MILRev
Metro Islamic Law Review
Scientific Islamic Law Journal Of Sharia Faculty
MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

Author:
[1*]Mahmood Shaker Alaloosh, [2]Govar Majed Ahmad, [3]Lara Adel Jabbar

Affiliation:
[1,2,3]University of Kirkuk, Iraq

Corresponding author:
*mahmoodshaker@uokirkuk.edu.iq

Doi: 10.32332/milrev.v5i1.13031

Dates:
Received 15 July, 2025
Revised 20 December, 2025
Accepted 19 Febuary, 2026
Published 27 Febuary, 2026

Read Online:

Scan this QR code with your mobile device or smart phone to read online

Adapting Iraqi Law to Smart Contracts: A Comparative Analysis Incorporating Islamic Law Principles and Consumer Protection in the Contemporary Digital Era

Abstract: This paper analyzes the opportunities and obstacles to introducing smart contracts into the Iraqi legal framework, focusing on the doctrinal and practical aspects. Smart contracts are self-executing transactions based on blockchain networks, lacking the involvement of intermediaries, and contest the concepts of consent, lawful subject matter, and cause of action in traditional civil-law regimes, as embodied in the Iraqi Civil Contracts Law No. 40 of 1951. Using a descriptive-analytical and comparative research approach, the study assesses Iraqi laws, as well as the experience of other countries, specifically the United States, the European Union, and the United Arab Emirates, in relation to legal recognition, assigning liability, consumer protection, and automated implementation. The conclusions show that the current legal system in Iraq lacks express clauses addressing smart contracts, leading to confusion about the identification of parties, their binding relationships, and penalties for programming errors. A comparative analysis shows that effective regulatory models are characterized by clear legal definitions, judicial capacity-building, regulatory sandboxes, and consumer rights protection. The analysis also draws on Islamic normative concepts (*maqāṣid al-sharīʿah*), such as *ḥifẓ al-māl* (wealth preservation), *al-ʿadl* (justice), and *darʾ al-mafsid* (hitting back), to support ethical governance, algorithmic responsibility, and risk avoidance. On this basis, the study suggests a balanced legislative framework for Iraq that would uphold classical principles of contract keeping and empower digital innovation by introducing statutory treatment of smart contracts, well-structured liability rules, consumer protection, and institutional reforms. Such a framework promotes the responsible adoption of automated contracts in sectors including e-commerce and financial services, enhances legal predictability, aligns domestic law with cross-

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246
border digital practices, and ensures normative legitimacy within an Islamic and international legal context.

Keywords: Digital Economy; Iraqi Civil Law; Islamic Contract Principles; Legislative Reform.

INTRODUCTION

The digital realm has experienced tremendous advances in contract and agreement technology, making it a new platform for creating legal relations and executing commitments. The most important of these technological innovations is smart contracts, which are automatically executed through blockchain networks when specific conditions are met, without the traditional intervention of intermediaries or executing parties.[1]They can also be called self-executing code that runs on decentralized blockchain systems and enforces set rules without involving a traditional mediator.[2] On the contrary, the traditional contract notion within civil law has remained dependent on the parties' volition, their assent, and the presence of a legal subject matter and cause, and it is still subject to human schemes of understanding and performance. In Iraq, some laws govern traditional contracts, among them the Civil Contracts Law No. 40 of 1951, which stipulates that a contract must be valid only if it is made by consent, subject to a cause, and valid.

Smart contracts are automated contracts deployed on blockchain networks. They reduce reliance on traditional intermediaries, enhance transaction safety through encryption, and automatically enforce contract terms. However, their irreversible and decentralized nature undermines traditional legal constructs of consent, liability, and enforceability, requiring regulatory revision.[3]I chose Iraq as the sphere of study for several reasons: first, there is an emerging digital economy and growing popularity of blockchain technologies. Second, even though Iraqi laws have begun to embrace electronic transactions, such as the Electronic Signature and Electronic Transactions Law No. 78 of

[1] Christopher D. Clack et al., 'Smart Contract Templates: Foundations, Design Landscape and Research Directions', arXiv:1608.00771, preprint, arXiv, 15 March 2017, https://doi.org/10.48550/arXiv.1608.00771.

[2] Clack et al., 'Smart Contract Templates'.

[3] Halah Salah Al-Hadithi, 'Changing Technology Contracts (Smart Contracts)', *Journal of college of Law for Legal and Political Sciences* 10, no. 38 (2021): 324, https://doi.org/10.32894/1898-010-038-024.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

2012, they have yet to be adjusted to self-executing smart contracts. Third, consumer protection is a sensitive issue in the digital world in Iraq, where consumers often feel helpless when dealing with new, unregulated technological devices.

According to Islamic law, the adaptation of Iraqi law to smart contracts should also conform to the principles of Shariah, especially the maqasid al-sharaiyah. These superior aims are focused on securing the wealth (*ḥifẓ al-māl*), the foundation of justice (*al-adl*), and protection against injury (*dar al-mafsid*). The autonomous and decentralized nature of smart contracts raises ethical and legal dilemmas regarding consent, fairness, and responsibility. By incorporating these Shariah concepts into legislative reform, Iraq will be able to ensure that the implementation of digital contractual technologies promotes efficiency and innovation while ensuring normative legitimacy, consumer rights protection, and the elimination of exploitation or unfair harm, in accordance with Islamic commercial jurisprudence. This is the best view to balance the international best practices and establish an ethically sound and technologically sound framework."

The key question addressed in this paper can be put in the following form: How does the phenomenon of smart contracts relate to the Iraqi legal system, taking into account both the traditional Civil Contracts Law No. 40 of 1951 and the new digital reforms, such as Electronic Signature and Electronic Transactions Law No. 78 of 2012 and the E-Commerce Regulation No. 4 of 2025? Moreover, what are the obstacles in classifying, implementing, and regulating smart contracts under the existing legislation and keeping them in connection with the provisions of the Islamic law, particularly the *maqāṣid al-sharīʿah* objectives of protecting wealth (*ḥifẓ al-māl*), establishing justice (*al-ʿadl*), and preventing harm (*darʾ al-mafsid*)?

To this end, the study will: (1) Evaluate the level of compatibility between the Iraqi laws and the nature of smart contracts, both in the context of traditional civil law and the recent digital regulatory changes. (2) Find the most appropriate legal category of the smart contracts in Iraq (civil contract, digital asset, or execution tool) and assess their adherence to the Islamic law, including the *maqāṣid al-sharīʿah* objectives of protecting wealth (*ḥifẓ al-*

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

māl), ensuring justice (*al-ʿadl*), and preventing harm (*darʾ al-mafsid*). (3) Propose legislative and regulatory reforms that enable the adoption of smart contracts, strengthen consumer protection, and ensure normative legitimacy within both Iraqi and Islamic legal frameworks.

METHOD

The methodology used in this research is a descriptive-analytical, comparative approach, which will allow for an appreciation of the nature of smart contracts in terms of technology and for comparison with the traditional civil-law system in Iraqi legislation. The comparative approach is also used to compare Iraqi legislation with international practices, namely those of the United States, the European Union, and the United Arab Emirates, and to draw lessons that can be applied to Iraq. The references used in the current study are national legislation (the Iraqi Civil Contracts Law No. 40 of 1951, the Electronic Signature and Electronic Transactions Law, the E-Commerce Regulation), the international and legal and scholarly literature on smart contracts, recent academic papers and technical articles concerning blockchain and smart contracts, and the legal sources covering the topic of contractual validity and ethics in Islam (*fiqh al-muʿāmalāt* and *maqāṣid al-sharīʿah*).

Regarding the data collection process, appropriate legislative texts were analyzed to identify legal gaps that hindered adaptation to smart contracts. The factual principles of civil contracts, as per consent, subject matter, and cause, were examined to know whether they can be applied to smart contracts. At the same time, comparative research on the experiences of legislatures in other countries was developed to understand aspects of governance better and approaches to liability and consumer protection in the digital realm. Furthermore, the study examined Islamic contract principles, such as mutual consent (riḍā), avoidance of *gharar* (uncertainty), and *maqāṣid* objectives like protection of wealth (*ḥifẓ al-māl*), justice (*al-ʿadl*), and prevention of harm (*darʾ al-mafsid*), to ensure normative legitimacy and ethical compliance of proposed frameworks.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

In the interpretation stage, the study is grounded in the critical analysis of the smart contract's structure as a legal matter, the analysis of risks related to consumer protection, automated execution procedures, and the law in the event of a programming malfunction. The results of the comparative and analytical assessment also imply practical legislative recommendations, e.g., amendments to the current legislation or the creation of a specific law on smart contracts, and the incorporation of ethical and Shariah-compliant principles. The study is in Iraq, while international experiences serve as inspiration. In the time perspective, it includes legislation promulgated until 2025. In substantive terms, the study focuses on the legal aspects of smart contracts in both commercial and financial contexts, particularly regarding formation, performance, evidence, liability, and ethical compliance under Islamic law.

RESULTS AND DISCUSSION

1. Theoretical and Conceptual Basis

1.1 Definitions & Traditional Contract Theory

According to Al-Sanhouri, a contract is an agreement between two or more parties that establishes an obligation or alters a legal situation. It is clear, based on such a definition, that in the traditional contract, as conceived by civil law, two key pillars of it are consent (mutual assent) and cause. On the same note, under Iraqi law, Article 37 of the Iraqi Civil Code considers a contract as the binding of an offer and acceptance, thereby creating a legal relationship on the subject matter of the contract. Smart contracts are an important step away from the classical vision of a contract in Iraqi civil law, which is historically rooted in human consent, mutual agreement, and judicial control over contract performance. The smart contracts, in contrast to traditional contracts regulated by the Iraqi Civil Code No. 40 of 1951, run on pre-programmed code on decentralized blockchain networks and execute automatically when the specified conditions are met. This automatism undermines the basic concepts of law, such as offer and acceptance, identification of the parties, and liability under the contract, especially when it is done without any additional human intervention. Without direct legislative oversight in Iraq, smart contracts would expose consumers to increased risks, such as a lack of withdrawal

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

rights, irreversible execution, and unclear accountability for software bugs. Such issues underscore the need for a reformed legal framework that integrates technological automation with the latest principles of existing contract law and provides efficient consumer protection in Iraq's dynamic digital economy.[4]

Within the conventional contractual system, consent is reached through the agreement of two or more wills, whereas the cause is the legal purpose or right intended to be realized. In this way, the contract is based on the definite aspects that outline the relationship between the parties and give rise to legal outcomes.[5] Under the same law, a contractual transaction is valid when the essential conditions (consent, subject matter, and cause) are met. Nevertheless, within this framework, the traditional contract, in its codified form, cannot easily fit the characteristics of smart contracts. This is because of technical characteristics such as automated execution and decentralized distribution, which fall beyond the scope of the overall legal provisions. As a result, there are difficulties in the legal interpretation of consent, subject matter, and cause of action for smart contracts.[6]

The smart contract, on the contrary, is a new model based on software that operates automatically once a set of conditions is satisfied within a decentralized technological network. Smart contracts are commonly defined as "an agreement that is automatically executed by computer code, translating legal terms into executable programming."[7] They are characterized by being self-executing, typically requiring no human intermediary for activation, and by being immutable upon execution in certain applications. These technical characteristics place smart contracts outside the scope of the traditional contract in some

[4] Rabiaa Adnan Abdullatif and Hatem Ghaib Saed, 'The Legal Implications of Artificial Intelligence On Commercial Law', *TPM – Testing, Psychometrics, Methodology in Applied Psychology* 32, no. S4 (2025): Posted 17 July (2025): 2175–2182.

[5] Al-Sanhūrī, Abdul Razzaq Aḥmad. 1998. Nazāriyyat al-ʿAqd [Theory of Contract]. Beirut: Al-Halabī Human Rights Publications.

[6] Ahmed Aziz Hassan, 'Legal Issues Arising from Smart Contracts under the Iraqi Law', *Journal of University of Human Development* 4, no. 4 (2018): 42–47, https://doi.org/10.21928/juhd.v4n4y2018.pp42-47.

[7] Ahmed Kamal Sabry, 'The legal nature of the smart contracts concluded on the blockchain By the provisions of French law', *Journal of Jurisprudential and Legal Studies* 23, no. July (2025): 74–74, https://doi.org/10.70299/hji.i23.6.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

instances, thereby necessitating a different legal interpretation.[8] In other words, human will has become increasingly absent from the foreground. This view is reinforced by the notion that smart contracts "are essentially a unilateral contract in which the offeror states: 'I will give you.'"[9]

From this standpoint, a question arises regarding the extent to which the traditional doctrinal requirements of a contract consent and cause are fulfilled within a smart technological context. In such an environment, the parties may have reduced ability to contribute meaningfully to the formulation of contractual terms, or their intervention may become limited once the code is deployed. This generates legal questions about the extent to which this model conforms to the classical definition of a contract as articulated by Al-Sanhouri. In this respect, the addition of Al-Sanhouri's definition offers a holistic reference criterion for examining the smart contract within the conventional jurisprudential paradigm of contracts. The classical contract is based on two manifest wills and a stated legal reason, whereas an automated process can execute the smart contract. This leaves the researcher with the dilemma of determining whether the parties indeed entered mutual consent and whether there is a lawful cause, or whether the smart contract requires rethinking traditional contractual concepts.

The dispute in international law concerns whether smart contracts are traditional contracts, technological tools, or even quasi-digital assets. For example, certain researchers claim that smart contracts are disruptive to the tripartite nature of contracts, their wills, and their subject matter, and that they cause constitutional and legislative problems. Some argue that existing legal regimes treat these contracts as programmed instruments rather than traditional civil law contracts.[10] Therefore, the legal definition of smart contracts is

[8] Ghassan Adhab Atiyah et al., 'Legal Issues Faced by Smart Contracts from the Perspective of Conventional Contracts', *UUM Journal of Legal Studies* 16, no. 1 (2025): 34–53, https://doi.org/10.32890/uumjls2025.16.1.3.

[9] Farshad Ghodoosi, *Contracting in the Age of Smart Contracts*, n.d., accessed 15 February 2026, https://digitalcommons.law.uw.edu/wlr/vol96/iss1/2.

[10] Zainutdinova Evgenia, 'Models of legal regulation of smart contracts: general and specific. Law.', *Journal of the Higher School of Economics*, no. 3 (March 2021): 126–147, https://doi.org/10.17323/2072-8166.2021.3.126.147.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

split into two primary directions: treating them as legal contracts with the same terms as conventional contracts or treating them as execution technology or a transferable digital asset. The third perspective is that smart contracts can be considered tokens or tradable digital assets, and if they constitute digital ownership of something, they are subject to digital property law. In this context, the smart contract is not merely an agreement between two parties, but rather a tool for creating or managing a digital asset. Consequently, it becomes subject to property and transfer regulations, as well as financial oversight. Some scholars, therefore, argue that Iraq needs an explicit legislative provision regulating smart contracts as digital assets rather than merely as traditional civil contracts[11].

First Approach: Upgradable Smart Contracts

In this type of contract, a human party holds the keys to the contract's code and can modify or update it later. This suggests that such contracts may be treated either as digital property or as ordinary legal contracts. [12]European regulatory frameworks also indicate that certain smart contracts may fall under financial-asset or digital-property regulations when an element of human authority and control is present.[13]

Second Approach: Fully Decentralized or Immutable Smart Contracts

In this case, no party owns or controls the contract. It executes automatically once the conditions are met, without human intervention or the possibility of later modification. In this way, smart contracts represent a new form of pre-execution, blending software with legal mechanisms. [14]As a result, it is hard to categorize in the usual civil contracts, especially when there is no familiar party legally liable. Consumers also face different risks associated with smart contracts: their self-executing nature can make it harder to withdraw or contest

[11] Atiyah et al., 'Legal Issues Faced by Smart Contracts from the Perspective of Conventional Contracts'.

[12] Sjef Van Erp and Martin Hanzl, 'ELI Principles on Blockchain Technology, Smart Contracts and Consumer Protection', *SSRN Electronic Journal*, ahead of print, 2024, https://doi.org/10.2139/ssrn.4751468.

[13] Van Erp and Hanzl, 'ELI Principles on Blockchain Technology, Smart Contracts and Consumer Protection'.

[14] Charlotte Ene, 'Smart Contracts - the New Form of the Legal Agreements', *Proceedings of the International Conference on Business Excellence* 14 (July 2020): 1206–1210, https://doi.org/10.2478/picbe-2020-0113.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

a contract, and enforcement terms can be difficult or impossible to change. The consumer is usually at a disadvantage when confronted with such instruments in a fast-moving technological setting, as witnessed in Iraq. Moreover, the lack of clear laws leaves consumers in a weak position when it comes to smart contracts. [15]Moreover, the risk is not limited to technical manipulation alone but also encompasses the absence of traditional legal protection mechanisms. [16]Therefore, the conceptual framework for smart contracts in Iraq remains incomplete unless it is integrated with an analysis of consumer protection, ensuring balanced rights to information, withdrawal, and compensation.

1.2 Philosophical Foundations of Contract in the Digital Age

The emergence of smart contracts prompts a reconsideration of the classical philosophical approach to contractual obligation, consent, and the character of normative enforcement. The central idea of classical contract theory is that issues of contractual obligations arise from the independent wills of the parties, who agree in a free and knowing consent. Conventional doctrine, be it in the civil law tradition or in the common law tradition, situates the validity of a contract in the alignment between an inner subjective intention (*voluntas*) and its external manifestation through communicative acts of offer and acceptance. Smart contracts, in their turn, incorporate commitments into machine-executable code, and some basic questions about the possibility of pre-programmed logic to capture human will and normative autonomy are posed.[17]

A single vital thread of modern research is the idea that, in a digital world, code is law. The influential formulation of de Filippi and Hassan argues that blockchain-based code is not just a way to put contractual terms into practice but is gradually coming to regulate behavior like a regulatory authority, and is eliminating or even surpassing the

[15] Ahmed Aziz Hassan, 'Legal Issues Arising from Smart Contracts under the Iraqi Law', *Journal of University of Human Development* 4, no. 4 (2018): 42–47, https://doi.org/10.21928/juhd.v4n4y2018.pp42-47.
[16] Attia Suleiman Khalifa and Nashwan Salah Samad, 'Smart Contracts and the Challenges of Conflict of Laws in Digital Space', *Indonesian Journal of Law and Economics Review* 20, no. 4 (2025): 10.21070/ijler.v20i4.1328-10.21070/ijler.v20i4.1328, https://doi.org/10.21070/ijler.v20i4.1328.
[17] Satish Kumar, 'Doctrine of Free Consent in Automated E-Contracts: Re-Evaluating Indian Contract Law in the Age of Algorithmic Negotiation', *International Journal of Civil Law and Legal Research* 5, no. 1 (2025): 142–149, https://doi.org/10.22271/civillaw.2025.v5.i1b.131.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

traditional legal interpretation in favor of formalized computational structures. The change places contractual regulation under the umbrella of two-polar performance rather than normative inquiry and reformulates human-based legal traditions as less flexible, thereby creating a judgmental context. Scholars note that translating legal rules into machine-readable code eliminates interpretation and renders contract performance identical to an act of coded instructions rather than human consent, which is the very nature of contractual autonomy. [18]

The conflict between autonomy and automation is especially acute in the execution of smart contracts. Contracts have traditionally been used as social means of distributing risks and enforcing promises within the broader normative context of law; their enforceability is internalized in legal institutions, which can be used to resolve ambiguities, interpret context, and resolve disputes. Smart contracts, on the other hand, are automated protocols that execute performance when specified conditions are met. This automation, although making transactions more transparent and reducing some transaction costs, as research on algorithmic governance indicates, may restrain human judgment, particularly when complex or unanticipated contingencies arise and require fair interpretation beyond the preset code. [19]

These dynamics pose two fundamental philosophical questions: Is code the expression of human intention? Moreover, do the victims of algorithmic execution lose the normative importance of volition? In the classical sense of contract theory, valid consent presupposes reflective entrepreneurship and the ability to revise or withdraw from the agreement before it becomes final. The act of withdrawal or renegotiation is often virtually impossible or expensive when smart contracts have been deployed on a decentralized registry, suggesting a mechanical compulsion that undermines the idea that contractual obligations rest on deliberative autonomy. According to one empirical study, conducted

[18] Primavera De Filippi and Samer Hassan, 'Blockchain Technology as a Regulatory Technology: From Code Is Law to Law Is Code', arXiv.Org, 8 January 2018, https://arxiv.org/abs/1801.02507v1.

[19] Carlos Molina-Jimenez and Sandra Milena Felizia, 'On the Use of Smart Hybrid Contracts to Provide Flexibility in Algorithmic Governance', *Data & Policy* 6 (January 2024): e8, https://doi.org/10.1017/dap.2023.49.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

using open access, the code of smart contracts does not inherently reflect the normative properties necessary to constitute a legal contract in the traditional sense: they need to be embedded within a broader legal order, in case they can take on the trappings of mutual assent that legal systems hold to be characteristic of a legal contract[20].

Further, the code-as-law paradigm, which is poetic, is controversial. It has been argued that an interpretation and remedial role of law can be entirely replaced by programmable code is flawed in its failure to acknowledge the underlying social and normative contexts, in which contractual relations are established and adjudicated. The focus of the legal enforceability of smart contracts has been highlighted by scholars who highlight that deterministic execution, being practical on its own, cannot explain moral judgment, ambiguity, or context-sensitive remedies, essential aspects of contractual justice in legal philosophy.[21] With the placement of smart contracts in this philosophical discussion, we can observe that the technological transformation of the law as interpretive social practice to law as the formalized execution involves basic inquiries regarding the essence of consent, autonomy, and legal obligation. The discussion of these questions helps strengthen the conceptual basis of the legal reform proposals and emphasizes the need for hybrid frameworks that do not compromise the normative legitimacy of contracts but enable the efficiencies of digital execution.

1.3 Smart Contracts considering Islamic Contract Theory (*Fiqh al-muʿāmalāt*)

Islamic commercial jurisprudence (*fiqh al-muʿāmalāt*) has long articulated detailed principles governing the formation, validity, and enforceability of contracts. Classical fiqh identifies both essential elements (*arkān*) and conditions (*shurūṭ*) that must be fulfilled for a contract to be valid under Shariah. These elements include the presence of contracting parties competent in capacity and intention, a clearly defined subject matter (*mahall al-ʿaqd*),

[20] Fabio Bassan and Maddalena Rabitti, *From Smart Legal Contracts to Contracts on Blockchain: An Empirical Investigation*, 6 November 2023, https://doi.org/10.2139/ssrn.4624640.

[21] Amina Yusuf and Robert Martinez, 'Smart Contracts and Legal Enforceability: Decoding the Political Philosophy of Code as Law', *Interdisciplinary Studies in Society, Law, and Politics* 4, no. 2 (2025): 292–302, https://doi.org/10.61838/kman.isslp.4.2.25.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

and an explicit expression of offer and acceptance (*ṣīghat al-ijab wa al-qabul*) that collectively reflect mutual consent (*riḍā*), absent error or coercion.[22]

In the Islamic legal tradition, mutual consent (*riḍā*) is not merely procedural but substantive: it embodies the free and uncoerced will of the parties to be bound by the contractual obligations. The classical jurists note that consent should not be defective, i.e., it should not be ambiguous, deceptive, or misunderstood by the parties, and that consent must be matched with actual willingness to proceed on the terms of the contract. Applying the same to the online context, one would wonder whether an act of consent in relation to clicking, automatic functionality, or pre-programmed circumstances can be regarded as equivalent to mutual intent and Shariah-acceptable. The digital interface must therefore be analyzed not only for form but also for whether it genuinely captures the *niyyah* (intention) and *qasd* (will) of the contracting parties in a manner consistent with Islamic jurisprudential requirements.

Another central doctrine in *fiqh al-muʿāmalāt* is the prohibition of *gharar* – uncertainty or excessive ambiguity in the subject matter or performance of a contract. Classical sources identify *gharar* as that which may lead to dispute or unjust loss, thereby undermining contractual clarity and fairness.[23] The important implication of this principle for smart contracts is that their immutability and automated execution can introduce uncertainty about performance conditions, data inputs, or algorithmic behavior. In cases where the uncertainties are high, and the contracting parties do not have the uncertainties at hand, the contract risks *fasad* (defect) or may be deemed invalid under Islamic commercial jurisprudence. The Shariah-compliant smart contract design would then have to reduce algorithmic ambiguity and make terms clear, transparent, and determinable at the consent stage.

[22] Eidrous Baroom Mohammed, '"Principle of Consent in Contracts: A Comparative Jurisprudential Study"', *Research in Leadership, Governance, Strategy, and Waqf*, 12 February 2026, https://www.mohammedbaroom.com/2025/10/principle-of-consent-contracts.html.

[23] Fadl ʿAbdullāh Murād, '"Al Gharar: Māhiyatuhu wa Ḍawābiṭuhu wa Atharuh ʿalā al ʿUqūd,"' *Majallat al ʿUlūm al Islāmiyyah wa al Ḥaḍārah* 1, no. 4 (2016), https://doi.org/10.55781/rsic.v1i4.399.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

Fiqh also affords remedies such as *khiyār* (option rights) when contracts involve defect or ambiguity, including *khiyār al-'ayb* (option in case of defect) and *khiyār al-majlis* (option exercisable before leaving the contracting session).[24] Within the framework of automated execution, similar protections would include contractual clauses that allow human intervention or some means of correcting code flaws before irrevocable execution, ensuring the principle of Islamic law that no party to the contract should be obligated to a transaction that is essentially impaired by unseen technical errors. Integrating *maqāṣid al-sharī'ah*, the higher objectives of Islamic law, further enriches the normative framework for evaluating smart contracts. Among the cardinal objectives are protection of wealth (*ḥifẓ al-māl*), justice (*al-'adl*), and prevention of harm (*dar' al-mafāsid*). These telic principles require that commercial dealings safeguard parties against unjust loss, ensure equitable terms, and prevent exploitation or harm arising from opaque contractual mechanisms. As contemporary scholarship on smart contracts and Shariah compliance suggests, efficiency gains and transparency afforded by blockchain technology may coincide with ethical concerns about fairness, algorithmic bias, and risk of harm, necessitating a jurisprudential audit that accounts for both technical design and substantive ethical objectives. [25]

By situating smart contracts within these traditional Islamic legal categories *arkān* and *shurūṭ* of contract, *riḍā*, *gharar*, *khiyār* options, and *maqāṣid*, this study extends beyond a purely positivist legislative focus to constructively appraise how digital contract forms might conform to or challenge foundational Shariah principles. This critical analysis not only addresses doctrinal gaps in the reform of contract law in Iraq but also highlights the normative consequences of technological modalities of validity, fairness, and liability in contracts within an Islamic law system.

[24] Mohamedou Mohamed Lemine Babah, 'Smart Contracts: Applications and Shariah Issues', *El Maqrizi Journal for Economic and Financial Studies* 8, no. 1 (2024): 465–486, https://asjp.cerist.dz/en/article/245338.

[25] Amir Rizwan et al., 'Smart Contracts and Shariah Compliance: A Legal Paradox?', *Annual Methodological Archive Research Review* 3, no. 12 (2025): 369–379, https://amresearchjournal.com/index.php/Journal/article/view/1372.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

2. Legal Challenges of Implementing Smart Contracts under Iraqi Digital Legislation

The law of contracts in Iraq is governed by the provisions of the Iraqi Civil Code No. 40 of 1951, which regulates various rules related to legislative foundations, the distinction between the rights of individuals and legal entities, and the application of the law. A contract is formed when one party makes an offer, and the other party accepts it. This agreement is established by the subject matter of the contract, as stated in Article 73 of the Iraqi Civil Code, which provides that a contract is formed when the parties reach an agreement, and the other party accepts the offer. The terms of the contract become binding on both parties once consensus is achieved, regulating their relationship.

Moreover, Article 77 of the Civil Code states that the parties must comply with the contract terms to have a valid and binding contract, which requires the fulfillment of a compatible contract offer and acceptance. The offer and acceptance can be made explicitly or implicitly, through commonly understood expressions or ideas between the parties.[26] In the meantime, the Electronic Signature and Electronic Transactions Law governs electronic contracts and provides fundamental definitions for electronic signatures, electronic writing, and electronic transactions. The law confirms that an electronic signature is no less valid than a handwritten signature, provided that the conditions are as specified. Nevertheless, research shows that judicial practice in Iraq continues to delay the acceptance of electronic contracts and electronic evidence in court.[27]

Most recently, in a regulatory shift, the Iraqi government has passed the E-Commerce Regulation No. 4 of 2025, which took effect in April 2025. The rule is intended to systematize and license e-commerce operations, protect consumers, and ensure digital confidentiality in the Iraqi business landscape.[28] Despite these attempts, the analysis of the

[26] 'Iraq: Civil Code', Refworld, accessed 15 February 2026, https://www.refworld.org/legal/legislation/natlegbod/1951/en/104270.
[27] Ali Taghi Khathi, 'From Paper to Screen: Digital Transformation in Iraqi Civil Law and Contracting Mechanism', Supreme Judicial Council (Iraq), 30 November 2025, https://www.sjc.iq/view.78055/.
[28] Republic of Iraq, 'Iraq, Regulation No. (4) of 2025,On the Organization of Electronic Commerce', Al-Waqaa Alraqiya, 10 March 2025, https://moj.gov.iq/upload/pdf/4818_compressed_323.pdf.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

law states that the regulation's adoption remains insufficient, as its effectiveness depends on the introduction of a digital licensing system and on interaction with tax and customs services.[29] In identifying the differences between current laws and the characteristics of smart contracts, one can discern a clear gap in light of the digital provisions, including the Electronic Signature and Electronic Transactions Law No. 78 of 2012 and the E-Commerce Regulation No. 4 of 2025. The most obvious of such gaps may be summed up as follows:

2.1 Formation and Execution Challenges: One of the main legal obstacles facing smart contracts in Iraq is the absence of a clear legislative definition. Current Iraqi legislation does not contain an explicit provision defining a smart contract or specifying its essential elements. This deficiency makes it difficult to incorporate such contracts within the traditional framework of civil contract law. [30] The implementation of smart contracts also faces the challenge of identifying the parties, especially in contracts executed on distributed networks, where there is no single human party or controlling owner to hold accountable. This raises a legal issue within the Iraqi framework, which assumes the existence of fixed elements, namely, parties, subject matter, and cause.[31]

2.2 Consumer Protection and Digital Security Challenges:

The programmable nature of smart contracts makes it difficult to apply concepts such as force majeure, cancellation, or modification concepts that exist in traditional legislation but have not yet been explicitly addressed in the Iraqi legal framework.[32]
Moreover, self-executing smart contracts limit consumers' ability to withdraw from or challenge the contract after execution, leaving them vulnerable in the event of a coding error or technical exploitation. These security gaps and programming errors are a major

[29] Omar Aro et al., 'Iraq's New E-Commerce Regulation', MONDAQ, 11 July 2025, https://www.mondaq.com/contracts-and-commercial-law/1649696/.
[30] Atiyah et al., 'Legal Issues Faced by Smart Contracts from the Perspective of Conventional Contracts'.
[31] Temurbek Pulatov, 'Legal Challenges in Ascertaining the Will of Parties in Smart Contracts', *Uzbek Journal of Law and Digital Policy* 3, no. 2 (2025): 25–33, https://doi.org/10.59022/ujldp.314.
[32] Hala Alrubayee, 'E-Signature Law of Iraq No. (78) of 2012 Challenges and Risks', *International Telecommunication Union (ITU*, ahead of print, 4 September 2019, https://www.itu.int/en/ITU-T/Workshops-and-Seminars/bsg/2019040405/Documents/Presentation%201.pdf.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

vulnerability to the assets under the management of these contracts. Moreover, the current regulatory framework is not consistently adequate to ensure the safety of personal data used in smart contracts; technological risks, alongside sluggish legislation, leave customers in a regulatory gap. The second issue insurance companies are grappling with is cyber risk, with the majority unwilling to provide cover because it is difficult to determine losses from non-physical attacks. This means there is a gap in legal coverage for digital consumers who will incur losses due to programming or unforeseen technological attacks.[33]

Moreover, recent reports on the development of e-commerce legality in the Iraqi area show that, although the development of regulations, including the licensing of vendors, transparency requirements, and the protection of personal data, are significant milestones on the way to consumer protection, the success of the practices can be greatly determined by the capacity to enforce them and the technical preparedness. Without adequate institutional implementation and monitoring, digital retail sectors remain susceptible to fraud, data breaches, and regulatory inconsistencies that undermine consumer trust and digital trade governance.[34]

2.3 Judicial Proof: Although the laws discuss the creation of contracts involving electronic methods, the presentation of electronically signed contracts in a court of judicial review in Iraq remains problematic because most of the judicial processes in the country are based on the old-fashioned paper-based methods.[35]Iraq, like other countries, faces challenges in accepting blockchain-based digital evidence in court, particularly when a smart contract executes automatically, and there is no paper signature or traditional certification. This raises doubts about the enforceability of such contracts within the Iraqi judicial system.[36] Cross-border transactions and smart contracts executed on global networks also raise issues of jurisdiction and choice of law, for which Iraqi legislation remains inadequately prepared.

---

[33] Alaa Hussein Ali et al., 'Legal Challenges of Cyber Risk on Commercial Transactions', *Malaysian J. Syariah & L.* 13 (2025): 456.

[34] Mahmood Shaker Alaloosh et al., *Securing Digital Trade: A Techno-Legal Analysis of E-Commerce Safeguards in Iraq's Regulation No. 4/2025*, n.d., https://doi.org/10.5281/zenodo.18452737.

[35] HHL-IT, 'Electronic Contracts and Signatures in Iraq', *HHL*, 20 July 2022, https://hhl-iq.com/electronic-contracts-and-signatures-in-iraq/.

[36] Khalifa and Samad, 'Smart Contracts and the Challenges of Conflict of Laws in Digital Space'.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

Consequently, the weakness of the judicial and enforcement framework makes smart contracts susceptible to non-enforcement or delays, thereby increasing the risks faced by consumers or the weaker party.

2.4 Legal Liability in the Event of Programming Errors or Failure of Automatic Execution in Smart Contracts: From a legal perspective, a programming error, such as a flaw in the code, failure in the oracle feed, or a network malfunction, can cause the contract to execute in an unintended manner or produce harmful consequences for a third party or one of the contracting parties. Programming vulnerabilities in smart contracts have become widespread, resulting in significant financial losses. [37]Turning to Iraqi law, the concept of tort liability is stipulated in Article 204 of the Iraqi Civil Code No. 40 of 1951, which provides that "any act causing harm to another obliges the actor to compensate, even if the actor is not fully competent, if the harm arises from their act." Analytically, tort liability may be determined by three elements: fault (or negligence), damage, and causation. Under the example of smart contracts, the fault can be in the code design, selection of platform, formulation of execution terms, data entry, or observing execution; harm can be in economic or legal loss to one or more contracting parties or a third party; causation exists when the malfunction of execution or the malfunction of programming specifically causes the harm. Nevertheless, there are some issues associated with the application of this rule in practice. To begin with, the decentralized nature of smart contracts poses a challenge in establishing clear responsibility: is it the developer of the code, the platform, the contract auditor, or the user who feeds the conditions? Second, the automatic execution mechanism cannot easily allow human intervention to fix errors after deployment, which restricts the effectiveness of traditional remedial tools. Third, the lack of clearly written provisions in Iraqi legislation on the liability for programming errors or smart-contract failures is a reason to propose specific legislation or to state such cases within the context of tort or contractual liability. It is also reported that the e-commerce industry in Iraq is growing swiftly, but the

[37] Sadaf Azimi et al., 'A Systematic Review on Smart Contracts Security Design Patterns', *Empirical Software Engineering* 30, no. 4 (2025): 95, https://doi.org/10.1007/s10664-025-10646-w.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

legislative and regulatory framework has remained behind the pace of development, particularly in technical regulation and consumer protection.[38]

3. International Models for Legal Frameworks of Smart Contracts

3.1 Regulations Governing Smart Contracts in the United States

There is no unified federal law governing contracts in the United States; rather, their execution and interpretation are regulated at the state level, with the National Conference of Commissioners on Uniform State Laws (NCCUSL) seeking to harmonize the rules. Courts assess the enforceability of smart contracts based on whether the offer, acceptance, and consideration elements are clearly satisfied. [39]Although some contracts require a written form, laws such as the Uniform Commercial Code (UCC) and the Statute of Frauds do not mandate a paper format, making code-based contracts enforceable, as illustrated by the example of a vending machine. The 1999 Uniform Electronic Transactions Act (UETA) serves as the basis for legislation in 47 states, recognizing the validity of digital records and electronic signatures as equivalent to paper documents. The law also acknowledges the concept of an "electronic agent," which is a program or system capable of interacting with and entering into contracts without direct human intervention, as in the case of smart contracts.[40]At the federal level, the 2000 E-SIGN Act acknowledged that electronic contracts, signatures, and records cannot be denied legal validity solely because they are electronic.[41]

[38] Muhammad Abdul Saleh, 'E-Commerce: Platforms, E-Stores, and the Iraqi Economy Between Reality and Potential', *Al-Bayan Center*, 10 March 2025, https://www.bayancenter.org/en/2025/03/12428/.

[39] Alex Lipton and Stuart Levi, 'An Introduction to Smart Contracts and Their Potential and Inherent Limitations', *The Harvard Law School Forum on Corporate Governance*, 26 May 2018, https://corpgov.law.harvard.edu/2018/05/26/an-introduction-to-smart-contracts-and-their-potential-and-inherent-limitations/.

[40] '15 U.S. Code § 7006 - Definitions', LII / Legal Information Institute, accessed 15 February 2026, https://www.law.cornell.edu/uscode/text/15/7006.

[41] '15 U.S. Code § 7001 - General Rule of Validity', LII / Legal Information Institute, accessed 15 February 2026, https://www.law.cornell.edu/uscode/text/15/7001.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

Despite the high level of flexibility in federal law, some states have enacted legislation to recognize smart contracts.[42] In a case in point, Arizona became the first to enact a smart contracts bill in March 2017, which accepted digital signatures as lawful evidence, and Tennessee, which accepted encrypted signatures. [43]Legislation recognizing the legal use of smart contracts has also been enacted in other states, including Nevada, Arkansas, Maryland, Oklahoma, South Dakota, New York, Utah, Texas, and Washington. The Blockchain Technology Act was signed in Illinois, which is one of the most extensive laws in this area, whereas South Carolina enacted a 2019 bill intended to promote the blockchain industry. Even though smart contracts are not yet widely adopted at the federal level across all states, the general trend in legislation is an increase in their use, suggesting that more and more innovative ways of using smart contracts will be introduced in the future.

3.2 Regulations Governing Smart Contracts in the European Union

In recent years, the European Union has increasingly focused on smart contracts and blockchain technology as drivers of digital commerce within the Digital Single Market. A report issued by the European Commission emphasized that adopting smart contracts within the EU could facilitate economic transactions; however, it could also threaten the uniformity of the Digital Single Market if a coordinated legislative framework is not established. [44]At the legislative and regulatory level, the European Union has adopted several principles and instruments that generally enable digital contracts, including directives on the content of digital services and the sale of goods. The European Commission has emphasized that harmonized principles are essential to provide strong consumer protection and increase legal certainty for traders across EU member states (European Commission). However, a gap remains between the original provisions of these

[42] Andri Winjaya Laksana et al., 'Integrating Maqasid Al-Shari'ah in Contemporary Islamic Legal Reform on Drug Policy', *MILRev: Metro Islamic Law Review* 4, no. 1 (2025): 416–439, https://doi.org/10.32332/milrev.v4i1.10665.

[43] Jared Arcari, 'Decoding Smart Contracts: Technology, Legitimacy, & Legislative Uniformity', *Fordham Journal of Corporate & Financial Law* 24, no. 2 (2019): 363–96, https://ir.lawnet.fordham.edu/jcfl.

[44] Thibault Schrepel, *Smart Contracts and the Digital Single Market through the Lens of a 'Law + Technology' Approach*, 1st edition (Luxembourg : Publications Office of the European Union, 2021).

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

directives and the characteristics of smart contracts, such as automatic execution (self-execution) and programmatic linkage.[45]

The Data Act of the European Union gives nationwide significance to smart contracts to organize data-sharing processes. Nevertheless, various issues remain, including the lack of flexibility, reliance on intermediaries (oracles), and challenges with enforceability and suspension.[46] The legalization of blockchain technology and smart contracts is becoming an increasingly popular trend in European legislation, and operational and regulatory issues must be addressed.[47] Judging by the above, it may be concluded that the European Union's attitude towards smart contracts balances technological innovation on the one hand with the threats of digital market fragmentation or legislative stalling on the other. Accordingly, the EU tends to adopt a law-and-technology principle as a reference framework for legislative development, aiming to integrate consumer legal protection with the promotion of innovation in smart contracts.

3.3 Regulations Governing Smart Contracts in the United Arab Emirates

The UAE Civil Code governs the formation of contracts, which may be concluded by meeting of wills, pursuant to Article 13 of the UAE Civil Transactions Law, Federal Law No. 5 of 1985, as amended by Federal Law No. 1 of 1987. The Article provides that offer and acceptance are considered "expressions of will" subject to the remaining legal provisions. The will can be expressed orally, in writing, through acts demonstrating binding understanding, or by any other means that removes doubt about the existence of mutual intent, according to Article 132 of the same law. In general, the UAE Civil Code allows contracts to be concluded in writing, orally, or by performance.[48] To keep pace with

[45] André Janssen, 'Smart Contracting And The New Digital Directives: Some Initial Thoughts', *JIPITEC – Journal of Intellectual Property, Information Technology and E-Commerce Law* 12, no. 2 (2021): 196–203, https://nbn-resolving.de/urn:nbn:de:0009-29-52935.

[46] Federico Casolari et al., 'How to Improve Smart Contracts in the European Union Data Act', *Digital Society* 2, no. 1 (2023): 9, https://doi.org/10.1007/s44206-023-00038-2.

[47] Robert Herian, 'Legal Recognition of Blockchain Registries and Smart Contracts', 12 December 2018, https://oro.open.ac.uk/59481/.

[48] Josias Dewey, *Global Legal Insights - Blockchain & Cryptocurrency Regulation: 1* (Global Legal Group Ltd, 2019).

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

technological development, the UAE authorities adopted Federal Law No. 1 of 2006 on Electronic Commerce and Transactions (ECTL) to clarify and expand the general principles of civil contracts in the creation of digital or electronic contracts. Similarly, Dubai Law No. 2 of 2002 on Electronic Commerce and Transactions (Dubai ETCL) was issued to achieve the same purpose.

Article 2(2) of the federal law provides that its provisions apply to "digital records, documents, and signatures related to electronic transactions and commercial initiatives," except in excluded cases. An electronic contract is defined as "any agreement, contract, or understanding concluded or executed wholly or partially by electronic means," a definition mirrored in Dubai law. E-commerce refers to commercial operations conducted through electronic communication channels.[49] According to Article 13 of Dubai Law No. 2 of 2002 and Article 11 of Federal Law No. 1 of 2006, an offer or acceptance may be expressed, in whole or in part, through electronic communication means, and a contract is not considered void or unenforceable merely because it was concluded electronically. The term "electronic" is broadly understood to encompass all matters related to modern technology with electrical, mechanical, optical, wireless, magnetic, electromagnetic, digital, photonic, or similar capabilities.

Furthermore, the law recognizes the possibility of concluding contracts through electronic systems, even before the emergence of blockchain technology. Article 12 of Federal Law No. 1 of 2006 provides that a contract may be concluded through the exchange of automated electronic agents (automated e-agents), including two or more pre-programmed information technology systems, even without direct user intervention, and such a contract is considered legal and binding. A contract can be concluded between a natural or legal person who owns an electronic system that operates automatically and

[49] 'Federal Law No. 1 of 2006 on Electronic Commerce and Transactions, United Arab Emirates, WIPO Lex', accessed 15 February 2026, https://www.wipo.int/wipolex/en/legislation/details/13908.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

another natural person who knows or believes that the system executes or performs the contract automatically.[50]

Smart contracts have demonstrated their ability to automate a wide range of operations and systems, particularly in the banking and financial sectors, where they are used to execute payments and related procedures. Insurance companies are also expected to benefit from smart contracts; for instance, DLA Piper recently assisted a major insurance company in creating a smart contract to automate specific processes within insurance agreements.[51]

Table 1. Legislative and Regulatory Proposals to Enable Smart Contracts in the Iraqi Legal System

State	Basic legislation	Key principles/facilities	Strengths	Lessons learned for Iraq
USA	UETA (1999), E-SIGN Act (2000) and individual state laws, such as the Blockchain Technology Act in Illinois	Recognition of digital signatures and electronic contracts; Possibility of using electronic agents; legal enforceability of smart contracts.	Significant legal flexibility Judicial acceptance of digital contracts; possibility of amending contracts as needed.	Adopting legal recognition of smart contracts, Establishing mechanisms for digital proof in court and defining the responsibilities of contract and platform developers.
European Union	Digital Single Market directives Data Act: Consumer Protection and Digital Trade Rules	A unified framework for digital contracts. Protecting consumer rights; integrating smart contracts into digital policies.	Strong legal protections for consumers; Clear regulations for digital data; enhanced trust in e-commerce.	Enacting legislation that defines consumer rights under smart contracts; Integrating smart contracts into national digital policies and emphasizing

[50] *UNCITRAL Model Law on Automated Contracting: With Guide to Enactment* (United Nations, 2025).
[51] Allen Paul and Emily Southon, "'Smart Contracts in the UAE: The End for Lawyers?'", *The Oath*, 3 December 2019, https://theoath-me.com/11336-2/.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

				transparency and the right to information.
United Arab Emirates	Federal Civil Law No. 5 of 1985, Federal Law No. 1 of 2006 on Electronic Transactions, Dubai Law No. 2 of 2002	Recognition of electronic contracts; Ability to execute contracts via automated systems; an electronic signature is equivalent to a handwritten signature	Comprehensive regulation of e-commerce, Practical application of digital contracts and support for technological innovation.	Adopting a clear definition of a smart contract; Allowing for the automated execution of contracts while protecting the rights of the parties and integrating electronic signatures and technology into civil law.

Source: Author's Interpretation

Iraq can benefit from international experiences in regulating smart contracts by adopting a comprehensive legislative framework that balances technological innovation with consumer protection. According to the American experience, Iraq may adopt the principle of legal identification for smart contracts and digital signatures to establish adequate mechanisms for digital evidence in court and define the duties of contract developers and platforms regarding liability in the event of programming errors or execution malfunctions. Based on the European experience, Iraq may apply the principles of consumer rights safeguarding and implement smart contracts in the policy of the country in the digital field, as well as increase transparency and the right to know, and develop clear principles regarding the processing of digital data, thus creating confidence between consumers and institutions in the digital world. In the light of the experience of the United Arab Emirates, Iraq might have an opportunity to enjoy the extensive regulation of e-commerce that would perceive the electronic contracts, which could be executed automatically using digital systems, and electronic signatures could be included in the Civil Code to encourage technological innovation and guarantee the legal validity of smart contracts.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

Based on these comparative models, Iraq would be facilitated to come up with a coherent legal framework that is abreast with digital development, balances the interests of the parties, reinforces consumer legal protection, and a conducive environment to the adoption of smart contracts in different sectors of the economy especially e-commerce and financial services, and, therefore, ensuring the security of the law in digital transactions. Based on the European experience, Iraq will be able to borrow the principles of consumer rights protection and implement smart contracts into the country's digital policies, and make the digital data processing more transparent, enabling the right to information and clear standards of working with the digital information, thus gaining the confidence of the consumers and the institutions in the digital environment. Based on the United Arab Emirates' experience, electronic commerce in Iraq might be promoted through comprehensive regulation that recognizes electronic contracts, enables their execution via digital solutions, and incorporates electronic signatures into the Civil Code, thereby fostering technological innovation and improving the legal efficiency of smart contracts. With such comparative models in mind, Iraq would be empowered to come up with an integrated legal framework that keeps up with the digital development and balances the interests of parties, enhances consumer legal protection, and provides an appropriate setting to implement smart contracts across the different economic sectors, specifically, the e-commerce and the financial service sectors, in promoting digital growth and providing legal security in digital transactions.

4 Legislative and Regulatory Proposals to Enable Smart Contracts in the Iraqi Legal System

Given the potential difficulties posed by smart contracts in the Iraqi legislative context, it is evident that a set of recommendations should be developed to improve the legal and regulatory framework and enhance consumer protection. To start with, the Iraqi Civil Code needs to be amended to include specific, separate clauses on smart contracts, clearly spelling out the situations in which computer code and automated performance

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

constitute a legally binding contract.[52] Most jurisdictions have yet to legislate on digital technology, and their laws need to be reformed to keep pace with technological changes.[53]

The introduction of smart contracts into the Iraqi Civil Code is an essential step toward the overall revision of the legislation to meet the needs of the digital economy and the realities of contemporary technology. It is further suggested that specific legislation should be adopted on smart contracts, to be either a separate law or to supplement the Civil Code, which would contain specific definitions of the terms under which legal recognition is achieved, the parties involved in the contract, activation processes, execution processes, and compensation routes in case of programming errors or unwanted auto execution. It is necessary to implement legal integration of smart contract execution through flexible legislative changes aligned with the principles of digital governance and administration.[54] Thus, the Iraqi laws must shed more light on the evaluation of the basic components of a contract consent, subject matter, and consideration within the framework of the smart contract, as well as finding technical protection that will avert the consequences of automated implementation.

The other valuable suggestion is the establishment of a temporary regulatory environment (regulatory sandbox) that the concerned authorities in Iraq will oversee.[55] This would enable testing smart contracts in specialized areas, such as finance, supply chains, and insurance, and would allow close monitoring of results before their general use. These kinds of temporary regulatory experiments are key to the success of smart contracts,

[52] Iryna Krykavska, 'Legislative Regulation for Implementation of Digital Technologies in the Provision of Administrative Services in Ukraine', *Scientific Journal of Bielsko-Biala School of Finance and Law* 24, no. 3 (2020): 5–8, https://doi.org/10.19192/wsfip.sj3.2020.1.

[53] Sofian Al Hakim et al., 'Contextualising Sharīʿah Economic Law: The Role of Pesantren in Indonesia's Socio-Legal Landscape', *Jurnal Ilmiah Mizani: Wacana Hukum, Ekonomi Dan Keagamaan* 12, no. 2 (2025): 479–496, https://doi.org/10.29300/mzn.v12i2.7926.

[54] Yusuf and Martinez, 'Smart Contracts and Legal Enforceability'.

[55] Yevhen Leheza et al., 'Interpretation of Regulatory and Legal Acts in Contemporary Contexts: Foreign Experience, Comparative Perspectives, and Pathways for Regulatory Reform', *NUSANTARA: Journal Of Law Studies* 5, no. 1 (2026): 102–122, https://doi.org/10.5281/zenodo.18727992.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

as they allow the legislative framework to be adjusted to real-world outcomes.[56] The mechanism can therefore have a role in closing the gap between what has been provided in law and what is done in practice. Since the digital systems and blockchain-based networks have a cross-border character, regional and international coordination of the legislation is crucial. Different countries regulate smart contracts differently, so international coordination is required to make cross-border contracts legally binding.[57]

It is thus advisable to organize specialized training activities and legal technical centres of expertise within the institutional set-up of the concerned authorities. In the context of consumer protection, Iraqi law must require firms and institutions that rely on smart contracts to provide adequate transparency and disclosure. This involves providing consumers with the necessary information on the nature of the code, the mechanism by which it is carried out, the risks, and the possibility of changing or canceling it. A right to withdraw or contest a contract should also be given to consumers in the event of a technical or programming error during the procedure, since they are usually on the weaker side of the transaction in the smart contract and need additional security.[58] In terms of tort liability, it is suggested that the developer, code auditor, platform company, or data provision party (Oracle) be held responsible for any bugs or failures in program execution. The liability in this respect may be directed toward tort liability or even contractual liability as stipulated by the law.[59]

In framing legislative reform for smart contracts, anchoring proposals in Islamic normative theory (*maqāṣid al-sharīʿah*) offers a robust ethical foundation that complements

[56] Shahin Heidari et al., 'Towards Standardized Regulations for Block Chain Smart Contracts: Insights from Delphi and SWARA Analysis', arXiv:2403.19051, preprint, arXiv, 27 March 2024, https://doi.org/10.48550/arXiv.2403.19051.

[57] Omar Farouk Al Mashhour et al., 'Legal and Regulatory Aspects of Smart Contracts: A Systematic Review', *Eurasian Journal of Management & Social Sciences - Open Access* 4, no. 2 (2023): 156–172, https://doi.org/10.23918/ejmss.V4i2p156.

[58] Nima Ballaji, 'Smart Contracts: Legal Implications in the Age of Automation', *Beijing Law Review* 15, no. 3 (2024): 1015–1032, https://doi.org/10.4236/blr.2024.153061.

[59] Leana Ter-Martirosyan, 'Smart Contract Accountability Problems: Default Oracle Liability as the Solution: Leana Ter-Martirosyan', *Columbia Business Law Review* 2025, no. 1 (2025), https://doi.org/10.52214/cblr.v2025i1.14257.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

technical and legal mechanisms. From the perspective of Islamic jurisprudence, smart contracts are contractual arrangements that should meet classical contract standards, provide certainty about the terms, and be accepted by the parties as legally and ethically binding. They are part of the jurisprudential themes of smart contracts and Sharia compliance.[60] The objective of *ḥifẓ al-māl* (protection of wealth) supports the inclusion of stringent consumer protection measures in legislation, because the implementation of smart contracts is inextricably linked with transparency requirements and the right to challenge implementation in the event of a programming failure, since the execution of smart contracts bypasses the discretion of the judicial process, which traditionally involved it as well. This principle is consistent with Islamic contractual ethics, whose aim is to safeguard the weaker party against exploitation and uncertainties in technological transactions.[61]

Likewise, the *maqāṣid* principle of *al-ʿadl* (justice and fairness) underpins algorithmic fairness standards in automated systems. In Islamic discussions of smart contract regulation, ambiguity or lack of transparency in automated terms is explicitly flagged as potentially inconsistent with Sharia if it leads to injustice or uncertainty (*gharar*).[62] Legislators can therefore justify regulatory requirements for explainable algorithmic processes, equitable dispute resolution mechanisms, and oversight provisions that ensure fair treatment of all parties. Finally, the foundational objective of *darʾ al-mafsid* (prevention of harm) justifies proactive risk-prevention mechanisms, including mandatory security audits, liability allocation frameworks encompassing developers and oracle providers, and regulatory sandboxes, to avert technological and economic harms before they materialize. This preventative reasoning echoes broader Islamic legal aims to discourage harm and

[60] Azlin Ahmad et al., 'Manipulation of Smart Contracts From an Islamic Perspective', *International Journal of Academic Research in Business and Social Sciences* 13 (May 2023), https://doi.org/10.6007/IJARBSS/v13-i5/16898.

[61] Ammar Shah and Jalil Al-Saadi, 'Legal Problems in Self-Executing Contracts', *Imam Ja'afar Al-Sadiq University Journal of Legal Studies* 2 (February 2025), https://doi.org/10.64682/3104-9419.1046.

[62] Ahmad et al., 'Manipulation of Smart Contracts From an Islamic Perspective'.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

preserve public welfare even when employing modern technologies.[63] By integrating these *maqāṣid* values into the legislative design for smart contracts, Iraqi law can better reconcile digital innovation with ethical accountability, ensuring consumer protection and normative legitimacy alongside technical enactment.

CONCLUSION

This study confirms that smart contracts are not merely technological innovations but represent a substantive transformation in the design and operation of contractual relationships. Although Iraqi civil law continues to rely on classical doctrines such as consent, lawful object, and cause, the automated and deterministic execution of smart contracts challenges traditional assumptions concerning human volition, contractual flexibility, and the interpretative role of courts. Accordingly, what is required is not a wholesale replacement of the existing legal framework, but a doctrinal recalibration to ensure its adaptability within digitally mediated environments. Comparative analysis demonstrates that effective smart contract governance is better achieved through gradual, principle-based legal adaptation—by clarifying legal concepts, establishing consistent liability regimes, strengthening consumer protection, and enhancing institutional capacity—rather than through radical legislative reform. From a normative perspective, this research further underscores the relevance of Islamic commercial jurisprudence as an ethical foundation for responding to automated contracting systems, particularly through the principles of wealth protection (*ḥifẓ al-māl*), fairness in transactions, and harm prevention. Integrating these values into legislative design can enhance legitimacy, social acceptance, and normative coherence in technologically evolving markets. A balanced legislative model—one that preserves doctrinal continuity, allocates liability proportionately, develops regulatory sandboxes, and strengthens institutional harmonization—can facilitate the responsible implementation of smart contracts in sectors such as e-commerce and financial services, while safeguarding legal certainty and cross-border interoperability. Future research should therefore include empirical assessments of judicial and regulatory

[63] Yusof Mahmoud et al., 'The Blockchain Technology from Maqasid Shari'ah Perspective', *Journal of Contemporary Maqasid Studies* 1 (July 2022): 59–82, https://doi.org/10.52100/jcms.v1i2.54.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

preparedness, as well as interdisciplinary studies integrating legal, technological, and digital economic perspectives, to ensure that blockchain-based contractual transformation remains aligned with principles of justice, accountability, and public protection.

ACKNOWLEDGEMENTS

The author would like to express sincere gratitude to the Rector and the entire academic community of the University of Kirkuk, Iraq, for their institutional support, academic guidance, and constructive intellectual environment that made this research possible. Their commitment to scholarly excellence and continuous encouragement has significantly contributed to the development and completion of this work. Appreciation is also extended to all faculty members, colleagues, and administrative staff whose support and cooperation enriched the academic process and facilitated the successful accomplishment of this study.

AUTHOR CONTRIBUTIONS STATEMENT

Mahmood Shaker Alaloosh led the conceptualization and overall design of the study, developed the theoretical framework, conducted the principal legal analysis, and drafted the main sections of the manuscript. Govar Majed Ahmad contributed to the literature review and comparative legal analysis, assisted in refining the research methodology, and provided substantial revisions to strengthen the analytical depth of the paper. Lara Adel Jabbar supported the research through data organization and regulatory framework analysis, managed references, and contributed to editing and proofreading to ensure clarity, coherence, and academic rigor throughout the manuscript.

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest regarding the publication of this paper. The research was conducted independently and without any commercial or financial relationships that could be construed as a potential conflict of interest.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

AI USAGE STATEMENT

The authors declare that artificial intelligence (AI) tools were used solely to assist in language refinement, grammar checking, and improving the clarity of expression during the manuscript preparation process. All substantive ideas, legal analyses, interpretations, and conclusions presented in this paper are the original work of the authors. The authors take full responsibility for the content and integrity of the manuscript.

BIBLIOGRAPHY

Abdullāh Murād, Fadl. '"Al *Gharar*: Māhiyatuhu wa Ḍawābiṭuhu wa Atharuh ʿalā al ʿUqūd,"'. *Majallat al ʿUlūm al Islāmiyyah wa al Ḥaḍārah* 1, no. 4 (2016). https://doi.org/10.55781/rsic.v1i4.399.

Abdul Saleh, Muhammad. 'E-Commerce: Platforms, E-Stores, and the Iraqi Economy Between Reality and Potential'. *Al-Bayan Center*, 10 March 2025. https://www.bayancenter.org/en/2025/03/12428/.

Abdullatif, Rabiaa Adnan, and Hatem Ghaib Saed. 'The Legal Implications of Artificial Intelligence on Commercial Law'. *TPM – Testing, Psychometrics, Methodology in Applied Psychology* 32, no. S4 (2025): Posted 17 July (2025): 2175–2182.

Ahmad, Azlin, Mat Noor Mat Zain, Ranitya Ganindha, and Reka Dewantara. 'Manipulation of Smart Contracts From an Islamic Perspective'. *International Journal of Academic Research in Business and Social Sciences* 13 (May 2023). https://doi.org/10.6007/IJARBSS/v13-i5/16898.

Alaloosh, Mahmood Shaker, Ali Shaker, and Sabir Hussien Eliwy. *Securing Digital Trade: A Techno-Legal Analysis of E-Commerce Safeguards in Iraq's Regulation No. 4/2025*. n.d. https://doi.org/10.5281/zenodo.18452737.

Al-Hadithi, Halah Salah. 'Changing Technology Contracts (Smart Contracts)'. *Journal of college of Law for Legal and Political Sciences* 10, no. 38 (2021): 324. https://doi.org/10.32894/1898-010-038-024.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246
Ali, Alaa Hussein, Wurood Khalid Mohameed, and Mahmood Shaker Alaloosh. 'Legal Challenges of Cyber Risk on Commercial Transactions'. *Malaysian J. Syariah & L.* 13 (2025): 456.

Alrubayee, Hala. 'E-Signature Law of Iraq No. (78) of 2012 Challenges and Risks'. *International Telecommunication Union (ITU*, ahead of print, 4 September 2019. https://www.itu.int/en/ITU-T/Workshops-and-Seminars/bsg/2019040405/Documents/Presentation%201.pdf.

Arcari, Jared. 'Decoding Smart Contracts: Technology, Legitimacy, & Legislative Uniformity'. *Fordham Journal of Corporate & Financial Law* 24, no. 2 (2019): 363–396. https://ir.lawnet.fordham.edu/jcfl.

Aro, Omar, Ali Al Dabbagh, and Hussein Shangar. 'Iraq's New E-Commerce Regulation'. MONDAQ, 11 July 2025. https://www.mondaq.com/contracts-and-commercial-law/1649696/.

Atiyah, Ghassan Adhab, Nazura Abdul Manap, and Ahmed Ismael Ibrahim. 'Legal Issues Faced by Smart Contracts from the Perspective of Conventional Contracts'. *UUM Journal of Legal Studies* 16, no. 1 (2025): 34–53. https://doi.org/10.32890/uumjls2025.16.1.3.

Azimi, Sadaf, Ali Golzari, Naghmeh Ivaki, and Nuno Laranjeiro. 'A Systematic Review on Smart Contracts Security Design Patterns'. *Empirical Software Engineering* 30, no. 4 (2025): 95. https://doi.org/10.1007/s10664-025-10646-w.

Babah, Mohamedou Mohamed Lemine. 'Smart Contracts: Applications and Shariah Issues'. *El Maqrizi Journal for Economic and Financial Studies* 8, no. 1 (2024): 465–486. https://asjp.cerist.dz/en/article/245338.

Ballaji, Nima. 'Smart Contracts: Legal Implications in the Age of Automation'. *Beijing Law Review* 15, no. 3 (2024): 1015–1032. https://doi.org/10.4236/blr.2024.153061.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

Bassan, Fabio, and Maddalena Rabitti. *From Smart Legal Contracts to Contracts on Blockchain: An Empirical Investigation*. 6 November 2023. https://doi.org/10.2139/ssrn.4624640.

Casolari, Federico, Mariarosaria Taddeo, Aina Turillazzi, and Luciano Floridi. 'How to Improve Smart Contracts in the European Union Data Act'. *Digital Society* 2, no. 1 (2023): 9. https://doi.org/10.1007/s44206-023-00038-2.

Clack, Christopher D., Vikram A. Bakshi, and Lee Braine. 'Smart Contract Templates: Foundations, Design Landscape and Research Directions'. arXiv:1608.00771. Preprint, arXiv, 15 March 2017. https://doi.org/10.48550/arXiv.1608.00771.

De Filippi, Primavera, and Samer Hassan. 'Blockchain Technology as a Regulatory Technology: From Code Is Law to Law Is Code'. arXiv.org, 8 January 2018. https://arxiv.org/abs/1801.02507v1.

Dewey, Josias. *Global Legal Insights - Blockchain & Cryptocurrency Regulation: 1*. Global Legal Group Ltd, 2019.

Ene, Charlotte. 'Smart Contracts - the New Form of the Legal Agreements'. *Proceedings of the International Conference on Business Excellence* 14 (July 2020): 1206–1210. https://doi.org/10.2478/picbe-2020-0113.

Evgenia, Zainutdinova. 'Models of legal regulation of smart contracts: general and specific. Law.' *Journal of the Higher School of Economics*, no. 3 (March 2021): 126–147. https://doi.org/10.17323/2072-8166.2021.3.126.147.

'Federal Law No. 1 of 2006 on Electronic Commerce and Transactions, United Arab Emirates, WIPO Lex'. Accessed 15 February 2026. https://www.wipo.int/wipolex/en/legislation/details/13908.

Ghodoosi, Farshad. *Contracting in the Age of Smart Contracts*. n.d. Accessed 15 February 2026. https://digitalcommons.law.uw.edu/wlr/vol96/iss1/2.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

Hakim, Sofian Al, Mohamad Sar'an, Ah Fathonih, and Agi Attaubah Hidayat. 'Contextualising Sharīʿah Economic Law: The Role of Pesantren in Indonesia's Socio-Legal Landscape'. *Jurnal Ilmiah Mizani: Wacana Hukum, Ekonomi Dan Keagamaan* 12, no. 2 (2025): 479–496. https://doi.org/10.29300/mzn.v12i2.7926.

Hassan, Ahmed Aziz. 'Legal Issues Arising from Smart Contracts under the Iraqi Law'. *Journal of University of Human Development* 4, no. 4 (2018): 42–47. https://doi.org/10.21928/juhd.v4n4y2018.pp42-47.

Hassan, Ahmed Aziz. 'Legal Issues Arising from Smart Contracts under the Iraqi Law'. *Journal of University of Human Development* 4, no. 4 (2018): 42–47. https://doi.org/10.21928/juhd.v4n4y2018.pp42-47.

Heidari, Shahin, Shannon Hashemi, Mohammad-Soroush Khorsand, Alireza Daneshfar, and Seyedalireza Jazayerifar. 'Towards Standardized Regulations for Blockchain Smart Contracts: Insights from Delphi and SWARA Analysis'. arXiv:2403.19051. Preprint, arXiv, 27 March 2024. https://doi.org/10.48550/arXiv.2403.19051.

Herian, Robert. 'Legal Recognition of Blockchain Registries and Smart Contracts'. 12 December 2018. https://oro.open.ac.uk/59481/.

HHL-IT. 'Electronic Contracts and Signatures in Iraq'. *HHL*, 20 July 2022. https://hhl-iq.com/electronic-contracts-and-signatures-in-iraq/.

Janssen, André. 'Smart Contracting And The New Digital Directives: Some Initial Thoughts'. *JIPITEC – Journal of Intellectual Property, Information Technology and E-Commerce Law* 12, no. 2 (2021): 196–203. https://nbn-resolving.de/urn:nbn:de:0009-29-52935.

Khalifa, Attia Suleiman, and Nashwan Salah Samad. 'Smart Contracts and the Challenges of Conflict of Laws in Digital Space'. *Indonesian Journal of Law and Economics Review* 20, no. 4 (2025): 10.21070/ijler.v20i4.1328-10.21070/ijler.v20i4.1328. https://doi.org/10.21070/ijler.v20i4.1328.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246
Khathi, Ali Taghi. 'From Paper to Screen: Digital Transformation in Iraqi Civil Law and Contracting Mechanism'. Supreme Judicial Council (Iraq), 30 November 2025. https://www.sjc.iq/view.78055/.

Krykavska, Iryna. 'Legislative Regulation for Implementation of Digital Technologies in the Provision of Administrative Services in Ukraine'. *Scientific Journal of Bielsko-Biala School of Finance and Law* 24, no. 3 (2020): 5–8. https://doi.org/10.19192/wsfip.sj3.2020.1.

Kumar, Satish. 'Doctrine of Free Consent in Automated E-Contracts: Re-Evaluating Indian Contract Law in the Age of Algorithmic Negotiation'. *International Journal of Civil Law and Legal Research* 5, no. 1 (2025): 142–149. https://doi.org/10.22271/civillaw.2025.v5.i1b.131.

Laksana, Andri Winjaya, Muhammad Ridwan Lubis, Denny Suwondo, Muhammad Ngazis, and Ratih Mega Puspa Sari. 'Integrating Maqasid Al-Shari'ah in Contemporary Islamic Legal Reform on Drug Policy'. *MILRev: Metro Islamic Law Review* 4, no. 1 (2025): 416–439. https://doi.org/10.32332/milrev.v4i1.10665.

Leheza, Yevhen, Oleksandr Kurakin, Olha Shapovalova, Kateryna Sokh, and Artur Makarov. 'Interpretation of Regulatory and Legal Acts in Contemporary Contexts: Foreign Experience, Comparative Perspectives, and Pathways for Regulatory Reform'. *NUSANTARA: Journal Of Law Studies* 5, no. 1 (2026): 102–122. https://doi.org/10.5281/zenodo.18727992.

LII / Legal Information Institute. '15 U.S. Code § 7001 - General Rule of Validity'. Accessed 15 February 2026. https://www.law.cornell.edu/uscode/text/15/7001.

LII / Legal Information Institute. '15 U.S. Code § 7006 - Definitions'. Accessed 15 February 2026. https://www.law.cornell.edu/uscode/text/15/7006.

Lipton, Alex, and Stuart Levi. 'An Introduction to Smart Contracts and Their Potential and Inherent Limitations'. *The Harvard Law School Forum on Corporate Governance*,

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

26 May 2018. https://corpgov.law.harvard.edu/2018/05/26/an-introduction-to-smart-contracts-and-their-potential-and-inherent-limitations/.

Mahmoud, Yusof, Azman Noor, Mohamad Aswadi, and Ahmad Syukran Baharuddin. 'The Blockchain Technology from Maqasid Shari'ah Perspective'. *Journal of Contemporary Maqasid Studies* 1 (July 2022): 59–82. https://doi.org/10.52100/jcms.v1i2.54.

Mashhour, Omar Farouk Al, Ahmad Shamsul Abd Aziz, and Nor Azlina Mohd Noor. 'Legal and Regulatory Aspects of Smart Contracts: A Systematic Review'. *Eurasian Journal of Management & Social Sciences - Open Access* 4, no. 2 (2023): 156–172. https://doi.org/10.23918/ejmss.V4i2p156.

Mohammed, Eidrous Baroom. '"Principle of Consent in Contracts: A Comparative Jurisprudential Study"'. *Research in Leadership, Governance, Strategy, and Waqf*, 12 February 2026. https://www.mohammedbaroom.com/2025/10/principle-of-consent-contracts.html.

Molina-Jimenez, Carlos, and Sandra Milena Felizia. 'On the Use of Smart Hybrid Contracts to Provide Flexibility in Algorithmic Governance'. *Data & Policy* 6 (January 2024): e8. https://doi.org/10.1017/dap.2023.49.

Paul, Allen, and Emily Southon. '"Smart Contracts in the UAE: The End for Lawyers?"' *The Oath*, 3 December 2019. https://theoath-me.com/11336-2/.

Pulatov, Temurbek. 'Legal Challenges in Ascertaining the Will of Parties in Smart Contracts'. *Uzbek Journal of Law and Digital Policy* 3, no. 2 (2025): 25–33. https://doi.org/10.59022/ujldp.314.

Refworld. 'Iraq: Civil Code'. Accessed 15 February 2026. https://www.refworld.org/legal/legislation/natlegbod/1951/en/104270.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246

Republic of Iraq. 'Iraq, Regulation No. (4) of 2025, On the Organization of Electronic Commerce'. Al-Waqaa Alraqiya, 10 March 2025. https://moj.gov.iq/upload/pdf/4818_compressed_323.pdf.

Rizwan, Amir, Sara Qureshi, and Muhammad Ahsan Iqbal Hashmi. 'Smart Contracts and Shariah Compliance: A Legal Paradox?' *Annual Methodological Archive Research Review* 3, no. 12 (2025): 369–79. https://amresearchjournal.com/index.php/Journal/article/view/1372.

Sabry, Ahmed Kamal. 'The legal nature of the smart contracts concluded on the blockchain, by the provisions of French law'. *Journal of Jurisprudential and Legal Studies* 23, no. July (2025): 74–74. https://doi.org/10.70299/hji.i23.6.

Schrepel, Thibault. *Smart Contracts and the Digital Single Market through the Lens of a 'Law + Technology' Approach*. 1st edition. Luxembourg : Publications Office of the European Union, 2021.

Shah, Ammar, and Jalil Al-Saadi. 'Legal Problems in Self-Executing Contracts'. *Imam Ja'afar Al-Sadiq University Journal of Legal Studies* 2 (February 2025). https://doi.org/10.64682/3104-9419.1046.

Ter-Martirosyan, Leana. 'Smart Contract Accountability Problems: Default Oracle Liability as the Solution: Leana Ter-Martirosyan'. *Columbia Business Law Review* 2025, no. 1 (2025). https://doi.org/10.52214/cblr.v2025i1.14257.

UNCITRAL Model Law on Automated Contracting: With Guide to Enactment. United Nations, 2025.

Van Erp, Sjef, and Martin Hanzl. 'ELI Principles on Blockchain Technology, Smart Contracts and Consumer Protection'. *SSRN Electronic Journal*, ahead of print, 2024. https://doi.org/10.2139/ssrn.4751468.

MILRev : Metro Islamic Law Review
ISSN: 2986-528X
Vol. 5 No. 1 January-June 2026, Pages 210-246
Yusuf, Amina, and Robert Martinez. 'Smart Contracts and Legal Enforceability: Decoding the Political Philosophy of Code as Law'. *Interdisciplinary Studies in Society, Law, and Politics* 4, no. 2 (2025): 292–302. https://doi.org/10.61838/kman.isslp.4.2.25.