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DEVELOPMENT AND INTEGRATION OF DIGITAL CURRENCIES IN THE VIRTUAL ASSET MARKET

Introduction. *In the evolving digital economy, a diverse range of tools plays a pivotal role, including virtual assets, central bank digital currencies (CBDCs), private currencies issued by commercial banks, and instruments from private financial groups. A key requirement for the harmonious and efficient functioning of this ecosystem is the establishment of a comprehensive legal framework governing their circulation, accompanied by robust public and private governance mechanisms. Effective regulation of this sector is critical for maintaining the integrity of payment systems and financial markets, safeguarding investor interests, and promoting overall financial stability.*

Problem Statement. *The advent of digital finance is reshaping approaches to public-private governance. From a legal perspective, legislative frameworks must address the dual challenges of mitigating the misuse of new financial tools in criminal schemes while fostering innovation. This necessitates implementing targeted preventive measures, modernizing crime-fighting activities, and adopting contemporary regulatory approaches, such as regulatory sandboxes, to facilitate innovation.*

Purpose. *This research aims to outline national priorities for the development of digital finance, emphasizing the importance of collaborative efforts in managing the circulation of CBDCs and virtual assets.*

Materials and Methods. *The study employs a combination of general scientific and specialized methods, including analysis, synthesis, grouping, description, and comparison of CBDCs and virtual assets. It also involves the theoretical generalization of the concept of digital assets.*

Results. *The findings highlight the urgent need to advance the National Bank of Ukraine's e-hryvnia project to enhance the transparency of virtual asset circulation, legalize the virtual asset market in Ukraine in compliance with FATF standards, and strengthen anti-money laundering and counter-financing of terrorism (AML/CFT) procedures.*

Conclusions. *Implementing regulatory frameworks for the virtual asset market, fostering its integration with banking institutions and payment systems, and introducing the e-hryvnia will bolster Ukraine's financial security. These measures will also support the country's reconstruction, modernization, and integration into the European Union.*

Keywords: virtual assets, central bank digital currencies, e-hryvnia, stablecoins, crypto assets, cryptocurrency, service providers related to virtual asset circulation, digital finance.

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The blockchain technology underlying the construction of digital finance catalyzes far-reaching changes in money and finance that will profoundly impact households, corporations, investors, central banks, and governments. It is a system for recording and transmitting information that allows data storage in a chain of blocks. Each block contains information about a certain number of transactions and the hash of the previous block. Thus, each block ensures a link with the previous block, forming a chain. By enabling the secure ownership of purely digital objects, it fosters the growth of new digital assets such as non-fungible tokens (NFTs).

Digital money has been evolving for some time. New technologies aim to democratize finance and expand access to financial products and services. The key goal is to achieve much cheaper, instant domestic and international payments.

Not every form of digital money will prove viable. Cryptocurrencies, such as Bitcoin, cannot function as money. Recently, crypto tokens have lost two-thirds of their value. Although actively traded and speculated upon, the prices of these instruments are disconnected from any underlying economic value. To curb volatility, stablecoins have been developed, but many of them have proven to be unstable, relying on the quality of the assets that back them up [1].

Nonetheless, decentralized finance (DeFi[1]) and cryptocurrency not only will persist but also have the potential to address real-world issues, such as the energy crisis. Regulation is key to bringing order to the markets and ensuring a safe space for innovation. Meanwhile, central banks are exploring their own digital currencies.

Central banks should harness the technological innovations offered by cryptocurrency while providing a foundation of trust. With responsibly developed central bank digital currencies, risks of confidentiality and cybersecurity can be managed [2].

[1] Decentralized finance, or DeFi for short, is a broad term for services such as investing, borrowing, lending, and trading that are based on decentralized, non-custodial infrastructure.

It's too early to predict how the digital landscape will evolve. However, with the right policies and regulatory choices, we can envision a future combining state and private currencies securely stored in the digital wallets of billions of people.

Many Ukrainian and international researchers are focusing on studying various aspects of both private virtual assets and central bank digital currencies (CBDCs). A central bank digital currency (CBDC) is a digital form of existing fiat money already issued by the central bank and is a universally accessible legal tender within the country. Depending on their properties, CBDCs are categorized for the following purposes: as a digital equivalent of cash; for interbank settlements; as a tool of monetary policy; as an equivalent of an account opened with the central bank.

According to the research of Merinov S. and Polovenko L., there has been currently no common understanding regarding the further strategy of cryptocurrency development worldwide [4]. S. Arzhevitin has analyzed the monetary aspects of using digital currencies, identifying issues such as the lack of government control over the circulation of virtual assets and the uncertainty of their impact on economic indicators in the medium and long term [5]. V. Kochergin and A. Yangirova have conducted a study on the prospects of issuing central bank digital currencies (CBDCs) as a new form of money, modelling their functions and potential impact on monetary policy. The researchers have concluded that, as with cash, CBDCs would allow the central bank to strengthen the transmission mechanism of monetary policy and make assets on its balance sheet more centralized, thereby reducing the need for funding for credit institutions [6].

In recent years, the activities of the virtual asset market have been the subject of numerous scientific studies. Our literature review will help identify key themes and conclusions in this body of research, as well as focus on unresolved issues.

One of the main themes in the literature on the virtual currency market is its volatility. Researchers have found that cryptocurrencies are highly

volatile and prone to significant price fluctuations over short periods of time (Bouri et al., 2018 [7]; Cheah & Fry, 2015 [8]). This volatility is explained by a number of factors, including regulatory uncertainty, market sentiment, and changes in investor demand.

Security and vulnerability of the crypto market have also been studied. In particular, research has shown that the decentralized nature of cryptocurrencies makes them less vulnerable to cyberattacks. However, research (Kshetri, 2018 [9]) has also found that the lack of regulation and transaction anonymity makes cryptocurrencies vulnerable to illegal activities such as money laundering and terrorism financing. The study "PEX: Privacy-Preserved, Multi-Tier Exchange Framework for Cross-Platform Virtual Assets Trading" assessed the risks of operations in the crypto market [10].

The issue of combating risks to financial stability in the processes of digital economy development, mitigating risks of using virtual assets in criminal operations in Ukraine, is reflected in the works of O.O. Liubich, H.P. Bortnikov, Z.S. Varnalii, V.A. Ustymenko, T.S. Gudima, and others [11—13].

Foreign researchers have been studying the impact of virtual assets on macroeconomic indicators of the global economy. Eswar S. Prasad [1], in his research, reviews existing and new forms of digital money and considers their impact on finance, monetary policy, international capital flows, and even on societal organization.

Agustín Carstens, Chairman of the Bank for International Settlements, and his colleagues John Frost and Hyun Song Shin believe that central banks should use technological innovations offered by crypto and provide an important foundation of trust [2].

The purpose of the article is to present a list of national priorities in the development of digital finance, such as increasing the efficiency of anti-money laundering and anti-corruption activities of the government, financial security of financial markets and the virtual asset market through collaboration in the circulation of central bank digital currencies and virtual assets.

It is important to note that research on the development of the crypto market in Ukraine is insufficient, particularly due to the lack of publications dedicated to the cooperation between central banks and service providers related to virtual asset turnover (VASP), as well as the issue of legalizing the crypto market as a means of reducing the risks of money laundering and terrorism financing. This underscores the importance of this article.

Money has been a significant tool for the development of society, facilitating trade and resource exchange regardless of geographical location. They allowed the transfer of wealth and resources across space and time. However, throughout history, money has also been subject to theft and destruction.

Currently, money has been undergoing transformations that will change the banking system, financial services, and even the structure of society. The era of physical currency is coming to an end as the age of digital assets dawns, even in low- and middle-income countries. There is increasing competition between official national currencies and private currencies on both domestic and international stages.

The proliferation of digital technologies is driving this transformation and may lead to beneficial innovations and increased access to financial services. However, there is a risk that these technologies could increase the concentration of economic power and allow large corporations and governments to interfere more in financial and private life.

Traditional financial institutions, especially commercial banks, are facing challenges to their business models as new technologies give rise to online banks that can attract more customers and web platforms that directly connect depositors and borrowers. These new institutions and platforms intensify competition, promote innovation, and reduce costs. Depositors gain access to a variety of savings, credit, and insurance products. Small businesses have the opportunity to finance from sources other than banks, which typically have less stringent lending and collateral requirements. Domestic and international payments become more

accessible and faster, bringing additional benefits to consumers and companies.

Initially, it seemed that the emergence of cryptocurrencies like Bitcoin would revolutionize payment systems. Cryptocurrencies do not require the support of central banks or trusted intermediaries such as commercial banks and payment systems to conduct transactions, which often eliminates inefficiencies and additional costs associated with such intermediaries. However, volatile prices, emission volume limitations, and long transaction processing times with cryptoassets have led cryptocurrencies to be recognized as inefficient means of exchange.

As a result, the next stage in the development of the crypto market became new forms of cryptocurrencies known as stablecoins, most of which, ironically, derive their stable value from the support of central banks and government securities. They have gained more popularity as a means of payment.

Stablecoin is a general term for cryptocurrencies whose exchange rates are attempted to be stabilized by pegging them to fiat currencies or, for example, to exchange-traded commodities (gold, oil) [14].

The blockchain technology underlying the circulation of virtual assets, allowing the secure ownership of purely digital objects, contributes to the growth of new digital assets, such as non-fungible tokens (NFTs).

Non-fungible tokens or NFTs are a type of cryptographic token on the blockchain that represents a unique asset. These can be fully digital assets or tokenized versions of real assets. With each created NFT, the owner/creator can store certain information in them, such as signing their works by adding their signature in the NFT metadata. Each NFT has a distinct and unique identifier that sets it apart from others and acts as proof of authenticity and ownership in the digital world [15].

At their core level, cryptoassets simply represent codes stored and available in electronic format. They can be asset-backed or unbacked by physical or financial assets. Their value may stabilize or remain volatile, depending on their peg to fiat currencies or other assets. The electronic lifecycle of cryptoassets entails a wide range of risks associated with technologies that state regulators actively incorporate into their core rules. These risks include cybersecurity and operational risks, which have become particularly significant due to known cases of losses from hacker attacks or unforeseen loss of control over access or records.

Some of these risks could have been less if the cryptoasset ecosystem were more closed. However, this is no longer the case. Many functions of the financial system, such as providing leverage and liquidity, lending, and asset custody, are now being introduced into the crypto-currency world. Major players are competing for funding and actively participating. This leads to more active calls for the application of the "same activity, same risk, same rules" principle with corresponding changes to the crypto world, increasing pressure on the activity of state regulators for regulation.

Actually, national governments and international regulators have already taken significant measures. Some countries, such as Japan and Switzerland, have amended legislation regarding cryptoassets and their service providers, while others (including the European Union, United Arab Emirates, United Kingdom, and United States) are in the stage of development or implementation. National governments vary in their approaches to regulating cryptoassets, which promotes flexibility in choosing crypto-business activities in jurisdictions with more favourable conditions and complicates monitoring of criminal activity involving virtual assets.

Some governments have banned the issuance or holding of cryptoassets by residents of the country or prohibited their use for certain purposes, such as payments. There are also more leniently inclined countries that even encourage companies to develop virtual asset markets. As a result, fragmented global response does not guarantee equal conditions and does not protect against the relocation of criminality, as all participants in the crypto market have the opportunity to quickly migrate to more friendly jurisdictions with less

stringent regulatory requirements, remaining accessible to anyone with internet access.

Let's now consider the Cryptocurrency Perception Index in terms of the economic development of countries worldwide (Table).

Technological innovations in finance, even those that may promote more efficient financial intermediation, can have dual implications for income and wealth inequality.

The benefits of financial technology innovations could primarily accrue to wealthy segments of the population, who could use them to increase financial returns and risk diversification, while existing financial institutions could co-opt these changes for their own benefit.

Moreover, as those who are economically marginalized have limited digital access and lack financial literacy, some changes may draw them into investment opportunities whose risks they do not fully assess or comprehend. Thus, the consequences of income and wealth inequality, which have sharply increased in many countries and fuel political and social tension, are far from obvious.

Another key change will be greater stratification at both national and international levels. Smaller economies and countries with weak institutions may see their central banks and currencies becoming less relevant, further concentrating economic and financial power in the hands of larger economies.

Alongside this, large corporations such as Amazon and Meta are increasingly gaining influence over the monetary system, controlling both trade and finance.

Even in a world of decentralized finance based on the innovative blockchain technology of Bit-

Global Innovation Index 2023 (10 first positions in terms of development of world economies)

No	High-income economies (48 in total)	No	Upper middle-income group (36 in total)
1	Switzerland (1)	1	China (12)
2	Sweden (2)	2	Malaysia (36)
3	United States (3)	3	Bulgaria (38)
4	United Kingdom (4)	4	Türkiye (39)
5	Singapore (5)	5	Thailand (43)
6	Finland (6)	6	Brazil (49)
7	Netherlands (Kingdom of the) (7)	7	Russian Federation (51)
8	Germany (8)	8	Serbia (53)
9	Denmark (9)	9	North Macedonia (54)
10	Republic of Korea (10)	10	Mauritius (57)
No	Lower middle-income group (48 in total)	No	Low-income group (48 in total)
1	India (40)	1	Rwanda (103)
2	Viet Nam (46)	2	Madagascar (107)
3	Ukraine (55)	3	Togo (114)
4	Philippines (56)	4	Zambia (118)
5	Indonesia (57)	5	Uganda (121)
6	Iran (Islamic Respublic of) (62)	6	Burkina Faso (124)
7	Mongolia (68)	7	Ethiopia (125)
8	Morocco (70)	8	Mozambique (126)
9	Tunisia (79)	9	Guinea (128)
10	Uzbekistan (82)	10	Mali (129)

Source: Global Innovation Index Database, WIPO, 2023 [16].

coin (which is arguably its true legacy), governments play a crucial role in ensuring compliance with contractual and property rights, investor protection, and financial stability. Ultimately, cryptocurrencies and innovative financial products also function better when built on trust derived from government oversight and control.

Governments are responsible for ensuring that their laws and actions promote fair competition rather than favoring incumbent companies and allowing large players to squeeze out smaller competitors. The international regulatory community is also actively working on these issues. In the early years of crypto industry development, their main goal was to preserve financial stability by minimizing the use of crypto assets in money laundering and other illicit operations. The Financial Action Task Force (FATF) quickly developed global requirements for all virtual asset service providers [17].

The IMF calls for a global response that would be coordinated to fill regulatory gaps arising from cross-sectoral and cross-border issuance and to ensure a level playing field; consistent, thus aligned with major regulatory approaches across the spectrum of activities and risks; and comprehensive, covering all participants and aspects of the crypto ecosystem.

The global regulatory framework seeks to bring order to the markets, help instill consumer confidence, establish boundaries of acceptability, and strive to provide a safe space for continued beneficial innovations.

At the same time, central banks are concerned about the consequences for both financial and economic stability if decentralized payment systems or private stablecoins displace both cash and traditional payment systems run by regulated financial institutions. Payment infrastructure entirely in private hands may be efficient and inexpensive, but some parts of it may stall in case of loss of trust during periods of financial turmoil.

In response to such concerns, central banks are considering the issuance of digital forms of central bank money for retail payments — central bank digital currencies (CBDCs).

The arguments for the introduction of retail CBDCs are not as convincing. Typically, this is a digital currency issued by the central bank for the general public, but it differs from other regulated digital currencies, such as stablecoins or tokenized bank deposits, in that it is a liability of the central bank.

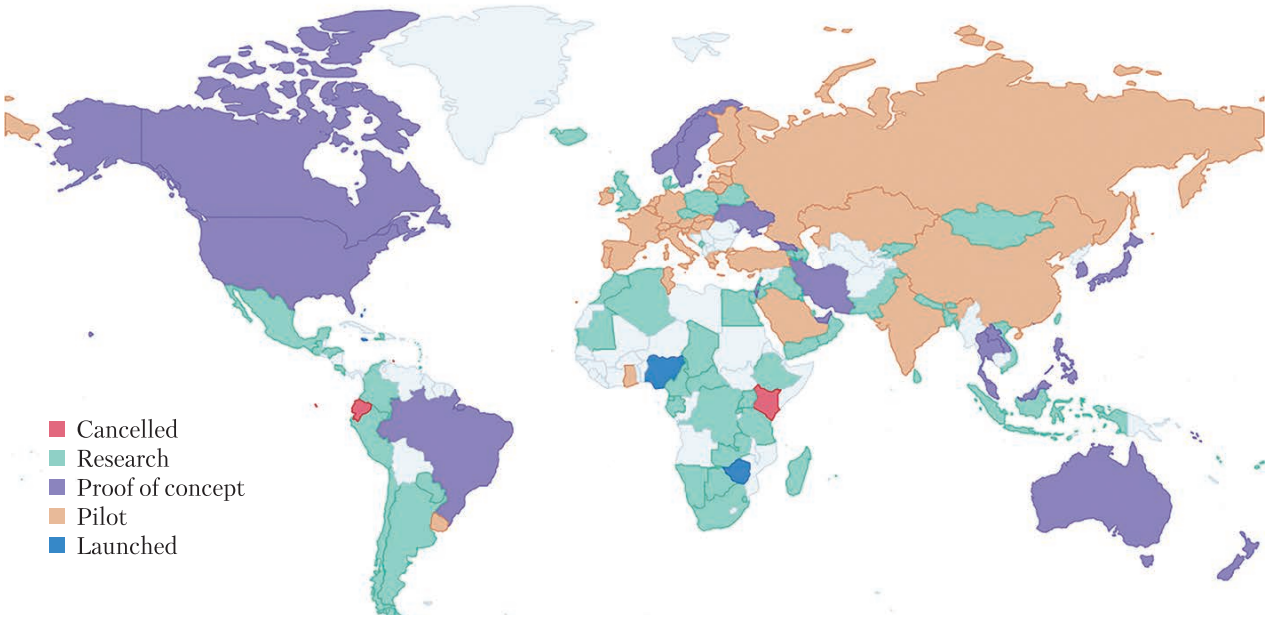
Interest in retail CBDCs has suddenly surged in recent years, and many central banks are experimenting with them. There are three main arguments in favour of retail CBDCs.

Firstly, retail CBDC would provide direct access to sovereign money in the digital economy, where cash is losing its relevance. However, the differences between the obligations of central banks and commercial banks typically do not matter significantly to most people as long as they are confident in the safety of their money and that central banks are willing to support the system during crises.

Secondly, retail CBDC could serve as a check on the monopoly exercised by banks or e-wallet providers in the retail payment space. However, there are other ways to enhance competition and ensure payment systems adhere to necessary standards.

Thirdly, retail CBDC could offer greater privacy and control over personal information and transactions than the current electronic payment system can provide. However, improving rules or legislation to protect user privacy and ensure reliable data management may be an alternative to issuing retail CBDC.

Retail electronic payment systems are fast, efficient, and cost-effective, while the residual amount of cash will remain in circulation and is unlikely to disappear. Speaking too categorically about the future development of these various innovations would be unwise. Central banks and regulators must continually monitor trends and evolution and adapt their policies and strategies accordingly. This can be done through internet resources such as the CBDC Tracker. Today's Central Bank Digital Currencies Status [19] or CBDC Tracker, funded by an HRF grant, developed by Peak Shift, and created by CBDC Tracker fellows [20].



Today's Central Bank Digital Currencies Status. Current status of CBDC implementation worldwide
Source: CBDC Tracker [19].

In Figure, one can see data on the status of CBDC implementation as of May 2024. The largest numbers, namely, 107 countries worldwide, are in the research phase (marked with green), 27 countries are in the justification phase for launching their own CBDC (marked with purple), 21 countries have already launched a pilot project (marked with orange), in 4 countries their own CBDCs are already operational (marked with blue), and 7 countries have declined to implement CBDCs in their own countries (marked with red) (Figure).

It would be interesting to further specify the countries that are already working with CBDC (Jamaica, Zimbabwe, Nigeria, Bahamas) and those that have rejected them (Philippines, Kenya, Denmark, Curacao, Singapore, Ecuador, Finland).

One can imagine a future in which the digital asset ecosystem becomes a permanent fixture in the financial landscape, coexisting with the current intermediated system. Traditional fiat currencies will remain dominant, but important roles will be played by private stablecoins and wholesale CBDCs.

CBDCs are likely to be crucial for cross-border payments and settlements. Retail CBDCs may become a small component of the monetary base, akin to the role cash plays today.

Both cross-border settlements and cash increase the use of traditional financial markets in criminal activities, especially in laundering illegal assets. Regarding CBDCs, they enhance transaction transparency through blockchain technology and contain procedures to counter money laundering and terrorism financing (AML/CFT), such as customer identification and verification, customer risk assessment, and activity monitoring.

Moreover, with the development of digital technologies, these procedures are performed remotely over the internet. For instance, compliance procedures in licensed VASP activities are implemented using blockchain analytics software [21]. Thanks to such software, customer risk assessment procedures are also automated [22, 23].

By employing blockchain analytics principles, it is possible to identify participants in virtual asset transactions through financial exchanges of banks

and payment institutions, centralized cryptocurrency exchanges, and VASPs. Currently, the focus is on transactions in DeFi, and we have already observed that financial services in financial markets are adapted to this decentralized digital economy and operate there. Therefore, through the implementation of government regulation and regulation at the global level, such companies also act as information carriers about their clients.

By following the principles of blockchain analytics, identifying participants in virtual asset transactions is possible through financial exchanges of banks and payment institutions, centralized cryptocurrency exchanges, and VASPs. Currently, the focus is on transactions in DeFi, and we have already noted that financial services in financial markets are adapted to this decentralized digital economy and operate there. Therefore, through the implementation of government regulation and regulation at the global level, such companies also act as information carriers about their clients.

However, a more effective tool for anti-money laundering procedures could be the exchange of virtual assets for CBDCs, through which transaction information on the blockchain becomes completely transparent, and AML/CFT procedures become automated. This is another justification for central banks launching CBDCs to enhance financial stability and the hypothesis that cash will not disappear, but its volumes may decrease significantly. This collaboration between virtual assets and CBDCs is projected to become a tool for anti-corruption activities and a deterrent to any crimes involving virtual assets.

On the other hand, for the implementation of such projects, besides the absence of political will to engage in such national projects, there are threats to both digital assets from cybercrime.

"Confidentiality and cybersecurity risks can be managed through responsibly designed central bank digital currencies," noted Josh Lipsky of the Atlantic Council [24]. There is a variety of CBDC designs, ranging from centralized databases to distributed ledgers and token-based systems. Before drawing conclusions about cybersecurity and confidentiality risks, it is essential to thoroughly examine each of these designs. It is also worth comparing these constructs with the current financial system to determine whether new technologies can offer safer alternatives.

Many proposed designs for CBDCs, especially for retail ones, involve centralized transaction data collection, creating serious risks for confidentiality and security. Concerns about projects aimed at preserving confidentiality lie in the fact that this may lead to reduced transparency for regulators.

Regulatory authorities typically require sufficient understanding to detect suspicious transactions, to identify money laundering, terrorism financing, and other illicit activities. Cryptographic methods can be used to develop CBDCs that provide a level of confidentiality similar to cash up to a certain threshold, allowing governmental agencies to conduct necessary regulatory oversight.

Over the past 18 months, some central banks have concluded that CBDCs may pose significant cybersecurity and confidentiality risks. However, they have also recognized that there are various CBDC design options to choose from, including new options that have not yet been fully tested. The choice of a specific CBDC design should be based on the country's needs and policy priorities.

Overall, it is important to understand that with proper design, CBDCs can be as secure as existing financial systems. Cybersecurity issues need to be balanced with other aspects to ensure optimal outcomes.

Our research confirms that fragmented efforts to create CBDCs can create compatibility issues and cross-border cybersecurity risks. Regardless of whether countries decide to deploy CBDCs, the Federal Reserve System of the United States should contribute to the development of global CBDC standards. The European Union is in the process of developing legislation for the crypto market (MiCA Regulation [25]) and simultaneously adopted the DORA Regulation for operational resilience of digital technologies in the financial services sector [26], aimed at creating a comprehensive and unified basis for harmonizing processes and

standards related to operational resilience of digital technologies in the financial sector and updated Directive 2011/16/EU on administrative cooperation in taxation DAC8 [27], which introduces tax transparency rules for crypto assets.

Taking into account the trends in the development of digital assets globally, it is necessary for Ukraine to expedite the processes of legalizing the virtual asset market and implementing the National Bank of Ukraine's pilot project on the national CBDC — e-hryvnia. This will help create the necessary conditions and rules for the functioning and development of decentralized finance, as well as for the entire virtual asset market, with the aim of expanding foreign investments into the national economy and creating favorable conditions for the operation of this cutting-edge sector.

Depending on the ease and transparency of regulatory approaches in legislative acts and the direct supervisory activities of government and law enforcement agencies, the development residency of the crypto industry and its transparency will be formed. Increasingly, modern trends in the progressive development of economies involve the interaction of the industry with government and security structures based on principles of mutual understanding and cooperation.

Thus, as a result of the conducted research, the main problematic issues requiring resolution at the current stage of development to streamline the circulation of virtual assets in Ukraine have been identified, including:

- comprehensive launch of the legal framework for the virtual asset market, requiring amendments to the Tax Code of Ukraine [28] regarding transactions with virtual assets and the activities of VASP and giving legal force to the adopted legislation (implementation of European Directives).
- implementation of the NBU project [29] on the circulation of e-hryvnia, considering approaches to enhance financial and cybersecurity (implementation of European Directives).
- determination of the characteristics of virtual assets regulated by the provisions of the Law of Ukraine "On Capital Markets and Organized Commodity Markets." [30] This approach requires all virtual asset service providers offering services in accordance with the law, including services related to issuing securities, circulation, clearing, and settlement of virtual assets, to apply and fully comply with the relevant rules regardless of the technology they use.
- establishment of requirements for financial institutions regarding the assessment of risks related to financial monitoring based on a risk-oriented approach to the introduction of new technologies, products, and practices and the application of appropriate measures to manage and mitigate risks, performed by state regulation and supervision functions.
- introduction by primary financial monitoring entities of an analysis of types of activities with virtual assets, including those related to their clients, the geographical location of the client's country of registration or institution through which the transfer (receipt) of assets is carried out, types of goods and services, etc. The Financial Stability Board (FSB) Report of the G20 [31] Finance Ministers emphasizes the implementation of decentralized financial technologies that can be applied to enhance financial stability in several areas, including considering cross-border payments and settlements, tokenization of securities, trade finance and insurance, and peer-to-peer lending. This proposal covers a wider range of issues related to strengthening digital operational resilience for the financial sector and ensuring the security of virtual asset circulation [31].
- strengthening cross-border cooperation and intersectoral coordination and exchange of information on the development of virtual assets to address threats to financial stability arising from the cross-border and intersectoral nature of crypto assets.

The study theoretically generalizes and addresses the scientific and practical task of developing theoretical and methodological principles for regulating the interaction of banking institutions

with service providers related to the turnover of virtual assets.

The impact of threats, vulnerabilities, and risks associated with the use of financial and banking sector entities for AML/CFT purposes on the indicators of socio-economic development of Ukraine has been proven, and their destabilizing effect on the growth of shadow GDP, shadow employment, and tax evasion by economic entities has been established.

The advantages of the obtained research results lie in substantiating the feasibility of developing practical guidelines for standardizing operations with virtual assets and classifying types of activities of service providers related to the turnover of virtual assets.

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Domestic research on the interaction of cryptocurrency market operators with banking and payment systems regarding the assessment and management of the risk associated with the use of virtual assets and the activities of service providers related to the turnover of virtual assets in legalization operations, as well as the development of practical guidelines, is absent because they are based on the experience of countries that have legalized the virtual asset market and international initiatives that have not yet been studied in Ukraine.

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РОЗВИТОК ТА ІНТЕГРАЦІЯ ЦИФРОВИХ ВАЛЮТ У ДІЯЛЬНІСТЬ РИНКУ ВІРТУАЛЬНИХ АКТИВІВ

Вступ. У розвитку цифрової економіки важливе місце займає набір інструментів — віртуальні активи, цифрові валюти центральних банків, приватні валюти комерційних банків і приватних фінансових груп. Першочерговим завданням для його злагодженого та ефективного функціонування є створення правової бази для обігу віртуальних активів та відповідного державного і приватного управління. Регулювання цього сектора матиме вирішальне значення для підтримки цілісності платіжних систем і фінансових ринків, забезпечення належного захисту інвесторів та сприятиме фінансовій стабільності.

Проблематика. На тлі розвитку цифрових фінансів змінюються підходи до державно-приватного менеджменту. Щодо правового поля розвиток законодавства потребує реагування на використання новітніх інструментів у злочинних схемах і забезпеченні розвитку інновацій. Тому важливо впроваджувати конкретні та суттєві заходи щодо запобігання злочинності й сучасні підходи, зокрема регуляторні пісочниці для подальшого інноваційного розвитку.

Мета. Подати перелік національних пріоритетів у сфері розвитку цифрових фінансів з обґрунтуванням необхідності колаборації обігу цифрових валют центральних банків та віртуальних активів.

Матеріали й методи. Використано загальнонаукові та спеціальні методи аналізу, синтезу, групування, опису, порівняння цифрових валют центральних банків та віртуальних активів, теоретичного узагальнення поняття цифрові активи.

Результати. Акцентовано увагу на необхідності подальшого розвитку проєкту НБУ щодо впровадження е-гривні для підвищення прозорості діяльності обігу віртуальних активів, легалізації ринку віртуальних активів в Україні відповідно до стандартів FATF та вдосконалення процедур з протидії відмивання коштів й фінансування тероризму.

Висновки. Остаточне рішення у питанні негайного запровадження регулювання ринку віртуальних активів, його взаємодії з банківськими установами та платіжними системами, впровадження е-гривні сприятиме забезпеченню фінансової безпеки України, повоєнного відновлення й модернізації держави та інтеграції України у ЄС.

Ключові слова: віртуальні активи, цифрові валюти центральних банків, е-гривня, стейблкоіни, криптоактиви, криптовалюта, постачальники послуг, пов'язані з оборотом віртуальних активів, цифрові фінан.