Oleksandr Leshchenkon,*
Vyacheslav Krahlevych,** Anton Borysenko,***
Yevhen Leheza**** & Olena Riabchynska*****

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Legal definition of the cryptocurrency in Ukraine in international comparison

* [leshchenko.aleks@gmail.com] (Kyiv University of Intellectual Property and Law of the National University "Odesa Law Academy", Ukraine)
** [ukrainescience2023@gmail.com] (Individual advocacy, Ukraine)
*** [lawyerborisenkoa@gmail.com] (Dnipro University of Technology, Ukraine)
**** [yevhenleheza@gmail.com] (University of Customs and Finance, Ukraine)
***** [Ryabchinskaya.olena@gmail.com] (Classical Private University, Zaporizhzhia, Ukraine)

Abstract

Legal regulation of digital finance is at an initial stage. It has been proven that many countries are favorable to the full or partial recognition of cryptocurrency as a means of payment, among them: Spain—the official payment system; Germany—monetary unit and form of private money; USA—currency, form of money, Sweden—contractual means of payment; the object of money transfers in certain states, Canada—a means of calculation, etc. It has been established that in Ukraine, the considered conservative nature of legal regulation of financial relations is observed in the context of the implementation of digital financial technologies in view of the task of protecting both public interests and the interests of individuals. Conclusions have been made, first, the issue of legal evaluation of cryptocurrencies is still not finally resolved and their legal nature also remains debatable; second, cryptocurrencies being alternative settlement units poses a threat to the dominance of public currencies, as they enable competition between private financial agents and states; third, according to its essence, electronic money is a kind of electronic promissory note.

Keywords: investment arrangement, cashless, cryptocurrency, payment system, legal regulation, public finance, digital money

1 Introduction

The use of digital technologies for the needs of both private and public finance has already become a sustainable trend in recent years. This is an objective consequence of fundamental transformations taking place in the world economy under the influence of FinTech-industry. New opportunities for collecting, recording, processing, evaluating and transmitting information have found their application not only in the banking sphere, but they are embodied in the formation of a new sector of the economy based on such digital technologies as big data, robotics, blockchain, tokenization, various Internet systems, artificial intelligence, neural networks, etc. Along with traditional settlement tools, new ones have appeared – electronic money and virtual assets, and on the basis of them platforms for the

provision of various financial services have already been created, including in particular, cryptocurrency exchanges, electronic payment systems, etc. Such phenomena as DeFi, InsurTech, online banking, online marketplace, PayTech, *P2P crediting etc*, brought to life by digital financial technologies require an appropriate legal assessment and an effective legal regulation, including in relation to ensuring protection of customers' rights and interests. Numerous publications and scientific studies of various legal aspects of the FinTech manifestation in economic relations are relevant, however the theory of legal regulation of digital finance is at the initial stage of its formation, it is fragmentary and does not have a systematic nature. Therefore, clarification of existing trends in this area is a necessary element in the development of the science of financial law. Such classification determines the need for awareness of the directions and content of legal regulation of social relations related to the digitalization of the public finance sphere.

Publications on FinTech issues have a rather wide spectrum, they cover professional, scientific, educational and methodological, reference and popular science literature from various fields of knowledge. But most often publications of legal orientation are dedicated to researching the specifics of legal regulation of new virtual assets, payment services, digitization and informatization of state administration in various spheres of its manifestation, etc. The presented results of scientific research are pluralistic and debatable, but they have not yet formed a coherent concept of legal regulation of FinTech in the sphere of public finance.

Another approach to solving the indicated problem is to study the legal regulation of payment systems from the standpoint of individual branches of law, as is done, for example, by M. A. Pozhidayeva in her work (Pozhidayeva, 2020), concerning studying financial and legal regulation of payment systems; however, her research was carried out even before the adoption of the Law of Ukraine "On payment services" No. 1591-IX dated 30 June, 2021 (Law of Ukraine, 2021), therefore it objectively requires some adjustment in accordance with the new conditions of legal regulation.

In recent years, functioning of payment systems is increasingly associated with the use of electronic money as a type of virtual assets. Such a question is hotly debated, which is reflected in special literature. The number and range of publications on such issues is impressive. Science and practice are at the stage of finding solutions to many fundamental problems, and one of the important places among these problems belongs to the issue of the legal nature of cryptocurrencies. Approaches to its solution differ not only depending on the specific national jurisdiction but are also related to the multifacetedness of the conceptual apparatus. We can point out Suzanne Hammond and Todd Eretamong the authors who devoted their works to such issues; they generalized the approaches to regulation of cryptocurrencies depending on this or that country (Ehret, 2020), however, despite the importance of such an overview, the problem of the legal nature of this type of virtual assets remains unresolved in fact. In addition, one of the leitmotifs of such work was the issue of taxation of operations with virtual assets, but at the same time, the problem of using cryptocurrencies for the needs of paying taxes and budget financing was left out of the attention of researchers although being important for any state.

Such authors as Desmond Dennis, Lacey David and Salmon Paul M. emphasize the insufficiency of the conducted research on various aspects of cryptocurrencies, including on their protection systems. This fully corresponds to the general level of theoretical sub-

stantiation of the peculiarities of legal regulation of virtual assets and social relations related to provision of payment services developing on their basis. Therefore, it appears that the nearest tasks in the formation of the doctrine of legal regulation of FinTech will consist of the search for the legal nature of virtual assets in their various forms of manifestation (electronic money, digital money, cryptocurrencies), as well as in assessment of the admissibility of their possible use for the needs of public finances. This is important not only from the point of view of providing public finances with modern settlement tools, but it also reflects the need to understand the danger brought by the new technological opportunities, meaning potential danger for committing economic offenses, first of all – tax evasion and laundering of "dirty money."

2 Methodology

The methodological basis of the research is a combination of general and special methods of cognition, such as dialectical, historical, descriptive, the method of scientific analysis and generalization; comparative-legal, structural-functional and analytical methods were also used. the dialectical method of scientific knowledge is used as the main general scientific method. in the course of the research of legal documents that highlight the functioning and development of relationships under the conditions of implementation of digital technologies, formal-legal and systemic-structural methods were applied. During the formulation of the legal structures "digital technologies," "electronic technologies," and "electronic legal relations" the logical-semantic method was used. The use of the method of scientific analysis and generalization of methods made it possible to collect reliable information about the current state of relations in the conditions of implementation of digital technologies, its parameters, as well as about the peculiarities of the practical application of legislation, including its problematic aspects.

In recent years, special attention has been paid to the problem of defining the concept of payment systems and peculiarities of their legal regulation. However, despite the high dynamics in the development of payment services, the understanding of the term "payment system" still remains a subject of scientific debates. Both Ukrainian and foreign specialists can be listed among the authors who have devoted their works to such topics. Most authors either reproduce provisions of regulatory acts in their works or leave such a problem unaddressed. Thus, Benjamin Geva outlined his vision of the specifics of legal and regulatory measures regarding electronic payments. However, when highlighting peculiarities of the structure typical for regulatory bodies and certain aspects concerning legal regulation of electronic payment services in the European Union, as well as in such countries as Australia, Canada, and the United States, although the term "payment system" is used in his work, the author does not provide its definition and he does not systematically consider it in the context of ensuring stability of monetary circulation in the new conditions of the digital economy (Geva, 2020). The same flaw is inherent in the views of the Indian specialist Ahmed Shehnaz; although outlining the directions of modernization of the law on payment services in India, he does not reveal his vision of the payment system concept (Shehnaz, 2021).

Comprehensive research, in the form of a literature review, was conducted using free access resources (Academic journals, Google Book Search, Google Scholar, Scientific periodicals of Ukraine), as well as the full-text database ScienceDirect.

The specifics of the research subject, as well as its purpose and tasks determined the use of general scientific and special methods of scientific cognition. The hermeneutic method was used to establish content of the concept of "digital technologies," "electronic technologies," and "electronic legal relations" enshrined in both legislative acts and legal doctrine. This method of analysis was used to interpret provisions of normative legal acts (the Civil Code of Ukraine, laws of Ukraine, international normative legal acts and regulations, etc.), which establish the order and features of personal data protection. With the help of the method of systematic analysis, court decisions issued in lawsuits regarding "digital technologies," "electronic technologies," "electronic legal relations," of consent for medical intervention or entering into contractual legal relations were studied. The dogmatic method made it possible to analyze scientific studies devoted to general problems of "digital technologies," "electronic technologies," and "electronic legal relations." The comparative method was used to compare provisions of the civil legislation of Ukraine, the legislation of the EU, and the USA to identify common features, differences, advantages, and disadvantages between them. The method of generalization helped to formulate conclusions that summarized the conducted research.

Thus, modern Ukrainian scientific research is mostly based on such a general scientific method as *dialectical one*. In general, dialectics as a science studies the most general laws of the development of nature, society and thinking. The dialectical method is such a general scientific method of cognition that needs to take into account relationship and constant development of phenomena in the process of cognition of reality. Dialectics as a method of learning information about nature, society and thinking, considered in unity with logic and the theory of knowledge, is a fundamental scientific principle of studying multifaceted and contradictory reality in all its manifestations (Sheyko, 2002).

This method "was developed over many centuries by scientists of various philosophical and political directions" and consists in such an approach to studying phenomena of social existence, which is based on the general regular connections of development of society, the state and nature (Maksimov, 1997).

Therefore, according to the dialectical method, all phenomena are interconnected and dynamic. The basis of their development (dynamics) includes such laws of dialectics as transition from quantity to quality, struggle and unity of opposites, etc.

As for the topic of the research, thanks to the dialectical method, the current state of personal data protection and understanding of the essence of this legal phenomenon was established, taking into account its dynamics, development during historical time and taking into account its interdependence with other phenomena of social and state life, and the interrelation of one relationship with others.

Application of the *axiological method* was aimed at clarifying and determining the public danger of violations in the sphere of "digital technologies," "electronic technologies," and "electronic legal relations" as well as the public utility of state activity to overcome these violations.

The *hermeneutic method* made it possible to reveal the dependence of interpretation of normative legal acts or provisions set forth in scientific texts on the subject of interpre-

tation, to reveal the content of legal norms and scientific knowledge, based on the peculiarities of legal normative and scientific language.

Humanization of domestic legislation and determination of the priority of a person, his/her rights and freedoms in relation to interests of the state determines the need to use a *humanistic method* in order to consider "digital technologies," "electronic technologies," and "electronic legal relations." As a result, it is concluded that *the state and laws* have a human nature, that is, they are created, act and are intended to provide for the needs of society and humans.

The formal-legal method was used to determine specifics of the normative-legal regulation of social relations in the sphere of "digital technologies," "electronic technologies," and "electronic legal relations."

The comparative-legal (comparative-historical, comparative-structural, comparative-functional, comparative-axiological, comparative-typological, comparative-linguistic, comparative-semiotic, comparative-legal, comparative-philosophical, comparative-political, etc.) for studying general, special and unique features between interpretation of the essence and content of "digital technologies," "electronic technologies," "electronic legal relations," as well as their protection in Ukrainian legal and scientific doctrine in relation to foreign ones, etc.

Hence, the outline of the methodological foundations of researching the legal bases of personal data protection allowed us to reach several conclusions.

Firstly, both the breadth of cognitive opportunities for extracting new knowledge about the subject of study and the adequacy of the obtained results depend on the methodological toolkit.

Secondly, the subject of research lies in the plane of several sciences, which requires the use of a wide range of general, philosophical, general scientific, partially scientific and special research methods.

Thirdly, only the complex use of methodological approaches and research methods will contribute to an objective, comprehensive, complete disclosure of the subject of study of this scientific work.

Thus, the complexity and multifacetedness of the research subject, the goal and task set in this dissertation, require definition of worldview, philosophical, scientific and theoretical foundations, as well as a comprehensive use of a wide range of general, philosophical, general scientific, partially scientific and special research methods. It is this approach that will contribute to a full, comprehensive, objective disclosure of the specifics of the legal basis for "digital technologies," "electronic technologies," and "electronic legal relations."

3 Features of the theoretical and legal basis of electronic money, cryptocurrency and the payment system

Legal regulation of the sphere of public finance in the conditions of digital technologies applied acquires new features and receives a significant impetus in its development. However, even in the presence of numerous FinTech publications and scientific studies, modern legal regulation of financial relations should objectively be conservative in nature, as it is

intended to protect both public interests and the interests of private individuals. When comparing the practice of introducing financial technologies into the economy, legal conflicts arise due to certain inconsistencies in the content and direction of action of normative legal acts and the essence of new forms and methods of economic activity. Thus, among the many problems faced by the modern science of financial law, one can single out the need to determine the legal nature of virtual means of settlement, including cryptocurrencies; this need is characterized by a high degree of relevance, as it objectively reflects fundamental changes in the world economy due to its accelerated informatization and digitalization. Such transformations directly affect the general state of law and order in the sphere of public finance, they entail the need to solve many general theoretical and applied issues. The growing role of the financial system information component requires its comprehensive consideration and awareness of existing trends in this area, and therefore it requires forecasting in development of the legal regulation of financial relations. First of all, this concerns the specifics of money circulation organization and functioning; such money circulation is subjected to fundamental restructuring under the pressure of the FinTech industry, which ultimately affects all other groups of financial legal relations (Leheza et al., 2023).

Table Problems of cryptocurrency on the way to being recognized as money funds

Problem	**Characteristic**
Scalability	Many cryptocurrencies are built on blockchain chains that are not designed for large transaction volumes.
Ease of use	User-friendly design is the foundation of acceptance. Cryptocurrency requires special understanding.
Regulation	Cryptocurrency needs general rules, while now in each country the issue of regulation is solved in its own way.
Volatility (exchange rate variability)	Fluctuations in value are characteristic of all currencies, but in cryptocurrency it is excessive.
Incentives	Any new financial system must answer the question of how reward will affect its behavior. If it is built incorrectly, it will allow some users to manipulate it to the detriment of others.
Privacy	Different levels of privacy should be available to users

From the very beginning in the letter dated 08.12.2014 No. 29-208/72889 regarding operations with such a cryptocurrency as "Bitcoin" the National Bank of Ukraine (the NBU) recognized it to be a monetary surrogate (Law of Ukraine, 2014). And according to Part 2 of Article 32 of the Law of Ukraine "On the National Bank of Ukraine" No. 679-XIV dated 20 May, 1999, it is established that the use of monetary surrogates as a means of payment is prohibited on the territory of Ukraine (Law of Ukraine, 2019). However, later this approach changed. According to the joint statement of the national financial regulators of Ukraine, "cryptocurrency" is considered as one of the types of decentralized virtual

currency. In particular, it is indicated that the complex legal nature of such means does not allow them to be identified with any of the related concepts (money, currency, currency value, legal tender, electronic money, securities, monetary surrogate, etc.). That is, the position was indicated about the need to consider cryptocurrencies as a new object of legal relations and about the impossibility to apply the method of legal analogy to this new object. And this, in turn, entails the need to develop new models, regimes and schemes of legal regulation of financial relations adequate to the needs of the economy (*Volobuieva* et al., 2023).

The next steps in the evolution of the official approach to the legal valuation of cryptocurrencies were presented as cancellation of the letter of the NBU No. 29-208/72889 dated 08 December, 2014 and several legislative initiatives, culminating in the adoption of the Law of Ukraine "On Virtual Assets" No 2074-IX dated 17 February, 2022, which has still not entered into force (Law of Ukraine, 2022). However, despite the changes in the national legislation of Ukraine and their widespread discussion in society, the issue of legal valuation of cryptocurrencies has still not been resolved completely. It appears that there was a distortion of concepts. The aforementioned law "On Virtual Assets" does not use the term "cryptocurrency." Neither is this term used in other legislative acts regulating relations in the sphere of financial services. Such legal initiatives look like an attempt to circumvent the prohibition established by Part 2 of Article 32 of the Law of Ukraine "On the National Bank of Ukraine" No. 679-XIV dated 20 May, 1999, which concerns the issue and use of monetary units other than the hryvnia on the territory of Ukraine and cannot be considered constructive in view of the need to determine the legal nature of cryptocurrencies (Law of Ukraine, 2022).

In addition, the provisions of clause 7 of Article 4 of the Law of Ukraine "On Virtual Assets" establishing that virtual assets are not a means of payment and cannot be exchanged for property (goods), works (services) (Law of Ukraine, 2022).That is, on the one hand, the law recognizes virtual assets as an object of civil rights , and on the other hand it deprives them of the function of a negotiable instrument.) This situation does not seem to be logical. Moreover, it is contradictory and inconsistent with the background of clauses 2, 5 of Article 3 subparagraph 3 paragraph 1 of Article 34 of the Law of Ukraine "On Payment Services" No. 1591-IX dated 30 June, 2021, which determine the possibility of using electronic money and digital money in economic circulation, marking them as cash (Law of Ukraine, 2021). Due to such peculiarities of determining the legal status of cryptocurrencies, the legal regulation of social relations (with virtual assets being their objects in Ukraine) has a fragmentary nature, which can be overcome only through the systemic coordination of the content of the regulatory framework and the programmatic conditionality of the rule-making activity performed by national regulators, taking into account the legal and economic nature of such alternative settlement units (the ASU) (Leheza et al., 2023).

As for the evaluation of cryptocurrencies as a type of private decentralized currencies, their use both in civil circulation and in the public legal sphere requires separate considerations. One of the fundamental provisions of the legal theory of money consists in distinction between private currencies and state (official) money. Means of payment alternative to any kind to public funds in modern conditions can acquire economic significance and value as an object of civil rights only if the state allows their use in official

transactions. The fundamental economic and legal value of state (official) money for the economy lies in its recognition as legal tender. In this context, public money serves to express and properly fulfill obligations. They must be accepted at face value for all payments. The requirement of the state to carry out financial settlements exclusively by legal means of payment appears to be particularly important in this regard. The state also makes payments for its obligations using legal means of payment (Leheza et al., 2023).

However, even in this area, we can see the seeds of breaking the state emission monopoly. These seeds originate from activities performed by the central bank of the country (which chose the course for the virtualization of money circulation) as well as by other state authorities that contribute to this process. Indicative of this is the possibility of issuing electronic money, denominated in hryvnia, by entities other than the National Bank of Ukraine which requires an assessment of such an innovation from the point of view of its constitutionality and openness to conflicts (Korneyev et al., 2017). A controversial point also consists in adaptation of FinTech for both fiscal and other financial and legal needs, which is consistently implemented through circulation of electronic money, which by its nature is a type of secured virtual asset and has a binding nature (Leheza et al., 2022). In its economic essence this money is a digital debt document, not funds. That is, it acts as a kind of "electronic promissory note," but it does not correspond to the formal features of such a security. And although Clause 2 of Article 3 of the Law of Ukraine "On Payment Services" No. 1591-IX dated 30 June, 2021 defines electronic money as a type of funds (Law of Ukraine, 2021), but, as can be seen, such a prescription is a dubious step both from the point of view of economic expediency and from the point of view of legal validity (justification). Electronic money has characteristics that are inherent to various types of assets, including monetary surrogates, but this does not prevent its use by the state in the sphere of public finances as a separate investment resource and as a means of paying taxes and fees. This vision is conditioned by the assessment of some recent legislative innovations. In particular, we are talking about making changes to paragraph 35.2 of Article 35 of the Tax Code of Ukraine regarding the permission to use electronic money for payment of taxes and fees (Law of Ukraine, 2023).

Such introduction of assets of the FinTech industry into the legal regulation of tax relations does not seem appropriate and well-considered, and again, in the context of the content of part 3 paragraph 35^{-1}.1 Article. 35^{-1} of the Tax Code of Ukraine is inconsistent, as it is not allowed to accept electronic money on a single account (Law of Ukraine, 2010). The above statement once again emphasizes the need for a balanced approach to the selection of models for legal regulation of digital financial technologies, greater visibility into their admissibility, as well as potential dangers and harm to public finances. In addition, this kind of legal regulation undermines trust in electronic money and causes significant reputational losses to the state (Leheza et al., 2019).

And if electronic money can be considered suitable for making payments of a non-public nature within the limits of the relevant payment systems, and transactions with their use can and should be considered as objects of taxation, since they create a separate channel for movement of value in economic relations, then their use as a means for payment of taxes is considered socially unacceptable. A simple question arises – why should the state and local self-government bodies receive private debt receipts instead of legal means of payment although such private debt receipts may probably be insufficient

for receiving corresponding amounts of "traditional money?" Electronic money can turn either into a "soap bubble" or into "junk securities." Therefore, in our opinion, only fiat money is suitable for paying taxes and fees, or (in view of the manifestation of FinTech) – digital money of the National Bank of Ukraine, since it is backed by the state with all its assets and power priorities, and therefore it is characterized by public-legal nature and relevant state guarantees of protection (Dymko et al., 2017).

Another indicative point that warns about its possible consequences in the context of the issue of the state monopoly of emission is presented in the provisions of Articles 34 and 35 of the Law of Ukraine "On Payment Services" No. 1591-IX, dated 30 June, 2021 which determine the types of payment instruments and the procedure for implementation of their emissions. Analysis of these provisions allows us to assert that the procedure for issuing electronic payment instruments to be used in payment systems is determined by the rules of the relevant payment systems, taking into account the requirements of this Law and the regulatory legal acts of the National Bank of Ukraine (Law of Ukraine, 2021). That is, there is a significant liberalization of the legal regulation of the functioning of payment systems through the provision of local rule-making. However, the latter is significantly limited by the current legislation. But such a state also reflects the constant tendency to weaken the imperative of legal regulation of the sphere of monetary circulation, which is fundamental for public finances. Instead, there have been discussions about defining the concept of payment systems for more than 20 years. Such a question still remains relevant in view of the adoption of the Law of Ukraine "On Payment Services" No 1591-IX dated 30 June, 2021 (Law of Ukraine, 2021). This normative legal act has changed some conceptual approaches to the organization of payment services, and it requires additional research into the problem of the ratio of dispositive and imperative principles of legal regulation of FinTech-industry manifestations in the sphere of public finances (Leheza et al., 2019).

Summing up the mentioned information, it should be noted that the issues of legal regulation of the introduction of FinTech in the sphere of public finance are not limited to the above. The spectrum of problematic issues related to digitalization of financial legal relations is much wider. However, the scope of this article does not allow even an overview of the most important of them. At the same time, the above makes it possible to create a general impression of the trends in the legal regulation of certain types of virtual assets and outline directions for further scientific research in this area.

4 Foreign experience of recognizing cryptocurrency as a means of payment

The world fintech market has evolved from the initial stage, in which startups were the main players, to the modern one, which is characterized by the presence of professional companies capable of offering consumers a wide range of products. The increasing involvement of consumers in the use of new financial technologies is evidenced by the increase in the level of penetration of financial services – in 2022, the average level of penetration was 16% (fintech markets of 27 countries were used for the study), in 2023 – 33%, in 2019 – 64% (Ehret, 2022).

Impressive results in this area are demonstrated by a number of countries: the fintech penetration level for China and India is 87%, Russia and South Africa – 82%; more than 70% – Colombia, Peru, the Netherlands, Mexico, Ireland, Great Britain. The lowest level of penetration was found in the USA (46%), Belgium and Luxembourg (42%), France (35%) and Japan (34%) (Fig. 1) (Ehret, 2022).

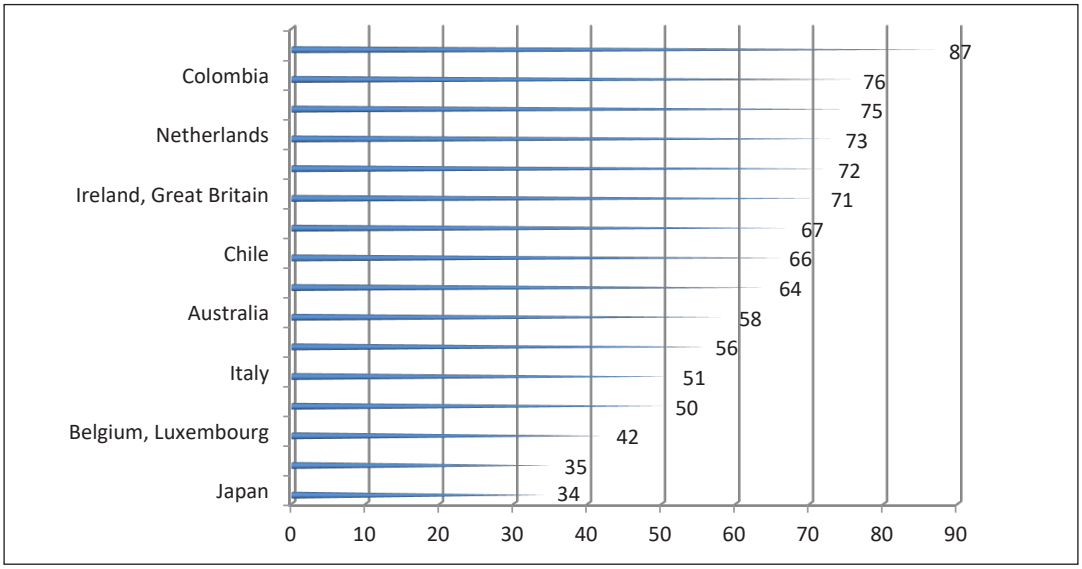

Figure 1 Electronic money, cryptocurrency, FinTech on markets in foreign countries, % (Ehret, 2022)

According to some estimates, there are more than 16,000 separate cryptocurrencies in circulation, and their total value exceeded 3 trillion USD (Ehret, 2022). However, crypto-euphoria caused by the awareness of potential opportunities for obtaining additional investment resources cannot negate a number of significant threats from the introduction of the ASU. We are talking about uncontrolled non-bank settlement operations, financial fraud, tax evasion, corruption, laundering of "dirty money," which is dangerous for the economies of individual states as well as for the world economy as a whole. Cryptocurrencies and alternative monetary settlement systems created on their basis are potentially dangerous for international peace and security, as they are suitable for financing international terrorism, illegal trafficking in people, weapons, drugs, etc.

In view of this, the legal assessment of cryptocurrencies as objects of legal relations is variable in different national jurisdictions, from their legalization to the complete prohibition of transactions performed with such virtual assets. Moreover, it can be contradictory and inconsistent. For example, despite the ban set by the People's Bank of China on the use of cryptocurrencies for official transactions, this country has become the world leader in cryptocurrency mining (Rysin et al., 2018). Such inconsistency is also typical Ukraine, where the official position regarding the legal status of cryptocurrencies has undergone a significant transformation.

Germany has recognized Bitcoin as a settlement currency and a form of private money. In February 2018, the Federal Ministry of Finance of the Federal Republic of Germany clarified that virtual currencies are equated with legal tender to the extent that they are accepted by the parties to the agreement as alternative contractual and direct means of payment that do not serve any other purpose. in addition to using quality as a means of payment (Chaplyan, 2020).

In February 2020, the Central Bank of Sweden announced the start of testing the first state cryptocurrency in the EU. E-Krona is traditional money, but in digital form, issued and managed by the Central Bank of the country (as opposed to cryptocurrency, which is managed by disparate online communities and not a centralized authority). In the decision of October 22, 2015, in the Hedqvist v. Sweden case, Bitcoin was recognized as a contractual means of payment. The population of Sweden almost completely abandoned cash (Yarova, 2017).

In 2017, the Government of Japan approved changes to the Law "On Banking Activities" and officially recognized Wiisoip as a legal means of payment (Chaplyan, 2020).

Cryptocurrency is considered "currency or other form of money" by US courts. For example, the decision of the judge of the Eastern District of Texas (Case NO. 4:13-CV-416) defined Bitcoin as a currency and resolved the question of the application of current law to transactions with it. Judge T. Mazant held that because Bitcoin can be used as money to pay for goods or exchanged for other currencies (such as the dollar, yen, yuan, etc.), it is a currency or form of money. However, in other states, the situation is different: by the decision of the District Court of Florida (Saze N0.: P14-2923), the court decided and declared the opposite, which led to the dismissal of the accusation regarding the legalization of income obtained through criminal means (Burdonosova, 2019). At the same time, the state of Washington recognizes digital currency as an object of money transfers on the basis of the Law "On the Unification of Monetary Services" (Leheza et al., 2019).

In Canada, Bitcoin is a means of payment. The Canada Revenue Agency (CRA) views cryptocurrency as a form of property, with profits subject to tax under income tax laws being either business income or capital gains.

Determining whether your cryptocurrency activity constitutes a business is critical since only 50% of capital gains are taxable, whereas business income is fully taxable. This guide provides a comprehensive overview of how to report and tax both types of income and addresses frequently asked questions about cryptocurrency taxation in Canada.

Cryptocurrency tax rates in Canada have unique characteristics that set them apart from many other tax systems around the world. Unlike some jurisdictions that differentiate between short-term and long-term capital gains, Canada does not. Instead, capital gains from cryptocurrency are taxed at combined federal income tax and provincial income tax rates. An important difference for individual crypto investors is that taxes only apply to 50% of total capital gains. In contrast, professional traders who regularly buy and sell cryptocurrency are taxed on 100% of their profits.

The federal income tax rates for individuals in Canada for 2023 and 2024 are broken down into several categories. For 2024, these brackets have been adjusted for inflation and other economic factors:

A 15% rate applies to the first $53,359 of taxable income, increasing from $50,197 in 2022. For income between $53,359 and $106,717, the rate is 20.5%, compared to the level between $50,197 and $100,392. Income between $106,717 and $165,430 is taxed at 26%, an increase from the previous bracket of $100,392 to $155,625. The next bracket, $165,430 to $235,675, is taxed at 29%, increasing from $155,625 to $221,708. For income above $235,675, the rate is 33%, adjusted from the previous bracket, starting at $221,708 (Ehret, 2022).

It is important to note that provincial and territorial taxes in Canada (with the exception of Quebec, which has its own tax system) mirror the federal structure, allowing for seamless integration between federal and local tax calculations. Each province and territory provides specific tax packages that include the rates applicable to their residents, ensuring that people can accurately calculate their overall tax liability, including those related to cryptocurrency transactions. (Sotska et al., 2024)

This simplified approach to cryptocurrency taxation highlights the need for Canadian crypto investors and traders to keep accurate records of their transactions. By understanding these tax rules and planning accordingly, cryptocurrency holders in Canada can more effectively meet their tax obligations and avoid potential pitfalls. (Dudyk et al., 2024)

Latin American countries mainly consider cryptocurrency as a legal asset, admissible in full or at least partially for civil circulation, but deny its status as national (fiat) money, foreign (fiat) currency and legal tender. However, the legislation of El Salvador in September 2021 recognized it as a legal tender—the de facto national currency of the country. This will give the decentralized financial product the official status of a foreign currency in other countries of the world. In the event of a successful continuation of this payment experiment in El Salvador, the issue of the use of cryptocurrency will become relevant, there will be a need to review legal formulations and approaches to the qualification of cryptocurrency as an object of civil rights in all Latin American countries. (Rezvorovych et al., 2023)

In Singapore, the legal regime of digital payment tokens in the country was regulated in 2019, when this concept was included in the Law "On Payment Services" No. 2 dated 22.02.2019. According to Part 1 of the Law, "a digital payment token means any digital representation of value (except for established exceptions) which: a) is expressed in the form of a block; b) is not denominated in any of the currencies and is not linked by its issuer to any of the currencies; c) is or is intended to be a medium of exchange accepted by society or its part as payment for goods or services or to repay debt obligations…" (Chaplyan, 2020). In general, at the level of legislation, administrative or judicial practice, the vast majority of Asian countries recognize that the real purpose of cryptocurrency is to act as a means of payment for goods / works / services, as an alternative to fiat money. However, only some countries, such as Japan, South Korea, Singapore, Thailand, have an undeniable attitude towards this function of this innovative object of civil rights.

Table 1 Advantages and disadvantages of using cryptocurrency

Advantages	**Disadvantages**
Cryptocurrency code	Lack of guarantees for the safety of electronic wallets
Limitless transaction possibilities	The danger of losing the key to cryptocurrency
Number of days of inflation	The instability of the cryptocurrency exchange rate
Anonymity	Dependence of the exchange rate on demand
Decentralization	Negative actions by national regulators are possible
Number of days of the commission	Hacker intervention
Equal Terms of Use Between Users	Problematic return in case of erroneous currency transfer
Independence from the economies of powers. Data protection from external threats	Distrust of users

Consider the experience of Ohio (USA) accept BitCoin. In October, Ohio Treasurer Robert Sprague suspended the use of Bitcoins, citing concern that the contract with a third-party payment processor was not competitively bid by Mandel, which would have been required if the Board of Deposit had approved the arrangement. OhioCrypto.com, a website launched in 2018 under Mandel, was the first state portal to facilitate cryptocurrency as a form of payment for businesses. (Nalyvaiko et al., 2023).

The website had been used for fewer than 10 transactions in just under a year of operation. During that time, the state never came into possession of Bitcoin. Instead, when taxpayers used OhioCrypto.com to make payments, the Bitcoin was converted into U.S. currency by payment processor BitPay before it was deposited into the state's account (Artyukhov et al., 2022).

In Switzerland, cryptocurrency is equated with foreign currencies—transactions with it are exempt from VAT but are taxed as property. In Finland, cryptocurrency is defined as a financial instrument, transactions with them are considered private transactions and are exempt from VAT.

5 Conclusions

It has been established that the legal regulation of implementing FinTech in the sphere of public finance in Ukraine has an inconsistent and contradictory nature. When comparing the practice of introducing financial technologies into the economy, legal conflicts arise due to a certain inconsistency of the content and direction of regulatory legal acts with the essence of new forms and methods of economic activity.

One of the fundamental provisions of the legal theory of money consists of the distinction between private currencies and state (official) money. The fundamental economic

and legal value of state (official) money for the economy lies in its recognition as legal tender. However, even in this area, the seeds of a break in the state monopoly of currency emission have emerged, due to the possibility of issuing electronic money denominated in hryvnia by entities other than the National Bank of Ukraine, which requires an assessment of such an innovation from the point of view of its constitutionality and openness to conflicts. In addition, cryptocurrencies, as alternative settlement units, pose a threat to the dominance of fiat (public) currencies. The FinTech supplemented formation of a new form of investment resources enables competition on the part of private financial agents with respect to states and their associations in the financial sphere; this acts as a factor in breaking the state emission monopoly and requires awareness of the possible negative consequences of such innovations.

Since, by its economic essence, electronic money is a digital debt document, not funds, and since it acts as a kind of "electronic promissory note," but does not correspond to the formal features of this type of security, its use in the sphere of public finance is debatable and cannot be considered sufficiently substantiated. In view of this, provisions of the Tax Code of Ukraine regarding the use of electronic money for paying taxes and fees are considered socially unacceptable. However, electronic money is suitable for making payments of a non-public nature within the limits of the relevant payment systems, and transactions with their use can be considered as objects of taxation, since electronic money creates a separate channel for movements of value in economic relations.

It has been established that the definitions of virtual currency proposed by the International Monetary Fund and the European Central Bank, the practice of leading countries in the field of technology and digitalization of foreign countries indicate the need to recognize crypto-assets as a means of payment. Nine states that have already successfully legalized cryptocurrency as a means of payment were analyzed. This is in line with the nature of cryptocurrency and public attitudes toward the use of this digital tool. In addition, the corresponding changes in the legislation will contribute to the active filling of the state budget thanks to cryptocurrency payments in various spheres of public life.

So, from the above, it follows that from a scientific point of view, cryptocurrency can be considered a means of payment, even more, its primary function is precisely the calculation. In addition, a number of foreign countries quite actively regulate the relevant innovation at the legislative level, especially those whose state policy is aimed at digitization.

The modern global fintech market is an extremely dynamic segment that combines advanced financial and technological achievements. Ukrainian fintech, despite its short period of existence, is characterized by all the trends occurring in the world. Ukraine, as a potentially promising fintech market, has yet to take a number of important steps to transform into one of the significant innovation hubs of the European space, first of all, to implement legislative initiatives in the fintech environment, primarily the EU Directive PSD2, which will make it possible to expand the ecosystem of financial services. The implementation of PSD2 will also create conditions for the introduction of remote identification of users, which, according to both fintech companies and banks, is one of the main obstacles to the development of the fintech industry in Ukraine.

Banking institutions must be determined to develop perfect APIs and ensure acceptable conditions of interaction with fintech companies interested in creating products that are attractive to both users and banks. It is important to implement an effective mecha-

nism for protecting the rights of consumers of fintech services to strengthen the responsibility of banks and non-banking institutions for the quality of services provided.

It remains urgent to create favorable conditions for the creation and further development of fintech companies and increase the level of financial inclusion in the Ukrainian market, free access of the population to the use of financial products and services based on adequate tariffs and legal protection. The priority is to solve the problem of attracting capital from external sources of financing, which is possible by reducing the riskiness of Ukrainian projects due to the economic stabilization of the country, overcoming corruption phenomena and improving the judicial system.

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