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NFT (Non-Fungible Tokens) as an Object of Accounting

Uliana Blinova ¹[0000-0001-5557-4763], Nadezhda Rozhkova ²[0000-0001-8419-8007],
Darya Rozhkova ¹[0000-0002-0500-2908]

¹ Financial University under the Government of Russian Federation

² State University of Management

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Abstract. This paper presents arguments about a need to study a new phenomenon in cyberspace - non-fungible tokens (NFT) as an object of legal relations and an object of accounting. A brief essential characteristic of these objects is given; the market of their turnover, Russian legal norms and accounting standards were studied. The objects of accounting from the Russian Federal Law No. 402-FZ "On Accounting", the criteria of referring to these objects in relation to NFT are considered. Afterward, we outlined the legal and accounting problems associated with the emergence of a new object and the ways for further research.

Keywords: assets, expenses, business transaction, digital assets, copyrights, intellectual property, cyberspace, digital product, token.

1. INTRODUCTION

Currently, in connection with creation of cyberspace, various types of technologies are actively developing. In the Russian national program «Digital economy of the Russian Federation» main steps of digital economy are presented; roadmaps for development of robotics and sensors, neuro technologies and artificial intelligence, wireless communication networks, quantum technologies, distributed registry systems are created. One of the emerging technologies of the technology of the distributed registry is "blockchain". It has begun to be used in many areas of the economy, and scientists and practitioners are actively studying its characteristic capabilities, features, advantages and disadvantages, as well as the main risks associated with the use of this technology [1;2].

In general, blockchain studies are divided into two groups - technology as a tool for creating a new management infrastructure and the creation of digital tools [3].

From a technical point of view, the use of blockchain technology allows introduction of a variety of digital tools. One of them is cryptocurrency; the increase in transactions with it caused the need for research on the methods of use and regulation of legal relations. Also, the concept of "token" has firmly entered to economic practice, the concept of "tokenization" has appeared - the process of creating tokens.

One of the types of non-fungible tokens are NFTs (non-fungible tokens) [4]. The emergence of this object and transactions with it causes a lot of legal and accounting problems. In particular, along with the existence of an active market for such tokens, its legal status is not clear, business practices have not been formed in Russian and international practice, and the process of their accounting and taxation has not been standardized. Russian legislation lacks not only mechanisms of legal regulation, but also basic definitions. Based on the essential characteristics of the NFT, it also becomes difficult to classify it as an object of accounting and related accounting methods. In order to outline ways to solve the problems that have arisen, it is necessary to consider the essence of NFTs, their regulatory and legal regulation

and belonging to accounting objects enshrined in current Russian and international accounting standards.

2. LITERATURE REVIEW

Digital economy has become a new structure of the economy, replacing the post-industrial one. The digital economy refers to a number of economic activities using digital knowledge and information as key factors of production, and society is a qualitatively different "cyber-physical", in which information and communication technologies play an important role, communication services as a key driving force the forces of increasing efficiency and optimizing the economic structure.

Certainly, digital knowledge and information have become a new factor of production and services. It is clear from the historical experience of economic development that as long as the economy undergoes major changes, new factors of production will appear. In the era of agriculture, land and labor were the most important factors of production. In the era of the industrial economy, capital and technology came to the fore. In the era of the digital economy, digital knowledge and information have become key production factors.

An important aspect is the development of digital infrastructure in order to promote economic growth [5;6;7]. The construction of digital infrastructure includes not only the digital upgrade and transformation of traditional information infrastructure, but also the new construction of several digital network infrastructures, such as big data centers, digital universities, Internet of Things, cloud computing, smart terminals, the Internet, autonomous driving and so on [8;9].

The emergence and development of the digital economy as a new paradigm of economic development has a significant impact on accounting [10;11;12].

Firstly, management accounting data is changing, there is a transition from "small data to big data". Previously, management accounting mainly used internal accounting data for planning, control, decision-making and analysis, and the type of data and collection channels were relatively uniform for all enterprises. Now, a managerial accountant has to develop skills in working with big data.

In the era of the data economy, external data sources are more extensive, the volume of information is large and relatively easy to obtain, accounting is gradually moving away from traditional data, analyzing the available "big data". At the same time, the main challenge is the problem of effectively identifying and using the necessary data to improve the performance of the enterprise. This is also confirmed by practical data. According to an analysis conducted by HABR and MTS, in 2020, approximately 50% of Russian IT companies use big data mainly to increase profits and improve infrastructure. At the same time, 68% of respondents claim that the need to use big data depends on the type and size of the company.

Secondly, there is a transformation of the role of accounting: from "accounting to management" [13]. Traditional management accounting has paid attention to the functions of accounting and control, as a result accounting activities are mainly organized and carried out by the finance department, without integrating management accounting activities into business activities and without reflecting its management value. Many Russian practices confirm that the managerial function of management accounting is increasingly being strengthened, and the "accounting function" is gradually decreasing due to automation and the use of ERP systems (for example, 1C).

Thirdly, there is an expansion of the scope of management accounting: from partial management to full management of the value chain.

The entities served by traditional management accounting mainly include the board of directors and management personnel at all levels. In accordance with the requirements of users of management accounting information and relevant

management units, providing them with the necessary information data, as well as assisting the relevant units is carried out within the enterprise in planning, monitoring and evaluation.

Fourth, the transformation of management accounting functions from extensive to intensive management. Thus, the integration of management accounting and business management continues in order to more fully and efficiently perform their functions. In the context of digitalization, management accounting can provide more accurate and reliable decision support for business management in order to reduce the operational risks of the enterprise and increase the value of the enterprise. To achieve this goal, it is necessary to establish a scientific and efficient management accounting information system, and the digital economy era provides a sufficient database and real-time update guarantee to create a system that can speed up the construction of management information system.

Consideration of the essence of NFT shows that it is a special digital product encrypted with cryptographic techniques that can be sold on a digital platform in cyberspace. The token is considered to be unique; it is almost impossible to counterfeit, split or replace with another similar product. This approach involves the consolidation of certain rights to a digital object, although now it is not entirely clear how these rights are regulated. This new and rather active trend in cyberspace is already changing the art and collecting art market, and its application in the future may be the basis for the emergence of a new asset class.

On one of the largest digital NFT marketplaces - opensea.io, where these objects are traded, NFTs are classified by type. These are digital art, collectibles, virtual reality items, crypto domain names, ownership records for physical items. [14]. For example, in the "Art" section, you can view and purchase a digital image of paintings by artists, any digital artwork; in the "Virtual Worlds" section - digital land plots, a virtual home. It is possible to purchase "mixed" works containing digital audiovisual objects enhanced with software elements. In Fig. 1 we present examples of trending NFT (on the date of June 2023), taken from opensea.io.



Trending in gaming



Trending in memberships



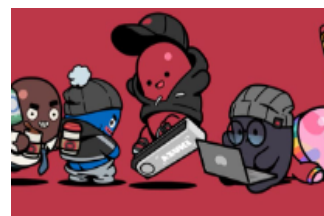
Trending in music



Trending in photography



Trending in art



Top collector buys

Fig. 1. Example of NFT [14].

For each NFT, the following information is provided: name; the date of placement and the period after which transactions with this object are terminated, the initial cost (in the current currency and digital currency - ethereum) [15]; a brief description of the object and the subject that placed the object. The digital product itself is also posted [14]. It should be noted that now the economic nature of the NFT contradicts its legal status, since from a legal point of view this object is informal. There is no concept of a non-fungible token in the Russian legislation.

In the formed cyberspace, based on modern technological tools, legal conflicts have appeared that do not allow resolving emerging conflicts. Cyberspace is characterized by a networked nature of functioning, non-linearity and multidimensionality, volatility [7], as well as significant decentralization and the presence of special institutional structures, the activities of which should fall within the legally regulated field.

However, there is a backlog in the creation of legal systems that regulate both global legal processes in cyberspace and local ones. Digital relationships are not regulated on a global scale, but at the level of specific countries. Along with the proliferation of activities that are not legally developed and regulated, there is an increasing need to create the necessary regulatory framework. NFT just refers to such objects that are currently recognized by a large number of people in cyberspace but are not formalized in the law. This imposes many restrictions on the NFT as an object of legal relations and an object of accounting.

3. DATA AND METHODOLOGY

In this paper we have analyzed the current legislation about NFT in Russia as well as Russian accounting standards.

4. RESULTS

By their economic nature, NFTs are close to the concept of «works of art», the copyright relationship of which is regulated in Chapter 70 of the Civil Code of the Russian Federation (CC RF). In addition, other legislative documents are used that regulate the creation and attribution of an object to a «work of art». On the one hand, NFT can be recognized as an object of copyright. This digital product can be conditionally attributed to works of science, literature and art (depending on their types); it is an independent result of the author's creative work and falls under the indication in the Civil Code of the Russian Federation of the form of its expression in the form of an image, sound or video recording, or in a three-dimensional form. For example, the Civil Code of the Russian Federation also specifies copyright, similar in meaning to NFT, to computer programs and the audiovisual displays generated by it, and the rights to an audiovisual work.

In addition, it is important that in order to have copyright, it is not legally required to register an object or follow any other formalization procedures. In addition, NFTs are based on the principle of non-fungibility, the uniqueness of each token. Uniqueness is ensured by the use of Colored Coins and Counterparty technology, the introduction of a special add-on to the blockchain protocol, which makes it possible to assign an individual crypto-record to identify an object.

However, when creating such a token, many issues arise related to the presentation of proof of authorship (NFT transactions are carried out in cyberspace and verification technologies are difficult for the user); risk of infringement of intellectual property by others.

At the same time, it cannot be said that the regulation of legal relations in Russian cyberspace is not developing. In recent years, the legal field has been expanded by changing existing regulatory legal acts and adopting new ones. For

example, the concept of “digital rights” has appeared in legislative practice (Article 141.1 of the Civil Code of the Russian Federation, Article 1, Clause 2 of the Federal Law “On Digital Financial Assets, Digital Currency and on Amendments to Certain Legislative Acts of the Russian Federation” No. 259- FZ), as well as a number of draft laws regulating the taxation of digital assets and the liability of entities in cyberspace.

However, under the current legislation, it is difficult to recognize NFT as a digital financial asset, since this token is not a digital currency and does not give rise to claims like securities. Let's assume that NFT is a certain combination of the right and the presence of the object itself. Therefore, to identify NFT objects, they can be perceived as a right to an object of intellectual property and other property. Those in the legal identification of this digital product, provisions related to intellectual property rights and rights in rem may apply. Let's apply this thesis to classify NFTs and make the token belong to a certain class of accounting objects.

In Art. 5 of the Federal Law "On Accounting" No. 402-FZ, a list of the main objects of accounting is given. Let us limit the consideration of the essence of NFT to three objects: the fact of economic life, assets, expenses and other objects, since its economic meaning does not allow us to rank it among other accounting objects identified in the law (income, liabilities or sources of financing activities). In the same legal act, the concept of the facts of economic life is given - as transactions, events or operations.

The concept of a transaction is reflected in Art. 153 of the Civil Code of the Russian Federation. This is a kind of action aimed at establishing, changing or terminating civil rights and obligations. That is, the concept of a transaction is interpreted as a process, and not the presence of an object, as is the case with NFT.

A similar approach is applied to events, although the current accounting legislation does not contain a definition of a business transaction. Operations carried out by organizations in the course of their activities were previously singled out as an object of accounting on the basis of Art. 1 of the Federal Law of November 21, 1996 No. 129-FZ “On Accounting”. Also, accounting methodology distinguishes four types of business transactions. In fact, business processes and business operations are closely related; Business processes in accounting are a set of business transactions.

The concept of an asset is given in several legislative acts. The Accounting Framework incorporates the concept of an asset based on the likelihood of obtaining economic benefits or, as explained in the following articles of the concept, the ability to establish cash inflows. IFRS states that it is not necessary to determine how likely it is for an entity to obtain economic benefits from an asset; it is enough to determine its potential possibility, and it is also necessary to determine the “controllability” of the object. In addition, the value of the asset must be measured with a reasonable degree of reliability. The Concept also defines the conditions under which it is believed that the asset will bring economic benefits to the organization.

For the recognition of expenses, certain criteria are also used (according to Russian Accounting standard 10/99), which are based on legal justification (features of civil law relations) and economic approaches (obtaining economic benefits).

In terms of economic benefits when using NFTs, it is impossible to reliably refute the thesis about its potential absence. Tokens can become the subject of sale and resale, with a value higher than the book value; used by organizations to generate income in the form of a kind of gallery exhibitions, as an advertisement for products (works, services), press releases, logos, etc.

The NFT market is now actively developing; there are also cases when NFTs are created and sold for quite significant amounts. In 2021, calendar week sales amounted to \$500,000. There is also a secondary market for NFTs; at the beginning of October 2021, 105189 such transactions were registered. For comparison, the same date in 2018 - 5577 transactions; an 18-fold increase compared to the current periods, which indicates a significant and positive dynamics of the market for such

tokens.

A separate issue regarding the classification of NFTs as an accounting object is a reliable determination of the value of assets [16].

The market approach to determining fair value adopted in IFRS is rather difficult to use, since, on the one hand, tokens are unique, on the other hand, there are a huge number of their types and the determination of their value will not meet the criterion of reliability.

The income approach, like the cost approach, is even more difficult to apply; it is problematic to take into account future cash flows from the use of such a specific object at present or to determine the costs of purchasing a similar object due to the uniqueness of NFTs.

Another difficulty is that NFTs are often purchased in an auction format or at a fixed price; the cost is indicated in cryptocurrency, the accounting of which is also not standardized. When applying the criteria of Russian accounting standard 10/99 "Expenses of the organization" to this object and the proposed attribution of NFT to expenses, some problematic points also arise. In particular, the legal difficulties of recognizing this type of object, the definition of copyright and other legal aspects mentioned above make it impossible to apply the criterion related to contractual practice and business customs. Despite the activity of transactions on platforms such as OpenSea, Rarible, SuperRare and NiftyGateway, it is too early to talk about the practice of using such tools and the presence of significant legal succession in cyberspace.

In Art. 5 of the Law "On Accounting" are indicated as an object of accounting and "other object". The wording of such objects is limited to the phrase "established by federal standards". However, at present, accounting for such objects as NFTs is not regulated.

5. CONCLUSIONS

In general, in the study of legal and accounting standards related to NFTs, the market for these objects, the following was revealed.

Currently, there is an active introduction of digitalization in all areas of the economy, and the accounting methodology should be changed. However, there is a significant lag behind the established practice, the presence of a market for new digital products. Relations developing in cyberspace, the emergence of new tools and technologies raise many questions that are not reflected in the legislative regulation of accounting processes. In cyberspace, the market for non-fungible tokens - NFTs - is actively developing. With significant volumes of transactions, their legal regulation does not meet the current realities of the information society.

When identifying NFT as an accounting object, partial or complete impossibility to attribute it to specific accounting objects specified in federal accounting standards is revealed.

It is necessary to develop a comprehensive methodology for accounting for such specific digital products as NFT, and its regulation both at the level of federal standards and in the accounting standards of the organization.

At present, the rules and management of NFTs in Russia are not completely clear, and there will be new laws and regulations in the future, which will continue to be implemented and improved with the development of the industry. From a technical point of view, as a specific application of blockchain technology, the development of NFTs is indeed of great importance in enhancing the innovation of digital works, protecting intellectual property rights, etc., and provides an efficient communication and trading platform for lovers of art collections. However, given the characteristics of blockchain technology, combined with its respective characteristics and close association with various products such as works of art, commodities, financial

products, and cryptocurrencies, the formulation of regulatory laws and regulations in this area is undoubtedly very complex.

To summarize, in the current realities, an important aspect is the creation of effective systems of legal supervision that can ensure the viability and development of the NFT market, as well as minimize financial risks. In addition, the policy of stimulating the development of the trade industry (including resale) of digital assets is a priority.

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Published online by ICS two times a year since 2020, Journal of Digital Art & Humanities (JDAH) is an international peer-reviewed journal which aims at the latest ideas, innovations, trends, experiences and concerns in the field of the arts & humanities. Our journal bridges the humanities, artistic, and scientific disciplines. It is a nexus for information exchange among academia and industry addressing theory, criticism, and practice.

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