The current state of crypto-market in the USA: regulation and future prospects in the context of the need to develop energy efficiency and achieve the Sustainable Development Goals

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Abstract. The paper traces the evolution of regulation of the crypto market in the United States in the context of the need to increase energy efficiency and achieve the Sustainable Development Goals. We analyze two levels of regulation, including federal regulations and state laws, that are changing to meet new environmental health pressures. There appears to be a lack of consensus at both of these levels, whether due to (significant) interstate differences or disagreements between various federal agencies and departments. We classify US states into four groups based on the nature of their cryptocurrency legislation and describe states that do not fall into this classification. We also explore the properties and features of the digital dollar concept and analyze the prospects for its development in products of the near future.

1 Introduction

Today, many world powers use cryptocurrencies that have recently emerged as a subject of intense multidimensional scientific discussion on their theory [23, 24], relations to bitcoin [17] and monetary sovereignty [8], philosophical and political aspects of cryptocurrencies [3] as well as their cultural aspects [32] and legal aspects [31] (including comparison of crypto regulation in various jurisdictions [15]), their commercial adoption [21] and the possibility of crypto replacing banks [6]. The United States has one of the largest numbers of crypto users in the world and accepts cryptocurrencies as a means of payment in shops, restaurants, hotels, and theaters; even some salaries are paid in crypto. In this paper we focus on the evolution of crypto regulations in the US that allowed for crypto currencies to become so widely used in a rather short period of time. Another focus point of ours is the prospects of digital dollar. Indeed, representatives of leading economic and political structures in the United States see significant prospects for the development of not only the national but also the global economy in cryptocurrency as a new form of money [9]. In this case, special attention is paid to the national digital currency. In the United States, they approached the issue with caution and conducted extensive research to determine the feasibility and potential benefits of implementing a digital dollar.
issue of launching a digital dollar very carefully and in detail during the election race between candidates for the post of President in 2020. As part of this, work was intensified on the creation of an electronic currency - the “digital dollar” (Fed coin).

2 Materials and methods

We primarily rely on the comparative approach, as we analyze the legislation of the US related to the virtual currencies and compare it “step by step”.

3 Results and discussion

One of the first documents regulating cryptocurrency (bitcoin) in the United States was a commentary on the draft changes to the Bank Secrecy Act (BSA) published by FinCEN back in 2011. Two years later, in 2013, FinCEN published guidance on the use of cryptocurrencies [1]. The main task of this document was an attempt to regulate crypto activities and crypto exchange. In particular, the document defines virtual currency as a medium of exchange that functions as a currency but does not possess all its attributes.

The guidance also contains provisions on which transactions with cryptocurrencies are subject to regulation by this agency. For example, according to the document, a person who purchased cryptocurrency to buy any goods or services is not classified as a dealer, and accordingly, is not subject to FinCEN rules and regulations. Cryptocurrency exchanges and crypto companies are made subject to the Bank Secrecy Act (BSA). Accordingly, to engage in crypto trading, they must be registered as a “money services business” (MSB). Moreover, cryptocurrency companies are required to establish their users’ identities (Know Your Customer policy) for transactions where sums of $3,000 or more are transferred. If an illegal transaction is suspected, the company is obliged to notify FinCEN.

The next important document is a Notice issued in March 2014 by the Internal Revenue Service (IRS). It contains information about the U.S. federal tax implications for transactions involving virtual currency (including payment of salaries in crypto). According to the Notice, electronic money got to be considered as property and thus became subject to appropriate tax legislation. In other words, users of virtual currencies now have to pay taxes on every crypto transaction. This IRS decision caused a significant resonance as extremely high taxation rates are a very deterrent factor in the development of the US cryptocurrency market. Even though cryptocurrency is not prohibited at the federal level (and there are no plans to prohibit it yet), crypto transactions are taxed to the maximum in each state, being subject to the same tax rate as capital gains. In 2021, it ranged from 10 to 37% for short-term capital gains and 0-20% for long-term ones [13].

In 2014, the Consumer Financial Protection Bureau (CFPB) issued a list of guidelines to warn consumers about the risks of trading in cryptocurrencies [22] related to the fact that virtual currencies are not insured by the FDIC and therefore do not guarantee the security of deposits. Similar warnings have been issued in individual states to warn about the dangers of crypto transactions.

In 2015, associations, organizations, and various corporations were allowed to use digital currency in the United States. In 2017, the Uniform Regulation of Virtual-Currency Businesses Act (URVCBA) was passed. Under this law, “virtual currency” is defined as “a digital representation of value that is used as a medium of exchange, unit of account, or store of value and is not legal tender” [29]. Moreover, virtual currency activities now include, for example, the exchange, transfer, and storage of virtual currency.

The next important step in the development of crypto regulation in the United States came on October 11, 2019, when a joint statement was issued by the FinCEN, the Commodity Exchange, and the US Department of the Treasury to warn about the risks of using cryptocurrencies.

In 2020, the Federal Reserve Board (FRB) released a report on digital currency and the future of money, which called for greater research and a consultative process to develop a digital dollar. The report emphasized the need for “sound, safe, and efficient” digital dollar design, which should be consistent with the US legal and regulatory framework.

In 2021, the US Treasury Department’s Financial Crimes Enforcement Network (FinCEN) released a series of reports and guidance on how to identify and regulate crypto transactions, emphasizing the importance of knowing the customer and complying with anti-money laundering (AML) and know-your-customer (KYC) regulations.

These regulatory frameworks and guidelines have had a profound impact on the US cryptocurrency market, shaping its development and growth. The US government’s approach to crypto regulation is still evolving, with ongoing discussions and debates among policymakers, industry stakeholders, and the public.

Overall, the development of crypto regulation in the US reflects the complexities and challenges of balancing innovation and consumer protection. As the market continues to grow and evolve, it is expected that the regulatory landscape will continue to adapt, ensuring a stable and secure environment for all participants.
Prior to that, federal institutions applied different approaches to the issues of defining cryptocurrencies and digital currencies. Thus, the SEC considered cryptocurrencies as securities, i.e. assets that require mandatory government regulation; CFTC viewed them as a commodity (since 2015), while FinCEN treated them like a currency. In this statement, a unified definition of “digital assets” was proposed.

In 2020, the Cryptocurrency Act was developed [30], containing definitions of the concepts of “crypto-commodity”, “cryptocurrency” and “crypto-security” and clarifying the functions of federal regulators of the circulation of digital assets. Thus, for cryptocurrencies, the main regulators are the Financial Crimes Enforcement Agency (FinCEN) and the Comptroller of the Currency. FinCEN can now track cryptocurrency transactions. In effect, the law placed cryptocurrencies in the same regulatory position as traditional financial institutions.

In mid-2020, CFTC stated that by 2024 the US will have developed comprehensive legislation regulating the crypto market. As part of this, an action plan for 4 years was published. One year later, the head of the Federal Reserve System denied plans to ban cryptocurrencies on behalf of his institution. A similar statement was made a little later by the head of the SEC who, however, clarified that there are plans to begin regulating this area in the short term.

Thus, in the United States there is no unified regulation of the crypto market; there are still significant disparities among federal departments on particular issues of such regulation. Moreover, the position regarding crypto regulation is most controversial at the federal level. However, heads of federal departments are increasingly speaking out about the need for crypto regulation and the development of unified legislation.

California was the first state to introduce regulation of cryptocurrency and related technologies (in 2015). Same year, the circulation of cryptocurrency was allowed in the State of New York, as mandatory BitLicense licensing was introduced. However, obtaining this license is difficult (due to a large number of requirements to meet) and expensive, as the application alone (which may not be approved) costs $5,000. In Washington State, one also must obtain a BitLicense to carry out cryptocurrency-involving activities. Arizona, on the other hand, took an opposite approach to crypto regulation: this state does not have any regional statutory rules that would force users to keep records of their cryptocurrency transactions. However, software development companies are subject to sales tax on any crypto transactions.

4 Discussion

In general, all the US states can be divided into four groups based on the nature of crypto legislation. The first group includes states that have excluded cryptocurrency (virtual currency) from their money transfer laws. New Hampshire has amended its remittance statute to exclude persons who engage in the sale or issue of payment instruments or hold value in the form of convertible virtual currency from state remittance regulations. Wyoming passed a series of laws in March 2018 that make virtual currency exempt from property taxes. Montana has no money transfer law at all.

The second group includes virtual-currency-friendly states, such as Kansas, Tennessee, Texas, Massachusetts. These states have not enacted laws or amendments that exclude virtual currency from money transfer laws, but various government agencies have issued regulations to the same effect. Illinois has issued guidance that virtual currency does not fall within the definition of money and therefore is also not subject to the money transfer laws.

The third group includes states that have developed comprehensive legislation regulating the crypto market. These states have enacted laws and amendments that define cryptocurrencies and related technologies. These laws and amendments provide a clear regulatory framework for the circulation of cryptocurrencies and related technologies.

The fourth group includes states that have not yet developed comprehensive legislation regulating the crypto market. These states have not enacted laws or amendments that define cryptocurrencies and related technologies. Therefore, these states have not provided a clear regulatory framework for the circulation of cryptocurrencies and related technologies.

Overall, the regulation of the crypto market in the US is still in its early stages. However, it is clear that the federal government and many states are working to develop a comprehensive regulatory framework that will provide clarity and certainty for all parties involved in the crypto market.
The third group includes states such as Hawaii, New Mexico, New York, that consider virtual currencies as money and make them subject to state money transfer laws or licensing requirements.

The fourth group includes states that regard virtual currencies as subject to remittance laws. Thus, Alabama recently amended the Transmission of Money Act, making cryptocurrencies regulated by the Act and requiring a license to perform cryptocurrency involving transactions. Connecticut, Georgia, North Carolina, and Washington have amended their money transfer laws or enacted separate licensing laws specifically regulating virtual currency. Vermont also amended its remittance law to make virtual currency a permissible investment and potentially beneficial.

However, most states do not fall into the above categories. This includes states that do not issue guidance and do not currently regulate crypto, such as California and Colorado. Other states may have laws related to virtual currency, such as anti-money laundering laws or tax issues. Government regulators may have issued warnings to consumers about virtual currency but have not given any specific guidance regarding money transfers. As a result, in the United States there are significant differences in the levels of development of crypto markets at the regional level. The most developed markets are to be found in those states where cryptocurrencies have long been permitted and there is liberal legislation.

Crypto exchanges are also very important for the development of the US crypto industry. Their activities are regulated by the Bank Secrecy Act. Accordingly, in states that allow the creation of crypto exchanges, customer verification is a mandatory condition for all and any operations. At the same time, crypto exchanges themselves must obtain the appropriate license to operate.

The largest exchanges in the United States include Coinbase, Gemini, Kraken, Poloniex, Bittrex, etc. Note that in the fall of 2021, SEC head announced plans to regulate the crypto industry, which means that crypto exchanges in the United States may soon be required to register with the SEC. Along with regular crypto exchanges, decentralized exchanges, or DEXs, will also be subject to regulation.

The release of digital currency by the US Federal Reserve was announced by the Federal Reserve Bank of Boston, which will, together with the Massachusetts Institute of Technology, develop, study, and test it. The US Federal Reserve Board of Governors has two points of view on the launch of a digital currency: it will make money transfers faster, and increase the efficiency of cross-border payments; demand for stablecoins and cryptocurrencies will decrease; the digital dollar will be the main competitor for both commercial banks themselves and their payment systems [11].

Since Joe Biden came to power in January 2021, the creation of the digital dollar has slowed down significantly. This is despite the fact that Biden’s administration has expressed serious concerns about China introducing its national digital currency, e-CNY, which is viewed as an attempt to strip the US dollar of its status as a global reserve currency in the long term [2, 5, 12].

However, in March 2022, Biden signed an Executive Order to ensure the responsible development of digital assets. It highlights six key priorities: “consumer and investor protection; promoting financial stability; countering illicit finance; U.S. leadership in the global financial system and economic competitiveness; financial inclusion; and responsible innovation” [28].

A special non-profit organization “The Digital Dollar Project” (DDP) currently operates in the US. Its tasks include stimulating research and development on the creation and implementation of a digital dollar. The main focus of the DDP work is on analyzing the effectiveness of using the digital dollar when making payments using a distributed registry. One of the most important achievements to date has been a pilot program implemented.
explore the possible use for the digital dollar. On August 31, 2022, DDP announced the launch of the Technical Sandbox Program, which provides an informal environment for exploring digital dollar technical design options and discussing business engagement issues with private sector representatives such as Digital Asset, EMTECH, Knox Networks, and Ripple.

First, the “digital dollar” will simplify and speed up interbank interactions. DDP experts believe that the digital dollar will act as an additional form of money, existing in parallel with existing fiat cash and not intended to replace it. The digital dollar can be called the third form of money, which differs not only from cash (the first form), but also from digital means of payment issued by private financial institutions (the second form), including non-cash money in commercial bank accounts. In other words, the digital dollar should become a new form of money in the United States that will be a direct liability of the government.

Second, the digital dollar is a fiat digital currency as it is backed by government authority. Thus, in its article, the Bank of England explained in detail and clearly that the monetary authorities of a country (including the United States) are not responsible for the ratio of reserves of commercial banks and the volume of consumer loans issued by them, limiting their regulatory activities to the implementation of the necessary monetary policy (establishing interest rates). That is why the digital dollar, which is a direct obligation of the government, will be a more reliable means of payment and savings than the obligations of commercial banks, which they create at their own discretion depending on the level of the key rate. Accordingly, the digital dollar is a fiat digital currency since it is backed by government authority.

Third, the issuer will be the Federal Reserve System, which will also deal with issues of its maintenance. The Treasury Department will issue digital dollars and then transfer them to the management of the Federal Reserve Bank.

Fourth, the platform on which the digital dollar will function will be fundamentally different from the blockchain system.

Fifth, the intellectual community involved in the development of the concept largely agrees that the digital dollar will be available for both wholesale (large payments between organizations) and retail transactions that will be available to ordinary users. Currently, the analogues of the wholesale digital dollar in the United States are the Fedwire, Clearing House Interbank Payments System (CHIPS) and National Settlement Service (NSS) payment systems, however, the number of client organizations allowed in them is very limited: no more than 10,000 financial institutions can use the Fedwire system organizations, and CHIPS services are available to only 50 organizations. Consequently, the introduction of the digital dollar will increase the availability of reliable, fast and legal dollar payments for all interested organizations in the United States and beyond.

Retail availability of the digital dollar will be realized through the mediation of private financial institutions (commercial banks), which will exchange their reserves with the Federal Reserve Bank for the Central Bank and provide the digital dollar to customers. This will allow P2P, P2B and B2B payments to be made without the direct participation of the Federal Reserve. The organizers of the Hamilton research project in their report use only the term “retail” in relation to the digital dollar. Moreover, the throughput of the processor developed during the Hamilton project (capable of processing 1.7 million transactions per second, of which more than 99% are completed successfully) meets the requirements of both wholesale and retail digital dollars.

Sixth, the basis of the digital dollar is supposed to be tokenization and distributed ledger technology (DLT). This will allow transactions to be carried out without the intervention of
A third party, as happens in the commercial banking system based on the interaction of user accounts. The logical result of tokenization will be an increase in speed and a decrease in the cost of transactions. Moreover, the issuance of unique tokenized dollars can solve the problem of double spending, as well as make the circulation of money transparent, which will prevent the use of digital money in illegal activities. Finally, tokenization and distributed ledger will enable the use of "smart contracts" in the digital dollar system, which were previously only available for cryptocurrencies. This will be a major step towards stimulating innovation and will also allow automation of many financial transactions.

It is important to note that the United States pays attention to the problems of confidentiality and potential risks related to the digital dollar. To consider such issues, an expert group was convened, which prepared and released analytical materials on the principles of privacy of the digital dollar in October 2021 [19].

First, the new form of money should not interfere with the FRS monetary policy aimed at combating excessively high inflation and regulating economic activity. That is why some researchers recommend that central banks issue relatively small volumes of securities at the initial stages in order to test the reaction of the financial system to a new type of money in circulation. Also, the introduction of the digital dollar may cause excessive competition of the new form of money with non-cash money of commercial banks, which can cause a massive outflow of funds from the latter or, conversely, a lack of motivation for using digital securities, for the storage of which interest is not charged. In other words, we are talking about risks to maintaining financial stability, which will become an important challenge for developers and government officials.

Secondly, the priority goal for the United States in the development of digital assets is to maintain the leading position of the country and its currency in the global financial system, thanks to which the United States makes enormous profits and can influence the financial policies of other countries, for example, through sanctions. That is why the authors of "The DDP White Paper 2.0" believe that the United States should not only introduce the digital dollar, but also take the lead in the development of global standards that will soon determine the principles of interaction between the Central Banks of different countries [26].

However, the US has not even officially decided to issue a digital dollar, while China [16] and the EU [7, 14, 18] are already significantly ahead of them in the process of developing digital currency. According to researchers, if the international financial infrastructure based on US leadership has a more modern and technological alternative (for example, based on the successful experience of China), this could lead to the beginning of the "de-dollarization" of the global financial system [10]. That is why DDP staff called on US leadership to increase investment into creating a tokenized dollar and stimulate corresponding research [26].

5 Conclusions

In the United States, work is underway to create a digital dollar, which will be a digitized version of the dollar to simplify and speed up interbank interaction. The issuer will be the Federal Reserve System, which will also deal with issues of its maintenance and upkeep. In essence, the digital dollar will be a fiat digital currency, as it is backed by government power. At the same time, in the United States, the development of the digital dollar is carried out
mainly through the efforts and initiatives of the private sector, while the American government takes a wait-and-see position (in China and the EU, official government agencies are involved in similar projects). This is evidenced by the statement of a senior US Treasury official, Nellie Liang, who in December 2022 stated that there was no need for the accelerated implementation of the digital dollar. According to her, the leading international position of the dollar is due not to technological, but to political and economic achievements of the United States. Therefore, one should not expect a full-scale introduction of the digital dollar in the near future.

References


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