

Review Paper

# Current Status and Regulation of the Digital Money Market in Ukraine

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Received: 19-12-2022

Revised: 23-04-2023

Accepted: 06-05-2023

## ABSTRACT

Nowadays, digital money, which in most cases is related to cryptocurrencies in one way or another, is gaining importance. The capitalisation of the cryptocurrency market is generally increasing over time; new coins are being created; and certain countries (including China, the European Union member states and Japan) are already working on projects to create their digital money. Given these trends, it is necessary to consider how the legal and regulatory framework for the electronic money market in Ukraine is structured and what is the current state of the market in the country. Thus, the research aims to analyse the current Ukrainian legislation that should regulate the electronic money market and to consider the current trends that prevail in the Ukrainian cryptocurrency market. The main method used in this research was the analysis method to draw appropriate conclusions about the effectiveness of the legal regulation of cryptocurrencies in Ukraine and the current state of their development in general, it was necessary to conduct a comprehensive analysis of the development of this phenomenon in many countries, including the United States, Germany, the United Kingdom, China, Japan. The study showed that the cryptocurrency market continues to grow rapidly in Ukraine. Cryptocurrencies are very popular among small investors, while Ukrainian cryptocurrency projects have not yet gained significant recognition in the world. The country's legal and regulatory framework for this sector appeared only in 2020, but it is too early to talk about its effectiveness; it is worth noting that its introduction is the right step for the further development of this sector. The data on the current state of the cryptocurrency market in Ukraine may be useful for investors to formulate their investment strategies, while an analysis of the legal and regulatory framework in this area in Ukraine and other countries will help policymakers to better shape future policy in this area.

## HIGHLIGHTS

- The aims of the article are to analyze the current legal and regulatory framework for the electronic money market in Ukraine, examine the prevailing trends in the Ukrainian cryptocurrency market, and evaluate the effectiveness of the legal regulation of cryptocurrencies in the country. The study highlights the rapid growth of the cryptocurrency market in Ukraine, the popularity among small investors, and the need for further recognition of Ukrainian cryptocurrency projects on a global scale. The findings provide valuable information for investors shaping their investment strategies and policymakers crafting future policies in the cryptocurrency sector.

**Keywords:** Financial System, Cryptocurrencies, Ukrainian Economy, Ukrainian Legislation, International Law, Blockchain

Blockchain has recently appeared as a secure, peer-to-peer platform for confirming transactions in a decentralised economy, facilitating the verification, security, and integrity of payments (Cumming et

**How to cite this article:** Sirenko, N., Dubinina, M., Melnyk, O., Bodnar, O. and Luhova, O. (2023). Current Status and Regulation of the Digital Money Market in Ukraine. *Econ. Aff.*, 68(Special Issue): 955-961.

**Source of Support:** None; **Conflict of Interest:** None



*al.* 2019). This system leads to many benefits for those who use it, including reduced time for data verification when sending payments and for identity verification. The new business model provided by cryptocurrencies, together with the exponential growth of their prices, has likely encouraged investors to use cryptocurrencies, including as a speculative asset (Shirakawa and Korwatanasakul, 2019). Due to the current spread of cryptocurrencies in the world, the emergence of new projects based on blockchain technology and new “coins” (i.e., new types of cryptocurrencies), it is important to consider the legal and regulatory framework for cryptocurrencies in the world and Ukraine.

Both domestic and foreign scholars have studied the issues of legal regulation of cryptocurrencies. D.J. Cumming *et al.* (2019) show the current trends in international regulation of the cryptocurrency market in countries around the world (Canada, India, China, Great Britain, Norway, Sweden, and the European Union), but with a focus on the regulation of the ICO (Initial Coin Offering) process. Other scholars, such as J.B.R. Shirakawa and U. Korwatanasakul (2019), used regression analysis to prove that the cryptocurrency market is more efficient when regulated (compared to the unregulated market), which proves the need to create institutions to manage these markets in countries. The conclusion that cryptocurrency markets should be strictly regulated was also reached by D. Afelumo (2021); in particular, the scientist writes that to conduct an ICO, the owners of this “coin” need to obtain a special licence issued by the relevant regulatory authorities. In general, the researcher is also confident that the regulation of the cryptocurrency market will only lead to the acceleration of the market development in the long run.

There are somewhat different trends among domestic scholars. In their studies, they rely exclusively on the experience of other countries and try to provide some advice for the formation of their regulatory framework. Thus, T. Bachynskyy and R. Radeiko (2019) emphasise the important role of cryptocurrency development in Ukraine (since, in their opinion, the features of this technology could help solve a significant number of general economic problems), and describe the current position of the government on this technology. In turn, S.I.

Derevyanko (2019) analyses the electronic money regulatory systems in the EU, the USA, Japan, Belarus, Moldova, and Russia and compares them with the Ukrainian system.

Thus, due to the increasing role of cryptocurrencies in the world, it was decided to conduct a study of the role of electronic money in the Ukrainian economy, as well as to consider the country’s legal framework for regulating this type of currency to ensure the future effective development of the sector. The research aims to analyse Ukrainian legislation on the regulation of electronic money and to draw conclusions about the current state and prospects of cryptocurrencies and cryptocurrency projects in Ukraine.

## MATERIALS AND METHODS

The main basis for writing this study was both the works of domestic and foreign authors who described the state of cryptocurrencies in Ukraine and their role in the world in general, as well as the legal framework of Ukraine regarding the regulation of cryptocurrencies. Domestic studies played a more important role, as most of the research is an analysis of the Ukrainian realities of the cryptocurrency market. Information on global regulatory standards was taken from both foreign and domestic sources. It should be noted that the basis of the analysed regulatory framework in this paper are laws and draft laws directly related to the development of the Ukrainian cryptocurrency market, namely: Law of Ukraine No. 7183 “On circulation of cryptocurrency in Ukraine” (2017), Law of Ukraine No. 7183-1 “On stimulation of the cryptocurrency market and their derivatives in Ukraine” (2017), and Law of Ukraine No. 2074-IX “On Virtual Assets” (2022). In addition, the study uses data from Ukrainian crypto exchanges on the dynamics of currencies issued by them.

The study consists of three main stages. The first stage analyses the current trends that are typical for the Ukrainian cryptocurrency market. It describes the main Ukrainian cryptocurrency projects, and the most well-known types of cryptocurrencies issued in Ukraine, and shows the attitude of the population towards them, their weight, and their role in the global cryptocurrency market. The second stage describes the attitude of the international

community to cryptocurrencies and analyses the main features of the regulatory framework of these countries; the countries are divided according to the criterion of “tolerance” to cryptocurrencies: those that support the legalisation of cryptocurrencies and try to promote the development of this technology and those that try to prevent and limit the influence of these currencies. The third stage analyses the Ukrainian draft laws and laws aimed at regulating the cryptocurrency market in Ukraine to define the concept of cryptocurrencies and their main points; in addition, it describes the benefits that the Ukrainian economy can receive from the wider adoption of cryptocurrency technologies within the country. The study concludes with a conclusion on the prospects for the development of this area for the country in the future.

## RESULTS AND DISCUSSION

### Current state and trends in the development of cryptocurrencies

It is worth noting that cryptocurrency is not synonymous with digital money but is only a subtype of it. Nevertheless, this research focuses on the role and status of cryptocurrencies in Ukraine. This is motivated by several reasons. First, the concept of digital money is broad (it is a monetary value represented in a claim to the issuer, stored on an electronic device, issued to receive funds for payment transactions and accepted by an individual or legal entity other than the issuing institution of electronic money) (Shyshkova and Moroz, 2017). Second, cryptocurrencies are the most common type of electronic money, the most developed. Thus, focusing on cryptocurrencies allows to significantly improve the quality of analysis and concentrate on a single object of debt.

In turn, cryptocurrencies are not just Bitcoin, although it is true that due to its origin, it is the most famous and has the largest capitalisation among other currencies: On 1 May 2022, it reached \$731.99 billion (Market capitalization..., 2022). There are other coins besides Bitcoin: Ethereum (the second most popular cryptocurrency), Litecoin, Bitcoin Cash, Monero, Dash, USDT (their total number is about a thousand). Each of these currencies often has a specific project (idea) that developers are trying to develop. For example, Ethereum is not

only a decentralised currency, like Bitcoin, but also a platform that makes it possible to establish new crypto projects based on Ethereum (Mamaeva, 2018).

The first Ukrainian cryptocurrency ever developed was Karbowanec (later renamed Karbo and with the KRB ticker), which was initially aimed at the Ukrainian audience and launched on 30 May 2016 (Merinova and Polovenko, 2021). The main benefits of this currency are anonymity and the ability to mine it on processors and video cards. Karbo is untraceable; it provides complete anonymity for the participants in the exchange process: it is impossible to even understand exactly who signed the transaction, as it is signed by a group of participants. In addition, transactions are also untraceable because the recipient can receive numerous one-time addresses derived from his public key; funds sent to these addresses can only be used by the recipient (Arkhireiska and Kuchkova, 2019).

The most popular stock exchange in Ukraine is the International Binance Exchange. Among foreign exchanges, Bybit, Huobi, Crypto.com also compete. However, new Ukrainian projects and Ukrainian stock exchanges are also emerging. In total, Ukraine has hosted about 30 ICOs (Initial Coin Offerings) in recent years, with MinexCoin being the most expensive until recently. The most recent of these is the Qmall exchange, which features the ability to conduct transactions with cryptocurrencies for hryvnias, which greatly simplifies the process of buying and selling (Qmall Cryptocurrency Exchange, 2022). An average Ukrainian investor no longer has to buy USDT (or another cryptocurrency analogue of the dollar) to purchase other cryptocurrencies (Bitcoin, Ethereum). This also slightly increases the expected profit of such an investor, as it allows not to spend extra money on buying and selling crypto dollars (this loss exists due to the difference in the buying and selling rates of such a currency: for example, as of 8 May 2022, USDT can be quickly bought on Binance via the Peer-to-Peer system at a price of about UAH 32.72 and sold at 32.5). In addition, the exchange makes it easy to send funds from a Ukrainian bank card without any fees. Such qualitative innovations indicate that cryptocurrency projects in Ukraine continue to develop.

Other Ukrainian exchanges include BTC Trade UA, Kuna Exchange, and EXMO. It is also worth noting that Ukraine has a Blockchain Association of Ukraine, which works to promote blockchain technologies in the Ukrainian economy, bringing together start-ups and specialists in this field for a multilateral dialogue, contributing to the development of the industry in the country.

The analytics of the Chain analysis Team, responsible for the development of the 2020 Global Crypto Adoption Index, are extremely useful for understanding the current state of cryptocurrencies in Ukraine. This index was intended to show how cryptocurrencies are used in countries among ordinary users (not speculators and institutional investors). For this purpose, four factors were used in the index cryptocurrency received value in the network, weighted by purchasing power parity (PPP) per capita (the total amount of cryptocurrency received by the country per capita), transferable retail value in the network, weighted by PPP per capita (the amount of cryptocurrency transferred through transactions compared to the wealth of the average person in the country), the number of cryptocurrency deposits in the network weighted by the number of Internet users (shows which countries' residents carry out the largest number of cryptocurrency transactions), the volume of Peer-to-Peer (P2P) exchange trading weighted by PPP per capita and the number of Internet users. Based on these data, a rating was formed, part of which is shown below in Table 1.

As can be seen from Table 1, Ukraine ranks first in the ranking of cryptocurrency adoption. This means that, compared to other countries, cryptocurrencies are highly accepted by the

population in Ukraine. Most of the countries in the top ten are developing countries. These are countries with not very strong economies and low living standards. This may indicate that for them, the decision to use cryptocurrencies is caused by weaknesses and shortcomings in the use of their national currencies. However, at the same time, this is a huge opportunity for such countries, as it makes it much easier to implement this technology among the population, allows them to build new projects on its basis and make plans development of the economy, considering the possibilities of future rapid development of this sector, which, in the author's opinion, should also be done by Ukraine.

Other countries are also developing this industry at a rapid pace. However, it is noteworthy that some of them are thinking about and working on the introduction of digital (crypto) currencies within their economies. For example, it is known that in China, in early 2022, the so-called "digital yuan" was launched, which can already be used to pay taxes. This may put China in a privileged position over other countries in terms of the future direction of financial technology development and help strengthen the country's national currency and contribute to the spread of its influence to other countries (Aysan and Kayani, 2022). It is known that other countries are working on a similar initiative the European Union is working on the creation of the digital euro, and Japan is working on the digital yen, and plans to launch them in the coming years.

### Legal and regulatory framework of the Ukrainian and global cryptocurrency market

Following an analysis of the current state of cryptocurrency development in Ukraine, let's

**Table 1:** Global cryptocurrency adoption index 2020

Country	Rate	Rank	Rating of individual weighted indicators included in the index			
			The resulting value of the cryptocurrency in the network	Transferable retail cost in the network	Number of cryptocurrency deposits in the network	Peer-to-Peer exchange trading volume
Ukraine	1	1	4	4	7	11
Russia	0.931	2	7	8	5	9
Venezuela	0.799	3	19	14	15	2
China	0.672	4	1	1	95	53
Kenya	0.645	5	37	11	57	1
USA	0.627	6	5	6	39	16

*Source:* Compiled by the authors based on the 2020 Global Crypto Adoption Index: *Cryptocurrency is a Global Phenomenon* (2020).



consider how their legal and regulatory framework is in place globally and in Ukraine. Interestingly, different countries have different attitudes to the expediency of using cryptocurrencies: some have long ago decided to legalise them and even promote their development (the UK, USA, Germany, Japan, Singapore), while others are more negative and slow down the spread of electronic money in their countries (e.g. China, Ecuador; it should be noted that there is not a single highly developed country that prohibits cryptocurrencies within its territory) (Dvulit *et al.* 2019). The IMF's attitude to cryptocurrencies seems to be twofold: on the one hand, the organisation urges countries not to ban the circulation of cryptocurrencies (although it recommends that it be regulated quite strictly, limiting any opportunities for speculation or unfair money-making), and on the other hand, it protests against the introduction of bitcoin on a par with official currencies in El Salvador and constantly states the great risks associated with this type of currency (Dobler *et al.* 2021).

To develop a high-quality legal and regulatory framework for cryptocurrencies in Ukraine, it is worth considering how it is done in other countries. In the United States, cryptocurrencies (in particular, bitcoin) are a financial asset that is considered a means of investment (akin to modern volatile gold); the situation is similar in Germany, where cryptocurrencies are a financial instrument and are considered a unit of account in comparison with foreign currency but are not legal tender (Dvulit *et al.*, 2019). In Japan, cryptocurrency is officially a means of payment, in Singapore and Finland legislation defines cryptocurrency as a commodity and equates the purchase of this currency to the purchase of software, and in Austria, cryptocurrency is considered by the tax authorities as an intangible asset (Dorosh and Kanacheva, 2020).

In Poland, cryptocurrency mining and buying and selling are considered a type of commercial activity and are subject to registration with the competent authorities. In Spain, cryptocurrencies are considered a means of payment in the gaming business (there is no other regulation), in the Netherlands it is considered a commodity. In Norway it is a financial asset, in Finland it is a payment instrument, but not an asset (Korneev and Cheberyako, 2018). Therefore, countries may

define the essence of cryptocurrencies in different ways. Nevertheless, in most of them, they are not prohibited. It is difficult to say how it would be better to define the essence of cryptocurrencies in Ukraine, but, in the authors' opinion, at least at the present stage, they are more similar to assets than to a means of payment in terms of their functions. It would be more realistic to use cryptocurrencies (or electronic money) in circulation issued by central banks of countries around the world (such cases were described above). Thus, "independent" cryptocurrencies issued by commercial projects would be investment instruments (similar to shares), while currencies issued by countries, with state support and guarantees, could become a real means of payment that could replace fiat money due to the existing benefits.

To partially legalise and regulate cryptocurrencies, two draft laws were introduced in Ukraine: Law of Ukraine No. 7183 "On circulation of cryptocurrency in Ukraine" (2017), which was intended to partially regulate some basic concepts related to cryptocurrencies (mining, use of cryptocurrencies, procedure for conducting transactions on a cryptocurrency exchange, activities of a cryptocurrency exchange; and the draft Law of Ukraine No. 7183-1 "On stimulation of the cryptocurrency market and their derivatives in Ukraine" (2017) was to establish the basic principles and rules for regulating cryptocurrencies in the state, planned to establish the basic rules for regulating certain concepts, such as cryptocurrency, mining, cryptocurrency market: The project was supposed to "create preconditions for the development of the economy based on the latest technologies in Ukraine, lead to additional high-tech investments, increase the country's competitiveness in the global market and contribute to GDP growth". Both draft laws were ultimately rejected. In general, the NBU recognised cryptocurrencies as a "monetary surrogate" back in 2014, but in 2017, the National Bank of Ukraine issued a joint statement on its website that "the complex legal nature of cryptocurrencies does not allow them to be recognised as either money, currency or means of payment of another country, or currency value, electronic money, securities or monetary surrogate" (Joint Statement of Financial..., 2017). However, it is noted that it is planned to continue to study the

experience of regulating cryptocurrencies in other countries and refine it in Ukraine. Until recently, the status of cryptocurrencies in Ukraine was uncertain. Nevertheless, on 17 February 2022, in response to requests from the International Group on Action against Money Laundering (FATF), the Verkhovna Rada adopted the Law of Ukraine on Virtual Assets and it was subsequently signed by the President (Shepeleva, 2022). The reason for this coercion by the FATF is that cryptocurrencies are an excellent way to launder illegally earned money, which is a very significant factor in favour of the need for regulation. The legislation of the European Union, the accession to which is the official development strategy of Ukraine, also provides for the implementation of anti-money laundering policies; additional regulation of cryptocurrency exchanges and companies has also been proposed (Sirenko *et al.* 2021). This is another reason for the introduction of such a law. The law defines the main concepts and terms in connection with which a virtual asset is an intangible good that is an object of civil rights, has a value and is expressed by a set of data in electronic form. Thus, they are considered intangible assets and can be either secured or unsecured. In addition, the law regulates the process of introduction, creation and turnover of virtual assets; describes the conditions of ownership, rights, and possession of virtual assets; describes the rights and obligations of participants in the virtual asset market; describes the process of providing services with cryptocurrency; describes the principles of state regulation of cryptocurrencies and the powers of the NBU; describes the principles of international cooperation in the field of cryptocurrency. The Law introduces appropriate penalties for non-compliance with its principles. In addition, and very importantly, it is planned to introduce taxation on income received from cryptocurrency transactions in the amount of 5% (for a grace period) +1.5% tax duty.

The Law of Ukraine on Virtual Assets plays a significant role in regulating the industry within the country. On the negative side, it may complicate activities in the sector and require taxes on cryptocurrency transactions. However, positive effects include a reduction in illegal transactions in this field. Overall, the adoption of this law was necessary to align Ukraine with developed

nations in this area. Its effectiveness and long-term consequences will become evident over time. From the author's perspective, the development of cryptocurrencies is an effective method for Ukraine's long-term economic growth. It is worth noting that other researchers have reached similar conclusions, emphasizing that broader use of electronic money could reduce budgetary expenses related to printing physical currency. This was shown in their work by N.L. Shyshkova and Y.Y. Moroz (2017), they show that this would save about UAH 217 million over 5 years. Although this figure does not seem very high given the much higher figures invested in the Ukrainian budget, it is nevertheless a saving. It should also be noted that this blockchain technology also allows banks to save money by simplifying transfer procedures, but so far, the NBU is only exploring opportunities for decentralisation in this sector. Although the Ukrainian authorities are not currently working on the creation of an electronic hryvnia, its creation could nevertheless help the country's economic development quite a bit.

## CONCLUSION

The study analysed the current state of cryptocurrencies in Ukraine. Their development is ambiguous. On the one hand, Ukrainian cryptocurrency projects are not very popular among Internet users around the world. Nevertheless, a huge number of people in the country use cryptocurrencies, which is primarily due to significant problems in the economy, lack of regulation (which was introduced only recently with the Law of Ukraine on Virtual Assets) and the possibility of easy and significant earnings. The global attitude to cryptocurrencies remains ambiguous. In general, most countries recognise them and try to regulate them in some way, either by equating them to assets or a special type of money. At the same time, some countries are trying to limit the activities of cryptocurrencies on their territory, while others, on the contrary, are trying to promote their development.

There have been several attempts to introduce cryptocurrency regulation in Ukraine. The most famous among them were "Law of Ukraine About the Use of Cryptocurrency in Ukraine" and "Law of Ukraine on Stimulation of the Cryptocurrency Market and Their Derivatives in Ukraine". However,

both bills were rejected. It was only in 2022 that the President of Ukraine signed the Law of Ukraine on Virtual Assets, which was intended to regulate the sector. The main features of the law are the recognition of virtual assets as intangible assets; regulation of all possible types of cryptocurrency activities (sale, exchange, market introduction, provision of services); establishment of monetary penalties for non-compliance with the law and setting tax rates for income from this type of activity. In general, the signing of this law should reduce the number of unfair transactions in the Ukrainian cryptocurrency market and bring it on par with cryptocurrency markets around the world.

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