment institution and BNPL provider can face different supplementary requirements. Contractual Shariah status similarly cannot be inferred from sectoral financial regulation alone.

6. Development of the Maqasid-Based Contestability and Redress Framework (MCRF)

6.1 Core principle and system boundary

MCRF defines meaningful contestability as an institutionally supported capacity to identify an actionable concern about a consequential digital financial determination, submit relevant evidence, obtain an authorized and reasoned reconsideration where appropriate, and secure proportionate correction or referral if the concern is substantiated. Its purpose is not to maximize approval rates, compel unsuitable lending, or presume that every rejected request is wrongful. Rather, it makes claims of fair, Shariah-conscious financial service procedurally accountable. The proposed framework covers six linked functions: (F1) decision traceability; (F2) intelligible notice; (F3) accessible evidence-enabled challenge; (F4) empowered review; (F5) proportionate remedy; and (F6) institutional learning. These functions form a sequence with a feedback loop, not independent checkboxes. The framework makes three critical distinctions: an appeal can be filed without being substantively reviewed; a human can inspect a case without being empowered to alter an erroneous outcome; and an error can be corrected internally without the consumer or dependent systems receiving an adequate remedy.

Figure 1. Proposed MCRF procedural sequence (author-developed conceptual model)

1. Record and notify	2. Receive and investigate	3. Decide and remedy	4. Learn and prevent
Versioned decision inputs, rules, reason categories and consumer-accessible notice.	Challenge intake, acknowledgement, evidence submission, identity safeguards and case linkage.	Authorized reassessment, written rationale, correction, reimbursement or justified refusal/referral.	Aggregate root causes, monitor repeated errors, update controls, audit trail and Shariah escalation.

Feedback direction: the fourth stage informs future decision design, disclosure quality, data checks, and governance review; it does not retroactively make an earlier flawed decision acceptable.

6.2 Function F1: Decision traceability

An institution must be able to reconstruct the relevant decision sufficiently to assess a complaint. Proposed evidence includes a unique case and decision identifier; transaction type and date; the input data categories and provenance; rules or model version; material exception flags; action taken; and whether a person intervened. Data minimization and privacy safeguards remain necessary: traceability does not justify indiscriminate retention, sharing of sensitive features, or disclosure of another customer's information. Where a rule relies on an external credit report, its source and timestamp should be identifiable to an authorized reviewer.

6.3 Function F2: Intelligible notice and explanation

A consumer-facing notification should distinguish a refusal, an account correction, a temporary hold, a proposed charge, and a routine service message. It should identify the relevant transaction, communicate material reasons at a level understandable to the intended audience, clarify what can be challenged, and point to an accessible channel. Explanation is not automatically a complete listing of variables. It must be accurate enough for an affected person to identify a potentially mistaken premise. A generic "system decision" or "risk policy" message fails this conceptual test, even if it is generated promptly.

6.4 Function F3: Evidence-enabled challenge

Contestability requires a route through which the consumer can challenge an input, a rule's application, an identity mismatch, or the handling of a transaction. The route should accept relevant documents or a concise narrative and provide an acknowledgement or case identifier. Accessibility requires attention to language, digital literacy, disability, and the possibility that the original channel has become inaccessible after an account restriction. The proposed safeguard is an institutionally designed procedure, not a claim of a universal statutory appeal right for every automated decision.

6.5 Function F4: Empowered and independent review

Meaningful review needs authority and separation proportionate to the stakes. A reviewer must be permitted to inspect the relevant decision record, correct erroneous data, seek clarification from the unit managing a model or rule, and either change the determination or make a properly reasoned recommendation to someone who can. A screen displaying the original output without additional information is not human oversight in any substantive sense. Reviewers should record any conflict of interest and have an escalation route for unresolved Shariah interpretation, contractual issues or conduct risk. Where the original adverse outcome remains justified after evaluation, the institution should be able to explain that conclusion without promising an altered result.

6.6 Function F5: Proportionate redress

Available remedies depend on the source of the problem and applicable rules. Possible institutional actions include rectifying a credit-data error; rerunning an assessment on corrected inputs; restoring wrongly withheld service; correcting a payment schedule; reversing an erroneous collection or fee where legally and contractually warranted; notifying a credit-information intermediary of a correction; or referring a dispute to the proper body. Remedies must avoid creating a new Shariah or regulatory breach, such as an unauthorized financing commitment. Compensation is not presumed merely because an automated output was challenged; the legal basis and evidence of harm require separate assessment.

6.7 Function F6: Institutional learning and Shariah assurance

Redress that addresses only an individual ticket can conceal a systemic design defect. A second layer of review should classify substantiated errors, record whether the fault arose from data, logic, interface design, vendor integration or procedure, and trigger corrective controls for comparable cases. Periodic reporting should distinguish the number of challenges filed from the proportion determined well-founded, corrected, escalated or unresolved. End-to-end audit scholarship reinforces the importance of documenting decisions across development, deployment and post-deployment review (Raji et al., 2020). Shariah review is engaged when the issue implicates contract execution, prohibited charges, unjust enrichment, or substantive Islamic legal obligations; a blanket "Shariah approved" label must never substitute for analyzing the particular occurrence.

7. Rights–Evidence–Remedy Protocol and Illustrative Applications

7.1 An operational audit protocol

The framework becomes reviewable when each procedural function has an observable artifact, a responsible role, and an outcome that can be disputed or independently checked. Table 3 offers a

proposed audit protocol. Its indicators are candidate design measures, not empirically validated quality thresholds or statutory standards.

Table 3. Proposed rights–evidence–remedy control matrix

Function	Minimum audit question	Suggested evidence / owner
F1 Traceability	Can the contested determination be reconstructed without guessing the underlying inputs or rule version?	Decision log; data provenance; model/rule version; accountable system owner.
F2 Notice	Could a typical consumer identify the event and at least one challengeable premise?	Versioned notification template; accessibility review; product and customer-care teams.
F3 Challenge	Can the person submit contrary evidence and obtain proof of receipt?	Submission receipt, case ID, accessible channel; customer-care unit.
F4 Review	Did a suitably authorized reviewer consider new evidence and have power to change or escalate the outcome?	Reviewer role, decision notes, reason codes, escalation path; risk/compliance and Shariah specialists as relevant.
F5 Remedy	If error is substantiated, are affected records and practical consequences corrected?	Correction record, downstream notification, consumer communication; operations and relevant data controller.
F6 Learning	Are recurring causes analyzed and preventive controls tested?	Root-cause register, corrective-action record, re-test outcome; assurance/risk governance.

7.2 Hypothetical case A: erroneous BNPL refusal

Suppose a consumer receives an automated BNPL refusal generated partly from a negative credit-record item that actually belongs to a different individual. This is a hypothetical illustration, not a case study of any Saudi firm. A notice identifying “credit information requires verification” might be sufficient to initiate a challenge without publicly exposing scoring logic. Through F3 the consumer identifies the mismatch and submits supporting evidence; F1 permits an authorized reviewer to establish the credit-record source and the relevant timestamp. Under F4 the reviewer checks whether the record is incorrect and coordinates correction through the applicable credit-information process. If the mistake is substantiated, F5 may require the firm to reassess the application using corrected information and update relevant records, without guaranteeing loan approval or waiving responsible lending criteria.

This case illustrates the boundary between contestation and recourse. Telling the consumer to improve their repayment history is a prospective recourse suggestion; it cannot cure a record that was never theirs. Under the Credit Information Law, Article 9, defined routes for declining grounds and inaccurate-record correction are legally relevant (Kingdom of Saudi Arabia, 2008). MCRF adds an auditable account of how an institution might connect those routes to automated decision evidence and an appropriately empowered internal review.

7.3 Hypothetical case B: incorrect installment or collection state

Consider a different hypothetical BNPL transaction in which a timely installment payment is recorded as outstanding because a payment-gateway update fails. A collection message or negative status could follow although the consumer holds a payment receipt. The critical problem is not whether the

original financing contract contained a clear installment schedule; it is whether the operational system preserves an accurate account of performance. F1 requires payment-event and integration records, F3 accepts a receipt and relevant metadata, and F4 enables reconciliation across ledger and gateway systems. If payment is verified, F5 calls for correction of the status and any affected downstream report and for a legally appropriate response to any wrongful fee or collection action.

Article 26 of the BNPL Rules makes clarity about payment schedules, delay consequences, refund handling and dispute-resolution mechanisms relevant to the institutional context (SAMA, 2023). The proposed procedure does not assume that all collection fees are necessarily forbidden or permitted: it separates an erroneous operational charge from a substantively contested Shariah or legal issue. The latter must be referred to an appropriately competent decision-maker.

7.4 Stress cases and safeguards

A robust system also needs safeguards against strategic complaints, third-party data exposure, and reviewer capture. A requester should be authenticated using proportionate methods, but identity verification should not be so burdensome that a legitimate complaint cannot be heard. The institution should restrict disclosure of protected model details when necessary while still giving the affected consumer a useful reason and challenge route. A challenge grounded in no apparent error may be closed with reasons; repeated well-founded challenges of the same rule, by contrast, should initiate broader testing. Thus, contestability protects both consumers and valid risk management rather than mechanically favoring one side.

8. Theoretical Propositions and Research Agenda

The MCRF is an explanatory and design framework whose propositions are open to refutation. It neither establishes causal relationships through observed data nor measures Saudi providers' present behavior. The following propositions specify pathways through which later field research could assess the framework. P1 (Traceability): Among otherwise comparable automated financial-decision processes, stronger decision traceability will be associated with more accurate classification of substantiated challenge grounds. P2 (Comprehension): Decision-specific and comprehensible notices will yield higher consumer understanding of the challengeable premise than generic notices, controlling for digital literacy. P3 (Effective review): Challenge pathways that allow consumers to submit relevant evidence and reach reviewers empowered to amend outcomes will correct a larger share of verified institutional errors than pathways offering only automated acknowledgments.

P4 (Procedural legitimacy): Perceived procedural fairness will be more strongly associated with reasoned consideration of consumer evidence than with notification speed alone, after controlling for whether the final outcome is favorable. P5 (System learning): Root-cause analysis linked to corrective actions and re-testing will be associated with a lower recurrence rate of previously confirmed error classes. P6 (Maqasid alignment): Independent Shariah specialists will rate remedy protocols that protect legitimate consumer wealth interests without overriding contractual and legal constraints as more normatively appropriate than protocols maximizing approvals or reversals without such safeguards. A mixed-method validation could begin with a multidisciplinary Delphi-style content assessment of the six functions, using Shariah scholars, Saudi financial lawyers, compliance officers, human-computer interaction specialists, and consumer representatives. Subsequent usability testing can compare notice formats under controlled conditions. A consented audit of anonymized case files could assess factual correction, empowerment of reviewers, closure reasons and downstream

remediation. A longitudinal design could measure recurring error classes before and after introducing feedback controls. Crucially, such studies must distinguish correlated improvements from causality and report institutional selection and confounding effects.

Table 4. Candidate research measures and boundaries

Construct	Illustrative measurement	Interpretive limitation
Decision traceability	Share of sampled contested decisions reconstructable from complete contemporaneous records.	A complete record does not establish that the underlying decision was fair.
Meaningful notice	Consumer task accuracy: can participants identify reason, challenge channel and required evidence?	Must test Arabic/English comprehension and representative literacy levels.
Review authority	Share of reviewed cases with documented authority to correct, reverse, or escalate the finding.	A nominal human reviewer may simply endorse the model output.
Substantiated correction	Confirmed errors corrected / independently verified substantiated errors.	Not comparable without stable definitions of an error and case mix.
Redress completeness	Cases with completed downstream corrections / cases requiring such corrections.	Financial compensation and legal liability require separate determination.
System learning	Recurrence frequency of previously validated error causes over time.	Trend may reflect volumes, rule revisions or reporting changes.

9. Discussion

9.1 Theoretical contribution beyond approval and disclosure

The article's principal theoretical move is from *ex ante* conformity to *ex post* answerability. Prior assessments may establish whether a financing product's legal form and supervisory structure are appropriate and whether platform design avoids unjustified uncertainty. MCRF instead asks what occurs once a possibly mistaken decision has already been executed. This is not a replacement for contract compliance or Shariah supervision. It exposes a distinct temporal and procedural domain: the capacity to hear evidence, correct error, restore legitimate interests, and learn from failure. In this sense, trustworthy service delivery is a continuously demonstrated institutional property, not a label derived solely from approval at launch.

A second contribution is to separate **error contestation** from **outcome optimization**. An applicant may dislike a legitimate affordability refusal but have no evidence that the decision was mistaken. Alternatively, an applicant may accept a refusal in principle while identifying a misattributed data field requiring correction. A framework that measures success merely by appeal reversal risks distorting credit risk management; one that measures only complaint closure may miss uncorrected harms. An appropriate evaluation must distinguish the justice of the procedure, correctness of the factual premises, and lawfulness of the final determination (Karimi et al., 2022; Kinchin, 2024).

9.2 Institutional feasibility and proportionality

Operational design needs proportionality. Routine, low-consequence service queries should not trigger the same evidentiary burden as an adverse credit-record status or a disputed collection measure. Higher-impact cases merit stronger logging, a clearer escalation path and more qualified review. Small providers may rely on shared or outsourced technical infrastructure, but the accountability chain should identify which legally responsible institution owns the consumer relationship and can ensure the correction is effected. Vendor contracts should support access to material evidence without automatically disclosing personal data or trade secrets.

9.3 Implications for Shariah governance

For Shariah governance, MCRF offers evidence when a customer grievance implicates the execution rather than merely the textual validity of a contract. For example, a dispute over actual late-payment treatment may require accurate operational records before a scholar can assess the financial consequence. The framework does not confer juridical authority on a machine, a compliance analyst, or this article's authors. It instead specifies when relevant facts should be preserved and forwarded to a competent reviewer, permitting better-informed determinations in line with applicable standards and governance arrangements (Auda, 2008; Güney, 2024).

10. Practical and Policy Implications

For providers, the first practical step is to create an inventory of automated consumer-affecting determinations, identifying their data sources, severity, licensing context, relevant Shariah features, and current complaint routes. Each high-impact process should have an accountable owner, a decision log sufficient for authorized investigation, a consumer notice, a challenge channel, and a reviewer with specified authority. The technical team and customer-care unit must agree on which evidence can be disclosed and which changes require risk, legal, or Shariah approval. For assurance functions, internal audit can select a sample of cases and trace one disputed outcome from initial notification to closure and any downstream correction. A successful test requires contemporaneous evidence that the stated review actually occurred and, where an error was established, that the correction reached affected records. Shariah auditors should not be asked to substitute for credit-information experts or forensic system engineers; instead, the interdisciplinary file should contain the facts needed for each specialist's independent assessment.

For policymakers, a useful next step would be cross-functional guidance clarifying the minimum form of consumer-accessible reasons, evidence retention proportional to materiality, treatment of disputes involving outsourced decision systems, and reporting categories for recurring automated errors. These are policy proposals, not assertions that SAMA has already promulgated such a unified algorithmic contestation code. Alignment with applicable SAMA rules and legally valid confidentiality safeguards must precede any pilot.

11. Limitations and Future Research

Four limitations delimit the claims. First, the analysis is a purposive conceptual synthesis, not an exhaustive systematic review; important doctrinal, sectoral or technical sources may remain outside its scope. Second, it does not assess the actual complaint journeys, source code, decision logs, or

supervisory practices of any Saudi FinTech firm. Third, the Saudi legal discussion is anchored in identified published instruments and is not a substitute for a current, institution-specific legal opinion concerning the applicable license, latest circulars, or data-protection duties. Fourth, maqasid alignment and Shariah permissibility have not been established through formal scholarly consensus or independent juristic endorsement. Future research should evaluate how affected consumers actually understand automated decisions, whether submitted evidence changes reviewer reasoning, whether remedies reach downstream credit records, and whether root-cause feedback reduces repeated harm. Comparative studies between BNPL firms, digital finance companies, and Islamic banks could identify the limits of a common protocol while respecting distinct regulatory requirements. An independently reviewed Shariah and legal assessment of the proposed control matrix would be a necessary step before presenting MCRF as a validated compliance standard.

12. Conclusion

This article develops the Maqasid-Based Contestability and Redress Framework to address a specific and under-theorized question in automated Islamic FinTech: how an affected consumer can meaningfully challenge a questionable financial determination and obtain a documented, proportionate response. It integrates six functions—traceability, intelligible notice, evidence-enabled challenge, empowered review, proportionate remedy and institutional learning—into an auditable procedural chain. Saudi consumer-protection, BNPL and credit-information provisions supply a concrete, but legally bounded, setting for the argument. The framework complements contract-focused and institution-focused approaches by explaining the accountability required after a decision, without claiming empirical validation, inventing consumer outcomes, or converting proposed safeguards into existing legal entitlements. Its value will ultimately depend on rigorous testing and competent legal and Shariah review.

References

- Auda, J. (2008). *Maqasid al-Shariah as philosophy of Islamic law: A systems approach*. International Institute of Islamic Thought. <https://iiit.org/en/book/maqasid-al-shariah-as-philosophy-of-islamic-law-a-systems-approach/>
- El-Gamal, M. A. (2006). *Islamic finance: Law, economics, and practice*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511753756>
- Güney, N. (2024). *Maqāsid al-Sharī‘a in Islamic finance: A critical analysis of modern discourses*. *Religions*, 15(1), Article 114. <https://doi.org/10.3390/rel15010114>
- Jaakkola, E. (2020). Designing conceptual articles: Four approaches. *AMS Review*, 10, 18–26. <https://doi.org/10.1007/s13162-020-00161-0>
- Karimi, A.-H., Barthe, G., Schölkopf, B., & Valera, I. (2022). A survey of algorithmic recourse: Contrastive explanations and consequential recommendations. *ACM Computing Surveys*, 55(5), Article 95. <https://doi.org/10.1145/3527848>
- Karimi, A.-H., Schölkopf, B., & Valera, I. (2021). Algorithmic recourse: From counterfactual explanations to interventions. In *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency* (pp. 353–362). Association for Computing Machinery. <https://doi.org/10.1145/3442188.3445899>
- Kinchin, N. (2024). “Voiceless”: The procedural gap in algorithmic justice. *International Journal of Law and Information Technology*, 32, eaae024. <https://doi.org/10.1093/ijlit/eaae024>

- Kingdom of Saudi Arabia. (2008). Credit Information Law (Royal Decree No. M/37, 8 July 2008), Article 9. SAMA Rulebook. <https://rulebook.sama.gov.sa/en/credit-information-law>
- Lyons, H., Velloso, E., & Miller, T. (2021). Conceptualising contestability: Perspectives on contesting algorithmic decisions. *Proceedings of the ACM on Human-Computer Interaction*, 5(CSCW1), Article 106. <https://doi.org/10.1145/3449180>
- Mittelstadt, B. D., Allo, P., Taddeo, M., Wachter, S., & Floridi, L. (2016). The ethics of algorithms: Mapping the debate. *Big Data & Society*, 3(2). <https://doi.org/10.1177/2053951716679679>
- Organisation for Economic Co-operation and Development (OECD). (2022). G20/OECD high-level principles on financial consumer protection 2022. OECD Publishing. <https://doi.org/10.1787/48cc3df0-en>
- Raji, I. D., Smart, A., White, R. N., Mitchell, M., Gebru, T., Hutchinson, B., Smith-Loud, J., Theron, D., & Barnes, P. (2020). Closing the AI accountability gap: Defining an end-to-end framework for internal algorithmic auditing. In *Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency* (pp. 33–44). Association for Computing Machinery. <https://doi.org/10.1145/3351095.3372873>
- Saudi Central Bank (SAMA). (2022). Financial Consumer Protection Principles and Rules (Circular No. 44006639, 23 August 2022). SAMA Rulebook. <https://rulebook.sama.gov.sa/en/financial-consumer-protection-principles-and-rules>
- Saudi Central Bank (SAMA). (2023). Rules for Regulating Buy-Now-Pay-Later (BNPL) Companies (Circular No. 450360390000, 17 December 2023). SAMA Rulebook. <https://rulebook.sama.gov.sa/en/entiresection/6523>
- Saudi Central Bank (SAMA). (2025). Launch of the First Phase of the Complaint Management System (Circular No. 1185, 1 July 2025). SAMA Rulebook. <https://rulebook.sama.gov.sa/en/launch-first-phase-complaint-management-system>
- Tabassi, E. (2023). Artificial Intelligence Risk Management Framework (AI RMF 1.0) (NIST AI 100-1). National Institute of Standards and Technology. <https://doi.org/10.6028/NIST.AI.100-1>
- Wachter, S., Mittelstadt, B., & Russell, C. (2018). Counterfactual explanations without opening the black box: Automated decisions and the GDPR. *Harvard Journal of Law & Technology*, 31(2), 841–887. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3063289
- Yurrita, M., Verma, H., Balayn, A., Alfrink, K., Gadiraju, U., & Bozzon, A. (2025). Identifying algorithmic decision subjects' needs for meaningful contestability. *Proceedings of the ACM on Human-Computer Interaction*, 9(7), Article CSCW234. <https://doi.org/10.1145/3757415>