

Non fungible Token (NFT): Sharia and Accounting Perspectives

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Abstract

A non-fungible token (NFT) is a digital asset within blockchain networks that presents potential as an alternative digital investment. Its use extends beyond conventional e-commerce, influencing financial reporting practices. However, NFT transactions involving cryptocurrency are still controversial, as the Indonesian Ulema Council (MUI) has prohibited their use. This study, through a literature review and practical experience in NFT e-commerce, examines NFT transactions from both the perspectives of Islamic jurisprudence and financial accounting. Within the Islamic framework, NFTs can be considered intellectual property rights that comply with Islamic principles. However, transactions involving cryptocurrencies may be invalid due to the ban. From an accounting standpoint, NFTs are classified as intangible assets with value based on procurement and utilization methods. Additionally, NFT creators or sellers adhere to revenue recognition principles. This dual perspective provides insights into the complex interplay between Islamic legality and financial accounting in NFT transactions. The study concludes that NFTs, as digital assets, are generally halal. However, Muslim entities should carefully assess whether their transactions involve cryptocurrencies. Given the growing popularity and diversity of digital assets, including NFTs, further research on their accounting treatment in practical scenarios is recommended to expand on these conceptual findings.

Keywords: NFT, Cryptocurrency, Islamic Law, Digital Assets, Accounting.

Saran sitasi: Rindika, S. M., Mashuda, K. U., & Retnawati, A. (2024). Non fungible Token (NFT): Sharia and Accounting Perspectives. *Jurnal Ilmiah Ekonomi Islam*, 10(03), 3025-3035. Doi: <https://dx.doi.org/10.29040/jiei.v10i3.15013>

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1. INTRODUCTION

In early 2022, Indonesia was taken aback by the "Ghozali Everyday" phenomenon. A young man from Semarang marketed his self-portraits captured between 2015 and 2022 as non-fungible tokens (NFTs) on the OpenSea platform. Ghozali set a price of 0.001 ETH or IDR 45,000 per photo, and managed to collect billions of rupiah through the sales. The phenomenon was reported in the international media (Nita, 2022) and sparked numerous discussions and debates regarding NFT in Indonesia.

NFT is a unique digital asset that runs in the blockchain network. The uniqueness because each token possesses distinctive metadata and identification code that differs from one another. This means that NFT cannot be duplicated, securing the creator's intellectual property rights. The most common forms of NFT in the market are collectibles, artworks, objects in virtual worlds and digital

characters from sports or other gaming fields. Due to the specific features, the emergence of NFT and the proliferation of NFT trading platforms signify potential for individuals and businesses within the creative industry, allowing them to showcase and promote their creations (Aletha, 2022). This also paves the way for digital investments.

In NFT transactions, however, cryptocurrency, specifically Ethereum (ETH), is utilized as a medium of exchange. A concern arises that cryptocurrency has been deemed haram (prohibited) by the Indonesian Ulema Council (MUI) through 7th MUI Fatwa Ulama Ijtima. We acknowledge that technological advancement is inevitable, and as part of a Muslim-majority country, Indonesian Muslims have great potential to be involved in NFTs. Thus, providing insight into the relationship between NFT transactions and compliance with sharia law norms is imperative,

safeguarding the ummah's security and preventing potential losses.

Furthermore, corporate interest in the NFT industry has been increasing since 2017, both globally and domestically, that NFT ownership within a company has implications for financial statements. While there are accounting standards governing the treatment of assets, there is a marked lack of specific provisions governing NFT.

This paper aims to take part in scholarly *ijtihad* concerning the legitimacy of NFT transactions and their prospective implications within the framework of Islamic law. Following Islamic economics, it is plausible that NFT may eventually be accepted (Saroh et al., 2023). However, the standard *ushul fiqh muamalah* (knowledge of activities or transactions based on sharia laws) states: "The original law of muamalah is that everything is permissible unless there is evidence prohibiting it (in the Qur'an and sunna)". Neither the Qur'an nor sunna contains a direct view of NFT transactions. Previous scholars have deliberated upon analogous issues, but the cases and circumstances are not precisely identical, thus warranting a reexamination. A scholarly *ijtihad* addressing contemporary muamalah (financial transactions) issues in the technological era is crucial to demonstrate that Islam is "*salihun likulli zaman wa likulli makan*" (suitable for all times and places). Apart from the sharia views, this study also explains whether digital assets in terms of NFTs can be categorized as intangible assets and how the revenue from NFT transactions should be recognized under Indonesia's accounting standards, known as the Financial Accounting Standards Regulation (Pernyataan Standar Akuntansi Keuangan or PSAK).

Employing literature review method and having individual experience diving into the NFT marketplace, we conclude that NFT is classified as intellectual property right in accordance with Islamic law. However, the involvement of cryptocurrency in these transactions raises concerns about elements such as *gharar* and *dharar*, which are considered haram. Nevertheless, NFT hold significant potential, thus prompting anticipation of clear legal regulations from the Indonesian government, enabling Indonesians

(Muslims) to benefit from NFT while still adhering to Islamic law. In terms of financial accounting, NFT can be considered as intangible asset for collectors or holders, meeting the criteria of PSAK 19, and NFT creators or issuers must follow PSAK 23 regarding revenue recognition in their sales transactions.

LITERATURE REVIEW

NFT and NFT Transactions through The Opensea Platform

The emergence of NFT is a combination of technological advances in digital commerce and the development of trading platforms (Hugo, 2022). The NFT ecosystem can empower artists through user-friendly and secure tools and methods, simplifying the process for artists to monetize their work more conveniently and efficiently (Aletha, 2022).

NFT constitutes one of the digital assets within the blockchain network, wherein each token possesses distinctive metadata and identification codes that are different from each other (Sugiharto et al., 2022). Blockchain is a database containing transaction records that are subsequently distributed, validated and monitored by a network of computers across the globe (Simanta, 2018). In its transactions, the NFT uses cryptocurrency, specifically Ethereum (ETH), as a medium of exchange. While cryptocurrency forms virtual coins and provides secure ownership and transactions using a cryptographic system (Harwick, 2016). Cryptography is one of the techniques for maintaining the confidentiality of messages by using ciphers and making them incomprehensible (Pabokory et al., 2015).

OpenSea currently stands as the world's largest NFT marketplace. The NFT marketplace suddenly gained widespread recognition by many in early 2021 when the trading volume increased by around \$550 million during the presence of NFT until the end of March 2021, when more than \$200 million of transactions took place (Dowling, 2022). Any digital object, such as virtual land, music, domain address and image, can be used as an NFT. Creators must take several steps to be able to list NFT products on the OpeaSea platform. The steps are summarized in Figure 1.

Figure 1: Steps to List an NFT on The Opensea Platform



Source: Author's Experience as a User on The Platform.

First, creators must use an e-wallet that meets the platform's requirements, such as Metamask, WalletConnect, Coinbase Wallet, Phantom, Bitkeep, Core and others because every NFT transaction within OpenSea uses ETH (Ethereum), which is a type of cryptocurrency. This e-wallet account will be used to log in to the platform. Second, creators initiate the product selling process by uploading their items onto the platform. The platform offers various file formats, including GIF, SVG, MP4, WENM, MP3, WAV, GLTF, GLB and OGG, with a maximum allowable file size of 100 megabytes. After uploading, the creator charges the price in ETH rate. The final step involves digital signing, or transforming the digital work into a non-fungible token (NFT), a process known as minting. Through these procedures, the work is protected by a blockchain system that serves as a deterrent against duplication and theft. Each NFT digital asset has a unique code. Its activation cannot be duplicated and exchanged. Once security and pricing are complete, the NFT is listed on OpenSea and ready to be purchased.

NFT transactions are typically similar to regular online transactions. Basically, both occur over the Internet, eliminating the need for physical interaction between the seller and the buyer. Moreover, the sales process follows a similar transaction path, particularly regarding item selection and providing a shopping cart to compare products or collect items for potential purchase. In addition, the prices offered are publicly available and visible to prospective buyers, as in general online transactions. Table 1 presents the differences between NFT transactions and online transactions in general.

Table 1. Differences between Online Transactions in General and NFT Transactions

No	Online Buying and Selling	Buying and Selling NFTs
1.	Occurs in marketplaces with regular and centralized servers.	Occurs in marketplaces that use blockchain networks.
2.	Payment methods are provided with various options, either in cash or pay later and using real currency (not digital).	There is only one payment method, ETH cryptocurrency. No pay later is provided.

No	Online Buying and Selling	Buying and Selling NFTs
3.	The object sold is tangible, that is, the object will be received after physical delivery.	Objects exist entirely in digital space and cannot be utilized as they would if they were physically embodied.
4.	Sellers are charged a platform usage fee only.	Sellers or buyers are charged a series of fees to prepare the NFT until it sold, including gas fees and service fees.

Source: Author's Experience as a User on the Platform.

Given that both types of transactions rely on the internet network, it becomes imperative for sharia principles to evaluate NFT transactions. Moreover, the utilization of cryptocurrencies as a means of exchange and the completely virtual nature of objects (NFTs) raise concerns regarding the implementation of these transactions, stemming from potential issues related to fraud and financial losses. However, the existence of smart contracts guarantees the security of NFT transactions. The following section discusses the principles of sharia in commercial transactions.

NFT Transactions in Islamic Law

The Concept of Buying and Selling in Islam

In Arabic, the term "buying and selling" comes from the word "البيع", which means to sell, change, or exchange something for something else. Thus, the word "البيع" simultaneously means "selling" and also means "buying" (Hasan, 2004).

Scholars have provided various terminology definitions, one of which originating from the Hanafiyah scholars, signifying "exchanging property in a certain way" or "exchanging something sought with its equivalent in a specific beneficial manner". According to Hasbi ash-Shiddieqy, buying and selling is a contractual arrangement characterized by "voluntary exchange of assets" (Hidayat, 2020). Imam al-Nawāwī defines buying and selling as "exchanging property for property in the form of transferring ownership rights", not much different from Abū Qudāmah's definition, "exchanging property for property in the form of transferring possession". According to these scholars, "ownership and possession are emphasized" because there are exchanges that do not require ownership, such as leasing.

In Islam, the practice of buying and selling, which is a form of mutual assistance, is deeply rooted in the Qur'an, sunna (the teachings and deeds of the Prophet Muhammad) and ijma' (the consensus of Islamic scholars). Allah Swt. (Subhanahu wa Ta'ala) has stated:

الرِّبَا وَأَحْلَلَّ اللَّهُ الْبَيْعَ وَحَرَّمَ الرِّبَا

"And Allah has justified buying and selling and forbidden usury" (Q.S. Al-Baqarah (2): 275).

Islamic jurisprudence (fiqh) scholars emphasize the legal permissibility of buying and selling. This is primarily because humans are essentially social creatures who depend on one another and cannot survive without helping each other. Therefore, the wisdom of buying and selling can help human survival. However, in certain circumstances, the law of buying and selling can change from permissible to obligatory, according to Imam al-Shatībī.

Pillars and Conditions for Buying and Selling in Islam

Following Islamic sharia, selling and buying must adhere to a valid transaction's essential elements and prerequisites. These fundamental elements and prerequisites must be complied for a sale and purchase to be considered valid. The basic components and conditions must be met since buying and selling represent a contractual agreement (Syaiyfullah, 2014).

According to the Hanafi school of thought, mutual agreement from both parties to the transaction is a requisite for a valid sale and purchase. In Islamic jurisprudence (fiqh), two indicators, known as "qarīnah," signify the mutual willingness of both parties. These indicators take the form of verbal expressions (ijāb and qabūl) and practical actions, specifically the exchange of items (transfer of goods and receipt of money). The majority of scholars divide the pillars of buying and selling into four (Hasan, 2004):

a. Subject of the Deed

Islamic jurisprudence (fiqh) scholars concur that the individual involved in a sale and purchase transaction must accomplish the following conditions:

- 1) Reasonable: Under this stipulation, a child who has not gained the age of reason is not eligible to engage in a sale and purchase transaction. It is deemed void if the child participates in the transaction. The prevailing

opinion among the majority of scholars is that the person conducting the transaction must have reached must have reached puberty and of sound mind. If the person carrying out the transaction is still considered "mumayyiz" (not yet reached puberty), the transaction remains invalid, even if they have obtained consent from their guardian.

- 2) The person conducting the transaction must be a different person. This condition means that a person cannot be both a seller and a buyer at the same time.

b. Object of the contract

The terms of the object being traded are as follows:

- 1) The merchandise must be currently available or, if not, the seller must assert their ability to obtain the goods.
- 2) These items must be usable and beneficial to the individuals. Consequently, the sale of items such as alcohol and carcasses is prohibited, as they are considered to be of no benefit to humans according to Islamic law (sharia).
- 3) The goods must belong to someone, implying that items not yet under ownership cannot be the subject of a sale, such as selling fish in the sea or gold in the ground, as they do not yet belong to the seller.
- 4) The items must be deliverable either at the time the contract is made or at a mutually agreed time in the future.

c. Sighat (Ijab and Qabul)

Mutual consent between the seller and buyer is crucial in Islamic jurisprudence (fiqh). This consent becomes evident during the transaction. Hence, the phrase "ijāb-qabūl" (offer and acceptance) must be clearly articulated to prevent any potential deceit and ensure that both parties are legally bound by it. When "ijāb-qabūl" is formally declared in a transaction, it automatically transfers ownership of the goods and the corresponding monetary exchange.

d. Price or Exchange Rate

The exchange value of an item stands as one of the foremost elements, which is currently referred to as currency or money. Islamic jurisprudence (fiqh) scholars illuminate that the conditions for exchange are outlined as follows:

- 1) The price agreed upon by both parties must be clear.
- 2) Can be delivered at the time of transaction, even if by legitimate means such as payment by cheque or credit card. If the goods are paid for later (debt), then the payment time must be clear.
- 3) If the sale is carried out by bartering, then the goods that are used as a medium of exchange are not goods that are prohibited according to sharia.

NFT Transactions in Financial Accounting

NFTs are formed due to minting activity into the blockchain network and exist on exchanges due to listings (Das et al., 2022). Therefore, NFT is considered intangible asset due to its nature in the digital space and difficult to physically manifest. NFT meets the definition of intangible asset based on PSAK 19 (2010) in paragraph 8, which explains that intangible assets are non-monetary assets that can be identified without physical form.

Understanding comprehensive transactions involving NFT is important to understanding the accounting implications. This involves the inherent terms, entitlements and responsibilities linked to NFTs, along with a clear understanding of what NFT signifies as an asset is essential (Deloitte, 2022). Accounting considerations in NFT may vary according to the interested parties, which can also be seen from several factors, including the following.

Collector's Point of View (Holder/Buyer)

From a collector/holder perspective, NFTs can be considered intangible assets (Deloitte, 2022). Intangible assets according to PSAK 19 (2010). Based on the standard, intangible assets are non-monetary assets without a physical form. Intangible assets are classified as non-current assets that can be utilized in business operations. In that classification, there are goodwill, patents, trademarks, royalties, software and so on. It is parallel to (Accounting Tools, 2021) which states that NFT grant the the holder ownership right over a particular piece of artwork, thus making them eligible to be classified as intangible asset. Like trademarks, NFT is generally considered to have an indefinite lifespan due to its anticipated ability to retain the value over an extended duration, negating the requirement for periodic amortization expenses.

Identification of Intangible Assets Based on PSAK 19

PSAK 19 (2010) explains that an asset is identified as an intangible asset if the object is (1)

separable or distinguishable; and (2) derived from contractual or other legal rights.

Recognition of Intangible Assets Based on PSAK 19

According to PSAK 19 (2010), an entity can select the intangible assets model to be recognized in its accounting policies, either by choosing the cost or the revaluation model. Under the cost model, the entire acquisition cost of the asset is used, subtracting any accumulated amortization (if applicable) and accumulated impairment losses (if applicable). Additionally, the recognition of intangible assets under this model depends on their useful life. Intangible assets with finite useful lives are subject to amortization, whereas those with indefinite useful life are not amortized. An entity shall test an intangible asset with an indefinite useful life for impairment by comparing its recoverable amount against its carrying amount each period and whenever there is an indication that the intangible asset may be impaired.

Creator's Point of View (Publisher/Seller)

Creators or publishers need to consider some factors, including identifying the assets being sold and determining whether the entity is obligated to maintain the NFT or provide alternative goods or continuous services. In numerous instances, revenue recognition becomes a point of deliberation (Deloitte, 2022). The sale amount is recorded as revenue, as there are no pending liabilities associated with the sale, and the selling price may be nearly equal to the related profit, as there will not be many costs associated with the sale (Accounting Tools, 2021).

Revenue Recognition Based on PSAK 23

PSAK 23 (2014) explains that transactions (revenue) can occur if the following criteria are met:

- a. The revenue amount can be accurately calculated.
- b. There is a higher probability that the entity will obtain economic benefits associated with the transaction.
- c. The level of transaction completion at the end of the reporting period can be precisely determined.
- d. Both the costs incurred for the transaction and the costs required to complete the transaction can be precisely quantified.

Revenue Measurement Based on PSAK 23

PSAK 19 (2010) paragraph 9 states that revenue is measured at the fair value of the consideration received or receivable. It means that sellers must subtract any applicable discounts and fees that may apply. The revenue generated from a transaction is typically determined through an agreement between

the entity and the buyer or by assessing the asset's utilization. This amount is calculated as the fair value of the consideration received, minus any applicable discounts.

2. METHODS

This study employs a qualitative exploratory writing method to delve into the phenomenon (Arikunto, 2010). We use descriptive analysis to provide clear, systematic, analytical, critical and objective information about NFT digital assets from the sharia perspective as well as to explain the accounting treatment of related assets. This study relies on the literature review method, which primarily uses documents such as books, journal articles and other works related to the topic (Hadi, 2003; Hadi,

1995). The author also actively participates in NFT platform to gain experience on the researched topic.

3. RESULT AND DISCUSSION

3.1. Results

NFT Transactions in Islamic law

The previous discussion on the concept of buying and selling infers that NFT transactions meet the criteria to be categorized as buying and selling. This is due to the fact that in NFT transactions, there is an exchange of assets or transfer of ownership from the creator to the buyer. Under Islamic sharia, buying and selling must adhere to specific foundational principles and conditions, which are essential prerequisites for a valid sale and purchase. Table 2 outlines the fundamental principles of buying and selling in Islam, all of which must be met and are indeed fulfilled by NFT transactions.

Table 2. Principles of buying and selling in Islam and its fulfillment in NFT transactions

No	Aspects	The pillars	Fulfillment by NFT Transaction	Fulfillment
1.	The subject of the Deed	Reasonable and performed by different persons.	In NFT transaction activities, sellers and buyers must have registered accounts so that sellers and buyers in transaction activities can be ensured to be different parties.	Fulfilled
2.	The object of the contract	The goods exist, can be utilized, owned by someone and can be delivered at the time of the contract.	NFT as a contract object, is a pure substance object because it is in the form of digital file formats such as photos, GIFs, MP3s and MP4s with benefits created by the developer.	Fulfilled
3.	Sighat (Ijab and Qabul)	Willingness between seller and buyer.	The sale and purchase transaction in NFT transactions is embedded with a written agreement, which confirms the purchase and signing of a smart contract on the NFT.	Fulfilled
4.	Price or Exchange Rate	Both parties agree upon the price, can be delivered, and the exchange rate is not forbidden.	All trades through the OpenSea marketplace use the Ethereum cryptocurrency to make transactions. However, the results of the 7th MUI Fatwa Ulama Ijtima held on November 11, 2021 stated that the use of cryptocurrency as currency is haram.	Not Fulfilled

Source: Hasan (2004)

In the context of NFT transactions, the determination of whether a person is "mumayyiz" or "baligh" can be ascertained by assessing the capacity of the seller and buyer to comply with the procedures established by the platform, as well as the regulations of the conventional bank used, which often imply age restrictions for customers. In contrast to "mumayyiz", "baligh" denotes the point at which a person becomes subject to sharia law obligation. "Baligh" is not solely pertained to a person's age; it encompasses a more significant and fundamental level of maturity, referred to as "al-rusyd," which includes proficiency, intelligence and the attainment of physical and mental

maturity, known as "ashuddah" (Umami, 2019). In the book "Kifayatul Akhyar," Sheikh Taqiuddin Al-Hushny emphasizes that in the context of buying and selling, it is essential for both buyers and sellers to possess expertise and competence. Transactions conducted by individuals lacking these qualities, such as fools, children, or individuals with mental impairment, are considered invalid (Hidayat, 2020). Furthermore, sellers and buyers must have registered accounts within NFT transaction procedure. This stipulation ensures that the parties engaged in transaction activities are distinct and verifiable as separate entities. Consequently, it can be deduced that

NFT buying and selling transactions adhere to the prerequisites of a valid sale and purchase contract under Islamic principles.

NFT products are exchanged in a virtual context, yet cannot be utilized when they are physically manifested, such as in a printed form. In this scenario, the subject of the contract is still considered to exist and be tangible, as the buyer does not have to envision the appearance of the purchased item since its form can be observed in the physical world. In addition, NFT as a contract object is purely substantive because it is in the form of digital file format such as images, GIFs, MP3s and MP4s with benefits according to those created by developers such as NFTs from Adidas and NBA which can specifically be used in a game (Noor, 2021). So, the handover of the NFT object is carried out with the protection of a smart contract that signifies confirmation of purchase and proof of ownership of the new NFT object. The existence of smart contracts is also an effort to secure NFT ownership so that it cannot be forged, resulting in fraud. This is because rightful owner fully controls the NFT, and they can be tracked on the blockchain network. Its existence in the blockchain network results in simultaneous delivery of the sale and purchase object along with the occurrence of the contract. According to Islam, NFT sale and purchase transactions have fulfilled the requirements of a valid sale and purchase contract object.

As sellers and buyers do not have in-person interactions, the NFT transactions involve creating a written agreement to formalize the purchase and authenticate the signing of a smart contract associated with the NFT. From the seller's point of view, they want to sell NFT products by uploading the product, setting the offered price, describing the product details and signing a smart contract on the NFT. In NFT trading there is no coercion, and the presence of a cart shows that each party has carefully intended the sale and purchase. According to Islam, the NFT buying and selling transactions have fulfilled the requirements for a legitimate sale and purchase.

In NFT trading transactions, the creator sets the price at the initial stage of uploading NFT product for sale on the platform. Payments are usually in ETH cryptocurrency. Furthermore, an e-wallet account designated for cryptocurrency storage is used during the buying and selling process, facilitating automatic payment processing upon transaction completion. So, the first and second conditions regarding the exchange

rate have been fulfilled in the NFT transactions. The third requirement for exchange value is that the goods exchanged are not haram. All trades through the OpenSea marketplace uses the ETH cryptocurrency. No other payment methods are provided regarding the blockchain network used. Cryptocurrency and NFT both utilize the blockchain network (Noor, 2021). Based on this, the 7th MUI Fatwa Ulama Ijtima (2021) which discussed the law of cryptocurrency, stated that the use of cryptocurrency as currency is haram because it contains gharar, dharar and contrary to Law Number 7 of 2011 and Bank Indonesia Regulation Number 17 of 2015.

Based on Law No. 7/2011 concerning currency, money is the official means of payment issued by the Republic of Indonesia, known as the rupiah. In addition, as outlined in Bank Indonesia Regulation No. 17/2015 regarding the obligation to use rupiah within the territory of Unitary State of the Republic of Indonesia, rupiah is the official currency and is recognized as legal tender throughout the nation. Thus, digital money or cryptocurrency is not a means of payment in Indonesia as determined by the Commodity Futures Trading Supervisory Agency (BAPPEBTI) which stipulates its development, supervision and guidance because it is considered an investment commodity.

Following this, the outcomes of the 7th MUI Fatwa Ulama Ijtima (2021), which took place in November 2021 discussed, among other things, the legal status of crypto currency. The decision states that using crypto currency as a currency is haram, because it contains gharar, dharar and contrary to Law Number 7 of 2011 and Bank Indonesia Regulation Number 17 of 2015. In line with MUI's decision, the Bahtsul Masail Institute of Nahdhatul Ulama Regional Management (LBM PWNU) of East Java, decided that cryptocurrency is not known to have a clear issuer and its technical regulations, thus has the potential to become shadow money that runs parallel to legal tender. According to the LBM PWNU, cryptocurrency does not meet the criteria of *sil'ah* (commodity) because it does not have an underlying value as a treasure and has the potential for gharar and maysir. Based on the explanation above, it can be concluded that NFT transactions cannot fulfill the legal requirements of buying and selling according to Islam because the means of exchange used considered as haram which has the potential to cause gharar and dharar in the transaction.

NFT Transactions in Financial Accounting

Accounting considerations for NFTs can vary depending on the interested parties. This can be seen from two perspectives: a collector/holder and a creator/publisher.

Collector's Point of View (Holder)

From the collector or holder's standpoint, NFT can be categorized as intangible asset, as it meets the criteria for identifying intangible asset outlined in PSAK 19 (2010) regarding intangible assets. These criteria include:

Table 3. NFTs Identification based on PSAK 19

No	Identification according to PSAK 19	Fulfillment of Identification by NFT Purchase
1.	Can be separated or differentiated	Each NFT possesses its digital signature, which transforms the digital work into an NFT. This process ensures the security of the work through a blockchain system that acts as a deterrent against replication and theft. Each NFT digital asset has a unique code, making this asset non-interchangeable.
2.	Derived from contractual or other legal rights	In transferring an NFT object, it is executed with the security provided by a smart contract. This contract serves as both confirmation of purchase and proof of ownership for the new NFT object. The presence of a smart contract serves the additional purpose of ensuring the authenticity of NFT ownership, preventing any potential falsification or fraudulent activities. This is because NFT ownership is entirely under the control of the rightful owner, with usage tracked on the blockchain network.

The subsequent consideration is the recognition model that will be employed to report the value of NFT as an intangible asset. Based on PSAK 19 (2010), two recognition models for intangible assets are available for the company's accounting policies. These models include the cost model, which utilizes the

entire asset cost minus any accumulated amortization (if applicable) and accumulated impairment losses (if applicable), and the revaluation model, which records the asset as its fair value at the revaluation date, also reduced by any accumulated amortization (if applicable) and accumulated impairment losses (if applicable). However, NFT is a digital asset that has no duplication in trading, resulting in the inability to compare the NFT's value based on its market price. So, the revaluation model cannot be used. In sum, NFT is identified as intangible asset, and the cost model is used to measure its value.

If applicable, the measurement of intangible assets under the cost model necessitates a reduction in the asset's value through amortization. According to PSAK 19 (2010), intangible assets with finite useful life are subject to amortization, while those with indefinite useful life do not undergo amortization. NFT, as digital creation, do not have a finite ownership period; in other words, the benefit is not constrained until it released or sold by the holder. Consequently, there is no requirement to amortize the asset value of NFT when classifying them as intangible asset.

When reporting NFT as intangible asset, an entity is obligated to disclose various aspects that differentiate internally generated intangible assets from other intangible assets. These distinctions encompass factors such as whether the assets have indefinite or finite useful life, the method used for amortization, the gross amount recorded, as well as the accumulated amortization at the commencement and end of the reporting period. Furthermore, the entity must provide details of the items included in the income statement and other comprehensive income, as well as reconciliation showing the changes in recorded amounts from the beginning to the end of the reporting period. Therefore, companies acting as NFT holders must disclose in the financial statements, starting from the acquisition of NFT, recognition of the cost model used to the indefinite life of NFT, so that no amortization is necessary.

Creator's Point of View (Publisher)

From the standpoint of a creator or publisher, various factors need to be taken into account. These factors include identifying the asset being sold and determining whether the entity is obligated to provide goods or services on an ongoing basis or retain ownership of the NFT. NFT sales transactions may be recognized as revenue based on PSAK 23 (2014),

which governs revenue recognition, based on the following criteria:

Table 4. NFTs Sales Identification Based on PSAK 23

No	Identification According to PSAK 23	Identification Fulfillment by NFT Sales
1.	The amount of revenue can be measured reliably.	Revenue in NFT transactions that the creator will receive will be set in a smart contract that shows purchase confirmation and proof of ownership. So, revenue measurement can be done reliably.
2.	It is probable that the economic benefits associated with the transaction will flow to the entity.	Each NFT possesses a digital signature capable of transforming digital items into NFTs. Consequently, each NFT digital asset is associated with a non-transferable code. This ensures that ownership and economic advantages tied to the NFT will exclusively benefit the entity, as anyone other than the token holder cannot access or utilize it.
3.	The degree of completion of a transaction at the end of the reporting period can be measured reliably.	There is no settlement period in NFT trading transactions, resulting in NFT being readily available for sale. As a result, the transaction completion rate remains consistently at 100%.
4.	The costs incurred for the transaction and the costs to complete the transaction can be measured reliably.	In the minting process in the OpenSea marketplace, the creator will pay a number of upfront fees, namely, Gas Fee and Service Fee. Gas Fee is a fee charged by the blockchain used. The fees will be listed on the platform so they can be measured reliably.

From Table 4, it can be concluded that NFT sales transactions meets the revenue recognition criteria based on PSAK 23 (2014). According to the standard, revenue is calculated based on the compensation received, subtracted any applicable discounts.

Furthermore, costs incurred during the sale and purchase process must be acknowledged as the cost of sales.

Terms are minting and listing in the process of NFT formation. Minting converts digital assets or works into NFTs or tokens to be placed on the blockchain network (Ghelani, 2022). Assets that have been minted provide a digital mark and can then be listed on the NFT exchange in the OpenSea platform. In the minting process, the creator can use two minting methods, namely regular or lazy minting. Lazy minting allows NFT creator to avoid incurring costs at the time of launching the NFT until the NFT is sold. Lazy minting can help creator save costs because the buyer will cover the costs (gas and service fees). Lazy minting takes advantages of Off-Chain NFT creation, or in other words, the creator is made unofficially on the blockchain until someone buys the NFT (Zhang et al., 2022). The seller will be charged an upfront fee for the minting process and generate a selling price which is entirely the seller's income.

Hence, when recognizing revenue from NFT sales, creator who employs the standard minting method will account for sales costs in the form of gas fee and service charge incurred prior to the actual sale of the NFT. However, if the creator uses the lazy minting method, there are no such fees because they will be paid by the collector/buyer during the sales transaction to the platform.

3.2. Discussion

We are of the opinion that there is no dispute regarding how entities treat NFTs from a financial accounting perspective. This includes treating NFTs as part of digital assets, classified as intangible assets, and how entities should account for them from the creator's perspective. However, further discussion is necessary to find solutions for the "legalization" of NFTs, making NFT transactions halal and legitimate, considering that NFT transactions often involve cryptocurrencies.

From a legal standpoint, we find that the components of NFT buying and selling nearly satisfy the fundamental pillars and conditions required for a valid sale and purchase. However, it is important to emphasize that the legal status of cryptocurrencies remains uncertain, especially in Indonesia, implying that these transactions are not entirely flawless. Furthermore, the pillars and conditions of buying and selling may remain unmet or incomplete, rendering

the purchase and sale of NFT assets, where transactions involve the use of cryptocurrency, impermissible (haram) when the medium of exchange involves something impermissible (haram). In this case, it is not the substance of the NFTs that is haram, but rather the means of transaction, namely cryptocurrency, which contains elements of gharar (uncertainty), dharar (harm), and maysir (gambling), all of which are clearly prohibited in muamalah (Islamic financial transactions). In other words, NFT asset transactions using cryptocurrency are not allowed because there is no clear legal framework for this currency in practice.

Nevertheless, it is undeniable that the emergence of NFTs brings significant potential, particularly for entrepreneurs within the creative industry who can utilize this technology to showcase their creations. Consequently, several countries have already embraced the use of digital currencies issued within their own national jurisdictions. For instance, the United Arab Emirates has introduced a digital currency, BitOasis, which is backed by gold, ensuring that all banking operations adhere to Islamic principles. In another case, an Islamic advisory firm authorized by the Central Bank of Bahrain granted a halal certification to Stellar, a blockchain platform provider based in California. This halal certification covers not only Stellar's blockchain system but also their digital currency products, such as Lumens (Aini, 2023). In Malaysia, HelloGold launched Gold X, a gold-backed cryptocurrency, which has received approval from Islamic clerical authorities at Kuala Lumpur-based Amine Advisors. Transactions involving this Islamic coin occur within a defined period, reducing price fluctuations and addressing the problem of pricing ambiguity (Kusuma, 2020).

Hence, it is imperative for the Indonesian government to promptly establish clear regulations concerning the protection and legal framework for users of digital currencies or cryptocurrencies. This should be done while considering the existing potential and offering public education. Such measures would enable the Indonesian population to benefit from NFTs without infringing upon Islamic law.

4. CONCLUSION

Non-fungible tokens (NFTs) are commodities created through blockchain and cryptocurrency technology. The examination of Islamic law

concerning NFT transactions has led to the conclusion that NFTs are classified as intellectual property rights that can be employed. However, transactions involving NFTs can be invalidated as they use cryptocurrency as the medium of exchange. Cryptocurrency is considered haram due to its elements of gharar and dharar. Nonetheless, the existence of NFTs offers substantial potential. Consequently, the Indonesian government should promptly anticipate enacting clear legislation to safeguard users of digital money or cryptocurrency. This approach would enable Indonesians to reap the advantages of NFTs without infringing upon Islamic law.

Moreover, our analysis of the financial accounting dimension of NFT transactions can be examined from two perspectives. First, from the standpoint of the collector or holder, NFTs meet the criteria of identifiability and reliable measurement as intangible assets. They are assessed based on how the entity acquires and derives benefits from the NFTs. Second, from the perspective of the creator or publisher of NFTs, the accounting policy can adopt revenue recognition principles following PSAK 23.

Given the popularity of digital assets, literature addressing the treatment of NFTs and more general digital assets in financial accounting and reporting practices within entities is limited. This is because entities engaged in NFT transactions are typically private (not publicly listed); thus, their financial information is often inaccessible to the public. Further research related to real case studies will enrich knowledge in this domain. This is particularly appealing given that the results of this study only address the conceptual aspects; in-depth and comprehensive surveys can be conducted, especially in the context of a prominent corporation, regarding the procedures and practices involved in treating NFTs and digital assets in real business cases.

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