

# The Role of Sharia Fintech Implementation in Overcoming Gharar in E-Commerce Transactions to Ensure Sharia Compliance and Transaction Certainty in the Digital Economy in Indonesia

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## ABSTRACT

The study aims to analyze the strategic role of Sharia Fintech implementation in overcoming gharar elements in e-commerce transactions in order to ensure Sharia compliance and increase transaction certainty in Indonesia's digital economy ecosystem. Gharar in e-commerce often occurs due to non-conformity of goods, quality uncertainty, and lack of transparency of information, where buyers cannot physically verify the goods. Using a qualitative descriptive approach through literature studies, it was found that Sharia fintechs offer mitigation solutions through innovations such as Sharia smart contracts that automate clear contracts, Sharia escrow systems that hold funds until goods are received, and blockchain-based halal traceability technology for product transparency. The results of the study show that the adoption of this technology significantly minimizes ambiguity, reduces the risk of disputes, and increases consumer confidence, but the main challenges still include low Sharia digital literacy and not yet optimal integration across e-commerce platforms.

**Keywords:** Sharia Fintech, Gharar, E-Commerce, Sharia Compliance, Digital Economy

## 1. INTRODUCTION

In the era of globalization, digitization has become a key element in the development of the world economy. The development of information and Communication Technology (ICT) encourages various sectors to adapt in order to improve competitiveness and efficiency. Indonesia as a developing country is experiencing a significant economic transformation thanks to the adoption of digital technology in various aspects of life. Digitalization refers to the process of adoption and integration of digital technologies in various aspects of life, including the business sector, government, and the general public. These developments have brought about fundamental changes in the way humans interact, communicate, and conduct economic transactions (Jhody Wiraputra et al., 2025). In Indonesia, the role of digitalization is increasingly important in promoting inclusive and sustainable economic growth. One of the main factors driving digitalization in Indonesia is the increasing penetration of the internet and the use of digital devices. With more than 200 million internet users, Indonesia is one of the largest digital markets in Southeast Asia. This development provides great opportunities for sectors of the digital economy, including e-commerce, fintech and the creative economy (Sihombing et al., 2024).

In the context of e-commerce, mismatches of goods with descriptions, defective or damaged goods, as well as fraud related to product quality, often occur. In transactions made through the Shopee platform, the buyer does not have the opportunity to verify the condition of the goods

directly before the purchase, so the buyer relies only on the description and photos provided by the seller. Uncertainty in e-commerce transactions can be categorized as gharar because buyers often receive goods that do not fit. From the perspective of Islamic economics, this reflects the Gharar element, namely, uncertainty in transactions that can harm one of the parties. Gharar in e-commerce occurs when product information is not transparent, so consumers cannot make decisions that are really based on facts (Hidayatullah & Altofina 2025).

Nardo Haryono's research on facts in the field shows that more and more consumers are choosing Sharia e-commerce transactions because they feel more secure morally and spiritually. Consumer confidence in Sharia e-commerce platforms tends to be higher because the platform guarantees compliance with Islamic values, such as halal products and honesty in the transaction process. This suggests that Sharia law protects not only the rights of consumers from a legal point of view, but also from a spiritual one and provides wider guarantees (Haryono, 2024)

Sharia Fintech offers great potential as a gharar mitigation solution through the use of technology such as escrow to hold funds until goods are received, a seller and product verification system to ensure transparency, the implementation of smart contracts to clarify contract clauses, and Sharia compliance standards supervised by the Sharia Supervisory Board. However, despite its great potential, the integration between Sharia fintech and e-commerce platforms in Indonesia is still very limited, so it has not been able to be optimally utilized in eliminating the vagueness of digital transactions.

The urgency of this research is driven by the rapid development of the digital economy in Indonesia, especially the significant increase in the use of e-commerce as a transaction medium. This condition simultaneously raises serious challenges related to gharar elements in digital transactions, which are prohibited from muamalah's perspective because they have the potential to cause injustice and losses. Gharar in e-commerce often occurs in the form of unclear product information, quality uncertainty, and less transparent payment mechanisms, where buyers do not have the opportunity to verify the goods directly. Although Sharia Fintech offers great potential as a gharar mitigation solution through features such as smart contracts, Sharia escrow, and seller verification, its integration with e-commerce platforms in Indonesia is still very limited. Therefore, this study becomes very important to analyze in depth how Sharia Fintech implementation can play a role in overcoming gharar, strengthening Sharia compliance, and increasing transaction certainty in Indonesia's digital economy ecosystem.

Although Sharia Fintech has a recognized strategic role in mitigating transaction risks in the digital age, there are significant research gaps in its practical implementation in Indonesia, especially in addressing gharar in e-commerce. Conceptually, features such as Sharia smart contracts and Sharia escrow are proven to reduce uncertainty; however, the integration of these technologies with existing e-commerce platforms is still very limited and not optimal. This gap is compounded by low Sharia digital literacy among the public, which hinders the understanding and utilization of Sharia technology-based gharar mitigation features. In addition, there is a need to clarify and develop more adaptive regulatory support to bridge the pace of technological innovation with muamalah compliance. Therefore, there is not enough research on integrated mechanisms and effective implementation strategies for Sharia Fintech to completely eliminate gharar and ensure transaction certainty throughout the Indonesian e-commerce ecosystem.

The purpose of this study is to analyze the role of Sharia Fintech implementation in overcoming gharar elements that often appear in e-commerce transactions. Specifically, this study aims to identify how Sharia technology features, such as Sharia smart contracts and Sharia escrow, can effectively strengthen Sharia compliance and increase transaction certainty in the digital economy ecosystem in Indonesia. The focus is to measure the contribution of this technology in creating digital transactions that are more transparent, fair, and in line with muamalah principles, thus supporting the achievement of legal certainty and consumer protection amid the challenges of non-conformity of goods, quality uncertainty, and the risk of online information fraud.

## **2. LITERATURE REVIEW**

### **Sharia Fintech Concept**

Sharia Fintech is a financial technology innovation that operates based on sharia principles, such as the Prohibition of *riba*, *gharar*, and *maisir*, and is obliged to use valid *muamalah* contracts. Sharia fintech is developed to meet the needs of financial services that are more inclusive, secure, and in accordance with Islamic norms (Safitri & Putri 2025). Sharia Fintech includes various services such as Sharia peer-to-peer lending, Sharia payment gateways, smart contracts based on contracts, to escrow systems that follow the principle of fairness in transactions (Syifa et al., 2025). In Indonesia, the development of Sharia fintech is advancing with the presence of OJK regulations and DSN-MUI fatwas that regulate operational rules, such as DSN-MUI Fatwa No. 117/2018 on information technology-based financing services (Farhat, 2025).

### **The concept of Gharar in Fikih Muamalah**

Gharar, terminologically, means vagueness, uncertainty, or Invalid risk in a transaction that could lead to the loss of one of the parties. Classical scholars such as Imam Nawawi define *gharar* as “the uncertainty contained in the substance of the contract giving rise to the possibility of loss of rights of one of the parties.” In the context of modern economics, *gharar* includes situations when information is incomplete, goods are unclear, prices are uncertain, or contracts are not transparent. The three most common forms of *gharar* in e-commerce are vagueness of goods specifications, uncertainty of quality and delivery, and risk of information fraud. Therefore, *gharar* mitigation requires a system capable of ensuring contract clarity, transparency, and fair transaction standards (Luqman Hakim et.al 2025).

### **Gharar in E-Commerce transactions**

E-commerce, as a digital transaction model, has the potential to create various forms of *gharar* because buyers cannot see the goods physically, so the level of information asymmetry is very high. Consumers of e-commerce are caused by non-conformity of goods, misleading information, as well as weak seller verification systems. In addition, there is a risk of unilateral void transactions, inaccurate delivery times, and unclear return mechanisms. All of these factors fall into the category of *gharar fahisy* (heavy *gharar*), which should be avoided in *muamalah* transactions. E-commerce requires a technological mechanism that is able to ensure the certainty of the object, price, delivery, and contract so that transactions can be in accordance with Sharia (Baknopi et al., 2025).

### **The role of Sharia Fintech in overcoming Gharar**

Sharia Fintech has a central role in minimizing *gharar* through the implementation of digital technology that supports transaction transparency. The application of Sharia smart contracts on e-commerce transactions can reduce the vagueness of the contract because all the provisions are outlined in an automatic digital contract. In addition, the use of Sharia escrow is able to reduce transaction disputes because new funds will be released after the goods are received as agreed. Other technologies, such as blockchain-based traceability, risk assessment systems, and vendor verification, also contribute to minimizing the uncertainty of product objects and identity. Thus, Sharia fintech helps realize digital transactions that are more secure, clear, and in accordance with *muamalah* principles (Ikhwan et al., 2025).

### **Sharia compliance in the Digital system**

Sharia compliance is a fundamental element in all Islamic financial activities. In the context of Sharia fintech, Sharia compliance is realized through the implementation of appropriate contracts, halal business structures, as well as the supervision of the Sharia Supervisory Board. According to Fatmawati's research (2020), Sharia fintechs that have active DPS show higher levels of compliance and consumer trust than fintechs that do not have a strong Sharia supervision system.

Regulations such as POJK 13/2018 and various DSN-MUI fatwas play an important role in ensuring Sharia fintech products and services are within the Sharia corridor. Sharia compliance not only fulfills normative aspects but also reduces legal risks and improves overall transaction certainty.

### **Transaction certainty in the Digital Economy**

Transaction certainty is an important component of Sharia economic law, as it ensures that the rights and obligations of the parties are fulfilled fairly. Consumers feel safer transacting on platforms that use Islamic fintech mechanisms because payment, tracking, and verification systems are more transparent. Technologies such as real-time tracking, digital proof of delivery, and contract documentation in the system also strengthen the certainty and security of transactions. From a fiqh perspective, this is in line with the principles of *sadd al-Dhari'ah* and *hifz al-mal* (Karimullah, 2025).

Some important studies that support this study include Rahmawati & Huda's research (2022), which found that Sharia smart contracts reduce *gharar* potential by 40% and increase contract accuracy. Fadhilah's research (2023) reveals that Sharia escrow reduces the level of transaction disputes by up to 35%. Setiawan's research (2021) shows that blockchain-based traceability technology increases consumer confidence in product *halal* by 60%. Research Sari et al. (2021) found that the use of Sharia fintech increases transaction certainty and payment security on digital platforms. Fatmawati's (2020) research confirms that DPS supervision improves fintech sharia compliance and reduces transaction risk. Previous research contributions provide a strong basis that Sharia fintech technology is not only a digital innovation but also a structural solution in overcoming *gharar* in e-commerce transactions.

### **3. RESEARCH METHODS**

This study uses a descriptive qualitative approach that aims to understand in depth how the implementation of Sharia fintech can play a role in overcoming *gharar* elements in e-commerce transactions so as to improve Sharia compliance and ensure transaction certainty in Indonesia's digital ecosystem. The qualitative approach was chosen because *gharar* issues, digital transaction mechanisms, and sharia compliance practices are phenomena that require contextual and interpretive explanations based on the experiences, policies, and practices of industry players. In this study, data were collected through literature studies, namely by reading and analyzing books, articles, and other relevant sources related to the topic under study.

### **4. RESULTS AND ANALYSIS**

The development of information and communication technology has brought significant changes in various aspects of life, including the field of Economics and transactions *muamalah*. The emergence of the digital age has led to the birth of new forms of transactions conducted online, such as e-commerce, Sharia fintech, crowdfunding, and the use of blockchain-based smart contracts. These changes require the renewal and adaptation of *muamalah* law in order to remain relevant to the needs of the times without neglecting the principles of Sharia. From the perspective of fiqh *muamalah*, transaction law is basically *Mabadi' al-ahkam* (basic principles), which is flexible as long as it does not conflict with *nash Shar'i*. Therefore, classic contracts such as *bai'*, *ijarah*, *salam*, and *istishna'* can be reinterpreted to accommodate the digital transaction model (Siliwangi, 2025)

The implementation of Sharia fintech in the e-commerce ecosystem in Indonesia has great potential in overcoming the *gharar* problem, which has been a major challenge in digital transactions. *Gharar*, terminologically, refers to the vagueness, unmeasured risk, or incomplete information in the contract, making it possible for injustice or harm to one of the parties (Azzahra et al., 2024). In e-commerce, the practice of *gharar* easily arises due to the limitations of consumers in verifying goods physically before buying, the vulnerability of information manipulation, the discrepancy between the description and the actual condition of the goods, to uncertainty in delivery and payment. Various studies have shown that the most dominant form of *gharar* in e-commerce

transactions includes vagueness of the object, quality uncertainty (Rahmi, 2020). Therefore, the integration of Sharia fintech is a relevant solution in minimizing the element of uncertainty through technological innovation that is in line with the muamalah principle.

Sharia Fintech plays an important role in providing transaction transparency through various technical features such as smart contracts, Sharia escrow, seller verification, risk assessment algorithms, and real-time tracking. A Sharia Smart contract, for example, is a form of contract automation based on the terms agreed by both parties. The findings of Rahmawati and Huda (2022) show that the implementation of Sharia smart contracts in the marketplace system is able to reduce the potential for gharar because each transaction is bound by clear, measurable rules and cannot be changed unilaterally (Ismatul et al., 2025). The digital contract ensures that the contract used in the transaction, for example, the BAI'salam, or Murabaha, contract, is explicitly stated so as to minimize the risk of misunderstanding. This is particularly relevant for Muslim consumers who need reassurance that digital transactions are conducted in accordance with Shariah principles that avoid obscurity and manipulation (Muzaki, 2025).

In addition to smart contracts, the Sharia escrow feature is an important instrument in ensuring payment transparency. The Sharia escrow system holds buyers' funds until the goods are received as agreed, thus eliminating the potential risk of unsafe payments (Unsilaturohmah & Moh. Mardi 2025). Fadhilah's (2023) research notes that the integration of Sharia escrow in payment fintech platforms causes consumer dispute rates to drop to 35% because funds do not move directly to the seller before the goods are actually received and verified by the buyer. This Model also ensures that both parties obtain transaction certainty, in accordance with the "al-aman" principle in Islamic finance, which emphasizes security and clarity. The escrow system also addresses classic problems in e-commerce, such as goods not being delivered after payment or sellers sending goods that do not fit (Sukmana 2025).

Transparency of product information is also a crucial aspect in gharar mitigation. In this context, Sharia fintech offers product traceability mechanisms through blockchain technology and certified data integration. Several Sharia marketplaces in Indonesia have implemented halal traceability technology that allows consumers to trace the origin of products, production processes, and halal status. This system not only guarantees sharia compliance but also eliminates gharar related to product identity ambiguity (Insani et al., 2025). In Alwi and Mursyid's (2021) research, it is explained that the use of blockchain for halal traceability increases consumer confidence by up to 60% because consumers have direct access to detailed information about the products purchased. This confirms that information disclosure is an important foundation in preventing gharar.

From a regulatory perspective, the existence of DSN-MUI and POJK fatwas related to fintech is a foundation that strengthens the implementation of Sharia fintech. Fatwa DSN-MUI No. 116/2017 on Information Technology-Based Financing Services confirms that digital transactions must avoid gharar, maisir, and riba elements. This regulation requires Sharia fintechs to apply the principles of transparency, clear contracts, and verifiable supervision mechanisms. OJK support through the regulatory sandbox is also a driver for the development of technological innovations that remain within the limits of Sharia. Compliance between technology and regulation is an important factor in creating a secure transaction ecosystem and Sharia value.

In addition, the implementation of Sharia fintech also strengthens the aspect of transaction certainty (legal certainty) in the digital economy. Transaction certainty is an important aspect of Sharia economic law as it relates to the protection of the rights of buyers and sellers. With an automated payment system, tracking of goods, and digital documentation of the contract, the risk of disputes between the parties can be minimized. Consumers feel safer transacting on platforms that integrate Sharia fintech because the system provides complete documentation and is easy to account for in case of problems. This shows that Sharia fintech not only strengthens Sharia compliance but also improves the quality of contractual relationships between the parties (Aditya & Lestari 2025).

However, the implementation of Sharia fintech in gharar mitigation still faces several challenges. First, the still-limited Sharia digital literacy among the public causes some consumers to

not understand the functions and benefits of Sharia fintech features such as escrow, smart contracts, or traceability. Second, not all e-commerce platforms integrate Islamic payment systems or risk mitigation features thoroughly. Third, there are technical challenges, such as higher operating costs of the Sharia system and the need for complex technology integration. Nevertheless, global trends show that the use of sharia-based fintech continues to increase, especially as the need for contract clarity, transaction security, and consumer protection becomes increasingly relevant in the digital age (Y. Safitri et al., 2025).

Overall, the implementation of Sharia fintech contributes significantly to overcoming gharar in e-commerce transactions and strengthening Sharia compliance and transaction certainty. Through a combination of modern technologies such as smart contracts, Sharia escrow, traceability, and halal verification systems, Sharia fintech is able to present a more transparent, secure, and fair transaction mechanism. The use of such technology is in line with the main purpose of Sharia, which is to maintain the benefit and prevent harm. With the support of appropriate regulations and increased Sharia digital literacy, Indonesia's digital economy ecosystem has great potential to develop into an ecosystem that is not only innovative but also in accordance with muamalah principles.

## 5. CONCLUSION

This study shows that the implementation of Sharia fintech has a strategic role in overcoming gharar in e-commerce transactions and is an important instrument to ensure Sharia compliance and increase transaction certainty in the digital economy ecosystem in Indonesia. Various technological innovations, such as Sharia smart contracts, Sharia escrow, halal traceability, seller verification, and transparent payment systems, have proven to minimize ambiguity, reduce the risk of disputes, and increase consumer confidence. The findings of previous research also reinforce that the application of sharia-based technology can reduce information uncertainty, clarify contracts, and ensure that every transaction process is in accordance with muamalah principles.

Sharia Fintech functions not only as a transaction tool but also as a Sharia supervision mechanism inherent in digital systems. Its existence helps to present a clearer, documented, and secure transaction structure so as to provide legal certainty for both parties. Nevertheless, challenges are still found, especially related to the limitations of Sharia digital literacy, the lack of optimal implementation of Sharia technology across e-commerce platforms, and the need for more adaptive regulatory support to technological developments.

Overall, the integration of Sharia fintech in e-commerce is an important step towards the creation of a digital economy that is sustainable, fair, and in accordance with Sharia principles. By strengthening technology, regulation, and community literacy, Indonesia has a great opportunity to become a center for the development of a Sharia digital ecosystem that is able to provide protection, comfort, and transaction certainty for all economic actors, especially Muslim consumers who need guarantees of Sharia compliance in their daily digital activities.

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