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**Regulatory and Legal Means and Principles for Regulating Digital Financial Assets
and Digital Currencies**

**Medios y principios regulatorios y legales para regular los activos financieros
digitales y las monedas digitales**

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Abstract

Digital financial assets, central bank digital currencies, blockchain, and digital platforms determine the modern vector of the development of financial and legal relations. The article aims to analyze the current legislative and regulatory frameworks governing digital financial assets and digital currencies. Its objective is to identify the fundamental principles guiding the regulation of these technologies and to highlight challenges and opportunities within the legal sphere. A systematic literature review is conducted using the Scopus and Web of Science databases. The authors highlight the need to create a system of legal principles for regulating relations in the sphere of digital financial assets, digital currency, and digital ruble. The principles will help digitalize the payment infrastructure and the coordinate system within which the corresponding branch of law develops. This process determines the development of this industry, which is especially relevant for financial legislation in the context of ongoing blockchainization and digital platformization.

Keywords: Principles of Law, Principles of Financial Law, Financial Law, Digital Financial Assets, Digital Ruble, Digital Platform.

Resumen

Los activos financieros digitales, las monedas digitales de los bancos centrales, las cadenas de bloques y las plataformas digitales determinan el vector moderno del desarrollo de las relaciones financieras y jurídicas. El artículo tiene como objetivo analizar los marcos legislativos y regulatorios actuales que rigen los activos financieros digitales y las monedas digitales. Su objetivo es identificar los principios fundamentales que guían la regulación de estas tecnologías y resaltar desafíos y oportunidades dentro del ámbito legal. Se realiza una revisión sistemática de la literatura utilizando las bases de datos Scopus y Web of Science. Los autores destacan la necesidad de crear un sistema de principios legales para regular las relaciones en el ámbito de los activos financieros digitales, la moneda digital y el rublo digital. Los principios ayudarán a digitalizar la infraestructura de pagos y el sistema de coordenadas dentro del cual se desarrolla la rama del derecho correspondiente. Este proceso determina el desarrollo de esta industria, que es especialmente relevante para la legislación financiera en el contexto de la actual blockchainización y plataforma digital.

Palabras clave: Principios de Derecho, Principios de Derecho Financiero, Derecho Financiero, Activos Financieros Digitales, Rublo Digital, Plataforma Digital.

Introduction

The research topic is relevant due to the development of the digital economy (Ketova, Ovchinnikov, 2024), the interaction of business and government through digital platforms (Kirillova et al., 2022), and the active digitalization of the payment infrastructure, which stipulates the need to legalize digital technologies (Zakaznova et al., 2024). Digital financial assets and digital currencies are the future. The modern world is witnessing a race between central banks to create centralized digital currencies. The emergence of cryptocurrency and digital ruble is transforming the monetary system. Digital currencies are introduced into it. The understanding of money, possession, and ownership is changing dramatically as consumption becomes digital and virtual.

All digital assets are subject to algorithms and technologies. The situation will change only if the laws are based on legal principles. Today academic and legislative discussions are still held regarding the use of such innovative phenomena as digital assets and cryptocurrencies (Fokina et al., 2023; Muradyan et al., 2023). The latter not only exist but are also rapidly developing all over the world. The growing financial market requires reliable rules of operation, as well as the rights of their owners in the circulation of digital financial assets and digital currencies (Iakhiaev et al., 2023). In general, all market participants around the world are not sufficiently protected due to a lack of regulatory standards. This is caused by the absence of scientific research in the industry, primarily due to its novelty and short-term development (Eremeeva et al., 2024).

Currently, the digital economy requires fundamentally different approaches and actively stimulates the introduction of the latest technological solutions aimed at optimizing the monetary system and settlement relations.

Cryptocurrencies are one of the fastest-growing markets in the world of financial innovation. In November 2021, the market capitalization of crypto assets reached a record high of \$2.9 trillion. On February 8, 2021, Tesla, one of the most successful companies and electronic car manufacturers in the world, announced the purchase

of approximately \$1.5 billion worth of Bitcoin for use as a payment method. This was a historic moment in the industry when cryptocurrency was widely adopted into the real economy. In the spring of 2022, the ecosystem faced a serious crisis. Within a few months, capitalization fell below \$800 billion. In September 2023, it was still hovering around \$1 trillion (Biancotti, 2023).

Amid these long-running difficulties, lawmakers are doing their best to bring order to the cryptocurrency market. Comprehensive legislation has been passed or is discussed in the European Union, the United States, and other countries. This is a positive trend for the industry since there is a need for legal certainty (Aliev et al., 2023). According to the authors of the publication “EU search for regulatory answers to crypto assets and their place in the financial markets’ infrastructure”, the rapid growth of the crypto asset ecosystem has attracted more attention from regulators. They are tasked with providing an adequate response, protecting investors and customers, and reducing risks while promoting technology development (Ferreira, Sandner, 2021). Determining the optimal strategy is a rather difficult task of balancing public and private interests. While some promote and support decentralization for financial inclusion and increased competition, others predict a future dominated by a few technology players and are concerned with protecting consumers and investors due to new opportunities for fraud or abuse that are possible in an anonymous and decentralized environment.

Instead of a wait-and-see approach, the EU has taken a significant step forward by adopting a comprehensive and robust regulatory package designed to accompany (and in some aspects even determine) the development of the crypto asset market.

The Digital Finance Package is the first attempt to find the right balance, establishing a set of minimum pan-European rules (MiCA, DORA) and creating a regulatory system to control the impact of new technologies on traditional financial instruments.

The primary objective of this research is to systematically review the existing legal frameworks, challenges, and future directions regarding the regulation of digital financial assets and digital currencies.

Materials and methods

Within the framework of this article, we used a systematic literature review methodology to examine the regulatory landscape of digital financial assets and digital currencies. With the help of the Scopus and Web of Science databases, we conducted an extensive search that discussed the legal and regulatory frameworks applicable to these digital technologies.

The search used a combination of keywords and phrases relevant to the research topic. The primary keywords included “digital financial assets”, “digital currencies”, “blockchain regulation”, “central bank digital currencies” (CBDCs), and “legal principles of digital assets”. These keywords were combined using Boolean operators to refine the search results and fully cover the subject.

The methodology allowed for a comprehensive review of the complex landscape of digital financial assets and currencies, providing insights into both established legal frameworks and emerging regulatory challenges.

Results and discussion

Through the Digital Finance Package (MiCA, DLT Pilot Regime, and DORA, later supplemented by DAC8), the EU aims to create an appropriate legal framework for financial cryptoassets. The package represents the first attempt to regulate a complex and rapidly evolving phenomenon characterized by significant trade-offs. It is no surprise that some important aspects of the crypto environment remain unaddressed at this early stage of the legislative process. This regulatory gap is largely explained by the difficulty of solving technological problems using mandatory norms.

MiCA establishes uniform rules for transparency and disclosure of information on the issue, public offering, and admission to trading of crypto assets. In addition, it regulates the authorization and supervision of crypto asset service providers (CASPs). This regulation should protect investors, promote innovation and

competition, guarantee financial stability, ensure the smooth operation of payment systems, avoid monetary policy risks, and prevent market abuse and insider trading. In accordance with the principle of technological neutrality, crypto assets that are already subject to existing legislation (for example, financial instruments or deposits) are outside the scope of MiCA and remain subject to existing regulation.

The second pillar of the digital finance package is the DLT Pilot Regime (Zakkaroni, 2022). This regulation is intended to stimulate the development of DLT-based market infrastructure through a pilot regime designed to support innovative (tokenized) financial instruments while maintaining market security and integrity (Levin et al., 2022). The tokenization of financial instruments refers to the digital representation of financial instruments on distributed ledgers or the issuance of traditional asset classes in a tokenized form, allowing them to be issued, stored, and transferred on a distributed ledger (The Tokenisation of Assets and Potential Implications for Financial Markets, 2020). Thus, the DLT Pilot Regime does not address all cryptoassets, but only those that are qualified as financial instruments.

The Central Bank of the Russian Federation is also experiencing a peak of interest in innovation in the financial sector and is implementing a new project of tokenized non-cash money (Tokenized non-cash money, 2023).

The next pillar of the digital finance package is the DORA. The DORA complements the Network and Information Security Directive by establishing uniform requirements for network and information security.

While MiCA represents the first and important step in the legislative progress to certainty, it does not address all of the important issues surrounding crypto assets and their application in decentralized finance. From a subjective viewpoint, this regulation introduces rules applicable to identifiable entities (i.e., issuers, providers, service providers) that do not exhaust the range of entities participating in decentralized financial systems. Thus, the following remain outside of legal regulation: developers of smart contracts and holders of management tokens of

decentralized autonomous organizations (DAO) and non-hosted wallets, i.e., software that allows peer-to-peer transfers between DLT addresses.

The new laws aim at developing a robust ecosystem for working with digital assets in the EU. These regulations strengthen the EU's role in the international regulation of cryptocurrencies and digital assets, which could lead to future EU regulators working closely with other countries to develop global standards in this area. This means that the European legislation can become a model for other countries.

An important regulatory act (and so far the only one) adopted by the International Institute for the Unification of Private Law (UNIDROIT) is the project called "Principles of Transactions with Digital Assets" (UNIDROIT adopts Principles On Digital Assets And Private Law, 2023).

The Principles include legislative guides and best practices regarding transactions involving digital assets such as cryptocurrencies and non-fungible tokens.

The Principles deal only with private law issues relating to ownership and rights to digital assets, determining that digital assets may be subject to property rights or may qualify as property, but this issue remains open to each jurisdiction. A similar approach is observed in the legal positions of Russian courts but the legislator is still uncertain. Digital assets may be the subject of security rights. The Principles are neutral to technologies and business models and are intended to apply to all digital assets, whether they are recorded on the blockchain or not. The Principles take precedence over other rules to the extent that they conflict with each other.

Time will tell how influential the published 19 Principles will be and whether they will be recognized in the national legislation of different states. However, countries are seriously concerned with this area.

The UNIDROIT also announced a joint project with the Hague Conference on Private International Law, which will build on the Principles and focus on the law applicable to cross-border ownership and transfer of digital assets and tokens.

The principle of technological neutrality of digital assets should be fundamental. According to this principle, the issuance and circulation of digital assets using several different technologies should be subject to discretionary regulation, and the legislator should remain neutral to technologies. Legislation should not interfere with the development of various technologies available on the market, either directly (by requiring the use of a given technology) or indirectly (by encouraging the use of some technologies over others).

In our opinion, the legislator faces an important task since digital assets are a relatively new phenomenon, like the distributed registry technology on which it is based. This phenomenon came out of nowhere in just a few years and is here to stay, transforming financial markets and taking them to new levels of efficiency. Despite regulatory uncertainty and high volatility in the digital asset market, they continue to grow at an accelerated pace, reaching record highs in market capitalization. Thus, adequately adjusting the regulatory hurdles that individual legislators set is a critical challenge. On the one hand, innovation should not be repressed; on the other hand, it is necessary to ensure legal certainty and exclude violation of the rules (Cappai, 2023).

Conclusion

The conducted study proved that there is legislative activity in the field of digital assets and an understanding that the Principles should underlie the legal regulation of relations in the sphere of digital financial assets.

As digital finance continues to blur the boundaries between different financial sectors, a holistic regulatory strategy becomes imperative to manage risks and leverage opportunities in the global digital economy. Thus, future legislative efforts should aim at creating a comprehensive and adaptive regulatory environment that accommodates the dynamic nature of digital assets.

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