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The Impact of Digital Currency Relations on The Development of The World Currency System

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ABSTRACT

The article examines the scientific and practical significance of processes related to the influence of digital currency relations on the development of the world currency system.

KEYWORDS

virtual assets, digital financial technologies, financial market, monetary policy transmission mechanism, financial transactions.

INTRODUCTION

Meanwhile, in order to assess the impact of innovations in the introduction of virtual assets on monetary and foreign policy, it is first necessary to analyze the changes in the supply and demand for money. For example, these virtual assets are considered as an alternative to traditional fiat money. as a result, the traditional monetary policy levers of the Central Bank are no longer effective in regulating the changes in money supply and demand caused by digital financial technologies and assets. Undoubtedly, digital financial technologies will not fail to affect the technical aspects of monetary policy implementation. In particular, changes in financial products, processes of financial transactions, financial institutions and the structure of the financial market affect the transmission mechanism of monetary policy and the effectiveness of a particular instrument of monetary policy.

The emergence of new financial products, the development of operations with cryptoassets requires the enrichment of the composition of monetary aggregates. Similarly, forecasting models of central banks and communication strategies with financial markets are also required to change. Another important point is that central banks and their monetary policy should be ready to respond to various shocks caused by changes in the regulatory system of the financial sector, the deepening

of globalization processes, and financial innovations. Countries are intensifying their efforts to build a cashless society. However, there are many reasons to use cash. In particular, performing the function of a means of transaction in conditions where there are no other forms of payment; absolute confidentiality of the parties when making payments with it is one of them. Therefore, the secret nature of cash is a factor that encourages its use in illegal and other "bad" transactions. cash is also used as a substitute currency in other countries. Some central banks, notably the European Central Bank and the Bank of Japan, have stated that distributed ledger technologies (DLT) are not yet sufficiently advanced to support large-scale payment systems at their current stage of development. Similarly, the Bank of Canada noted in its report that current versions of DLT for critical financial market infrastructures, such as payment systems, fail to deliver overall net benefits compared to existing centralized systems.

Virtual currencies, new models of financial intermediation and artificial intelligence are expected to be the innovations that will have the most significant impact on central banks.

Some of these innovations have already been reflected to some extent in wallets, smartphones, and financial systems. However, it is important not to confuse virtual currencies with real currencies, such as digital payments made using Paypal and other electronic money providers. Such virtual currencies have their own unit of account and payment systems, and there is no need for central clearing institutions or the Central Bank for transactions. Currently, the most prominent example of virtual currencies is bitcoin, which has not yet reached the point where it poses a serious challenge to the system in place through central banks and their fiat money. This is because the value of Bitcoin is highly volatile, high risk, extremely energy intensive, and the underlying digital technology has serious drawbacks in terms of "scalability". However, the replacement of traditional fiat money by virtual currencies may vary from country to country. In particular, in countries without strong financial institutions and stable currencies, the population may prefer virtual currencies instead of hard currencies such as the US dollar or the euro, essentially "dollarization 2.0". Here it is worth noting that the strong position of traditional fiat money in the market is determined not by the state's intervention and regulatory practice, but by market participants' preference for these currencies. The choice of a particular currency as a means of payment by the private sector depends not only on its stability, but also on the economic potential of the issuing country and the position of the monetary authorities. In addition, this is the basis for the selection of leading currencies by market participants there are also factors such as the development of financial instruments in foreign currency, low transaction costs.

It is no exaggeration to say that the above aspects serve to ensure the sustainable leading role of the US dollar as an international reserve and transaction currency. Nevertheless, the state of the US economy and growth rates, the volatility of the US dollar against other currencies is not always positive. It follows that the development of financial instruments with virtual currencies, the increase in the turnover of cryptocurrency markets and the increase in the liquidity of instruments will ultimately serve to reduce transaction costs in such currencies and create opportunities for leadership. At the same time, virtual currencies, unlike fiat money, are free from lengthy clearing processes, settlement risks, central registration, and intermediaries who verify account numbers. As private virtual currencies exhibit high risk and volatility, citizens and businesses may demand digital payment instruments from central banks.

The need for new models of financial intermediation arises in the conditions of the digital economy. Because citizens and business entities can keep a small part of their funds in digital wallets for payment purposes, and the remaining significant part can be placed in investment funds or P2P lending platforms in order to earn income. Such platforms usually use big data and artificial

intelligence to automatically determine credit scores.

A sharp decrease in the volume of deposits of commercial banks and the provision of money flow to the economy through other new channels may ultimately have a significant negative impact on the effectiveness of the current banking system model. In such conditions, it is very important how central banks conduct monetary policy. Because nowadays, the influence of central banks on the prices of assets in the economy is ensured with the help of large commercial banks - dealers, that is, by providing liquidity to them through open market operations. However, as a result of the declining importance of commercial banks in the new financial world, the balance sheets of central banks will also tend to shrink. This will have a negative impact on the effectiveness of the monetary policy transmission mechanism. Of course, in response to this, central banks may increase the number of counterparties in their operations, not limited to commercial banks.

Cryptocurrencies have become a new phenomenon not only in the field of computers and cryptography, but also in the field of economics. Cryptocurrencies are a form of digital money exchange based on the theory of solving encryption algorithms to create unique hashes that are limited in number. From Andy Greenberg's April 20, 2011 Forbes article entitled "Crypto Currency" then the term cryptocurrency became popular in the mass media. Obviously, the term cryptocurrency is closely related to Satoshi Nakamoto's Bitcoin project. The Bitcoin project is a decentralized system, the operation of which is based on cryptographic methods and blockchain technologies. The purpose of Bitcoin was to create an alternative means of payment to existing fiat money and their electronic forms, outside the control of central banks. All cryptocurrencies that appeared after Bitcoin are also called "altcoins" (short for "alternative coin" in English). Cryptocurrencies are private money, the emergence of such money was predicted by the famous Austrian economist, 1974 Nobel laureate F.Hayek. According to F. Hayek, private money exists and can exist without the participation and control of the state. there are a number of aspects that distinguish cryptocurrencies from traditional electronic money. In particular, firstly, when payment is made with cryptocurrencies, there is no intermediary between the seller and the buyer.

Secondly, cryptocurrencies, unlike traditional forms of electronic money, use cryptographic methods and provide anonymity during transactions. Cryptographic protocols for such systems were first proposed by the American computer and cryptography researcher D. Chaum (David Chaum) in 1983, who managed to introduce the terms "electronic cash" (ecash, digital cash) into scientific circulation.

Cryptocurrencies are based on the blockchain. In the case of Bitcoin, Bitcoin is the only asset linked to the blockchain. Other blockchains, such as Ethereum, work like Bitcoin and allow other assets to be listed on the blockchain through tokenization. The rate of growth of many cryptocurrencies (e.g. Bitcoin) is limited by an algorithm, which determines the rate at which new cryptocurrency units are created. Such cryptocurrencies, which have a predetermined fixed growth rate, are not able to adjust to changes in the demand for money due to economic growth or crisis situations. At this point, it should be noted that blockchains, which can provide money supply in accordance with changes in demand for money, serve to increase the capabilities of the market system in eliminating economic instability.

Taking into account the above, it can be said that the introduction of MBRV should not be limited to the study of technical aspects today, but should become an important strategy in the monetary sphere for the coming period. Another negative aspect expected from the widespread adoption of cryptocurrencies is the high risk of using cryptocurrencies to finance terrorism and other illegal activities. In particular, bitcoin is considered a popular online payment tool, and there are many cases of its use in payments for illegal goods and services. At the same time,

cryptocurrencies can also have a negative impact on global economic stability. As the Bitcoin algorithm becomes more complex (the energy consumption of the mining process increases), the later the IMF starts to introduce controls, the harder it will ultimately be to rein in the situation.

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