

## FEATURES OF INHERITANCE OF CRYPTOCURRENCY ASSETS

CARACTERÍSTICAS DE LA HERENCIA DE ACTIVOS EN CRIPTOMONEDAS

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**Abstract:** The article analyzes the legal nature and specific of legal regulation of cryptocurrency in order to reveal the features of inheritance of cryptocurrency assets. The article aims to reveal whether it is possible to inherit cryptocurrency in terms of the existent legislation and if so, what kind of peculiarities of cryptocurrency should be considered. The financial and legal nature of cryptocurrency are described in the article. The main differences between cryptocurrency and traditional electronic money are revealed. The current legislation of Ukraine and some European countries on cryptocurrency legal status is analyzed. It is stated, that in most countries of the world, cryptocurrency is not considered to be money or currency, but rather a kind of property. It is noted, that while solving the issue of inclusion of cryptocurrency assets in the legacy, it is necessary to take into account the functional features of cryptocurrencies in general and the specifics of a particular type of cryptocurrency. Most of the benefits of cryptocurrencies for their owner (such as anonymous character) are obstacles to their inheritance according to the procedures provided by applicable law. The

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classification of the methods of inheritance of cryptocurrency assets is made in the article. The differences in the inheritance of cryptocurrency and tokens are revealed.

**Keywords:** Cryptocurrency, Tokens, Inheritance, Electronic Money, Will

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**Resumen:** *El artículo analiza la naturaleza jurídica específica de la regulación legal de las criptomonedas con el fin de revelar las características de la herencia de los activos en criptomonedas. El artículo pretende estudiar si es posible heredar la criptomoneda en términos de la legislación existente y, de ser así, qué particularidades de la criptomoneda deben tenerse en cuenta. La naturaleza financiera y legal de la criptomoneda es descrita en el artículo. Se describen las principales diferencias entre la criptomoneda y el dinero electrónico tradicional. Se analiza la legislación actual de Ucrania y algunos países europeos sobre el estatus legal de las criptomonedas. Se afirma que en la mayoría de los países del mundo la criptomoneda no se considera dinero o moneda, sino más bien un tipo de propiedad. Se observa que, al resolver el problema de la inclusión de activos de criptomonedas en el legado, es necesario tener en cuenta las características funcionales de las criptomonedas en general y las características específicas de un tipo particular de las mismas. La mayoría de los beneficios de las criptomonedas para su propietario (como el carácter anónimo) son obstáculos para su herencia de acuerdo con los procedimientos previstos por la ley aplicable. La clasificación de los métodos de herencia de activos de criptomonedas se realiza en el presente artículo, así como se revelan las diferencias en la herencia de criptomonedas y tokens.*

**Palabras clave:** *Criptomonedas, tokens, herencia, dinero electrónico, voluntad*

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**Summary.** *I. Introduction. II. Methodology. III. The Financial and Legal Nature of Cryptocurrency. IV. Legal Status of Cryptocurrencies in the Legislation of Ukraine and some European Countries. IV.1. State of Cryptocurrency Regulation in Ukraine. IV.2. State of Cryptocurrency Regulation in Different Countries of the World. V. Legal Issues of the Inheritance of Cryptocurrency Assets. VI. Conclusions. References.*

## I. INTRODUCTION

Modern technologies are changing human life daily, enriching it with new opportunities for self-realization, communication, knowledge dissemination,

meeting other human needs. The modern degree of development of information technologies causes the widening of the spectrum of social relations that may arise in the virtual environment. New relationships are emerging around new objects of virtual space that have information, cultural, economic, and personal value for the subjects of such relationships. The collision of interests of individuals in the sphere of creation, possession, use and disposal of such objects is a factor that determines the need to regulate such relations at the level of law. The ability to freely dispose of a virtual object, including the inheritance, must be taken into account. The effectiveness of the legal regulation of these relationships is determined by a sound scientific basis, on the basis of which appropriate regulatory acts should be adopted.

The demand of modern society to expand the range of objects of civil law and ensure proper protection of rights to such objects necessitates the theoretical development of these issues by the science of civil law. The achievements of today's industry, expressed in the widespread use of modern information technology and the emergence of new digital objects that have tangible and intangible value, are slowly being reflected in legislation. Therefore, there is a situation in which law enforcement practice is forced to anticipate legislative regulation, and this threatens unequal or completely incorrect regulation of civil relations in practice.

Today, cryptocurrencies are becoming more and more popular. The demand for such digital money is increasing. However, we still feel the lack of legal regulation of relations, which arise while using cryptocurrencies not only in Ukraine but also all over the world. The acceptability of any item as money is the first prerequisite for using it to fulfill this function. If most people cannot be persuaded to accept this item, they will not be able to fulfill their purpose. That is why it is extremely important to investigate the legal nature of cryptocurrencies and reveal their features, which would allow treating them as money. Nevertheless, this issue is still debatable.

Problems of legal regulation of cryptocurrencies have been the subject of a number of studies: H. Nabilou (2019), A. Barroilhet Díez (2019), L. F. Kjaersgaard & A. Arfwidsson (2019), N. Tiwari (2018), E. P. Ermakova & E. E. Frolova (2019), A. Jarova & I. Lloyd (2018), Nekit K. (2018), and Golubeva N. (2018). However, the rapid development of blockchain technology and the global proliferation of cryptocurrencies and cryptocurrency transactions have led to a legislative loophole in regulating cryptocurrency relationships.

## **II. METHODOLOGY**

In the course of the research general scientific methods, such as dialectical, analytical-synthetic, system-analytical, as well as special methods, such as logical-legal, comparative-legal analysis were used.

The dialectical method was used to analyze various doctrinal concepts regarding the legal nature of cryptocurrency as object of property rights. Analytical-synthetic method helped to determine the scope of the concept of cryptocurrency as an object of hereditary relations. The system-analytical method made it possible to conduct the research of the current legislation to reveal the factors excluding a possibility of application of a traditional order of inheritance to digital objects. The logical-legal method allowed to analyze the content of current legislation of Ukraine, identify gaps contained in certain regulations, as well as identify inconsistencies in certain regulations governing the terms and conditions of inheritance of cryptocurrency. The comparative-legal method was used to compare doctrinal provisions, legislation and case law in Ukraine and foreign countries.

## **III. THE FINANCIAL AND LEGAL NATURE OF CRYPTOCURRENCY**

History shows that money can exist without being tied to the state apparatus, due to the mere agreement or agreement of a certain stakeholder group, that is, the existence of the state as a regulator is not an obligatory condition for the emergence of monetary units and the existence of commodity turnover. However, each state in one form or another acts, as a regulator of the circulation of money. It may authorize the emergence of new currency, to deprive money of their status, or even to withdraw them from circulation.

A striking example could be the fact that in 1948, a new currency, the German mark, was introduced in Germany in the territories under the protectorate of the United States, Great Britain, and France. Only one day was set aside for exchange - June 21, 1948. Only during this day, old money could be exchanged for new ones at the rate of one to one with a volume of not more than 400 Reichsmark. The exchange limit was no more than 200 Reichsmark over the next two months. Impaired Reichsmarks filled the Soviet occupation zone, which quickly led to their total ban (Krashennikov, 2011).

In 2008, a person or a group of people, nicknamed Satoshi Nakamoto, posted a file describing the protocol and principle of a new payment system. Satoshi Nakamoto first described the principle of the payment system in the form of a peer-to-peer network, which in 2009 was presented by him as an open-source client program - Bitcoin on the Internet (Nakamoto, 2008, p. 1).

In addition, a special application was created, a wallet for computers containing Bitcoin cryptocurrency (hereinafter referred to as “Bitcoin”). On the official website, Bitcoin is called “open-source P2P digital currency”. Bitcoins in their essence are cryptographic (mathematical) hash codes, each of which is unique and cannot be used twice. That is, if the value of gold and silver was based on their physical properties, then the use of Bitcoins is based on its mathematical properties.

Bitcoin is created through so-called mining. The process of mining is decentralized and regulated by a simple software architecture. A transaction is a network message that transfers a certain number of Bitcoins from one user to another. It is seen by the miners (computer stations with powerful processors) and must be computed to complete the operation. Only after that the transaction is recorded in the so-called block. There are many such blocks, each containing information about thousands of transactions processed. However, the most important thing is that each block is connected to the previous one.

The initial cost of Bitcoin is the cost of electricity consumed while mining, the secondary cost is determined by the demand for this cryptocurrency. Such a complex process of Bitcoin mining is determined by the need to guarantee the inevitability of transactions. If any user tries to rewrite the transaction history, at the same time, the data in all other blocks will be corrupted. The chain principle actually makes it impossible to manipulate the data and at the same time allows each user to find out how many Bitcoins belonged to a particular wallet in a certain period of time. The financial nature of cryptocurrency is determined by its features:

(i) Decentralization and accessibility. The Bitcoin network is a combination of all client programs (wallets) and a distributed blockchain database stored on each computer of the chain. Blockchain is completely open to view the registry of all transactions on the system. You can connect to this registry using your own wallet or a web interface of specialized monitoring services from anywhere, without passwords and any other authorization.

(ii) Full transparency of payments. The history of any payment can be traced to the moment of coin generation. Such information will never be deleted from the database. Knowing only the Bitcoin wallet address, you can find out at any time any transactions that were accepted or sent from it.

(iii) Free Degree Selection. The user can download an official Bitcoin Core client that stores all transaction history. If the user does not need battery life and blockchain analysis, he or she can install one of the lightweight or mobile wallets that require significantly less resources. For maximum

security, there are hardware wallets with additional degrees of protection, the so-called “cold wallets”.

(iv) Lack of Network Control. Because blockchain is a peer-to-peer database, the Bitcoin network does not have a control center that can freeze any account, change the number of units in the system, block or cancel a payment. There are small commissions, the size of which is almost insensitive in practice and does not depend on the amount of the transfer. Transactions in the system are as irrevocable as cash transactions.

(v) Anonymous settlement options. Bitcoin provides a convenient and anonymous settlement tool; the address is an account number in the system not associated with its owner. No documents are required to open such an account. The address looks like this: 1BQ9qza7fn9snSCyJQB3ZcN46biBtk4ee. It can be converted to a QR code or other two-dimensional code for ease of calculation.

(vi) Unmatched protection. With each new block, the computing power that miners need to calculate the entire chain from scratch increases. The longer the chain, the harder it is to break the network. To date, the Bitcoin network has exceeded the total processing power of all supercomputers in the world. To gain even limited control over it requires enormous resources and costs of hundreds of millions of dollars (Stakhira, 2017, p. 53).

The main differences between cryptocurrency and traditional electronic money are reflected in the next features:

(i) Cryptocurrency does not imply any debt obligations of its owner or issuer (there is no cryptocurrency issuer at all).

(ii) There is no single emission center or central administrator in the cryptocurrency system.

(iii) Payments within the system of a particular cryptocurrency can be made completely anonymously, which means that for the payers and recipients of the cryptocurrency, there is a complete lack of control by any third parties, including public authorities.

The process of creating new types of cryptocurrencies or increasing the amount of cryptocurrency within a single cryptocurrency system (the mining process) can be performed on the basis of mathematical algorithms.

Using the computing power of the computers of individuals who acquire (own) additional units of cryptocurrency. Accordingly, the rate of generation of new units of cryptocurrency decreases with the increase of the total mass of cryptocurrency, and the generation of additional units of cryptocurrency in case of reaching a certain total number of units will become technically impossible (for example, if 21 million units of Bitcoins are reached). Electronic money is required to be tied to a particular national

currency and the issuer, whereas cryptocurrency cannot be connected to any currency in the world (Solovyova, 2018, p. 245).

The legal status of cryptocurrencies is undetermined in most countries of the world, and if defined, is gradually changing as there is an active search for their place among civil rights objects. At the same time, it is necessary to determine the legal nature of cryptocurrency as there is a significant growth of it. In 2017, the volume of the crypto market was about 70 billion US dollars, and scientists noted that within the world economy it is very small amount (Golubeva, 2017, p. 22). In 2019, the capitalization of just one Bitcoin has already reached 140 billion US dollars. In addition, the number of cryptocurrencies (both in the number of varieties and in the number of coins of individual cryptocurrencies) and the number of owners of cryptocurrency assets is constantly growing.

The proliferation of cryptocurrency circulation at one time provoked lively discussions about the legal nature of cryptocurrency, namely, researchers were wondering whether cryptocurrency could be considered as the real currency. Most researchers are in solidarity that cryptocurrency is not money in the classical sense, because it has no signs of money: it is not recognized and issued by the state and is not a mandatory means of payment. Various researchers attribute cryptocurrencies to electronic money, non-documentary securities, information, quasi-things, or other property.

Thus, Golubeva (2017) believes that as an object of civil rights, cryptocurrency is difficult to implement in the existing classifications:

«Cryptocurrency can be attributed to intangible benefits. Since there is no limited list of objects in the Art. 177 of the Civil Code of Ukraine. Apart from things, property rights, results of works, services, results of intellectual, creative activity, information as objects of civil rights, the Civil Code of Ukraine mentions other tangible and intangible goods» (p. 24).

R. Turkin (2017), on the contrary, believes that cryptocurrency is an object of property right. K. Nedit (2018) considers that cryptocurrencies could be qualified as a kind of property since «these assets are of economic value, affect financial interest and can therefore be considered as an object of ownership» (p. 42).

There are some significant achievements in determining the legal nature of cryptocurrency in German legal doctrine. Having analyzed the current German legislation, German scholars F. Boehm & P. Pesch (2014) concluded that today there are two approaches to the qualification of Bitcoins: as intellectual property rights (§ 2 of the German Copyright Law) or as software (§ 69 of the German Copyright Law).

However, Bitcoins are neither personal intellectual creation nor software (only the Bitcoin management protocol is software). The approach to the acquisition of the ownership of the newly created thing (the creator of the cryptocurrency unit formally has the right to use, possess and dispose), as well as the nature of transactions made with cryptocurrency (sale and purchase), make it possible to consider them as objects of real rights. Nevertheless, the anonymity of the transactions complicates the application of civil legislation to such relationships. In particular, there is a problem of restoration of violated property rights and imposition of protective measures by the court.

Of interest from the point of view of the science of civil law is the consideration of the nature of transactions, the objects of which are cryptocurrency assets. Thus, researchers say that on the one hand, if someone buys a product in exchange for money, it is classified as a sales contract. It seems obvious that if you pay for a purchase with Bitcoin, then this is a typical example of a sales contract. However, if we consider in more detail the legal provision that defines sales contracts under German law (§ 433 of the German Civil Code), a different conclusion can be drawn. A contract of sale is a contract that includes the obligation to transfer ownership of movable property in exchange for a cash payment. Since Bitcoin cannot be classified as money, a Bitcoin contract cannot be regulated as a contract of sale (Boehm & Pesch, 2014).

Taking into account different approaches to the legal nature of cryptocurrency, we can say that in our opinion, cryptocurrency is a property equal to a commodity in terms of sale and exchange, and the owner of a cryptocurrency wallet has a status similar to the owner of traditional property.

## **IV. LEGAL STATUS OF CRYPTOCURRENCIES IN THE LEGISLATION OF UKRAINE AND SOME EUROPEAN COUNTRIES**

### ***IV.1. State of Cryptocurrency Regulation in Ukraine***

Today there is no specific law governing relationships with cryptocurrencies, nor there a legal definition of cryptocurrency in Ukraine. Nevertheless, there are some draft laws as well as provisions of Civil Code, which can be used to determine the legal status of cryptocurrency in Ukraine.

According to the article 177 of the Civil Code of Ukraine, objects of civil rights are things, including money and securities, other property, property rights, results of works, services, results of intellectual, creative activity, information, as well as other tangible and intangible goods.

According to the article 99 of the Constitution of Ukraine, the currency of Ukraine is the “hryvnia”. In addition, scientists rightly point out that in order to classify an asset as money, it must perform such basic functions as: means of circulation; a measure of value; means of accumulation; means of payment; world money (Bezverhiy, 2018, p. 30).

According to the article 3 of the Law of Ukraine “On Payment Systems and Funds Transfer in Ukraine” dated April 5, 2001, the “hryvnia” as a monetary unit of Ukraine is the only legal tender in Ukraine, accepted by all natural and legal persons without any restrictions on the whole territory of Ukraine for transfers and payments.

Pursuant to the article 32 of the Law of Ukraine “On the National Bank of Ukraine”, the issuance and circulation in the territory of Ukraine of other monetary units and the use of monetary surrogates as a means of payment are prohibited. According to the article 3 of the Decree of the Cabinet of Ministers of Ukraine “On the System of Currency Regulation and Currency Control” dated February 19, 1993, the “hryvnia” as a currency of Ukraine (national currency) is the only legal tender in Ukraine accepted by all physical persons and legal entities without any restrictions throughout the territory of Ukraine for transfers. Residents and non-residents have the right to own currency values located on the territory of Ukraine. Residents also have the right to own currency values outside Ukraine, except in cases provided for by the legislative acts of Ukraine. The list of currency values is given in the article 1 of the aforementioned Decree, including the currency of Ukraine, payment documents and other securities, expressed in the currency of Ukraine; foreign currency, payment documents and other securities denominated in foreign currency or bank metals; precious metals.

The list of currency values is given in the article 1 of the aforementioned Decree, including the currency of Ukraine, payment documents and other securities, expressed in the currency of Ukraine; foreign currency, payment documents and other securities denominated in foreign currency or bank metals; and precious metals.

Thus, the legal nature of cryptocurrency is not defined under Ukrainian law, but at the same time, cryptocurrency cannot be equated with a means of payment or currency value.

Taking that into account, it is important to determine their turnover in civil circulation. According to the article 178 of the Civil Code of Ukraine, objects of civil rights may be freely alienated or transferred from one person to another by a contract or succession, if they are not removed from the civil turnover and not restricted in circulation. The types of civil rights that are forbidden in the civil turnover (objects removed from the civil circulation) should be explicitly set out in law. Types of objects that may belong only to certain

participants of civil relationships or be in civil circulation only on the basis of special permission (objects with limited turnover) are established by law.

Some scholars believe that cryptocurrency can be an object of civil relationships since it is an aggregate of information and has a monetary value. And information as well as other intangible things can be objects of civil rights according to Ukrainian legislation (Nekit, Ulianova & Kolodin, 2019). Other scholars on the contrary state that cryptocurrency cannot be attributed to any legally mandated type of civil-law object (Nakonechnyi, 2017).

According to the article 1 of the Draft Law “On Encouraging the Cryptocurrency Market and Their Derivatives in Ukraine” dated October 10, 2017, cryptocurrency is defined as a decentralized digital value measurement, which can be digitally expressed and function as a means of exchange, storage or a unit of account based on mathematical calculations, is their result and has cryptographic accounting protection.

Cryptocurrency is considered a financial asset for regulatory purposes. The bill was submitted as an alternative to the Draft Law of Ukraine “On the Circulation of Cryptocurrency in Ukraine”. However, it should be noted that this project comes from slightly different positions than the previous one, it is based on the assumption that the cryptocurrency market is a part of the financial services market. In particular, this is confirmed by the fact that according to the Draft:

(i) Cryptocurrency for legal regulation purposes is considered a financial asset.

(ii) Professional participants in the cryptocurrency market are crypto exchanges and other financial institutions providing financial services in the cryptocurrency market.

(iii) The Regulator, which will carry out state regulation of the cryptocurrency market and activities of professional participants on it is introduced.

(iv) The issue of derivatives for cryptocurrency is allowed.

However, Ukrainian scholars have repeatedly mentioned that at the current stage of the development of the cryptocurrency market it would be more appropriate to ensure the proper legal regulation of the relevant public relations without the adoption of a separate legal act. It would be better to improve some existent Laws of Ukraine, such as “On the National Bank of Ukraine”, “On financial services and state regulation of financial services markets” and some other (Solovyova, 2018, p. 246).

The cryptocurrency community has made the following key points regarding cryptocurrencies:

(i) Bitcoin is a decentralized system that generates cryptocurrency with a specific financial and legal nature.

(ii) Cryptocurrencies can already be exchanged for goods and services by agreement of the parties.

(iii) Cryptocurrency is characterized by a high degree of liquidity, as well as fiat money, since it can be quickly exchanged for cash without significant loss of its value.

(iv) Cryptocurrency is divisible. For example, one Bitcoin is subdivided into 100.000.000 arbitrary units called “Satoshi”. Therefore, it is easy for the consumer to pay any amount, get the rest, etc.

(v) Cryptocurrency is portable. Any transaction can be made in a few minutes from different angles of the planet.

(vi) Cryptocurrency does not have its own value. Its value is determined by the number of goods and services that can be purchased for a given amount of cryptocurrency.

(vii) The distributed blockchain database shows all transactions performed. In such a register, any user can track the territory where the transaction was made.

(viii) Cryptocurrency, unlike fiat money, has no issuer. Coins are generated by a separate group of users, who are called miners.

Based on the above, we can state that cryptocurrency has all the features of the currency except for the issuer (Barroilhet Díez, 2019).

Based on the recent definition of the category “currency” (the currency should be considered the external form of goods and services, which is a common equivalent and a medium of exchange, characterized by a high degree of liquidity, is divisible and portable and has no intrinsic value), cryptocurrency can refer to currencies.

The authors of the cryptocurrency encyclopedia have been identified the main features of cryptocurrency, namely: decentralization, ability to make payment, high degree of liquidity, divisibility, portability, lack of features of the material world, transparency, absence of a single issuer.

With today’s refusal of the gold standard, the strengthening of the processes of globalization and integration of the world economy, the development of information and computer technologies, cryptocurrencies are capable of performing all functions of money. That is why they can be defined as new, evolutionary form of money, resulting from the loss of intrinsic value of money and the development of non-cash payments, through the combination of financial and technical tools, as the transition to the informational stage of money development from their analogue form to digital.

At the present stage, the state authorizes the use of certain objects as money. It is worth clarifying this applies to most countries in the world, including Ukraine. Therefore, despite the fact that cryptocurrencies by their very nature fit into the category of “money”, they will be able to officially

obtain the status of money only after the appropriate order of the authorized state body. However, in Ukraine, the recognition of decentralized cryptocurrencies is not expected in the near future. At the same time, the mere granting of legal status to cryptocurrencies at the legal level would already be a significant step forward and would lead the cryptocurrency market participants out of the constant threat of accusations of illegal transactions. The domestic legislator faces the difficult task of qualifying cryptocurrencies. Considering, on the one hand, the monetary nature of the latter, and on the other, the need to avoid the use of the term “money”, the compromise seems to be the introduction of an institution of undocumented electronic money surrogates, which will act as legal means of payment.

In Ukraine, the official recognition of cryptocurrencies requires an appropriate decision at the legal level, which is unlikely today. Nevertheless, despite the uncertainty of the legal status of cryptocurrency assets and transactions, new owners of cryptocurrency assets are actively appearing in Ukraine today, the number of transactions is increasing exponentially.

The prospects for research and legal regulation of cryptocurrencies in Ukraine now seem uncertain due to the substantial resistance of the state to recognizing the status of decentralized currencies.

#### ***IV.2. State of Cryptocurrency Regulation in Different Countries of the World***

At the same time, some countries have good experience in legal regulation of cryptocurrencies. For example, in the Republic of Belarus, the Presidential Decree “On the Development of the Digital Economy” n° 8 has entered into force, according to which unprecedented conditions for the development of the IT industry were created. The Decree provides serious competitive advantages for the country in the creation of the digital economy of the 21<sup>st</sup> century, in particular it recognizes the possibility to use cryptocurrency in certain cases.

In most countries of the world, cryptocurrency is not considered money or currency. EU law defines cryptocurrency as a digital representation of value that is not endorsed by a central bank or public authority and is not tied to legally established exchange rates, which can be used as an exchange instrument for the purchase of goods and services, their transfer and storage, and can be purchased electronically. Buying or selling of cryptocurrency is exempt from value-added tax in all EU Member States. However, the legal nature of cryptocurrency is similar to the concept of “product” (Kjaersgaard & Arfwidsson, 2019).

At the same time, the laws of individual states have different approaches to determination of the status of cryptocurrency (Ermakova &

Frolova, 2019). In Germany, cryptocurrency belongs to the category of private money through which multilateral clearing operations can be carried out (Galushka, 2017, p. 636). In 2014, Spain recognized Bitcoin as an official payment system. This initiative came from a tax inspection that analyzed the use of cryptocurrency in the country and concluded that this process should be legalized and taxed (Maksurov, 2018, p. 97). The Austrian Ministry of Finance classifies Bitcoins as other (intangible) goods. According to the Ministry, mining is generally a commercial activity and is therefore considered as any other production of goods. The same applies to trading online cryptocurrency trading platforms. In addition, the world's first Bitcoin Bank ("BitcoinBank") was officially opened in Vienna (Austria) in early 2017. In the United Kingdom, cryptocurrency is considered to be a unique combination of numbers derived from complex mathematical calculations and algorithms (Nabilou, 2019).

In Switzerland, according to analysts, the most favorable laws for the circulation of cryptocurrencies have been passed. The Swiss cryptocurrency exchange ECUREX GmbH is currently the world's first fiat money cryptocurrency exchange platform that fully complies with the regulatory requirements of the Swiss Law on Banking. In addition, cryptocurrency transactions in that country were exempt from value-added tax. In response to a request by Swiss Bitcoin companies to the Swiss Federal Tax Administration, cryptocurrency transactions were recognized in that country as a payment method rather than a service or commodity transaction.

The use of cryptocurrencies in Croatia is legal, but they are not recognized as electronic money and are not legal tender, that is, cryptocurrencies can be accepted by sellers as a payment method, but sellers are not obliged to accept them.

Litigation in the circulation of cryptocurrencies in the EU Member States is quite broad. Despite the lack of a unified approach to the financial and legal nature of cryptocurrency, national courts have a high priority to protect the fundamental rights and freedoms of citizens. It is about protecting property and recovering damages in case of improper performance of the contract between the parties.

In the United States, Bitcoin cryptocurrency is recognized as one of the types of e-commerce payments. In Hong Kong, back in November 2013, was stated that Bitcoin is a virtual commodity. In Venezuela, Bitcoin is considered property, not currency. Today, in the vast majority of countries, cryptocurrency is qualified as an intangible asset or commodity, most often it is not legal tender. In this case, transactions with cryptocurrency are equivalent to barter operations (UK, EU countries, Australia, Canada, USA, Japan) (Nekit, 2018). Japan has recognized Bitcoin as a payment method

since April 2017, and since then Bitcoins are functioning as a currency (Balikova, 2017).

Based on the above statistics, it is concluded that the recognition of digital currency largely depends on the degree of development of the country. Countries with weak economies are not ready to implement such payment systems (Jarova & Lloyd, 2018). Conversely, highly developed countries seek to regulate the system of electronic payments, taking them under their control and imposing taxes (Maksurov, 2018, p. 98). To date, cryptocurrency can be, by its legal nature, attributed to a particular type of property that acts as a commodity.

For Ukraine, it would be useful to take into account foreign practices of legal regulation of cryptocurrency. Of a special interest is the experience of the Republic of Belarus, where the definition of cryptocurrency as well as basic principles of its turnover were defined at the legislative level. The most common for all countries position on the legal nature of cryptocurrency should be taken in account by the Ukrainian legislator. Thus, cryptocurrency has to be defined as a specific type of property, which can be exchanged to other goods.

## **V. LEGAL ISSUES OF THE INHERITANCE OF CRYPTOCURRENCY ASSETS**

Problems of inheritance of cryptocurrency assets are actively emerging in practice, but generally remain out of the limelight of researchers in the field of inheritance law. Increased interest in modern information technology is shaping society's demand for effective legal regulation of these relationships, which should be preceded by a significant amount of work by scientists to develop a sound approach to the legal nature of cryptocurrencies and other digital assets.

As a general rule, the inheritance includes all the rights of the heir that belonged to him at the time of opening the inheritance and did not terminate as a result of his death.

The urgent issue is the inclusion of cryptocurrency in the heritage in case of death of the owner of the cryptocurrency asset. It should be noted that there is no direct ban on the inheritance of cryptocurrency in the current civil law of Ukraine. The features of their inheritance are conditioned by the differences between crypto-assets and other traditional objects of inheritance.

Since cryptocurrency ownership is impersonal, the owner is nowhere recorded nor he is specified in any registers, confirmation of ownership cannot be obtained in any form. That is, the ability to own, use and dispose

of cryptocurrency depends only on the availability of a special electronic cryptocurrency wallet and a password to access it (public and private keys). The wallet number and access key are stored in a manner that no one can access this wallet unless they have a password, even with the consent of its owner or court order.

Therefore, the inheritance of cryptocurrency assets by law looks like a technically impossible process because of the features of the object itself. As for the will, under civil law a person may leave a secret will, the regime of which allows to bequeath cryptocurrency assets.

However, there are currently several ways to inherit cryptocurrency in practice. An analysis of recent publications allows to classify all the suggested methods as follows: (i) traditional (using the mechanisms enshrined in current legislation), (ii) technological, and (iii) mixed (Alina, 2018).

Among the traditional methods of inheritance of cryptocurrencies, it is named the use of a classic testament, indicating the data of the cryptocurrency wallet and the key to access it. In this way, however, the anonymity of owning such a purse is eliminated and there is a risk of losing money due to the awareness of others. To ensure the integrity of the funds, it is suggested that the text of the will indicate only the public key and the private key should be kept separately. The disadvantages of this method are obvious - due to various circumstances, there is a risk of permanent loss of the keys.

Among the technological ways of transferring cryptocurrency assets to the heirs are the following: deferred payment systems built into the crypto wallet client programs; use of specially created Internet resources for inheritance of digital assets; wallet access deferral systems (Alina, 2018).

One of the most modern ways of keeping a key and being able to transfer it to heirs is an encrypted electronic data warehouse based on blockchain technology. The wallet owner transmits the data (wallet number and key) to the storage where they are encrypted. The owner also leaves the order on the transfer of data to third parties (for example, after submitting a death certificate). This technology is reliable for storing and protecting against third party's information, but like any technology, it cannot guarantee the data retention completely.

For example, a service known as Coinbase offers to transfer the cryptocurrency of the deceased person to the crypto wallet of his or her relatives after submitting a death certificate and will. However, users of the service have to transfer the ownership of the access keys to Coinbase representatives for a lifetime. Most crypto enthusiasts consider such a format inadmissible because it contradicts the very idea of Bitcoins and decentralization.

Mixed methods include the inheritance of crypto wallets in paper and hardware forms. Access keys can be equated to traditional things, and their location may be indicated in the text of the will (Alina, 2018).

It seems that among all methods of inheritance of cryptocurrencies the most appropriate is the last one. Mixed ways of inheritance of cryptocurrencies would allow combining advantages of traditional and technological methods. It also prevents disadvantages, such as the possibility to lose the key, which could happen in case of the traditional way of inheritance. Unlike the technological way, it will not create any problems while protecting rights of the heirs in court.

The easiest and most affordable way is to use a bank cell to store your crypto wallet key. In this case, the owner of the crypto wallet for life is the only person who retains access to such a wallet, and he can indicate in the will the bank cell without specifying what is stored there.

The heirs will, in fact, inherit the testator's rights to the banking cell so that the anonymity of the cryptocurrency's ownership will be maintained. However, in this case, the security of the banking system is a potential threat to the practical realization of the rights of heirs.

In the traditional sense, inheritance requires the confirmation of the right of the heir, which is to have certain documents or records in the register. Certain documents confirming the right may be issued by third parties: state or state authorities, other competent persons. For example, in many countries the ownership of real estate rights is confirmed by the records in special state or notarial registers, the ownership of shares is confirmed by an extract from the shareholder register.

The ownership of various financial instruments (bonds, futures, different types of derivatives), among which cryptocurrency tokens are nowadays named, can be verified by authorized organizations. The ability to provide such confirmation of the ownership of property and property rights to the heir is an important condition for their further inheritance. Only after such confirmation the property can be inherited, and the heir receives the right to own and use it at his or her discretion.

The benefits of inheritance are that the heir benefits from inherited property or rights without additional tools. The very fact of proper registration of inheritance makes it possible to own, use and dispose of the property of the deceased. In case there are some obstacles to the execution of such rights, there is always the possibility of overcoming them by going to court. However, in the case of cryptocurrency tokens, the prospect of obtaining a court order that would oblige someone to disclose affiliation information or give the heirs access to the "assets" of the testator seems to be ambiguous.

One of the advantages of cryptocurrencies as an investment tool is the anonymity of the investor. However, such anonymity is rather conditional, as state regulators are actively mastering the technique of investor tracking. There is a debate about the possibility of equating tokens obtained during the ICO to the securities of the company purchased on the stock exchange. Unlike cryptocurrency assets, in the case of tokens, there is a subject that can recover funds for the benefit of the heirs, however, as long as such procedure is not regulated by law, courts usually refuse to protect digital assets.

The aforementioned Decree of the Republic of Belarus “On the Development of the Digital Economy” provides for the inheritance of tokens by will. According to the Decree, individuals have the right to legally file a legacy that includes cryptocurrencies. However, it is still unclear how should this law be implemented in practice.

## **VI. CONCLUSIONS**

1. Given the civil legal nature of both the rights and obligations in respect of digital objects, the issue of the inheritance of such digital objects should remain within the limits of the permissive legal regime. The users should be able to independently decide the fate of their assets in the virtual environment. Increasing economic and social value of such assets makes it impossible to find them outside the legal field, and therefore the legal regime of their inheritance must be established.

2. In solving the issue of inclusion of cryptocurrency assets in the legacy, in practice, it is necessary to take into account the functional features of cryptocurrencies in general and the specifics of a particular type of cryptocurrency. Expanding the scope of the secret will, the widespread involvement of technological solutions to effectively protect the contents of the will should simplify the implementation of the right to bequeath cryptocurrency assets.

3. Most of the benefits of cryptocurrencies for their owner (such as anonymous character) are obstacles to their inheritance according to the procedures provided by applicable law.

4. The methods of inheritance of cryptocurrency assets can be classified into traditional (using mechanisms enshrined in current legislation), technological and mixed. Traditional cryptocurrency inheritance methods include methods using a classic or a secret will. Among the technological ways of transferring cryptocurrency assets to the heirs are the following: deferred payment systems built into the crypto wallet client programs; use of specially created Internet resources for inheritance of

digital assets; wallet access deferral systems. Mixed methods include the inheritance of crypto wallets in paper and hardware forms.

5. Unlike cryptocurrency assets, in the case of tokens, there is an entity that can recover funds for the benefit of the heirs, however, as long as such procedure is not regulated by law, courts refuse to resolve disputes over such an object as tokens. The analysis of domestic court and notary practice shows a considerable conservatism of judges and notaries in cases when it is necessary to resolve cases involving such objects as cryptocurrency assets.

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