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Digital Assets: Legal Regulation and Estimation of Risks

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Keywords

Bitcoin,
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cryptocurrency,
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risk,
token

Abstract

Objective: to substantiate the need to create a universal mechanism of legal regulation of digital currencies and tokenized assets, based on a uniform categorization of digital assets and the author's interpretation of the conception of digital assets risk, in order to ensure their safe circulation with legal means and effective development of the global digital economy in the future.

Methods: the research was carried out with a combination of cognition techniques of various levels: from philosophical to private scientific; the key position among them belongs to a systemic approach, a comparative legal method and a formal-juridical analysis of normative materials.

Results: the present research lays the conceptual basis for building a global system of legal regulation of digital assets circulation and facilitates identifying and resolving the key issues, necessarily emerging in the analysis of the current mechanisms of legal regulation at national level and in the estimation of various types of digital assets.

Scientific novelty: consists in a comprehensive consideration of the essence and features of the legal nature of various types of digital assets, possessing, alongside with significant advantages, high risks from legal and financial viewpoints. Based on contradictory approaches and revealed gaps in the legal regulation of various types of digital assets, the author proposes a uniform categorization of digital assets, substantiates the concept of digital assets risk, attempts to substantiate the need to create a universal mechanism of legal regulation of digital currencies and tokenized assets, which would allow forming an effective system of means to protect property right to them and ensure safety of their circulation.

Practical significance: is due to the current absence of a unified approach and a possibility to apply the existing legal norms in relation to innovative digital assets, taking into account their specificity, despite their trans-border character. The main provision and conclusions of the research can be used to improve the mechanisms of legal regulation of digital assets circulation.

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Contents

Introduction

In the recent decades, the global financial system demonstrates a trend for complication. Economists define this complication a larger diversity of new financial tools and types of financial mediators. The intricate web of bits and bytes, which the modern financial system represents, is underlain by the possibility to exchange and transfer capital between various participants of economy. Lendees, creditors, investors and entrepreneurs form, essentially, four corners of a square. Until recently, the state, being on top of this four-cornered pyramid, regulated the functioning of all subjects at its base. However, with the emergence of digital assets, the possibilities for such regulation have dramatically decreased. The reaction of states to such changes varies greatly (Hendrickson & Luther, 2021), as achievements if the sphere of digital technologies and distributed ledger technologies for financial services, which led to a sharp growth of digital assets markets, have profound consequences in possibilities to protect consumers, investors and business, including data confidentiality and safety, financial stability, national security, consequences of criminal actions, etc.

The current practice shows that the approaches of countries (Gonzálvez-Gallego & Pérez-Cárceles, 2021), based on attempts to ignore the existing trends and emerging problems, just aggravate the situation in their financial system. Much more positive is the approach which allows creating systemic legal regulation at intra-state levels, harmonized with the international standards currently elaborated. Such regulation should be aimed at preventing large-scale risks for the population, economy and financial system of states, emerging due to the use of digital assets. Ideal goals of such regulation in the sphere of financial technologies and cryptocurrencies lie in promoting innovations, protecting market integrity and providing an optimal level of clarity in the market, although regulators often fail to achieve all three goals at a time (Yadav & Brummer, 2019). This is due to the fact that initially digital decentralized systems were created to avoid such regulation and control and to exclude state bodies and banks from their contour of “monetary” circulation and commitment of transactions and rights.

1. Essence and features of the legal nature of digital assets

1.1. Blockchain technology as the basis for building a digital ecosystem

Digital assets function as a part of a complex and interdependent digital ecosystem. The ecosystem is based on a blockchain – a type of a distributed ledger where transaction are registered, participants making deals with each other and decentralized applications. Blockchain technology is a radical innovation which may challenge or even replace the existing business models relying on the trusted third parties (Beck & Müller-Bloch, 2017).

The blockchain concept was introduced in 2008 with the issuance of "Bitcoin" document[1] and during the first years was used as a technology underlying cryptocurrencies. However, as it was not fully programmable, in 2014 the second generation of blockchains was presented, which allows programming and executing software – the so-called smart contracts – at all participating nodes of a blockchain. Most popular among them is Ethereum, which, like other blockchains of smart contracts such as Solana, Terra, BSC, allows renting one's blockchain (storing smart contracts and transactions) and one's virtual machine (necessary for reading and executing smart contracts) out to projects wishing to use the decentralized finance (further – DeFi) without the need to support the blockchain infrastructure (Hugo & De Quenetain, 2022). DeFi is a new form of financial applications, consumer-oriented and consisting of smart contracts deployed on a blockchain technology without licenses (Jensen et al., 2021). Hence, any user obtains an opportunity to create and introduce software with the common global infrastructure[2].

Today, legal regulation of blockchain in different countries is developing in completely different ways. Immediate state-level large-scale regulation of decentralized finance markets, which are still at an early stage of maturity, may lead to regulation errors and frequent changes in legislation, currently observed in a number of states. Moreover, many decentralized finance products poorly fit the existing system of financial regulation of many countries (Ozili, 2022). However, given that the problems of decentralized finance regulation have acquired the global character, it appears necessary to coordinate the efforts of regulators to create the rules and procedures of their circulation, under the aegis of a global institute of finance management embodied in the International Monetary Fund, Financial Action Task Force (further – FATF), Basel Committee on Banking Supervision, International Organization of Securities Commissions.

1.2. Essence and classification of digital assets functioning on the distributed ledger basis

Digital assets are digital representations of any types of assets, securities, rights, currencies or accounting unit, registered in a distributed ledger such as blockchain. There is no common system of categorization of digital assets, which is a serious obstacle for regulation and management of digital assets, often existing in the international and multi-jurisdiction

1 Nakomoto, S. (2008). Bitcoin: *A Peer-to-Peer Electronic Cash System (White Paper)*. The official site of the United States Sentencing Commission. https://www.ussc.gov/sites/default/files/pdf/training/annual-national-training-seminar/2018/Emerging_Tech_Bitcoin_Crypto.pdf

2 Buterin, V. (2014). A next-generation smart contract and decentralized application platform. *White Paper Journal*, *3*. https://scholar.google.co.kr/citations?view_op=view_citation&hl=en&user=DLP9gTAAAAAJ&citation_for_view=DLP9gTAAAAAJ:IjCSPb-OGe4C; Wood, G. (2017). Ethereum: a secure decentralized generalised transaction ledger. *Ethereum Project Yellow Paper*, 1–32. https://membres-ljk.imag.fr/Jean-Guillaume.Dumas/Enseignements/ProjetsCrypto/Ethereum/ethereum-yellowpaper.pdf

environment. Classification of digital assets must depend on their nature and essence, i. e. be in compliance with the rights and obligations they impose on their owner, as well as on their main economic purpose and function of the asset. Changing the form of an asset does not necessarily change its juridical essence, but may lead to an emergence of new mechanisms of creating, storing, delivering and transferring of the asset, entailing legal consequences. This is easily demonstrated by the example of a digital bond: though the asset nature is preserved, the digital form may influence the way of its transfer, hence, entail other legal consequences[3].

1.2.1. Differences of digital assets from other non-material assets

Unlike other non-material assets based on internal electronic accounting systems (for example, unrealized shares), the key characteristics of the "new" digital assets under analysis are the following:

a) expandability: rights and obligations may be directly coded in the assets and executed automatically;

b) controllability with cryptographic keys: the cryptographic keys are necessary to access the assets and sign transactions to initiate the assets transfer;

c) compatibility: digital assets may, with the exception of artificial restrictions, freely circulate within the system in which they were issued, and interact with other digital assets existing in the same frameworks.

1.2.2. Classification of digital assets

Given all the correlations of notions used by the Russian legislator and common in IT, digital assets are virtual assets, i. e. assets created directly in distributed ledgers, and tokenized assets existing in real terms, the right to which are placed in the digital environment. Such classification is important, first of all, to determine the legal status of each and the probable measures for the users' legal protection. However from the viewpoint of international approach, digital assets are most often classified into tokens; within this classification it is rather difficult to distinguish criteria to correlate the foreign terminology with the Russian one.

In some foreign states there are also contradictions, despite the existence of an established classification of tokens; de facto the same tokens may be considered utility tokens in one country and investment tokens in another. This leads to an imbalanced protection of citizens participating in the circulation of digital assets in various jurisdictions.

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[3] Allen, G. J., Rauches, M., Blanding, A., & Bear, K. (2020). *Legal and Regulatory Considerations for Digital Assets*. Cambridge Center for Alternative Finance. https://www.jbs.cam.ac.uk/wp-content/uploads/2020/10/2020-ccaf-legal-regulatory-considerations-report.pdf

The global system of legal regulation of the digital assets circulation may, at least, lay the unified terminology, the bases of a uniform classification, stemming from the range of rights and obligations provided by certain digital assets. Hence, adhering to such conception, it would become possible to create common mechanisms of legal protection of the participants of legal relations in the sphere of digital assets circulation. Undoubtedly, states may create their own legal mechanisms to regulate aspects of circulation of certain digital assets, but, given their trans-border character, a unified foundation is necessary anyway.

Non-fungible tokens (further – NFT) should be considered separately. NFT is a new type of unique and atomic tokens based on blockchain. Originating as an artistic/gaming experiment, NFT generated a new form of entrepreneurship in the virtual world, having great advantages and possibilities (Chandra, 2022). They differ from other digital assets, such as tokens and coins, in being inseparably connected to the basic asset. Each NFT is unique; it cannot be divided or united[4]. NFTs are mainly used to confirm the property right to physical assets (luxurious goods, cars) or digital goods (virtual game assets, digital works of art or software licenses)[5]. Such tokens are regularly exchanged by users to confirm that the assets, uniqueness of which is hard to prove (for example, digital images), are owned on an exclusive basis[6].

While fungible tokens made it possible to create new scenarios of use, like primary offers of coins, the potential of NFT as a valuable component is still unclear. Form the legal viewpoint, there are no unified legal standards to answer the question: what an NFT holder actually owns – the basic asset, its share, or just a right to intellectual rights to it. If it is the right to intellectual rights, then it is necessary to define the amount of restrictions imposed on them. Some positive changed have occurred recently – for example, courts in Singapore and England recognized NFT to be a property (Mezei, 2022), which may be protected with an injunction and a freezing order.

4 Voshmgir, S. (2018, September 23). *Fungible Tokens vs. Non-Fungible Tokens*. https://medium.com/token-kitchen/fungible-tokens-vs-non-fungible-tokens-69871b0e37a9

5 Griffin, J. (2018, April 12). *Software licences as non-fungible tokens*. https://medium.com/collabs-io/software-licences-as-non-fungible-tokens-1f0635913e41

6 Bella, Giampaolo, Cantone, Domenico, Longo, Cristiano, Asmundo, Marianna Nicolosi, & Santamaria, Daniele. (2021). *Blockchains through ontologies: the case study of the Ethereum ERC721 standard in \ ONT{} (Extended Version)*. https://www.researchgate.net/publication/354435217_Blockchains_through_ontologies_the_case_study_of_the_Ethereum_ERC721_standard_in_ONT_Extended_Version

1.3. Features of building a legal system of regulation of tokenized digital assets in the Russian Federation

Tokenization promotes financialization of an asset by creating a bridge between the asset and its digital avatar (i.e. token). Actually, the main advantages of tokenization are directly associated with the advantages of distributed ledger technology (further – DLT). That is why the increased efficiency, liquidity (Chokor & Alfieri, 2021) and transparency are, probably, one of the most often mentioned advantages of tokenization of assets and securities.

In an attempt to regulate the circulation of such items, the Russian Federation, stemming from the traditions of building a legal system in this country, went its own way, renaming a token for "digital right". Essentially, it is not a new object of right, but, just as a token, is a new form of fixation of the existing rights.

Adhering to elaborating a unified terminology within the current legislation, one may assert that the rights to objects of civil rights, certified with tokens, being digital rights, may be protected with civil-legal means and at the same time, in case of infringement upon them, may be recognized as objects of theft in criminal law. Below we correlate the existing tokens with digital rights in compliance with Article 141.1 of the Civil Code of the Russian Federation (further – CC RF)[7].

The Federal Law of August 2, 2019 no. 259-FZ (ed. of July 14, 2022), w.e.f. January 1, 2020 "On procuring investments using investment platforms and on making changes in certain legislative acts of the Russian Federation" introduced the notion of utility digital rights[8]. They were supposed to be an exact copy of utility tokens. However, by implication of law, the latter may be equaled to utility digital rights only if created on the platform complying with all the standards of the said Federal Law. If a company in any corner of the world refuses to make the changes required by the Federal Law of the Russian Federation, than the rights of a person possessing tokens within such digital platform are not subject to protection in the territory of the Russian Federation.

According to the Federal Law of July 31, 2020 no. 259-FZ (ed. of July 14, 2022) "On digital financial assets, digital currency and on making changes in certain legislative acts of the Russian Federation", another type of digital rights in Russia are digital financial

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7 *Civil Code of the Russian Federation (Part 1). No. 51-FZ* (1994). https://online3.consultant.ru/cgi/online.cgi?req=doc&ts=uk1c5ETWXNyahdpr&cacheid=C3BA75257675D5072BCC4E7ECE908376&mode=splus&rnd=bEJ38g&base=LAW&n=410306#AN2c5ETP7HDTbfU6

8 *On procuring investments using investment platforms and on making changes in certain legislative acts of the Russian Federation.* No. 259-FZ. (2019). https://online3.consultant.ru/cgi/online.cgi?req=doc&ts=uk1c5ETWXNyahdpr&cacheid=3574F9E534E3295CF57286D2146F42E7&mode=splus&rnd=bEJ38g&base=LAW&n=422183#giik5ET2GqHWqfYA1

assets[9], i. e. investment tokens. They may be represented as monetary claims to the emitter or as a right to participate in the capital of non-public joint stock company and rights to emission securities, including the transfer demands.

Today, the Bank of Russia has registered three platforms entitled to issue such assets: Atomyze, Sberbank and Lighthouse. Bur provision of deals with digital financial assets (exchange, purchase, sale, redemption) may only be performed by the companies from the exchange operator register, which will be kept by the Central Bank of Russia. However, not a single exchange operator is included into the register.

Rather doubtful is also the position of a legislator expressed in the explanatory note to a law draft of March 26, 2018 no. 424632-7 "On making changes in Parts 1, 2 and Article 1124 of Part 3 of the Civil Code of the Russian Federation". It says that digital rights should be regulated as "an element important for economy", while "bonuses, virtual items, etc. should not, as they do not possess a substantial significance for economy"[10]. In case of bonuses, these are so-called bonus tokens. Recently, marketplaces are gaining popularity, which use such tokens instead of loyalty scores. Thus, a loyalty card cannot be lost and Internet platforms obtain an opportunity to tokenize their business using all the advantages of blockchain technologies.

There are also donation tokens – just scores without any obligations or functional load. They are awarded for donations to a project.

One may conclude that a part of utility tokens, bonus tokens and donation tokens are not referred to the category of digital rights by a legislator, which is rather odd, given that the explanatory note to the said law draft of March 26, 2018 no. 424632-7 introduces the basic notion of "digital right" instead of the term "token" in its modern sense of a cipher, possession of which provides certain opportunities in the web[11].

Assumingly, such decision is due, inter alia, to the fact that bonus tokens and donation tokens do not grant access to the blockchain functional and do not provide a proprietary right to anything, that is why a legislator excluded the when constructing the notion of a "digital right".

A scrupulous examination allows saying that the approach of the Russian legislator is similar to the international one. Most close to the classification of "digital rights" introduced into the Russian legal system is the classification of tokens elaborated

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9 *On digital financial assets, digital currency and on making changes in certain legislative acts of the Russian Federation.* No. 259-FZ. (2020). https://online3.consultant.ru/cgi/online.cgi?req=doc&ts=uk1c5ETWXNyahdpr&cacheid=E14508391CB5EC1A9DF3236C4497BB05&mode=splus&rnd=bEJ38g&base=LAW&n=422194#bKfe5ETZtZtV2pdS

10 *Explanatory note to a law draft no. 424632-7 of March 26, 2018 "On making changes in Parts 1, 2 and Article 1124 of Part 3 of the Civil Code of the Russian Federation".* (2018). https://sozd.duma.gov.ru/bill/424632-7?ysclid=l6ncm2y5pu318025418

11 *Ibid.*

by the US Securities and Exchange Commission (further – SEC) and Swiss Financial Market Supervisory Authority (further – FINMA). The integration between the FINMA position, aimed at evaluating the economic function of token, and the SEC one, based on the evaluation of the degree of a token's relatedness to securities, allowed classifying them into payment tokens, or cryptocurrencies, asset tokens, or investment tokens (security tokens), and consumer (utility) tokens (Rozhkova, 2020).

Virtual assets include cryptocurrencies (digital currencies, according the Russian legislation) and other payment tokens, tokens created through ICO (Initial Coin Offering – an offer of digital tokens or coins using blockchain technology (Zetzsche et al., 2018)). The harmonization of the Russian legislator position with the global trends can be also seen in which cryptographically protected digital ICO assets an emitter may sell:

A. Cryptocurrency – a financial tool using modern ciphering for checking and protecting online transactions, which can be used in payment of deals with any person ready to accept it (Kopaliani, 2022). Such digital assets function via a unique distributed ledger and form an integrated payment system with it. A unit of such cryptocurrencies is a coin.

B. Investment token, which is a standard security registered and exchanged in a blockchain to reduce transaction costs and to create a record of the property right (at that, the basic assets may vary from goods to currencies, real estate and even corporate share). They entitle the owner to participate in the emitter's future incomes and in some cases to vote or have other participation rights[12].

C. Utility token, which gives its owner consumer rights to an access to a gods or service.

That is, donation tokens and bonus tokens are tool to collect money in crowdfunding but not in crowdinvesting.

1.4. Regulation of ICO market

Considering a token within an ICO, it should be estimated exclusively as a means of investing, while further circulation of such tokens requires elaborating separate regulations. Funding for business projects is raised through issuance and placement among an unlimited range of investors of own digital asset tokens in exchange for liquid cryptocurrency[13], which may in the future be converted into "fiat" money. At that, potential risks for investors are maximally high (Hsieh & Brennan, 2022). They may lose their assets both due to an unfavorable financial

[12] European Parliament. (2021). *Briefing "Understanding initial coin offerings. A new means of raising funds based on blockchain"*. https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/696167/EPRS_BRI(2021)696167_EN.pdf

[13] Aksakov, A. (2017, December 9). *The notion of "token" may be defined in legislation*. State Duma Committee on financial market. https://komitet2-12.km.duma.gov.ru/Novosti-Komiteta/item/14060239?ysclid=l6vd095wkt214089722

situation, for example, as a result of a startup failure, and due to illegal action of emitters, for example, fraud, when the money procured are used not only for the purposes of the project development.

The Federal Law of August 2, 2019 no. 259-FZ does not stipulate the possibility to make investments via cryptocurrencies, although admits it in general[14]. In this regard, the absence of due legal regulation leads to emitters choosing for ICO projects foreign jurisdictions with a transparent legislative position and favorable taxation regime. But foreign states also attempt to regulate and secure the ICO market. Analysis of the US judicial practice shows that the US courts recognize some payment tokens as securities, striving to extend the current legal regulation on them. At the same time, they specify that investing money into a cryptocurrency used by the members of a decentralized community functioning via blockchain technology which is governed by the same community, not an integrated enterprise, will hardly be considered a security in compliance with the well-known test explicated in S.E.C. vs W.J. Howey Co., 328 U.S. 293, 298-99 (1946)[15]. However, in some cases, when emitters try to avoid the US federal laws on securities by marking their product as cryptocurrency or a digital token, such actions are considered illegal and emitters are obliged to return the money to investors. For example, Telegram and TON selling 2.9 billion Grams to 175 buyers for US$ 1.7 bln is a part of a larger plan to distribute these Grams in the secondary public market. Taking into account the economic realities in compliance with Howey test, the US court found that, in the context of this scheme, resale of Grams in the secondary public market is an indispensible part of selling securities without an obligatory registration statement[16]. When solving the question of whether a digital asset is a security, SEC compares it with an "investment contract"[17], which implies "a wide range of multilateral investment relations"[18] (Jackson, 1999). If a digital asset is expressed in a code, then accompanying facts and circumstances, including the means of its distribution, may indicate investment activity (Goforth, 2021). Some digital assets based on blockchain are considered to be goods. An example is cryptocurrencies, which serve as a means

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14 *On procuring investments using investment platforms and on making changes in certain legislative acts of the Russian Federation*. No. 259-FZ. (2019). https://online3.consultant.ru/cgi/online.cgi?req=doc&ts=uk1c5ETWXNyahdpr&cacheid=3574F9E534E3295CF57286D2146F42E7&mode=splus&rnd=bEJ38g&base=LAW&n=422183#giik5ET2GqHWqfYA1

15 SEC v. W. J. Howey Co., 328 U.S. 293 (1946). https://supreme.justia.com/cases/federal/us/328/293/

16 United States District Court against Telegram Group Inc. and Ton Issuer Inc. Southern district of New York, 1:19-cv-09439-PKC. (2020). https://cases.justia.com/federal/district-courts/new-york/nysdce/1:2019cv09439/524448/227/0.pdf?ts=1585128306

17 Hinman, William. (2018, June 14). *Digital Asset Transactions: When Howey Met Gary (Plastic)*. U.S. Sec. & Exch. Comm'n. https://www.sec.gov/news/speech/speech-hinman-061418

18 SEC v. W. J. Howey Co., 328 U.S. 293, 298 (1946) [defining «investment contract»]. https://www.lexisnexis.com/community/casebrief/p/casebrief-sec-v-w-j-howey-co

of storing and transferring value and "may fluctuate in price, like any goods"[19]. However, even if a digital asset is goods, "any specific digital asset may or may not fall within the laws on securities", while "many securities are goods to which laws on securities apply"[20].

For the purposes of uniformity of state approaches to the regulation of digital assets circulation, it is necessary to transfer into a digital format all traditional processes of funding and investing, as well as the respective infrastructure. The task is to combine the knowledge on capital markets mechanics, normative-legal requirements and technological possibilities into a profitable business model, recognized all over the world, which would be useful for all participants of the basic ecosystem (Egloff & Turnes, 2021).

1.5. Regulation of circulation of assets created directly in distributed ledgers

According to the FATF position, virtual assets are a means of digital expression of value, which may be traded or transferred digitally and may be used for payments or investments. At that, they do not include the means of digital expression of fiat currencies, securities and other financial assets[21].

1.5.1. Essence of digital currencies of central banks of states

Such exclusion of digital currencies of central banks from the general concept of regulation is quite logical, given the absolutely different nature of this tool and possible risks. Studying the possibility of creating a central bank digital currency (CBDC) was a priority for many countries during the recent years. CBDC is seen as the next step in the development of a global currency regime, with many countries already using or piloting a CBDC program (Mack, 2022). For example, the digital ruble created in Russia significantly differs from other virtual assets. First, according to the Report for public consultations of the Bank of Russia, the digital ruble performs all functions of money, being a means of circulation, payment, a measure of value and a saving means. Second, it has an emitter guaranteeing reliability and responsibility of the process of the digital

19 SEC v. Telegram Inc., 19-cv-9439 (PKC), 2020 U.S. Dist. LEXIS 53846 (S.D.N.Y. Mar. 24, 2020). https://law.justia.com/cases/federal/district-courts/new-york/nysdce/1:2019cv09439/524448/227/

20 Schwartz, Robert A. (2020). [Letter to the Hon. P. Kevin Castel]. SEC v. Telegram Group, Inc., et al., No. 1:19-cv-09439 (PKS). https://www.docdroid.net/okmUUBS/cftc-letter-in-telegram-case.pdf

21 *International educational-methodological center for financial monitoring. (2021, October). FATF Updated Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers*. https://mumcfm.ru/d/ZMaQyboDDRXwu6OnbQGfEFJE8X3HwM82WP5oRyrZ

ruble issuance and circulation. Third, the digital ruble is the obligation of the state, with the value equivalent to the cash and cashless forms of ruble[22].

1.5.2. Cryptocurrencies as an object of civil rights and a target of crime

The growing use of cryptocurrencies (Orr, 2023), combined with the high risks of their use for laundering money, financing terrorism and servicing shadow economy (Remolina, 2022), required from a legislator to elaborate public-legal provisions, including certain requirements to ensure safety of the relevant circulation; thus, on January 1, 2021 the Federal Law of July 31, 2020 no. 259-FZ came into force, which gives a definition of digital currencies and makes steps to regulate their circulation[23]. However, a growing number of contradictions emerging during civil-legal classification of digital assets, as well as classification of illegal activities with the use or in relation to cryptocurrencies, gave grounds to a legislator to believe that the attempt was not fruitful enough. As early as in February 2022, the Russian Government adopted a Concept of legislative regulation of digital assets circulation, in which it admitted that currently in Russia there is no legislative regulation of such a high-risk financial tool as digital currency (cryptocurrency)[24].

In this regard, the following judicial positions are rather logical. Ordzhonikidzevskiy district court in Yekaterinburg in its decision of July 14, 2021 in case no. 2-2582/2021 on debt recovery of a loan agreement and interest for the use of loan, the object of which were cryptocurrencies, concluded that the use of cryptocurrencies in deals is the grounds to refer such deals (operations) to deals (operations), aimed at criminal income laundering and terrorism funding[25]. Hence, all operations with this tool are performed by the civil

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22 Bank of Russia. (2020, October). *Digital ruble. Report for public consultations*. https://online3.consultant.ru/cgi/online.cgi?req=doc&ts=uk1c5ETWXNyahdpr&cacheid=E857D3D7DAC98A55137DBF16CDDA25F2&mode=splus&rnd=bEJ38g&base=LAW&n=364913#2ETe5ETILns7qxqQ1

23 *On digital financial assets, digital currency and on making changes in certain legislative acts of the Russian Federation*. No. 259-FZ. (2020). https://online3.consultant.ru/cgi/online.cgi?req=doc&ts=uk1c5ETWXNyahdpr&cacheid=E14508391CB5EC1A9DF3236C4497BB05&mode=splus&rnd=bEJ38g&base=LAW&n=422194#bKfe5ETZtZtV2pdS

24 *Concept of legislative regulation of the mechanisms of organization of digital currencies circulation*. (2022). https://static.government.ru/media/files/Dik7wBqAubc34ed649ql2Kg6HuTANrqZ.pdf

25 Rosfinmonitoring. (2014, February 6). *On using cryptocurrencies*. https://online3.consultant.ru/cgi/online.cgi?req=doc&ts=uk1c5ETWXNyahdpr&cacheid=569654B8A75A572436E6B27A04580986&mode=splus&rnd=bEJ38g&base=LAW&n=158661#Teqe5ET0268ebgBn

circulation participants at their own risk. Judicial protection is not rendered on their requests regardless of how grounded they are[26].

Cryptocurrencies have a potential to ease processing of small sums with great speed and at low costs[27]. However, cryptocurrency cannot be referred to merely financial assets, as it is not money or a share tool of another organization, nor does it generate a contract right for the owner to obtain money or financial assets in future; it is also not a contract, which clearance will or may be executed with own share tools[28]. At the same time, cryptocurrency may be classified as an object of civil rights, as it can be detached and have a property value recognized by circulation[29].

Analysis of current practice allows asserting that cryptocurrency regularly serves as an object of obligations and is subject to protection by the norms of law of torts. The ultimate question underlying most cases refers to the property-legal regime of cryptoassets; that is the preliminary question to solve other problems of material and procedural law. This issue determines two other trends. First, there is trend for closer interaction with some of the further issues associated with the regime of cryptoassets in property law. Second, in the world of civil law there is a trend to search for alternative routes to ease a regulated legal regime of cryptoassets in more restrictive conceptual frameworks peculiar for a civil property right (Allen et al., 2022).

In our opinion, one may agree with the position that cryptocurrency should be referred to "other property" by implication of Article 128 CC RF. Then cryptocurrencies may be recognized as targets of crime, which especially relevant given their financial appeal. At that, positions of court on this issue are sometimes quite opposite.

For example, in the sentence of Solnechnogorsk city court of Moscow oblast of October 7, 2020 no. 1-227/2020, the court equals cryptocurrency to electronic payment means[30]. However, according to Part 5 of Article 14 of Federal Law of July 31, 2020 no. 259-FZ, legal and physical persons in the Russian Federation cannot accept digital

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26 Ordzhonikidzevskiy district court in Yekaterinburg (2021). *Decision of July 14, 2021 in case no. 2-2582/2021*. https://online3.consultant.ru/cgi/online.cgi?req=doc&ts=uk1c5ETWXNyahdpr&cacheid=183F7C58A28644AB4D573FF3D3536288&mode=splus&rnd=bEJ38g&base=AOUR&n=6488711#ZJVg5ETwq0onclzK

27 Popescu, Andrei-Dragos. (2021). Financial Technology (FinTech) as a Driver for Financial Digital Assets. *Analele Universitatii Ovidius Constanta*, *XX*, 1055. https://www.researchgate.net/publication/350004620_Financial_Technology_FinTech_as_a_Driver_for_Financial_Digital_Assets

28 Ministry of Finance of the Russian Federation. (2015). *International accounting standard (IAS) 32 "Financial tools: consideration"*. https://online3.consultant.ru/cgi/online.cgi?req=doc&ts=uk1c5ETWXNyahdpr&cacheid=848D0A4D7FDF20D0993D13EE13A0802B&mode=splus&rnd=bEJ38g&base=LAW&n=374637#prwg5ETCqLhbSNVG

29 *Ministry of Justice called cryptocurrency "other property"*. https://cryptonews.net/ru/news/regulation/65650/?ysclid=l6vck3v9l8673770654.

30 Solnechnogorsk city court of Moscow oblast. (2020). *Sentence of October 7, 2020 no. 1-227/2020*. https://online3.consultant.ru/cgi/online.cgi?req=doc&ts=uk1c5ETWXNyahdpr&cacheid=5EA18D3245367237670AA08F26D4C0BA&mode=splus&rnd=bEJ38g&base=AOKI&n=8961537#mHTj5ETOkQz5RvN81

currency in consideration for goods transferred to them, works performed by them, services rendered to them or any other means enabling to assume payment with digital currency for goods (works, services)[31].

A completely different position was held by Saint Petersburg city court, which did not agree with the defense when considering the appellation of P. for a sentence of Petrogradskiy district court of Saint Petersburg of December 20, 2021, in which P. was accused of the crime stipulated by clause "b" of Part 3 of Article 161 of the Russian Criminal Code. The defense claimed to eliminate the breaches of criminal-procedural law committed by the first instance court and to exclude from the scope of charges theft of cryptocurrency as an item without a legal status. Saint Petersburg city court found that digital currency in the form of bitcoins, bitshares and digibytes, stolen by P. and E., may be considered property as it was and is used as a means of payment, investment and storage of savings, i. e. is of economic interest, and has a material value[32].

Third cassation court of general jurisdiction supported the opinion of Saint Petersburg city court, stating that essentially the main difference of cryptomoney from money is just the way of their emergence, and as the notion of cryptocurrency is not legislatively stipulated, in the accusation it should be referred to "other property"[33]. Such positions of court enable to protect with criminal-legal means the violated rights of cryptocurrency owners under legal uncertainty.

Earlier Saint Petersburg city court had found an interesting solution in a situation when digital currency was a target of infringement. In an Appellate decision of December 20, 2021 on case no. 1-19/2021, 22-5752/2021, the court stated that it does not accept the reasons of defense that bitcoin and other cryptocurrencies are not a target of extortion, as their value is not registered by the state and circulation of cryptocurrency is not regulated by the state: initially V.A. extorted money, while cryptocurrency was just a means to hide the transfer of that money[34].

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31 *On digital financial assets, digital currency and on making changes in certain legislative acts of the Russian Federation*. No. 259-FZ. 31.07.2020 (ed. of 14.07.2022). https://online3.consultant.ru/cgi/online.cgi?req=doc&ts=uk1c5ETWXNyahdpr&cacheid=E14508391CB5EC1A9DF3236C4497BB05&mode=splus&rnd=bEJ38g&base=LAW&n=422194#bKfe5ETZtZtV2pdS

32 Saint Petersburg city court. (2022). *Appellate decision of 16.05.2022 no. 22-2616/2022, 1-257/2021*. https://online3.consultant.ru/cgi/online.cgi?req=doc&ts=uk1c5ETWXNyahdpr&cacheid=97DB8B72DCA899C7D5889FF7721CEB2D&mode=splus&rnd=bEJ38g&base=AOSZ&n=5081238#2sej5ETY3DZGLB171

33 Third cassation court of general jurisdiction. (2021). *Cassation decision of 24.06.2021 no. 77-1411/2021*. https://online3.consultant.ru/cgi/online.cgi?req=doc&ts=uk1c5ETWXNyahdpr&cacheid=C10D4B31598CBB37FEAF6E5C8A378287&mode=splus&rnd=bEJ38g&base=KSOJ003&n=35963#Tfkj5ET46wqfhZ3J

34 Saint Petersburg city court. (2021). *Appellate decision of 20.12.2021 on case no. 1-19/2021, 22-5752/2021*. https://online3.consultant.ru/cgi/online.cgi?req=doc&ts=uk1c5ETWXNyahdpr&cacheid=8BB30E68700B55EA5B0F59C18D4256C8&mode=splus&rnd=bEJ38g&base=AOSZ&n=4878364#kjvj5ETBUjWxI0fD

The now revised draft of Federal Law "On digital currencies", developed by the Ministry of Finance of the Russian Federation, stipulates legalization of cryptocurrency sphere in Russia. Given that under sanctions cryptocurremcy is one of the quickest, most convenient and effective means of payment, this draft of law is supposed to allow payments in the foreign trade activity of legal persons and entrepreneurs for goods, works, services and intellectual activity with digital currencies. The draft of law also stipulates licensing of digital currency exchange operator and digital platform operator, that is, it will be possible to register crypto exchanges in the Russian Federation. However, the draft of law does not so far determine sanctions for breaches in the proposed order of cryptocurrencies circulation and illegal actions of its participants. In general, analysis of this draft of law allows ascertaining that the process of regulating the cryptocurrencies circulation in Russia will be similar to the legislation provisions on regulating the securities market, i. e. will stipulate rather tough requirements and standards.

1.5.3. Legal protection of persons owning virtual currency and virtual property in the Russian Federation

Other payment tokens are virtual currencies (Vandezande, 2017). European Central Bank defines them as a type of unregulated digital money, issued and usually controlled by their developers and used and accepted among the members of a certain virtual community[35]. Essentially, virtual currencies are intended for using in specific virtual spheres or world, such as global multiuser online games[36].

Although virtual currency is legally not subject to exchange for fiat currency, practice shows that it is virtual currency, alongside with non-cash and electronic money, that becomes the target of infringement in computer fraud (Savel'yev, 2014). Accordingly, the issue of regulating its circulation in the territory of the Russian Federation will allow creating conditions for legal protection of persons owning such currency.

Claims occur more and more often in judicial practice, which are directly associated with mass multiuser online games[37]. However, court decisions on them in the Russian Federation are mostly restricted to a reference to Article 1062 CC RF, stating that an online game is a game, by its definition and purposes of creation indicated in a license agreement;

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35 European Central Bank. (2012, October). *Virtual Currency Schemes*. Report (p. 13). https://www.ecb.europa.eu/pub/pdf/other/virtualcurrencyschemes201210en.pdf

36 Eurasian group on counteracting criminal incomes laundering and terrorism funding. (2014, June). FATF report "Vritual assets". *Key definitions and potential risks in the sphere of money laundering and terrorism funding*. https://eurasiangroup.org/files/FATF_docs/Virtualnye_valyuty_FATF_2014.pdf

37 Rozhkova, M. A. (2020, December 6). *Virtual property and multiuser online game – how to distinguish relations emerging in connection with them?* Zakon.ru. https://zakon.ru/blog/2020/12/6/virtualnoe_imuschestvo_i_mnogopolzovatelskaya_onlajn-igra__kak_razlichat_voznikayuschie_po_ih_povodu

hence, it is not subject to Article 1062 CC RF[38], according to which judicial protection is not extended on requirements of citizens and legal persons associated with organization of games and wagering and participating in them[39].

However, there are court decisions considering virtual currencies within consumer rights protection claims. For example, Lefortovo district court of Moscow acknowledged that game currency is a measurement unit of the volume of rights for using additional functional of an online computer game, granted to a user by showing a certain amount of measurement units of gamer's rights on an intra-game personal account, which may be purchased or acquired without money (as a bonus for certain activities in the game, for example, participation in an intra-game auction). However, in this regard, the amount of "virtual currency" accrued on the intra-game personal account does not reflect the flow of actual money between the game administration (defendant) and the account owner[40].

The issue of regulating the "virtual property" circulation is not less acute, given the rapid commercialization of the multiuser online games market. Basically, "virtual property" is just a computer code, aimed mainly at imitating the objects of real (physical) world in the digital space. The solely virtual form of existence of such objects does not hinder their circulation, which touches upon the interests of real consumers, as the process of their acquisition and disposition is based on an obvious consumer value (Russkevich & Frolov, 2020).

The above makes it possible to assert that the contemporary world of cryptoassets and decentralized finance continues to rapidly evolve, being characterized by a rich combination of innovations, risks (Almaqableh et al., 2022) and normative problems. It is the unified legal approaches to regulating the circulation of digital assets all over the world that are able to minimize the said risks.

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38 Fourth cassation court of general jurisdiction. (2022). *Ruling of 01.03.2022 on case no. 88-5695/2022*. https://online3.consultant.ru/cgi/online.cgi?req=doc&ts=uk1c5ETWXNyahdpr&cacheid=F31C60CE0A5B986B5B1D27E2386915C6&mode=splus&rnd=bEJ38g&base=KSOJ004&n=72541#SKBk5ETFXl55CyV1

39 *Civil Code of the Russian Federation (Part 2)*. No. 14-FZ. (1996). https://online3.consultant.ru/cgi/online.cgi?req=doc&ts=uk1c5ETWXNyahdpr&cacheid=FCB3B26F22A203831458B5022A803D40&mode=splus&rnd=bEJ38g&base=LAW&n=377025&dst=102595#bCYc5ETs90x4mjI1

40 Lefortovo district court of Moscow. (2015). *Decision of 09.06.2015 on case no. 2-1619/2015~M-998/2015*. https://online3.consultant.ru/cgi/online.cgi?req=doc&ts=uk1c5ETWXNyahdpr&cacheid=17CCF72FEDE8E3A35215CEF4D7EAE3BF&mode=splus&rnd=bEJ38g&base=AOCN&n=4479817#B8Ok5ETUF6RrfQ2j1

2. Estimation of risks occurring during the digital assets circulation

In order to elaborate the global legal bases to regulate the said market, it is necessary, first of all, to estimate the risks (He et al., 2022) emerging during the digital assets circulation. Understanding the concept of digital assets risk may lead to effective results for both investors and regulators.

2.1. Volatility risk

The value of digital assets is highly volatile, i.e. their price may rapidly fall or rise at any time, including within one day (Naeem et al., 2022). Hence, investments into digital assets are considered highly speculative investments. There is a risk of significant or complete loss when purchasing or selling digital assets (Shen et al., 2022). Market prices may significantly differ from a company fair value or an investment opportunity in case of non-liquid/low-liquid assets. Although the volatility of digital assets is so high and varies significantly, it may increase depending on the technological changes and achievements, fraud, theft and cyber-attacks (Tsuchiya & Hiramoto, 2021; Caporale et al., 2021), against which there are no sufficient means of legal protection under the current legal nihilism of users. On the other hand, sharp changes in normative-legal regulation may even more aggravate the volatility of digital assets, increasing the potential of investment profits and losses. Besides, digital assets have no historical experience of other currencies or goods such as gold, which could have helped to determine if the current volatility levels are typical or untypical.

2.2. Risk of incorrect evaluation

The order of tokens evaluation directly depends on their type. For example, the price for payment tokens depends on the dynamics of supply and demand at global level and does not rely on the traditional evaluation methods used for securities, which significantly complicates determination of their objective value. Digital currencies only exist virtually in the computer network and have no physical equivalent; hence, it is difficult to determine their value, as it depends on the expectations and trust in possibility to use them for future payment operations. As for the utility tokens, there are no tested methods for their evaluation at all. Some of the utility tokens issued have no internal value except the possibility to use them to access or use a service/good to be developed by the emitter. At that, there is no guarantee the services/goods will be successfully developed. The situation with investment tokens evaluation is clearer. It is influenced by such commonly known factors as: analysis of discounted monetary flows, liquidity or non-liquidity premium depending on the term of existence of the company and trading platforms. However, assets tokens bear risks associated with the basic company or asset, as many companies procuring funds are private ones not registered in the equity market.

2.3. Liquidity risk

Market capitalization of the cryptoassets industry is mainly headed by bitcoin with over 50% of the overall market capitalization (Wu et al., 2018). In the market of digital assets other than bitcoin, there may be periods of reduced liquidity and even non-liquidity. There are no guarantees that a private company successfully executes a primary public share placement or provides an alternative exit strategy for the capital invested. In relation to investment tokens, the liquidity risk is the probability that the company will not be able to fulfill its financial obligations at the time of their redemption. A purchaser of assets tokens may suffer financial losses when selling them during circulation at an expected price, including due to the lack of sufficient demand or insufficient volume of operations, as well as the lack of representative market level of prices (Arsi et al., 2021).

2.4. Technological risk

The technologies associated with digital assets are at the early stage of development. Accordingly, technological achievements in the sphere of cryptography, code hacking, quantum computations, etc. may pose a risk for the safety of digital assets. Also, there may appear alternative technologies, which may make some digital assets less relevant or obsolete. The functioning of digital assets is based on open source software, into which errors can be introduced during programming. Also, developers may cease developing open source software potentially at a critical stage, when safety requires updating, as a result of which digital assets will be subject to failures and programming errors, while the risk of fraud, theft and cyber attacks will also increase (Corbet et al., 2020). Some digital assets networks suffered a sharp increase of the number of transactions during the recent years. The increased number of transactions combined with the inability to introduce changes into the digital assets technology may lead to a decreased time of transaction processing or a significant rise of commission fees for transactions with digital assets, paid to miners to ease their processing.

2.5. Hardfork risk

As there is no central authority (for example, a central bank or a government agency) controlling the development of technologies associated with digital assets, the functioning of digital assets and their further improvement (for example, the possibility to increase a number of transactions, decrease processing time, reduce commission fees for transactions, introduce safety updates) depends on cooperation and consensus of various stakeholders, including developers improving the open source software associated with the digital asset, or miners facilitating the processing of transactions. Any disagreement between the stakeholders, linked with making essential changes in the

blockchain protocol may lead to the digital asset network being divided into two or more incompatible versions (Schär, 2020). As a result, the trading platforms where the digital assets are traded may suspend the possibility to trade a certain version of the digital asset.

2.6. Criminal risks associated with the digital assets circulation

Special characteristics of digital assets (for example, only exist virtually in a computer network, operations with digital assets are irreversible and anonymous) make them an attractive target for fraud, theft and cyber attacks (Caporale et al., 2019). There are various tactics for stealing digital assets or damaging the technology of digital assets ("attack 51", when an opponent may obtain control over the digital assets technology by providing 51% of computer power in the digital assets network; at that, there are currently no laws in the world directly stipulating punishment for "attack 51" (Conklin et al., 2022); "Denial of Service Attack" (SmurfAttack), when a wrongdoer tries to make the digital assets network resources inaccessible by overloading it with service requests; Sybil-attacks, when one person attempts to grab a peer-to-peer network by creating several accounts, nodes or computers[41]; spoofing attack (substitution), when a fraudster pretends to be some reliable source; malicious software attacks (Higbee, 2018)). For example, on October 8, 2022, Binance, the world largest cryptocurrency exchange, confirmed that, as a result of jacking of a blockchain network managed by it, the total of US$ 570 mln in cryptocurrencies were stolen (Conklin et al., 2022). Recently, cases of cryptocurrencies extortion became rather common, which are associated with cyber attacks at critical information infrastructures.

There are other possible options of criminal behavior in the sphere of digital assets circulation. Most often, cryptocurrencies are used for legalization of money or other property acquired as a result of committing crime (laundering), or are used as a bribe. However, due to the lack of relevant legal regulation in the sphere under consideration, the possibilities of bringing criminals to liability are limited.

Besides, digital assets are subject to a higher than usual risk of market abuse, market manipulation and insider deals, due to the existing gaps in regulation, surveillance, control over market and liquidity.

[41] Douceur, J. R. (2002). The Sybil attack. Lecture Notes in *Computer Science. Conference: 1st International Workshop on Peer-to-Peer Systems, 2429*, 251–260. https://www.researchgate.net/publication/299267832_The_Sybil_attack

2.7. Operational risk

Basic level transactions in DLT or another distributed ledger are irreversible and final, while the transactions history cannot be altered computationally. As a result, if a user initiates or requests a transfer of digital assets using a wrong address of the distributed ledger, it will be impossible to identify the receiver and cancel the defective transaction. Besides, substantial risks of illegal misuse of information emerge due to the public character of actions in the ubiquitous distributed ledger.

2.8. Credit risk and counteragent risk

In case of tokenized securities, the risk of default or bankruptcy of the basic emitter is substantial, in accordance with the private investments into joint-stock capital and/or private debt-based investments.

2.9. Specific risks associated with the storage of digital assets

Possessing a digital asset is equivalent to possessing a private key (a code matched with a blockchain address), which provides access to it. A loss or theft of the private key matched with a certain blockchain address make it impossible for the owner of such private key to identify themselves as a legal holder of the digital tokens recorded at the respective blockchain address.

2.10. Special risks associated with the tokenized securities, tokens of securities or DLT-based securities

Tokenized securities are accounted outside the traditional custodian system, and their transfer is subject to legal uncertainty. The property right to tokenized securities is determined by recording the digital tokens connected with these securities in the decentralized ledger kept by the users' community. The blockchain technology appeared not long ago. In many jurisdictions, the legal and regulatory regime, applied when this technology is used in financial sector, remains disputable. That is why one cannot exclude disputes over some aspects of acquisition and transfer of tokenized securities in the form of digital tokens, such as, for example, the transfer validity. Traditional frameworks of fighting against money laundering and terrorism funding do not expand to tokenized securities. Placement and storage of tokenized securities may be performed without involving professional custodians but through a transfer of digital tokens recorded in a decentralized ledger. That is why the mechanisms usually applied to prevent money laundering and terrorism funding are, as a rule, not applied in this case. To be able to determine the source of the capital procured and avoid becoming a receiver of illegal funds, the emitter usually relies on the anti-money laundering (AML) standards.

This said, the actually existing tokenized assets are perceived much more positively by the states, from the viewpoint of risk assessment, than those created directly in distributed ledgers, due to the greater safety of their circulation. This is also confirmed by the opinion of experts from Basel Committee on Banking Supervision, who in June 2021 classified them into three groups, calling to analyze the nature of each particular cryptoasset when determining the risk value. The least risks are shown by material and non-material assets of group 1a, which includes traditional assets represented in the form of tokens[42].

2.11. Legal risks

International consensus on the standards of regulation of digital assets circulation is still not found. The current legislation is subject to constant changes which may entail varied reactions of regulatory and other state bodies and influence the issuance of certain digital assets, possibility of trading them in the internal and global markets, and the possibility to transfer or convert digital assets, potentially increasing the risk of complete or partial loss of units or reduction of their value (including up to zero). With the development of regulation all over the world, there is also a risk of inconsistency of regulation in various jurisdictions, which may lead to certain operations being recognized as legal in one jurisdiction and illegal in another[43]. Today, by the adopted principle of cryptocurrencies regulation, all states can be divided into ignoring, approving and prohibiting. The latter are still very few, but China is among them. These states mainly emphasize the need to introduce central banks digital currency in their jurisdictions and to ensure its transborder circulation. The first group of states is the most numerous. They adopted various means of coexistence with new financial tools – "sandbox" regimes, partial adaptation of the existing legislations to new realities, or introduction of their own classification of tokens. In any case their position is based on clear conviction that it is not worth rushing things and adopting special normative legal acts aimed at regulating cryptocurrencies, while no uniform global standards are elaborated. The third group of states admits the priority of cryptocurrencies advantages over the risks associated with their circulation, assumes the inevitable increase of cryptocurrencies market volume, and makes attempts to get recognized as a global cryptohub.

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42 The Bank for International Settlements. (2021, September 10). *Consultative Document of Basel Committee on Banking Supervision. Prudential Treatment of Cryptoasset Exposures*. https://www.bis.org/bcbs/publ/d519.pdf

43 Choo, T., Hodgins, P., Bacon, L., Guang, Z. L., & Lester, A. (2022, September). *Managing digital asset and cryptocurrency risk*. Financier. Worldwide. https://www.financierworldwide.com/managing-digital-asset-and-cryptocurrency-risk#.Y0su4y96BQI

The financial innovations pose huge problems for state policy and normative-legal base in terms of providing financial stability; these problems must not be ignored. That is why the surveillance approach must take into account both advantages and risks accompanying financial innovations, as well as the adequacy of regulatory measures. From the viewpoint of central banks, the task of ensuring financial stability remains pivotal. In the light of the changing financial landscape, one may assert that the financial stability depends on the adequacy of risk management systems and control by the market participants, on the one hand, and on the due surveillance measures of the regulator, on the other. That is why the state as a regulator must take up a more active role, using the combination of prescriptive and market-oriented approaches.

Legislative regulation of digital economic space and provision of information protection and safety of digital financial operations, as well as improvement of the system of legal regulation of digital assets per se will minimize the economic risks in financial system of the states.

Conclusions

1. Digital assets as new objects of property economic relations existing in the information-communication network – the Internet – are currently the basic tool of digital economy subject to significant risks.

2. Digital assets are the latest technological innovations introduced via blockchain and DLT, leading to revolution and other paradigmatic changes in the sphere of financial services. This technology changes the means of management and creation of wealth, as well as the interaction between users and money or financial products.

3. The lack of solid and integral normative-legal base for digital assets aggravates the vulnerabilities of the digital ecosystem. Many elements of the digital assets ecosystem are elaborated so as to avoid regulation. Digital assets do not fit the existing normative-legal base. Besides, the controlling impact is often hidden (for example, in DeFi) or distributed (for example, blockchain validators). Regulatory bodies should focus on the essence of a basic asset and related rights, not on its form, unless the form changes the essential nature of the asset.

4. A critically important condition of digital economy development in Russia is the provision of confidence of all economic subjects in their protection in the digital space. This can be achieved, first of all, by forming and developing the normative-legal base ensuring protection of rights of the participants of digital assets circulation and implementation of mechanisms of fighting with crimes in this sphere.

5. It is necessary to determine, how digital assets and cryptoassets can be objects of property law in the legislations of respective jurisdictions, be it by making amendments in general provisions or by creating an isolated special regime.

6. In order to understand whether (and how) working with a digital token has legal consequences for rights in the real world, one may need further clarification on the part of national legislations regarding juridical recognition of purely digital objects. In particular, whether a non-material, digital representation can be recognized as an object of property rights.

7. Today, given the risks analyzed in this research, we consider most correct the position of the group of states which selected a rather "ignoring", or "wait-and-see" position, monitoring the course of events, striving to moderate the cryptocurrencies markets and minimize the losses by embracing them in the usual financial regulation while continuing the special regulation to fight with money laundering and terrorism funding.

8. Elaboration of a global legal regulation of digital assets circulation will allow avoiding situations when a digital asset is recognized as not subject to protection and forced execution in a certain jurisdiction, and will ease the task of revealing and forced recovery of digital assets in case a fact is established of committing a crime in relation to them or using them.

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Цифровые активы: правовое регулирование и оценка рисков

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Ключевые слова

Биткоин,
блокчейн,
криптовалюта,
право,
регулирование,
риск,
токен,
финансы,
цифровая валюта,
цифровой актив

Аннотация

Цель: обоснование необходимости создания основанного на единообразной категоризации цифровых активов и авторского понимания концепции риска цифровых активов унифицированного механизма правового регулирования цифровых валют и токенизированных активов для обеспечения безопасности их оборота правовыми средствами и эффективного развития в будущем цифровой экономики на глобальном уровне.

Методы: исследование проводилось посредством комбинированного сочетания разноуровневых средств познания: от философских до частнонаучных, ключевое место среди которых отводится системному подходу, методу сравнительного правоведения и формально-юридическому анализу нормативного материала.

Результаты: представленное исследование закладывает концептуальную основу построения глобальной системы правового регулирования оборота цифровых активов и способствует определению и решению ключевых вопросов, которые необходимо возникают при анализе действующих механизмов правового регулирования на национальном уровне и оценке законности различных видов цифровых активов.

Научная новизна: заключается в комплексном рассмотрении сущности и особенностей правовой природы различных видов цифровых активов, обладающих наряду с существенными преимуществами высокими рисками как с правовой, так и с финансовой точек зрения. На основе противоречивых подходов и выявленных пробелов в правовом регулировании различных видов цифровых активов автором предлагается единообразная категоризация цифровых активов, обосновывается концепция риска цифровых активов, предпринимается попытка обоснования необходимости создания унифицированного механизма правового регулирования цифровых валют и токенизированных активов,

что позволит сформировать эффективную систему способов защиты права собственности на них и обеспечить безопасность их оборота.

Практическая значимость: обусловлена отсутствием в настоящее время унифицированного подхода и возможности применения действующих правовых норм в отношении инновационных цифровых активов, учитывающих их специфику, несмотря на их трансграничный характер. Основные положения и выводы исследования могут быть использованы для совершенствования механизмов правового регулирования оборота цифровых активов.

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