

## VIRTUAL ASSETS IN THE DIGITALIZATION ERA: ECONOMIC AND PRIVATE LEGAL ASPECTS

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**Abstract.** Virtual assets have become an integral part of the modern digital economy. Their development and proliferation create new opportunities and challenges for economic and legal systems. At the same time, their proliferation raises several economic and legal issues that require urgent resolution. These include ensuring the security of transactions, protecting the rights of owners of virtual assets, developing effective regulatory mechanisms and addressing financial market risks. Addressing these issues is essential to ensure the stable and sustainable development of the digital economy and to adapt legal systems to the new realities. The *research subject* focuses on virtual assets in the modern digital economy, covering their development, proliferation and the resulting economic and legal implications. The study looks at different types of virtual assets, including cryptocurrencies, tokens, central bank digital currencies (CBDCs), and virtual goods and services. It aims to understand the economic benefits, such as transaction efficiency, financial inclusion and investment opportunities, as well as the risks and challenges, such as high volatility, regulatory complexity and security concerns. The *primary purpose of this study* is to provide a comprehensive analysis of virtual assets in the context of digitalisation, in particular from the economic and legal perspectives. This involves studying the impact of virtual assets on the modern economy and legal systems and identifying the necessary adjustments to ensure their stable and sustainable development. The *methodology* of this study includes doctrinal analysis, comparative methods and legal policy analysis. Doctrinal research involves the systematic study of existing laws, regulations and legal principles relating to virtual assets. The comparative method is used to analyse and compare different regulatory approaches in different jurisdictions, identifying best practices and potential pitfalls. Legal policy analysis helps to assess the effectiveness of current policies and propose new regulatory mechanisms to better regulate virtual assets. Using these methods, the study provides a thorough understanding of both the economic benefits and the legal intricacies associated with virtual assets. The paper analyses different types of virtual assets, including cryptocurrencies, tokens, central bank digital currencies (CBDCs), and virtual goods and services. It examines the economic benefits of using virtual assets, such as fast and low-cost transactions, financial inclusivity and investment opportunities, as well as the risks, including high volatility, regulatory challenges and security concerns. The legal aspect of the study includes an analysis of different approaches to the regulation of virtual assets in different countries, property rights and taxation issues. The study also assesses the prospects for the development of this sector and its impact on traditional financial systems. The study *concludes* that virtual assets play a key role in today's digital economy, offering significant benefits such as fast and cost-effective transactions, increased financial inclusion and new investment opportunities. However, these benefits are accompanied by significant risks, including high market volatility, regulatory hurdles and security issues. The legal analysis reveals a variety of regulatory approaches to virtual assets, highlighting the need to harmonise international standards to protect property rights and ensure fair taxation. The research highlights the importance of developing a robust legal and regulatory framework to manage the risks associated with virtual assets, while fostering their potential to revolutionise the financial sector. It suggests that policymakers and regulators should focus on creating adaptable legal systems that can keep pace with technological advances. By addressing these challenges, the digital economy can achieve stable and

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sustainable growth and ensure that both economic and legal systems are well equipped to deal with the evolving landscape of virtual assets.

**Keywords:** virtual assets, digitalisation of the economy, cryptocurrencies, tokens, central bank digital currencies, regulation of virtual assets, property rights.

**JEL Classification:** E58, D23, O31

## 1. Introduction

In the current context of increasing digitalisation, the global economy is undergoing radical changes driven by the development of information technologies. One of the key phenomena in this process is the rapid proliferation of virtual assets. Virtual assets, including cryptocurrencies, tokens and other digital forms of value, have become an integral part of modern financial markets, attracting significant interest from investors and regulators alike. However, the development of virtual assets is fraught with challenges. The lack of a universally accepted definition, regulatory uncertainty, high security risks and ethical issues pose significant barriers to their integration into the global economy. The economic and legal aspects of virtual assets require in-depth research in order to develop effective regulatory mechanisms and ensure the stable development of financial markets.

The objective of this study is to analyse the economic and legal aspects of virtual assets in the context of digitalisation. The subject of the study is the economic and legal aspects of virtual assets, including their classification, economic impact, legal regulation, risks and challenges, and recommendations for improving the regulatory framework.

Research tasks:

1. To define the essence of virtual assets by examining their economic nature and functions.
2. To examine the existing regulations governing virtual assets.
3. To develop recommendations to mitigate risks and promote the stable development of the virtual asset market.

A thorough analysis of the economic and legal aspects of virtual assets is necessary to develop effective regulatory mechanisms and ensure the stable development of financial markets. The results of the study can be used to improve the legal regulation of virtual assets, reduce risks and ensure the stable development of financial markets.

## 2. Methodology

In the course of the study of virtual assets in the digital age, the authors used the doctrinal research method. Doctrinal research as a methodological approach is critical for a deep understanding of the economic and legal aspects of virtual assets in the modern era of digitalisation. This method allows

for a systematic analysis of legal norms, doctrines and concepts related to virtual assets, providing a comprehensive overview and theoretical justification of key issues arising in this area.

The main aspects of doctrinal research of virtual assets include the following:

- Analysis of the existing legal and regulatory framework. This involves a review of international and national legislation governing virtual assets, as well as an overview of the legal doctrines that form the basis for the regulation of cryptocurrencies and other virtual assets;
- critical understanding of legal concepts. Studying different approaches to determining the legal status of virtual assets and analysing the legal regimes applicable to virtual assets in different jurisdictions;
- classification and systematisation of legal provisions. Identification and classification of key legal provisions related to the circulation of virtual assets, as well as systematisation of legal norms in order to identify gaps and shortcomings in the current legislation;
- justification of legal decisions. Development of recommendations for improving the legal regulation of virtual assets.

The method of legal policy analysis was applied to study the economic and legal aspects of virtual assets in the modern era of digitalisation. This method allows assessing the effectiveness of existing legal norms and practices, identifying problems and shortcomings in regulation, and developing recommendations for improving the legal framework.

The main elements of the legal policy analysis of virtual assets include the following:

1. Assessment of the current state of legal regulation. Analysing the existing laws and regulations governing the circulation of virtual assets at the national and international levels, as well as studying legal precedents and court practice related to virtual assets.
2. Identification of problems and gaps in legal regulation. Identification of legal barriers and inconsistencies that impede the circulation of virtual assets, as well as the identification of shortcomings in the protection of the rights of virtual asset owners and service consumers.
3. Analysis of the economic consequences of legal regulation. Assessment of the impact of legal regulations on the development of the virtual asset market, including innovation and investment.

4. Developing recommendations for improving legal policy. Formulation of proposals to amend or supplement existing legal provisions to improve their effectiveness.

In order to obtain comprehensive research results, the comparative method was used. This method involves comparing the legal norms regulating virtual assets in different countries and regions in order to identify similar or different approaches and to assess their effectiveness and impact on the economy. The comparative method made it possible to obtain an objective picture of the diversity of approaches to regulating virtual assets in different parts of the world and to conduct an in-depth study of various aspects of regulation, including legal, economic and social dimensions.

### 3. Literature Review

When studying virtual assets in the economic and legal context, the works of the following scholars were analysed: O. Butnyk-Siverskyi, S. Volosovych, M. Grebenyuk, R. Lukianchuk, S. Hrytsai, N. Horobets, I. Maisun, T. Dmytrenko, Liubych, Ivanyuk, Katunina, Kud, Kulazhenko, V. Lazorenko, O. Kuznetsov, Ye. Kokolova, R. Maidanyk, V. Nahnybida, V. Novytskyi, V. Fitsa, A. Ovcharenko, and O. Ushynkina.

In the work of O. Butnyk-Siverskyi (2023), the intellectualisation of the digital economy is considered from an economic and legal perspective. The author notes that intelligence and intellectualisation are processes of generalising and implementing new ideas, using modern methods and techniques, and creating innovations. This is important for understanding the intellectualisation of the economy and its new quality of development – digitalisation. Digitalisation means the transition from analogue to digital methods of recording and transmitting information in the human-digital environment. The development of digital methods using computer technology has contributed to technical and technological transformation. This process combines human intellectual resources and/or collective (group) intelligence with information and communication technologies into a single organism, a conglomerate. This entity is integrated into an intelligent technical and technological computer platform of digitalisation, which has the characteristics of a progressive innovative entity with great opportunities. It simultaneously develops and combines computer technologies, telecommunications and digital software methods of their use. From an economic and legal point of view, considerable attention should be paid to the formation of a human-digital environment and a human-digital system. In such an environment, virtual objects and virtual assets emerge as a special type of property rights, with intangible things as their objects.

Acceptance of the principles of creation and use of digitised objects and their content helps to substantiate the sequence of steps in the development of the digital economy during its digitisation. The definitions of concepts such as digitisation, digitalisation and digital transformation promote the ability to determine the stages of transition to a digital economy or structure.

In addition, S. Volosovych (2018) examines the state regulation of the cryptocurrency market. The author notes that the means of regulating cryptocurrencies vary from region to region and country to country. Some countries have banned the circulation of cryptocurrencies, while others have defined their legal status. Regulatory methods can be purely administrative or combined with economic approaches. Among the economic methods, the most common is the taxation of cryptocurrencies, which is usually applied in developed countries. In light of positive international experiences, the author suggests developing the foundations of state regulation of the cryptocurrency market to support innovation in the Ukrainian financial sector. This should include compliance with FATF requirements on combating the financing of terrorism, ensuring cybersecurity and securing tax revenues for the budget. On the other hand, it is important to protect consumer rights by introducing legal requirements for identifying participants in cryptocurrency transactions and licensing cryptocurrency exchange activities.

In addition, M. Grebenyuk and R. Lukianchuk (2017) reviewed the legal regime of cryptocurrencies through the experience of EU countries. S. Hrytsai (2022) examined problematic issues of legislative regulation of virtual assets in Ukraine. In particular, it was noted that the Law of Ukraine "On Virtual Assets" defines the beginning and end of the turnover of a virtual asset, but does not include "miners" engaged in cryptocurrency mining. This leaves open the question of their status and taxation. Regarding the interpretation of the clause on the right to open accounts for virtual asset transactions, the author suggests clarifying whether it refers to the creation of special accounts in banks. As legal entities already have the right to open accounts in banks, it is important to understand whether there is a need for specialised accounts for these purposes. These issues also raise important aspects that need to be aligned with existing legislation, including the Civil Code of Ukraine and other regulatory acts, to ensure regulatory compliance in the area of virtual assets. N. Horobets and I. Maisun (2021) studied virtual objects and their place in the institution of property rights. They concluded that virtual property arises in relation to virtual objects that have economic value and are traded in virtual space. These objects have no physical form; they are unique, permanent and can be exchanged between owners as things. The uniqueness,

permanence and exchangeability of these objects give them the status of property. The owner of virtual objects has the right to possess, use and dispose of them in accordance with virtual space and legal practice. Such a right to virtual property can be considered as a specific type of property where the objects are intangible things.

Furthermore, T. Dmytrenko, O. Liubych, V. Ivanyuk (2019, 2020) focused on the implementation of international standards for the regulation of the virtual asset market in Ukraine. In particular, they identified problematic issues in this context, in particular the lack of a unified regulatory approach.

The application of dynamic factor analysis was studied in the work of O. Katunina (2021). In summary, the development of effective mathematical models for analysing the dynamics of the virtual asset market is a key component of the digital infrastructure. This contributes to increasing market transparency, raising awareness among participants, reducing uncertainty and, as a result, stimulating the growth of the value of virtual assets. In the near future, the creation of an ecosystem of tools for the virtual asset market, such as systems for storing streaming transaction data, mathematical modelling tools and software, will become increasingly popular. This will lead to an increased demand for scientific research and consulting services in the use of FinTech digital technologies. The main directions of these studies will be the analysis and forecasting of the development trajectories of the virtual asset market, the identification of factors influencing changes in its structure and dynamics, as well as the identification of market behavioural patterns and the management of relevant risks.

Moreover, A. Kud (2020) studied the phenomenon of virtual assets from the point of view of economic and legal analysis. A classification of entities in the digital data accounting system based on distributed ledger technology in the field of virtual assets was carried out, as well as the substantiation of the interrelation and interaction between these entities ("service providers" – "service consumers"). Based on the criterion of "derivation from the primary asset", and taking into account the characteristics of each type of virtual asset and the way they are used, a classification of distributed ledger virtual assets was proposed: tokenised assets and crypto assets. It was noted that further systematic research on tokenised assets and the justification of their classification depending on their characteristics is promising. It was noted that digital assets have a special place in this classification. The proposed modern terminology in the field of virtual assets includes terms and their definitions: digital data accounting system based on distributed ledger technology, distributed ledger, distributed ledger token, identifier, tokenised asset, digital

asset, primary asset, crypto asset, user of digital data accounting system based on distributed ledger technology, service provider, service consumer.

The study of V. Kulazhenko, V. Lazorenko, O. Kuznetsov, Ye. Kokolova (2021) examines the essence of cryptocurrencies, their types and advantages over traditional payment methods, ensures their further development and integration into the global economy, analyses the current state of the cryptocurrency market, and selects eight cryptocurrency trading tools among those with the highest capitalisation.

Basides, R. Maidanyk (2019) considered virtual objects as a challenge to the classical approach to property law. It was noted that the emergence of property rights to a virtual object in the context of civil law in Ukraine is not sufficiently substantiated due to the limited ability of the user to control such an object. This limitation defines the main characteristic in this context. The establishment of property rights, in particular ownership rights, to a virtual object seems premature due to the lack of a unified position on the legal nature of such objects. However, it is known that they are of value to participants in civil relations and may be marketable, so it is appropriate to extend the regime of property rights to them. Nevertheless, this position may be promising if an open list of property rights is applied, without a specific type of property right being bindingly established in legislation. The legal ambiguity regarding the place of virtual objects in private law relations is advantageous for platform developers, as it allows them to avoid responsibility for violating property rights. Despite the fact that online platform developers often prohibit the transfer of such objects and define them as part of services, the civil circulation of virtual objects is developing dynamically and contributes to the capitalisation of these developers' services.

Additionally, V. Nahnybida (2021) considered the implementation of the legislation on virtual assets in the light of the digitisation policy. It was noted that an important addition to the definition of the legal nature of virtual assets under the Law is the provision of Part 7 of Article 4, which states that virtual assets cannot be used in exchange for property, work, services or goods and, accordingly, are not a means of payment on the territory of Ukraine. This means that such exchange can only be made for hryvnia or other virtual assets and, in cases determined by the National Bank of Ukraine, for other monetary values.

V. Novytskyi, V. Fitsa (2021) studied the formation and development of legal regulation of the circulation of virtual assets. They found that currently there are no unified regulatory acts at the international level that regulate the development of digital technologies, including blockchain. This poses serious challenges to global financial stability and national security.

The anonymity of transactions and the lack of government control over the circulation of cryptocurrencies contribute to the shadow economy. Even bona fide owners of cryptocurrencies cannot protect their interests through administrative or judicial processes. The main problem in the field of cryptocurrencies is the lack of a unified international convention governing their circulation, especially bitcoin. This emphasises the need to develop global standards and regulatory acts to ensure the stability and safety of virtual assets in the global economy. A. Ovcharenko (2020) shares this position and emphasises the need to identify the owner of virtual assets.

O. Ushynkina (2022) considered the legal regulation of virtual assets in Ukraine and abroad. The author noted that there is still no consensus on the nature of virtual assets. However, most countries do not ignore the rapid development of this phenomenon and are developing appropriate regulatory acts to regulate all possible types of virtual assets. The analysis of existing legislative acts and draft laws in the field of regulation of legal relations related to the circulation of virtual assets has revealed trends in the definition of the concept of "virtual assets". Firstly, at the legislative level in various countries, there is a shift from the term "virtual currency" to the broader term "virtual asset" or "digital asset". Secondly, many countries began to associate the concept of "virtual asset" with distributed ledger technology or a similar analogue, indicating a more thorough approach to the study of this phenomenon. Thirdly, there are attempts to categorise virtual assets according to functional criteria. The analysis of the definition of virtual assets proposed by Ukrainian legislation in the context of modern global terminological trends indicates the need to refine the Law of Ukraine "On Virtual Assets" in terms of definitions and classification of virtual assets. According to the author, the law does not take into account a number of important aspects related to the nature of virtual assets. A limited legislative approach may result in most virtual assets being outside the legal framework of the state.

Thus, with regard to the trends in scientific research on virtual assets, it should be noted that virtual assets have become the subject of active scientific research due to their rapid development and integration into the financial systems of many countries. The study of the economic and legal aspects of virtual assets covers several key areas that reflect current trends in scientific research in this area. One of the main trends is the effort of scholars to unify terminology. Most of the research is aimed at developing clear and unambiguous definitions of the terms "virtual asset" and "digital asset". Researchers are also working on classifying virtual assets according to different criteria such as functionality, technological basis, economic

nature and legal status. Researchers are analysing how virtual assets are changing the structure of financial markets, influencing investment strategies and stimulating the development of new financial instruments. The study of risks associated with the use of virtual assets is another important area. It analyses aspects such as security, fraud, money laundering, terrorist financing and other threats. Ethical and social issues related to the use of virtual assets, including privacy, employment and social inequality, are also studied. Current trends in virtual assets research reflect their multifaceted nature and significant impact on various aspects of the economy and law. The unification of terminology, economic impact analysis, legal regulation, risk study and innovation are key research areas that contribute to a better understanding and effective management of virtual assets in the digital age.

#### 4. Research Results

##### *On Defining the Essence of Virtual Assets by Considering Different Approaches to Their Economic Nature and Functions*

Currently, there is no common approach among scholars to defining the concepts of "virtual asset", "digital asset", "virtual currencies" or "cryptocurrency". Virtual or digital assets are often equated with cryptocurrencies, but a digital (virtual) asset is a broader concept, as it is an information resource derived from the right to value that circulates in a distributed ledger as a unique identifier. This enables the discussion of a new object of civil legal relations – the right to use information derived from the right to value. Authors use the term "virtual currency" to describe a digital expression of value that can be used digitally and functions as a medium of exchange, a unit of account and a store of value.

Defining the nature of virtual assets is a complex task due to their diversity, evolution and wide range of uses. Different approaches to their definition and classification reflect their economic nature and functions.

##### *On the Analysis of Current Regulatory Acts Governing Activities in the Field of Virtual Assets*

The legal regulation of virtual assets is discussed in more detail below.

The European Union's position on the legal status of virtual assets is set out in EU Directive 2018/843, which complements EU Directive 2015/849 on the prevention of money laundering and terrorist financing. This Directive was the first piece of legislation to create a legal framework for the regulation of virtual assets at EU level. EU Directive 2018/843 uses the term "virtual currency" and defines it as a digital representation of value, not issued or guaranteed by a central bank or public authority, not necessarily linked to a legally established currency and not having

the legal status of currency or money, but accepted by natural or legal persons as a means of exchange, which can be transferred, stored and traded electronically. Importantly, the definition is technologically neutral and does not refer to distributed ledger technology or similar technologies (Directive (EU) 843, 2018). The preamble of EU Directive 2018/843 states that virtual currencies can be used as a means of payment, as well as for other purposes such as exchange, investment, storage of valuables, online casinos, etc. However, local currencies, also known as complementary currencies, which are used in very limited networks and among a small number of users, should not be considered virtual currencies.

The European Union Parliament is currently working on innovative regulation of virtual assets, setting standards for the whole world. The Council of the European Union and the European Parliament have preliminarily agreed on its provisions aimed at achieving four main goals:

1. Creation of a robust legal framework that clearly defines the regulatory regime for all crypto assets not covered by existing financial services legislation.
2. Introduction of a safe and proportionate system to support innovation and fair competition.
3. Ensuring an appropriate level of protection for investors and consumers of crypto assets.
4. Ensuring financial stability.

These intentions demonstrate the European Commission's commitment to a coordinated, consistent and comprehensive approach to the regulation of crypto-assets (Proposal 1937, 2019).

Another important document is the FATF Recommendations, which set out a comprehensive and consistent system of measures that countries should apply to combat money laundering, terrorist financing and the financing of the proliferation of weapons of mass destruction. However, these recommendations have the status of "soft law", meaning that they are not legally binding. Nevertheless, they have significant political influence in shaping national legislation to prevent and combat the legalisation of the proceeds of crime. The FATF Recommendations define virtual assets as digital representations of value that can be traded, transferred and used for payment or investment purposes. For the purposes of applying the FATF Recommendations, countries should consider virtual assets to be "property", "proceeds", "funds", "funds or other assets" or other "equivalent value" (FATF, 2021).

In Ukraine, "virtual asset" does not have a single comprehensive definition that fully discloses its essence and characteristics. Therefore, it is important to define this concept, its essential features and characteristics, as well as the correlation between the terms "virtual asset" and "cryptocurrency". The complexity of the legal status of cryptocurrency

as a widely used virtual asset in Ukraine lies in the fact that it does not fall within the definition of electronic money set out in Article 15 of the Law of Ukraine "On Payment Systems and Funds Transfer in Ukraine" and does not fall within the definition of a payment system contained in paragraph 29 of Article 1 of this Law (The Law of Ukraine "On Payment Services" No. 1591-IX, 2021). Cryptocurrency is also not a foreign currency in accordance with the Law of Ukraine "On Currency and Currency Transactions", is not included in the Classifier of Foreign Currencies and does not fall within the definition of objects of civil rights set out in the Civil Code, not being a thing (commodity), cash or non-cash money, dematerialised securities, property rights (The Law of Ukraine "On Currency and Currency Transactions" No. 2473-VIII, 2018). In addition, cryptocurrencies do not have the characteristics of a document and therefore cannot be recognised as a monetary surrogate as defined in the Law of Ukraine "On the National Bank of Ukraine" (The Law of Ukraine "On the National Bank of Ukraine" No. 679-XIV, 1999). The complex nature and legal uncertainty of cryptocurrencies do not allow them to be identified with any of the related concepts (funds, currency, currency value, means of payment, electronic money, securities, monetary surrogate, etc.).

According to the Law of Ukraine "On Virtual Assets" (not yet in force), participants in the virtual assets market are service providers and any persons who conduct transactions with virtual assets in their own interest. A service provider may only be a legal entity. A foreign legal entity may be a service provider. The requirements for the amount of charter capital are higher for service providers: residents and non-residents. Business entities are allowed to engage in more than one type of service provider activity. The law provides for four types of services:

1. Services for the storage or administration of virtual assets.
2. Services for the exchange of virtual assets.
3. Virtual asset transfer services.
4. Intermediary services related to virtual assets.

The problematic issues identified in the study include the following:

1. No mention is made of the so-called "miners" who mine cryptocurrencies. This issue is controversial and requires further careful study from various points of view, including from the point of view of taxation.
2. The interpretation of the right to open and use bank accounts for transactions with virtual assets is unclear, as legal entities already have the right to open bank accounts, which is regulated by numerous legal acts of Ukraine, such as the Civil Code of Ukraine and the Commercial Code of Ukraine. When it comes to special accounts in banking institutions, it is unclear why Section VI, Clause 3 of the Final and

Transitional Provisions does not contain any relevant amendments to the Civil Code of Ukraine.

3. The practical application of certain provisions is questionable, in particular, such expressions as "indirectly controlled by", "or acting in their interests", "owning ... indirectly (through another individual ... person)". These evaluative expressions may lead to corruption risks (The Law of Ukraine "On Virtual Assets" No. 2074-IX 2022).

#### ***On Recommendations to Mitigate Risks and Promote Stable Development of the Virtual Asset Market***

The study of the essence of virtual assets shows their diversity and complexity of definition, which is due to their economic nature and the functions they perform in the virtual space. In authors' opinion, the stable development of the virtual assets market will be facilitated by:

1. Regulatory environment. Legal certainty and regulation of virtual assets to ensure their legal integrity and user protection. Given their diversity, it is important to determine which types of assets are subject to regulation and which can operate without centralised control.

2. Investor protection. Create mechanisms to protect investors from fraud and manipulation in the virtual asset market. This should include requirements for information disclosure, transparency of transactions, and effective mechanisms for monitoring the activities of market participants.

3. Combating abuse. Developing effective measures to combat money laundering, terrorist financing and other financial crimes in the context of virtual assets. Use of blockchain and cryptography technologies to ensure the security and confidentiality of transactions.

4. International cooperation and standardisation. Establish international agreements and standards to harmonise the regulation of virtual assets. This will help to avoid jurisdictional differences and promote the global development of this sector.

Therefore, in order to ensure the stable development of the virtual asset market, it is important to adopt a set of measures aimed at reducing risks and creating a safe and transparent environment for all participants.

#### **5. Conclusions**

1. A "virtual asset" can be defined as an electronic asset that is created using cryptographic means, exists in the form of digital programme code and has no physical form. Ownership is evidenced by the inclusion of digital records in the Digital Transaction Registry and has economic value. The terms "virtual assets" and "cryptocurrencies" are not synonymous, as cryptocurrencies are a type of "decentralised virtual currency", which is much narrower than the term "virtual asset". Virtual assets can be classified as secured and unsecured: secured virtual assets certify property

rights, including claims on other objects of civil rights; unsecured virtual assets do not certify property rights and exist as a set of data in electronic form. The study of the nature of virtual assets shows that they are a complex economic and legal phenomenon requiring appropriate regulation and recognition at both national and international levels. Virtual assets have the potential to have a significant impact on the modern economy and financial system, but this requires a clear legal definition and effective regulatory policy.

2. In Ukraine, the process of drafting the Law of Ukraine "On Virtual Assets", which has now been adopted but has not yet entered into force, has been going on for several years. The Ukrainian legislator took into account the FATF recommendations and used the concept of "virtual asset". A virtual asset is defined as an intangible good that is an object of civil rights, has value and is represented by a set of data in electronic form, the existence and turnover of which are ensured by the system of virtual asset circulation (a virtual asset can certify property rights, including claims to other objects of civil rights). The Law also states that virtual assets are not a means of payment in Ukraine and cannot be exchanged for property (goods), labour or services. Unique in global legislative practice is the division of virtual assets into secured and unsecured. Unsecured virtual assets do not certify property rights, while secured virtual assets certify property rights, including claims to other objects of civil rights. Securing a virtual asset means certifying property rights, including claims on other objects of civil rights.

3. The analysis of the definition of virtual assets proposed by Ukrainian legislation in the context of modern global terminological trends indicates the need to refine the Law of Ukraine "On Virtual Assets". In particular, it is necessary to clarify the definitions and classifications of virtual assets, as the current approach does not take into account several important aspects of the nature of virtual assets. A limited legislative approach may result in most virtual assets remaining outside the state's legal sphere. In addition, issues relating to the development of the market infrastructure for virtual assets, ensuring its transparency and efficiency, need to be addressed.

In particular, it summarises that there are currently problematic issues regarding the definition and classification of virtual assets. Different countries and organisations use different approaches to classify and define virtual assets (e.g., cryptocurrencies, tokens, digital property rights). In addition, there are complexities in defining the economic essence of virtual assets. In particular, virtual assets can perform different functions – means of exchange, store of value, investment asset, etc. – which complicates their study from the perspective of economic theory.

The lack of uniform legal regulation of virtual assets at the international level and differences in regulation between countries lead to legal uncertainty and complicate the development of the global market for virtual assets.

Based on the analysis of the economic and legal aspects of virtual assets, the following recommendations can be made:

- Establish a clear and consistent regulatory framework for the virtual asset market that would define their legal status and the obligations of market participants;
- develop legal regulations that take into account the specifics and risks of virtual assets, in particular in the area of investor protection and financial crime prevention;

- ensure an effective mechanism for protecting the rights of consumers and investors from fraud, manipulation and other negative practices;
- developing and implementing high cybersecurity standards for virtual asset exchange and storage platforms;
- promote international cooperation in the regulation of virtual assets to create harmonised international standards.

As for further research, it is necessary to study the legal framework and mechanisms for regulating virtual assets in different countries. This concerns the definition of the legal status of virtual assets, regulation of their circulation and trade, protection of property rights, taxation and liability for violations.

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Received on: 28th of June, 2024

Accepted on: 19th of August, 2024

Published on: 20th of September, 2024