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LEGAL FRAMEWORK FOR THE E-HRYVNIA IN UKRAINE AS A MEANS OF REFORMING THE FINANCIAL SYSTEM

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Abstract. *The article outlines the current global approaches to the introduction of electronic money arising from the objective grounds for the development of the financial system and financial control and virtual assets; the author describes the CBDC system developed by the Ukrainian legislator, identifies and formulates the main trends in the context of determining the processes of protection of the rights of persons involved in such legal relations in Ukraine. The purpose of the study is to analyse the legal regulation and to try to express a position on the mechanisms for protecting the rights of individuals when introducing new payment instruments. Ukrainian legislation regulates the process of introducing electronic money.*

Keywords: *CBDC, e-hryvnia, digital currency, digital assets, e-wallet, virtual assets, blockchain, financial system, financial control, financial inclusion, cashless payments, cybersecurity.*

Introduction. The study of foreign and domestic approaches to the legal regulation of the introduction and use of electronic money in Ukraine, and the determination of the subject matter of legal relations arising in this regard, is essential for the development of Ukrainian legislation, which only partially meets current trends, especially in terms of protection of rights. The concept of a central bank digital currency has been around for several years. The growing use of digital payments, the decline in cash transactions, and the emergence of cryptocurrencies such as Bitcoin and Ethereum, which pose a threat to the stability of the financial system and are outside the traditional banking system, all served as prerequisites for the creation and development of the CBDC project. The Covid-19 pandemic has accelerated the adoption of digital payments and increased demand for digital currency, highlighting the limitations of physical money. As digital money begins to be used, countries around the world have high expectations for improving financial inclusion, promoting economic growth, creating a secure digital payment system, and making financial transactions transparent.

Digitalisation in the financial sector as a mechanism for the democratisation of society is a relevant reform step in modern Ukraine. As of October 2022, the e-hryvnia and e-hryvnia trademarks were registered and are directly owned by the National Bank of Ukraine. Employees of the Ministry of Digital Information and the developers of the state app Diia received their salaries in blockchain-based digital currency in 2021. This was part of an experiment to create a national currency, which the Ministry of Digital Transformation is conducting in cooperation with the National Bank. Ukraine, as one of the first countries, is striving to gain momentum in digitalisation by creating a digital version of its national currency. And with the adoption of the Laws of Ukraine "On



Payment Services" and "On Virtual Assets", it has begun to legally enshrine it.

Modern legal scholars are actively discussing the e-hryvnia project. Thus, I. Veres, O. Kravchenko, K. Petrofanova, V. Riadinska, M. Radchenko, I. Trubin, I. Ustinova have comprehensively analysed the institution of electronic money and expressed their essential conclusions regarding the implementation of such a project. The authors agree with the existing conclusions and have their own views on the current state of legal regulation of electronic money.

The new digital currency format CBDC (central bank digital currency) will soon become a new official means of payment protected by the state. The National Bank of Ukraine has been working on the concept of creating an e-hryvnia since 2016, when a study was conducted on the possibilities of launching a digital currency, and in 2018, the NBU launched an expected pilot project to issue e-hryvnia for retail payments on the blockchain platform [1].

The idea of digital currency is supported by most central banks in the developed world, and half of them have started practical experiments. The development of blockchain and Ethereum smart contracts further encourages society to adopt digital currency as a third form of payment. Yes, CBDCs are not considered cryptocurrencies, they may or may not use a database such as the blockchain, but this currency is fully decentralised by the national bank of the country. National banks create and maintain full control over the production, circulation and distribution of digital fiat currency. SBDC is based on tokens or accounts and the key principles are privacy, access and easy distribution.

Ukraine is one of the first countries that aims to introduce digital currency into national circulation in the near future. Some employees of the Ministry of Information and the developers of the state app Diia already receive their salaries in e-hryvnia. The electronic form of Ukraine's currency, issued by the NBU, will become the third form of money, complementing cash and non-cash currency. Minister of the Ministry of Digital Transformation Mykhailo Fedorov claims that this innovation will make Ukraine a leader in virtual projects, cryptocurrencies and smart contracts [2].

The International Monetary Fund notes that the introduction of CBDCs will improve the operational and economic efficiency of developing countries and can become a reliable tool for digitalisation and financial inclusion, which involves equal access and use of all financial services and products. According to ACI WorldWide, due to the coronavirus pandemic, the volume of non-cash transactions has decreased by 74% and directly led to the further introduction of digital currency. [3].

Let's define how CBDC differs from conventional fiat currency. First of all, each banknote, i.e. the hryvnia, has its own unique number, while non-cash money has a special account in a commercial bank. Digital currency, in turn, is issued in the form of a unique code and stored on a special electronic wallet. When conducting transactions, there are no intermediaries, or their involvement is minimal, and funds are transferred from one electronic wallet to another. Such transactions require an internet connection, but CBDC developers are also working on possible offline transactions. The e-hryvnia will be used to pay for goods, just like Apple Pay or Google Pay, but the conduct and procedure of transactions abroad is still in question and depends on further agreements between the countries.



Digital currency should not be equated with cryptocurrency, as the state does not control the issuance, distribution and use of cryptocurrency. The SBDC, in turn, is backed by the country's real foreign exchange reserves, meaning that the digital currency is backed by the national currency in a 1:1 ratio, where one digital hryvnia is equivalent to a fiat currency and is its absolute digital analogue.

The NBU started actively working on the issuance of digital hryvnia in 2016. A pilot project to issue e-hryvnia for retail payments on the blockchain was conducted in 2018. It resulted in the publication of the e-Hryvnia Position Paper. [3].

Issuing e-hryvnia into circulation in a limited amount (equivalent to UAH 5,443) and testing digital currency operations and transactions for NBU employees and project participants. However, the limited list of operations and project participants, as well as the small number and volume of transactions conducted in the small-scale pilot project, did not allow for a sufficiently detailed analysis of all the advantages and disadvantages of the e-hryvnia.

At the legal level, the pilot project resulted in the adoption of the Law of Ukraine "On Payment Services", which enshrines digital currency as the state form of currency. The law does not directly establish rules for the electronic hryvnia, but states that payment systems used in Ukraine must be registered in accordance with the law, including the Law of Ukraine On Electronic Money. The Law also defines digital currency as "an electronic form of the currency of Ukraine, the issuer of which is the National Bank" [4].

The NBU emphasises that it is not a complete replacement for cash and non-cash payments, but that the e-hryvnia will become an alternative to cash, electronic money, and payment cards. Thanks to the digital currency, it is possible to reduce the cost of non-cash transactions by eliminating acquiring fees, i.e. fees for processing payment transactions made using bank cards or other electronic means of payment. Experts from the international company PwC ranked the e-hryvnia among the most mature digital currency projects in the world, placing it in 4th place.

In 2021, the NBU published the results of a survey on the possible introduction of the NBU's digital currency, CBDC, focusing on three areas of e-hryvnia use. First and foremost, the e-hryvnia as a retail and non-cash P2P payment and e-commerce transaction, and also as a tool for cross-border payments, primarily P2P transfers. Also, the e-hryvnia is not intended to carry out transactions in the field of virtual currencies, namely exchange, issuance and other transactions related to virtual assets. [5].

Therefore, the National Bank and the Ministry of Digital Information are actively developing the concept of a digital hryvnia and have signed a contract with the Stellar Development Foundation to launch the e-hryvnia. According to the terms of the contract, Stellar will provide technical support and consulting services to create the infrastructure for the launch of the digital currency. [6].

In February 2022, the Law of Ukraine "On Virtual Assets" was adopted, which defines virtual assets as an intangible good that is an object of civil rights, has its own value, and exists only in electronic form. The very definition of "virtual assets" used to refer exclusively to cryptocurrencies, but now it means assets that are freely traded on the market, have a digital value, and have their own identification and circulation



system. Oleksiy Zhmeretskiy, chairman of the Verkhovna Rada's subcommittee on anti-corruption policy in the field of digital innovation and public data, says that the volume of transactions with virtual assets in Ukraine is estimated at around \$150-200 million per day. All these transactions remain in the shadows and are not regulated by law. The Law on Virtual Assets was intended to remedy this situation, but the law has not yet entered into force. The head of the National Bank also clarified that the main infrastructure for virtual assets will be the regulation of digital currency.

The NBU has shown considerable interest in using the e-hryvnia as a tool for virtual asset transactions, and argues that the digital hryvnia should be implemented on the basis of blockchain technology. He also added that, given the size of the virtual asset market in Ukraine and technological affinity, the use of e-hryvnia in the circulation of virtual assets is a promising area that has the potential for further research. The digital currency allows for fast, secure, and anonymous transactions and will reduce the cost of transactions. However, before using the e-hryvnia in transactions with virtual assets, it is necessary to study all the risks and legal restrictions associated with these transactions.

We will determine the economic and fiscal feasibility of introducing the e-hryvnia in Ukraine. The introduction of the e-hryvnia project has the potential to provide significantly new opportunities for the state, business and citizens. From the point of view of organising and conducting financial control, this project will allow for clearer tracking of the use of targeted social assistance and other targeted payments and projects of different budget levels. It could create new parameters of interaction between them that are fast and highly efficient, reducing delays caused by additional intermediaries and avoiding additional risks of corruption. The e-hryvnia will significantly strengthen the country's macroeconomic stability. Thanks to the digital currency, it will minimise costs for the state and business during transactions. We believe that the launch of the e-hryvnia will increase competition between banks, which in turn will also reduce the cost of banking services. The ECB (European Central Bank), in turn, argues that the main purpose of the euro is to compete with foreign stablecoins.

The e-hryvnia will be a useful tool in the fight against corruption. All digital currency transactions will be recorded electronically, which will reduce the risk of loss or falsification of documentation. Digital currency transactions reduce the number of intermediaries, which also reduces the risk of corruption. The European Commission for Democracy (Venice Commission) provided comments and a number of recommendations on the constitutional crisis and problems with anti-corruption legislation. In 2021, US Secretary of State Anthony Blinken said that Ukraine was losing \$40 billion a year, which is 1/3 of GDP. He stressed that the most pressing issue for the Ukrainian people is to build trust in the government by minimising corruption. As an example of the joint fight against corruption, Blinken noted USAID's cooperation with the Ukrainian Ministry of Digital Transformation and the digitalisation of more than 30 public services.

The introduction of a digital currency by the central bank will increase transparency by strengthening control over tax collection and, accordingly, the spending of public funds. Financial control measures will be more optimal and



effective, financial transactions will be monitored, especially those that take place in the shadows, which will significantly increase confidence in the country's financial system and reduce crime and fraud. It should be noted that the use of CBDCs will increase financial inclusion and boost the country's economic development and will be an effective way to fight corruption.

The digital currency will provide innovations in public administration and create an opportunity to implement an automatic taxation system. The so-called "transaction tax" is collected from every sale between a buyer and a seller. Transactional taxation is an effective means of financing public expenditures and implementing social programmes, where taxes are paid automatically without the use of any intermediaries. Automatic fines and penalties may be introduced. In this case, it will be much harder to find loopholes in tax legislation.

Undoubtedly, the launch of the e-hryvnia will be a significant step for Ukraine in shaping its image as a modern high-tech country, as it will be one of the first examples of the introduction of a new instrument for regulating monetary circulation at the state level. The introduction of the e-hryvnia will also strengthen the integration of the national digital currency with other government electronic services. For example, the functionality of the e-hryvnia wallet will be available in the Diia mobile application, which has already been successfully used to engage a wide range of citizens in the country's digital transformation process. [7].

Conclusions.

The issue of implementing the CBDC remains controversial, as the digital currency is a fairly young project. It is expected to provide instant payments, create transparent financial transactions, ensure financial stability, reduce tariffs, and fight the shadow economy. But the issue of anonymity and cybersecurity is close at hand. The National Bank will monitor all digital transactions to ensure complete security, but at the same time, total digital tracking will be created.

Ukraine, in turn, plans to implement a pilot project in 2023, and the following year will decide on the full introduction of digital currency into circulation. The Ministry of Digital Information, TASKOSBANK, Stellar, and Bitt are experimenting with the e-hryvnia by testing distributed ledger technologies. As part of its research and monitoring of global trends, Ukraine will cooperate with central banks and other international financial institutions to ensure the quality of digital currency implementation.

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***Анотація.** У статті окреслено сучасні світові підходи до запровадження електронних грошей, що впливають з об'єктивних підстав розвитку фінансової системи та фінансового контролю, а також віртуальних активів; охарактеризовано розроблену українським законодавцем систему CBDC, виявлено та сформульовано основні тенденції в контексті визначення процесів захисту прав осіб, залучених до таких правовідносин в Україні. Метою дослідження є аналіз правового регулювання та спроба висловити позицію щодо механізмів захисту прав фізичних осіб при запровадженні нових платіжних інструментів. Законодавство України регулює процес запровадження електронних грошей.*

***Ключові слова:** CBDC, е-гривня, цифрова валюта, цифрові активи, е-гаманець, віртуальні активи, блокчейн, фінансова система, фінансовий контроль, фінансова інклюзія, безготівкові платежі, кібербезпека.*