Proceeding The ICON-INSIMA : International Conference Institut Agama Islam KH Sufyan Tsauri Majenang , Cilacap, Indonesia *2026*
ISSN : xxx-xxx; DOI: xx.xxxx

The Legal Status of Virtual Property Ownership in Online Games: A Review of Article 499 of the Indonesian Civil Code and the Concept of *maal* in Islamic Law

Abad Wibisono [1], Triyono Adi Saputro [2]
[1] Department of Islamic Economic Law, Faculty of Islamic Studies, Universitas Muhammadiyah Surakarta; email: i000230109@student.ums.ac.id
[2] Department of Islamic Economic Law, Faculty of Islamic Studies, Universitas Muhammadiyah Surakarta; email: adi.hes@ums.ac.id

Abstract (10 pt)
Perkembangan teknologi telah melahirkan kepemilikan virtual (virtual property) dalam gim daring, seperti akun, karakter, dan mata uang dalam gim (in-game currency) yang memiliki nilai ekonomi serta diperjualbelikan secara luas. Hal ini menimbulkan pertanyaan mengenai status hukumnya menurut hukum perdata positif dan hukum ekonomi Syariah. Penelitian normatif ini menganalisis status kepemilikan aset virtual dengan merujuk pada Pasal 499 Kitab Undang-Undang Hukum Perdata (KUHPerdata) mengenai definisi kebendaan (zaak) dan konsep māl dalam hukum Islam. Penelitian ini menggunakan pendekatan perundang-undangan (statute approach) dan pendekatan konseptual (conceptual approach) terhadap bahan hukum primer dan sekunder, yang dianalisis secara deskriptif kualitatif. Hasil penelitian menunjukkan bahwa aset virtual dapat diklasifikasikan sebagai benda tidak berwujud berdasarkan Pasal 499 KUHPerdata, meskipun klasifikasi ini dibatasi oleh kekakuan sistem tertutup (gesloten system) dan dominasi klausa End User License Agreement (EULA) yang mereduksi hak pengguna menjadi sekadar lisensi yang dapat dicabut. Dari perspektif syariah, aset-aset tersebut memenuhi persyaratan sebagai māl; namun, kepemilikannya lebih tepat dipahami sebagai milk nāqiṣ (kepemilikan tidak sempurna yang terbatas pada hak guna) daripada milk tām (kepemilikan sempurna), sehingga memberikan kerangka kerja yang lebih presisi dibandingkan pendekatan biner dalam hukum perdata. Kesimpulannya, terdapat konvergensi filosofis antara hukum positif dan Syariah dalam mengakui properti virtual sebagai objek kepemilikan yang sah, dan penelitian ini merekomendasikan pengesahan regulasi teknis khusus untuk menjamin kepastian hukum dalam transaksi digital..

Keywords: Properti Virtual, Gim Daring, Pasal 499 KUHPerdata, *māl*, *Milk nāqiṣ*

Abstract
Technological development has given rise to virtual property in online games such as accounts, characters, and in-game currency that possesses economic value and is widely traded, thereby raising questions as to its legal status under positive civil law and Islamic economic law. This normative study analyzes the ownership status of virtual assets by reference to Article 499 of the Indonesian Civil Code (KUHPerdata) concerning the definition of an object (zaak) and the concept of maal in Islamic law, employing a statute approach and a conceptual approach to primary and secondary legal materials, analyzed descriptively and qualitatively. The findings show that virtual assets can be classified as intangible objects under Article 499 of the Civil Code, although this classification is constrained by the rigidity of the gesloten (closed) system and by the dominance of End User License Agreement (EULA) clauses that reduce user rights to a mere revocable license. From a Shari'ah perspective, these assets satisfy the requirements of maal; however, their ownership is more accurately understood as milk naqis (imperfect ownership limited to usufruct) rather than milk tam (perfect ownership), thereby offering a more precise framework than the binary approach found in civil law. In conclusion, there exists a philosophical convergence between positive law and Shari'ah

in recognizing virtual property as a legitimate object of ownership, and the study recommends the enactment of specific technical regulations to guarantee legal certainty in digital transactions.

***Keywords**: Virtual Property, Online Games, Article 499 of the Civil Code, maal, Milk naqis*

1. Introduction

Indonesia's online gaming industry has grown very rapidly over the past decade, in step with rising internet penetration and smartphone adoption. Playing games is no longer merely a form of entertainment; it has evolved into a distinct digital economic ecosystem. Within that ecosystem, players collect, buy, sell, and even trade a variety of objects that exist within a game's virtual world, commonly referred to as virtual property or virtual assets. Virtual assets may take the form of game accounts, characters (avatars), weapons, cosmetic items (skins), virtual vehicles, in-game currency (such as diamonds, gold, or gems), and items obtained through random gacha or loot-box mechanisms.

This phenomenon gives rise to fairly complex legal issues. On the one hand, virtual assets have no physical form of the kind ordinarily recognized as an object under classical civil law. On the other hand, such assets in fact carry economic value recognized by their user communities, as evidenced by the widespread practice of buying and selling accounts and in-game items through third-party marketplaces, social media groups, and official in-game transaction features. Real Money Trading (RMT) the exchange of virtual assets for real currency has become a common practice of significant economic value, and in a number of cases has given rise to legal disputes, such as conflicts over account ownership, fraud in the sale and purchase of items, and unilateral account suspension by service providers (game developers/ publishers).

Within the framework of Indonesian positive law, the Civil Code (KUHPerdata), as a legacy of colonial law (the Burgerlijk Wetboek), regulates the law of property (zaakenrecht) in a limited manner and on the basis of a closed system (gesloten system), meaning that the types of property rights are exhaustively determined by statute (Subekti & Tjitrosudibio, 2014). Article 499 of the Civil Code provides the foundational definition of an object (zaak) as anything capable of being the object of ownership (Kitab Undang-Undang Hukum Perdata (Burgerlijk Wetboek Voor Indonesie), 1847). This provision gives rise to the classification of objects into corporeal objects (lichamelijke zaken) and incorporeal objects (onlichamelijke zaken), as further regulated in Article 503 of the Civil Code (Subekti & Tjitrosudibio, 2014). The fundamental question that arises is whether virtual assets in online games which cannot be physically touched, yet possess economic value and can be exclusively controlled by their users may be categorized as incorporeal objects under that provision.

Islamic economic law, as part of fiqh muamalah, meanwhile provides its own conceptual framework for determining whether an object qualifies as property (maal) fit to be the subject matter of a transaction (mahall al-'aqd). Classical fiqh scholars hold that an object may be categorized as maal if it satisfies the elements of mutaqawwam (possessing value under Shari'ah), qabil li al-tamlik (capable of being owned and transferred), and lawful benefit (maslahah recognized by 'urf) (az-Zuhaili, 2021; Mardani, 2020). The question of the status of digital assets from an Islamic-law perspective is not new; scholars of Islamic economic law including a number of academics from the Department of Islamic Economic Law (HES) at Universitas Muhammadiyah Surakarta have conducted intensive research into various forms of contemporary digital assets, ranging from cryptocurrency and digital wallets to Non-

Fungible Tokens (NFTs) and gacha mechanisms in online games (Febriandika, Fadli, et al., 2022; Windiastuti & Athief, 2019).

Prior research has generally examined the status of contemporary digital assets from only a single perspective, either analyzing cryptocurrency purely from a Shari'ah standpoint or addressing consumer protection under positive law in general terms. Literature that integrates a comparative analysis of the rigidity of the gesloten system under Article 499 of the Civil Code with the flexibility of the concept of maal in evaluating the ownership status of virtual property such as accounts and gacha items remains very limited. Most studies have not addressed the underlying philosophical tension between a corporation's claim to a temporary right of use (a revocable license) and the player's genuine right of ownership. This research gap is the point of departure for the discussion presented in this paper.

An examination of the legal status of virtual assets in online games is important given the absence of any specific regulation that expressly governs the legal status of such assets, whether under the Civil Code which was, of course, drafted long before the digital era or under classical fiqh, which naturally has no conception of the virtual world. Accordingly, a comparative and integrative analysis of positive civil law and Islamic economic law is needed to provide a comprehensive understanding of the legal status of virtual-asset ownership, together with its implications for the practices of sale and purchase, inheritance, and consumer protection within Indonesia's online-gaming ecosystem.

2. Method

This study employs the normative (yuridis-normatif) legal research method, which examines law as a body of applicable norms or rules by analyzing library-based legal materials. It applies a statute approach, examining the provisions of the Civil Code and related legislation on electronic transactions, together with a conceptual approach, examining the foundational concepts of *fiqh muamalah* concerning *maal* and its requirements. The primary legal materials used in this study comprise the Civil Code, the Law on Electronic Information and Transactions, and relevant fatwas of the National Shari'ah Board of the Indonesian Council of Ulama (DSN-MUI). The secondary legal materials comprise classical and contemporary works of *fiqh muamalah*, books, and accredited scientific journal articles, including several studies by lecturers of the Islamic Economic Law study program at Universitas Muhammadiyah Surakarta (HES UMS) addressing the legal status of digital assets and micro-transactions in online games from an Islamic-law perspective. Tertiary legal materials, in the form of legal dictionaries and encyclopedias of fiqh, are used to clarify technical terminology. Data analysis was conducted descriptively and qualitatively, using a deductive method that is, drawing conclusions from general premises (legal norms and fiqh principles) and applying them to the specific issue at hand (the legal status of virtual assets in online games).

3. Results and Discussion

a. The Legal Status of Virtual Assets as Objects of Property under Article 499 of the Civil Code

Determining the juridical status of virtual property within the landscape of Indonesian civil law requires a doctrinal examination of the conception of property embodied in the Civil Code (Kitab Undang-Undang Hukum Perdata (Burgerlijk Wetboek Voor Indonesie), 1847). Article 499 of the Civil Code fundamentally provides that

property (zaak) is understood as every item and every right that can be the object of ownership (Subekti & Tjitrosudibio, 2014). From this basic norm arises the legal question of whether digital data in the form of characters, in-game currency, virtual cosmetics, and other digital equipment within an online-game ecosystem may be lawfully recognized as an object of ownership (zakelijk recht).

Ontologically, virtual assets have no physical form that can be touched in the real world, and therefore cannot be classified as corporeal objects (lichamelijke zaken) under the classical understanding of property. Article 503 of the Civil Code, however, opens the way for a classification of incorporeal objects (onlichamelijke zaken), under which virtual assets may be construed as a right (recht) over digital data stored on a service provider's server (Nurdhito, 2023; Yogatama, 2021). This construction confers on the holder of an account's credentials exclusive authority to access, exploit, and control that digital commodity, on a par with the legal recognition already extended to other intangible objects such as receivables, electronic securities, and intellectual property rights.

Two principal elements confirm the status of virtual assets as incorporeal objects. First, the element of control (exclusivity of control) is demonstrated by the exclusive control held by the legitimate user through the account-authentication mechanism. Second, economic value has been empirically confirmed by the prevalence of buying and selling in both primary and secondary markets, involving significant turnover in nominal value, as seen in the trade of in-game currency, which has come to be recognized as a digital commodity with genuine economic value (Al Ghifari, 2022). The presence of mechanisms of supply, demand, and scarcity demonstrates that virtual assets satisfy the material parameters of an object that carries value and can be individually controlled (Yogatama, 2021).

Although virtual assets satisfy the material criteria of property, their status faces a conceptual obstacle arising from the closed system (gesloten system) that governs Indonesian property law, under which categories of property rights may only arise and be regulated by statute (Subekti & Tjitrosudibio, 2014). The absence of positive regulation expressly governing virtual assets has produced a legal vacuum (rechtsvacuum) (Fauzan, 2020), which in practice is filled by the dominance of standard-form End User License Agreements (EULAs). Game developers commonly and unilaterally include clauses stating that all in-game assets and data remain the property of the service provider, while the user is granted only a limited, revocable license to use them. This construction reduces what would otherwise be an absolute property relationship to a mere contractual obligation (persoonlijk recht) resting on the principle of freedom of contract under Article 1338 of the Civil Code, leaving the user's bargaining position highly vulnerable to unilateral action by the developer, such as the sudden suspension of an account or the permanent shutdown of a service without compensation (Nugroho & Nasution, 2025). For this reason, doctrinal recognition of virtual assets as incorporeal objects is urgently needed in order to provide legal certainty of protection for consumers, particularly given the public's low level of legal literacy regarding electronic transactions (Andriani, 2019), through Law Number 8 of 1999 on Consumer Protection and Law Number 11 of 2008 on Electronic Information and Transactions, as subsequently amended.

It should further be emphasized that the EULA, as currently constructed, functions as a genuinely lopsided, take-it-or-leave-it contract: prospective users are presented with the license terms only after or as a precondition to installation or account creation, are

afforded no realistic opportunity to negotiate any term, and must accept the agreement in its entirety merely to access a service in which they have already invested time, money, and in-game achievements. Because Article 18 of Law Number 8 of 1999 on Consumer Protection prohibits business actors from including standard clauses that shift liability away from the business actor or otherwise disadvantage the consumer, a EULA clause declaring that all in-game data and assets remain the exclusive property of the developer while denying the user any recourse in the event of unilateral suspension or service discontinuation arguably falls squarely within the categories of standard clauses void under that provision. This positions Article 18 of the Consumer Protection Law as a concrete legal instrument through which Indonesian game users may challenge unbalanced EULA terms, notwithstanding the formal freedom-of-contract doctrine embodied in Article 1338 of the Civil Code.

b. A Shari'ah Perspective on the Ownership of Virtual Assets Based on the Concept of maal

Islamic economic law approaches questions of property through a functional and adaptively beneficial lens, grounded in the fiqh principle that the default rule governing all forms of muamalah is permissibility (al-ashlu fi al-mu'amalah al-ibahah illa an yadulla dalil 'ala tahrimiha), unless a Shari'ah proof establishes prohibition (az-Zuhaili, 2021). Recognition of the existence of virtual assets from the standpoint of fiqh muamalah rests on the satisfaction of three parameters of property (maal): mutaqawwam, qabil li al-tamlik, and lawful benefit.

The mutaqawwam criterion requires that an object possess real value recognized by Shari'ah and by societal custom ('urf). Virtual assets have come to be widely accepted as entities carrying exchange value (qimah) owing to factors of scarcity, skill, and the time and cost required to acquire them (Hudaefi et al., 2026). This recognition of value is, by analogy (qiyas), consistent with the recognition of value accorded to conventional collectible objects, thereby satisfying the requirement of a valid 'urf tijari (commercial custom) (Mardani, 2020), and finds firm precedent in the contemporary ijtihad of the National Shari'ah Board regarding the validity of electronic money and certain cryptocurrency instruments possessing commodity value (Fatwa DSN-MUI No. 7/MUNAS-X/MUI/2021 Tentang Hukum Mata Uang Kripto (Cryptocurrency), 2021; Fatwa DSN-MUI No. 116/DSN-MUI/IX/2017 Tentang Uang Elektronik Syariah, 2017).

With respect to qabil li al-tamlik, the issue is more complex than the mere presence or absence of economic value, since a player's ownership of a virtual asset is, in practice, constrained by the EULA clauses discussed above. Within the body of fiqh muamalah, a distinction is drawn between milk tam (perfect ownership, encompassing full rights over both the substance and the usufruct of an object) and milk naqis (imperfect or limited ownership, encompassing only one dimension of ownership for example, a right of usufruct without a right over the substance, or vice versa). This concept is well suited to characterizing the position of a game player: insofar as asset data technically remains under the control of the service provider's server, while the player holds only a right of use and an exclusive right of transfer through the account's credentials, what attaches to the player is more properly categorized as a form of milk naqis over usufruct (milk al-manfa'ah), rather than milk tam over the substance of the asset itself (Saputro et al., 2024). This framework offers a middle path that is more precise than the approach taken under civil law, which tends to force a binary choice between "ownership" or "a mere license";

fiqh muamalah can instead recognize a property right over the usufruct of a virtual asset without requiring absolute ownership of the underlying digital infrastructure. Within the bounds of milk naqis, the account holder retains the power to operate, transfer, or relinquish rights over the asset through the transaction of transferring account ownership or exchanging items (Misno, 2021), provided that such action does not violate the limits of Shari'ah or the rights of third parties (Sabiq, 2007).

The criterion of lawful benefit calls for a case-by-case analysis of how an asset is acquired. A transaction carried out through a direct top-up scheme, with a price and object that are clearly defined, constitutes a valid contract of sale (ba'i), since it satisfies the requirements of certainty as to the subject matter (ma'qud 'alaih) and the price (tsaman) (Windiastuti & Athief, 2019). The implications of such lawful ownership extend as well into the realm of Islamic inheritance law, where a digital asset possessing economic value and demonstrable ownership may be qualified as part of the estate (tirkah) that must be distributed among the heirs (Febriandika, Majid, et al., 2022; Kompilasi Hukum Islam, 1991). By contrast, the acquisition of an asset through a random, probability-based mechanism such as gacha or a loot box raises a fundamental problem, because the player surrenders real money or virtual currency in exchange for an item whose specification remains uncertain at the time the transaction takes place. This gives rise to gharar fahisy (excessive uncertainty) and resembles the pattern of maysir (gambling), such that the motivation behind the transaction shifts from consumption to speculation in pursuit of a jackpot (Febriandika, Majid, et al., 2022), ultimately vitiating the validity of the contract in order to uphold the principle of la dharara wa la dhirar (no harm and no reciprocation of harm) (az-Zuhaili, 2021).

c. The Validity of Ownership Acquired through Gacha Mechanisms: A Comparison of Shari'ah and International Regulatory Approaches

Under both Shari'ah and positive law, the validity of ownership over a given property (maal or zaak) is determined not only by the nature of the object itself, but also, to a significant degree, by the manner of its acquisition (sabab al-milkiyyah). As discussed above, the acquisition of virtual assets through random mechanisms (gacha or loot boxes) gives rise to the legal defects of gharar fahisy (excessive uncertainty) and maysir (gambling). This has serious implications: the transaction becomes void (batil), which in turn vitiates the legitimacy of the player's ownership (milk) of the asset obtained. Notably, the question of the validity of asset acquisition through gacha mechanisms is not a concern exclusive to Islamic jurisprudence. Various jurisdictions around the world likewise regard this mechanism as a threat to ownership rights and consumer protection, prompting strict regulatory intervention.

The problem of gharar and maysir in gacha mechanisms, as discussed in the preceding subsection, has proven to be a concern not only within Shari'ah but also, from a secular legal standpoint, within numerous jurisdictions worldwide. Belgium, through the Belgian Gaming Commission, explicitly declared in 2018 that all loot boxes purchasable with real money whether directly or via in-game currency are to be categorized as a form of gambling, such that publishers lacking a gambling license are prohibited from offering such mechanisms (Nordia Law, 2023). A similar approach has been adopted by the Netherlands, which has further urged fellow European Union member states to formulate joint regulation on loot boxes. China and Japan, by contrast, have taken a different approach, not prohibiting gacha outright but instead requiring

developers to transparently disclose the probability (drop rate) of each item available within the system, while also prohibiting "complete gacha" schemes that require players to collect a series of rare items in order to obtain a grand prize (Nordia Law, 2023).

In the Indonesian context, the absence of an explicit definition of "digital gambling" in the prevailing legislation makes enforcement against gacha practices difficult, even though, in theory, the elements of gambling under the Criminal Code and the prohibition on gambling content under the Electronic Information and Transactions Law could potentially reach such practices (Prasojo, 2025). The complexity of tracing the flow of funds within a virtual ecosystem presents a further challenge for law-enforcement authorities. This cross-jurisdictional comparison reveals two regulatory models that may serve as a reference for Indonesia: an outright prohibitive model, as applied in Belgium and the Netherlands, and a disclosure-based model, as applied in China and Japan. Given the characteristics of Indonesia's gaming industry, which continues to rely on gacha-based monetization as a principal source of revenue, a disclosure-based approach appears more realistic to adopt in the short term namely, by requiring developers to transparently disclose drop-rate probabilities to players prior to any transaction. Such a disclosure obligation would, in turn, also strengthen the Shari'ah basis for assessing the validity of the contract, since disclosure of the drop rate directly reduces the element of gharar fahisy that constitutes the central problem identified in the analysis in subsection 3.2.

d. Convergence and Divergence in Orientation between Positive Law and Shari'ah

Table 1. *Comparison of the Criteria for Recognizing Virtual Assets under Article 499 of the Civil Code and the Concept of maal in Islamic Law*

Aspect	Article 499 of the Civil Code	The Concept of maal (Islamic Law)
Basis of recognition	Economic value and the capacity to be controlled (Subekti & Tjitrosudibio, 2014).	Mutaqawwam: possessing value according to Shari'ah and 'urf (Mardani, 2020).
Nature of ownership	Absolute in principle, but reduced by contract (EULA) to a mere personal right (persoonlijk recht).	Graduated: *milk tam* versus *milk naqis* (Saputro et al., 2024).
Requirements for a valid object	Falls within the classification of onlichamelijke zaken (Article 503).	Qabil li al-tamlik: capable of being owned and transferred.
Transactional limits	Freedom of contract (Article 1338), constrained by standard-form clauses.	Free of gharar, maysir, and tadlis (az-Zuhaili, 2021).
Principal obstacle	The gesloten system restricts the creation of new categories of property rights.	Random-chance mechanisms (gacha) risk constituting maysir.

Source: compiled by the authors based on a synthesis of sections 3.1-3.3.

A comparison of the two legal frameworks reveals a point of convergence at the level of substance: both Article 499 of the Civil Code and the concept of *maal* alike require real economic value and verifiable control as the foundation for the recognition of a right. The two frameworks diverge, however, at the level of structural solution. Indonesian civil law, bound as it is by the gesloten system, tends to leave the detailed regulation of virtual-asset ownership to contractual clauses (EULAs) that are heavily weighted in favor of the developer, leaving the user with, in practice, no property right enforceable against third parties (droit de suite). Shari'ah, through the concept of *milk naqis*, instead provides a more accommodating framework: it recognizes a right worthy of protection over the usufruct of a digital asset without first requiring resolution of the question of ownership over the server infrastructure in which the underlying data is stored (Saputro et al., 2024). This divergence in orientation forms the basis for the argument that the *maal* approach and, in particular, the distinction between *milk tam* and *milk naqis* may serve as a conceptual reference for policymakers in formulating technical regulation on consumer protection for digital assets in Indonesia, a gap that has not been widely addressed by prior studies, which have tended to examine digital assets from only a single legal perspective.

4. Conclusion

Based on a comparative analysis of positive civil law and Islamic economic law, virtual assets in online games in essence satisfy the parameters of a legitimate object of ownership: they satisfy the elements of Article 499, read together with Article 503, of the Civil Code as incorporeal objects (onlichamelijke zaken), given that they carry economic value and can be exclusively controlled, while at the same time satisfying the qualifications of maal under fiqh muamalah by virtue of being mutaqawwam and of lawful benefit. In practice, however, this right of ownership is reduced by the dominance of End User License Agreement (EULA) clauses that are unilateral and unbalanced a take-it-or-leave-it contract leaving the consumer with no room whatsoever to negotiate terms that designate all in-game assets as remaining the property of the service provider. This condition, in fact, satisfies the elements of a prohibited standard clause under Article 18 of Law Number 8 of 1999 on Consumer Protection, such that such clauses are potentially void by operation of law and may serve as a legal instrument of defense for game consumers in Indonesia. Shari'ah, for its part, offers a more precise middle path through the concept of milk naqis limited ownership over usufruct (milk al-manfa'ah) that does not require control over the server infrastructure while also constraining the validity of asset acquisition by voiding gacha or loot-box transactions that are laden with gharar fahisy and maysir.

To address this legal imbalance, concrete technical regulatory intervention is required from the relevant authorities in Indonesia. The Ministry of Communication and Digital Affairs (Komdigi) should establish minimum standards for fair EULA clauses applicable to the gaming industry operating in Indonesia, including a mandatory obligation to disclose gacha drop rates, as a technical derivative of the Electronic Information and Transactions Law and the Consumer Protection Law. The Financial Services Authority (OJK) should also be engaged, given that high-value virtual assets are increasingly intersecting with the domain of digital assets and electronic payment instruments. Meanwhile, the National Shari'ah Board of the Indonesian Council of Ulama (DSN-MUI) should issue a specific fatwa that explicitly adopts the milk naqis framework for virtual assets, so as to provide both legal certainty and certainty as to the lawfulness of digital economic transactions for the public. This study is limited to a

normative analysis without empirical field data; future research may test the acceptance of the milk naqis concept through interviews with fatwa authorities or industry practitioners.

Acknowledgement: The authors extend their appreciation to Universitas Muhammadiyah Surakarta for providing an academic environment that supported the preparation and development of this manuscript. Gratitude is also expressed to the academic supervisor, as well as to all the scholars and institutions whose academic publications, legal documents, and regulatory materials contributed to the development of the comparative analysis presented in this study.

References

Al Ghifari, S. M. (2022). Perlindungan Konsumen dalam Perbuatan Melawan Hukum Pembelian Diamond Game Online Mobile Legends. Fakultas Hukum Universitas Udayana.

Andriani, R. (2019). Literasi hukum konsumen dalam transaksi elektronik. Jurnal Hukum Dan Pembangunan, 49(3), 412–428.

az-Zuhaili, P. D. W. (2021). Fiqih Islam wa Adilatuhu Jilid 4: Sumpah; Nadzar; Hal-Hal yang Dibolehkan dan Dilarang; Kurban dan Aqiqah; Terori-Teori Fiqih. https://books.google.co.id/books?id=_1Q0EAAAQBAJ

Fatwa DSN-MUI No. 7/MUNAS-X/MUI/2021 tentang Hukum Mata Uang Kripto (Cryptocurrency). (2021).

Fatwa DSN-MUI No. 116/DSN-MUI/IX/2017 tentang Uang Elektronik Syariah. (2017).

Fauzan, M. (2020). Kekosongan hukum dalam jual beli akun game online. Jurnal RechtsVinding, 9(2).

Febriandika, N. R., Fadli, F., & Mi'raj, D. A. (2022). How Are NFT (Non-Fungible Token) Transactions Reviewed According to Islamic Law? Borobudur Law Review, 4(1), 1–12. https://doi.org/10.31603/burrev.6807

Febriandika, N. R., Majid, N., & Kumar, R. (2022). Review of Islamic Law on Microtransaction Contracts in the Gacha System. Borobudur Law Review, 4(2).

Hudaefi, F. A., Zakiy, M., Laallam, A., Athief, F. H. N., & Apriantoro, M. S. (2026). Shari'ah Analytics of Arabic Currency Terms and Implications for Cryptocurrency. Journal of Islamic Monetary Economics and Finance, 12(1), 107–132. https://doi.org/10.21098/jimf.v12i1.3328

Kitab Undang-Undang Hukum Perdata (Burgerlijk Wetboek Voor Indonesie) (1847). Kompilasi Hukum Islam (1991).

Mardani. (2020). Fiqh Ekonomi Syariah: Fiqh Muamalah. Kencana Prenadamedia Group.

Misno, A. M. B. P. (2021). Virtual Property Pada Game Online Dalam Perspektif Hukum Ekonomi Syariah. Al Maal: Journal of Islamic Economics and Banking, 3(1), 1–14. https://doi.org/10.31000/almaal.v3i1.4699

Nordia Law. (2023). Gaming loot boxes. https://nordialaw.com/gaming-loot-boxes/

Nugroho, M. K. A., & Nasution, K. (2025). Perlindungan Hukum Bagi Pengguna Game Online Dirugikan Karena Tutupnya Sistem Elektronik Game Online Di Indonesia Secara Sepihak. Journal Evidence Of Law, 4(1), 44–50. https://doi.org/10.59066/jel.v4i1.958

Nurdhito, D. S. (2023). Perlindungan Hukum Kepemilikan Akun Steam sebagai Virtual Property Ditinjau dari Hukum Benda di Indonesia.

Prasojo, B. W. (2025). Perspektif hukum pidana terhadap perjudian terselubung. Mahkamah Agung Republik Indonesia.https://marinews.mahkamahagung.go.id/artikel/perspektif-hukum-pidana-terhadap-perjudian-terselubung-0tP

Sabiq, S. (2007). Fiqih Sunnah (Terjemahan Nor Hasanuddin) (Vol. 3). Pena Pundi Aksara.

Saputro, T. A., Rumadan, I., Suwadi, P., Latifah, E., & Syaiful, M. (2024). The Urgency of Using al-Milk an-Naqiṣ in Geographical Indications: An Ideal Preservation for Intellectual Property in Indonesia. Juris (Jurnal Ilmiah Syariah), 23(2), 269–279. https://doi.org/10.31958/juris.v23i2.12227

Subekti, R. & Tjitrosudibio. (2014). Kitab Undang-Undang Hukum Perdata (Terjemahan). Balai Pustaka.

Windiastuti, F. C., & Athief, F. H. N. (2019). Inacoin Cryptocurrency Analysis: An Islamic Law Perspective. Journal of Islamic Economic Laws (JISEL), 2(2), 152–177. https://doi.org/10.23917/jisel.v2i2.8585

Yogatama, R. (2021). Kepemilikan Benda Virtual (Virtual Property) pada Game Online dalam Konstruksi Hukum Benda di Indonesia.