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CENTRAL BANK DIGITAL CURRENCIES (CBDC): ECONOMIC PURPOSE AND IMPLEMENTATION REMARKS

Modern economic relations in society require a rethinking of the role of money as a means of payment and savings. Given the speed of trading, the ability to make transactions 24/7, the development of buying goods through online stores, the exchange of products not only within one country but across continents, the role of digital currencies is becoming more critical.

Digital currency creation is possible using Distributed Ledger Technology (DLT) technology, which preserves data by distributing information across a large number of nodes. This technology has several advantages:

- sharing and synchronization according to the agreed algorithm;
- lack of a single centre for data management and control;
- distribution of copies of the database among all participants, and hence control over its use.

Graphically the use of the distribution registry, centralized and decentralized data exchange is presented in Fig. 1.

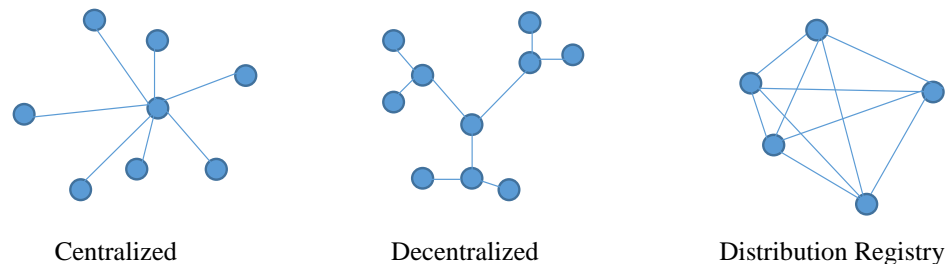


Fig. 1. Options for information distribution

The universal distribution registry (DLT) has become widely known due to the emergence of cryptocurrencies, but its use is possible in various fields: financial, management, legal, social, trading, etc.

The central bank's digital currency is, according to the interpretation of the European Central Bank, a digital form of fiat money, which is publicly available, issued by the state and has legal tender status [1].

The Bank of International Settlements defines the CBDC as the obligations of the central bank, expressed in the available unit of account, which serves as both a means of treatment and a method of storage [2].

The International Monetary Fund considers the CBDC a digital form of existing fiat money, which is issued by the central bank and can act as a legal tender [3].

In our country, during February-December 2018, the National Bank of Ukraine conducted a Pilot project on the introduction of the digital currency e-hryvnia. The primary purpose pursued by the NBU is to determine the possibility of effective use of digital currency along with the use of cash by individuals in small-scale calculations.

As a result of the project implementation, the regulator was able to draw the following conclusions [4, p. 36]:

- e-hryvnia as an instrument (tool) for making instant retail payments to individuals may become an alternative to existing means and devices of retail payments;

- given that the Pilot project had a limited list of operations and a range of users, as well as a small number and volume of transactions, it made it impossible to fully assess the attractiveness and potential level of involvement of the Ukrainian population in such an instrument. Thus, it is difficult to predict what number of Ukrainian citizens will become e-hryvnia users if they decide to implement it nationally;

- e-hryvnia can be considered as "disruptive technology", as it could significantly alter the ecosystem of the Ukrainian payment market and redistribute the existing roles of market participants;

- implementation of e-hryvnia is impossible without significant investments and time to upgrade the payment infrastructure for such an instrument since the Ukrainian payment services market is characterized by a high level of competition, concentration and existing infrastructure;

- for e-hryvnia to become a truly mass product, there is also a need for its popularization and promotion among the population, taking into account already existing consumer habits.

Ukraine is not the only country seeking to modernize payment methods that meet current market needs. For example, the Central Banks of Europe, Asia and Africa are researching the feasibility of using digital currencies. The results of the studies have polarized conclusions and different approaches to the involvement of the Central Bank in this process.

Countries such as Japan, European Union countries have entirely abandoned the use of digital currencies and do not consider this means of payment and savings to be usable.

Few countries, including Ukraine, conduct research and pilot projects to assess the need for currency in society. Yes, Canada, South Africa and Thailand see digital currency as a means of interbank payments, while Sweden, Ukraine and Uruguay consider it an alternative to cash.

However, there are several countries, Singapore, Senegal, Tunisia and Venezuela, that are on the right track to address this issue and use digital currencies.

Therefore, the digital e-hryvnia studied and tested in Pilot projects has every chance of becoming a reliable payment instrument in the country in the future.

In favour of this, the following factors point to it: this tool is more secure and sophisticated than cashless payments, electronic money and cash. This tool is cheaper than others. The digital currency is as a tool for making quick purchases for small sums in Ukraine and abroad. This type of money will be determined initially for individuals and will operate under the auspices of the National Bank of Ukraine.

References:

1. Cryptocurrencies and tokens, ECB FXCG update. – https://www.ecb.europa.eu/paym/groups/pdf/fxcg/2018/20180906/Item_2a_-_Cryptocurrencies_and_tokens.pdf.
2. Central bank digital currencies, Committee on Payments and Market Infrastructures, March 2018, Bank for International Settlements. – <https://www.bis.org/cpmi/publ/d174.pdf>.
3. Casting Light on Central Bank Digital Currency, IMF Staff Discussion Note, Tommaso Mancini Griffoli, Maria Soledad Martinez Peria, Itai Agur, Anil Ari, John Kiff, Adina Popescu, Celine Rochon, November 12, 2018. <https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2018/11/13/Casting-Light-on-Central-Bank-DigitalCurrencies-46233>.
4. Analitichna zapyska za rezultatamy pilotnoho proektu iz vprovadzhennia platformy «Elektronna hryvnia» ta elektronnykh hroshei Natsionalnoho banku Ukrainy (e-hryvnia). – <https://www.nbu.gov.ua/>