

Цифровой рубль и его перспективы в ближайшем будущем

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Аннотация

В данной статье рассматривается цифровая валюта и цифровой рубль в частности. Цель статьи — понять, является ли цифровой рубль технологией, способной существенно повлиять на национальную экономику, или это просто вещь, с которой большинство людей не удосужится иметь дело. Хотя на сайте ЦБ РФ есть ряд сообщений о запуске этой новой технологии, никаких особых шагов (кроме написания нескольких новых законов) к ее запуску пока не предпринималось. В начале в этой статье рассматривается основная теория самой технологии и собрана вся известная на данный момент информация о цифровом рубле. В статье собрана вся известная информация о том, как будет работать цифровой рубль. Он также включает в себя все его возможности, которые являются новыми в электронной области народного хозяйства. Для этого были изучены отчеты Центрального банка России и некоторые высказывания представителей министерств. Кроме того, авторы статьи изучают международный опыт внедрения и тестирования цифровой валюты. В частности, подробно проанализирован китайский опыт тестирования и написания политики для цифрового юаня. Авторы сравнивают китайское и российское решения по обращению с цифровыми деньгами в национальных экономиках в связи с тем, что китайская политика в отношении цифровой валюты практически завершена. Кроме того, в статье рассматриваются преимущества и недостатки использования цифровой валюты в российской экономике. Изучено и собрано мнение граждан и бизнеса. В заключение статьи приведены некоторые возможные результаты внедрения технологии и применения политики.

Ключевые слова: цифровая валюта, цифровая экономика, финансовые технологии, безналичность, блокчейн.

Digital Ruble and its Prospects in the Nearest Future

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Abstract

This paper discusses digital currency and digital ruble in particular. The purpose of the paper is to understand whether digital ruble is a technology that can significantly affect national economy or is it just a thing that most people will not bother to deal with. Although on the website of Russian Central Bank there are number of reports about launching this new technology, no special steps (apart from writing a few new laws) towards its start have not been taken yet. In the beginning this paper covers basic theory behind the technology itself and collects all so far known information about digital ruble. The article includes all known information on the way digital ruble is going to work. It also includes all its features that are new in the electronic field of national economy. Reports of Central Bank of Russia and some sayings of representatives of Ministries have been studied for this purpose. Besides, the authors of the paper study international experience of implementing and testing digital currency. Particularly, Chinese experience in testing and writing policy for digital Yuan are analyzed in details. The authors compare Chinese and Russian solutions about dealing with digital money in national economies due to the fact that Chinese policy on digital currency is almost complete. In addition, the paper discusses advantages and disadvantages of using digital currency in Russian economy. Opinions of citizens and businesses have been studied and collected. In conclusion

of the article, some possible outcomes of implementing the technology and applying the policy are given.

Keywords: digital currency, digital economy, financial technology, non-cash, blockchain

Introduction

The use of digital wallets and as a result digital money flourished as technology evolved in the past decade. Their popularity peaked during the pandemic because of their contactless benefits. This paper covers the a new rapidly developing technology- digital currency. The news about digital ruble can be heard more often. Paper analyzes the technology itself and digital ruble in particular. We are going to study already existing Central Bank's policy on digital ruble. This paper tries to study possible outcomes of digital ruble usage comparing it with existing experiment with digital currency abroad.

The key objectives of our research are:

- to collect all existing reports of Central bank to figure out its operating principal
- research the experience of other countries' digital currency launching
- compare Chinese and Russian digital currency
- forecast possible outcomes of Digital Ruble after its official launching.

Literature overview

Financial analytics of Central Bank of Russia published a brief but informative report on the principal of Digital Ruble on October 13, 2020. They mentioned in the report that “The emergence of new financial opportunities ... increases the competitiveness of the entire economy as a whole. Therefore, the Bank of Russia... is studying the possibilities of issuing the central bank's digital currency”. Arina Raksina from TASS has recently written an article that studies Digital Ruble, where she mentioned that banks cannot ignore the trend for digitalization and the appearance of digital currency is inevitable. She wrote: “...the appearance of official digital currencies is obviously only a matter of time”. Research paper published by Deutsche Bank on July, 14 2021 gives a detailed description of Chinese digital currency (e-CNY). According to China Chief Economist, Yi Xiong, “The e-CNY will likely bring substantial changes to China's digital payment sector. It offers an entry point for China's big banks to break into a business segment that is currently dominated by big tech firms”.

Material and methods

The article uses the following methods for the research: analyzes of reports on operating process of Digital currencies in Russian and China; Method of comparison analyzes using Russian

and Chinese experience on testing digital currencies and writing policies in order to find out possible defect of Russian Central Bank approach of developing Digital Ruble.

Discussion

Digital currency refers to the electronic form of fiat money issued by the government. They are used for contactless transactions between parties. Digital currency wallets must be protected with strong passwords to reduce the risk of theft or hacking. The digital currency is backed by a centralized authority, as it is a form of fiat money. It is also usually stable, and transaction information is available to the sender, recipient, and bank.

The digital ruble will be developed on the basis of the blockchain technology. Blockchain is a technology that keeps data that is simultaneously stored on multiple computers connected to each other via the Internet. But the details of the operation of the digital ruble on this system are not yet known.

The Bank of Russia, whose goals include the development of the national payment system, is studying the possibility of issuing the digital currency of the central bank - the digital ruble.

The digital ruble will be issued by the Bank of Russia in digital form. The digital ruble will combine the properties of cash and non-cash rubles. In other words, the digital ruble will make it possible to make payments online (as non-cash money) and offline (as cash, that is, without Internet access). The difference between the digital ruble and cash or non-cash money lies in the presence of a unique digital code, which will be stored in the form of records on clients' electronic wallets. The wallet will be stored on the digital ruble platform - a special infrastructure created by the Central Bank. This is another difference between the digital ruble and non-cash money, which are usually found in commercial bank accounts.

The digital ruble will become available to all economic entities - citizens, businesses, financial market participants, and the state. One ruble in cash is equivalent to one to a non-cash ruble, so and one the digital ruble will be equivalent to each of them.[1]

The new form of the Russian national currency has a number of advantages:

- support for the development of the digital economy in the country
- the ability to work with the digital ruble offline, which will make it a new convenient additional payment tool for customers in remote, sparsely populated and hard-to-reach territories
- increasing the level of security due to the presence of unique numbers of the digital ruble

The disadvantages are:

- cyber fraud: the emergence of new ways of fraud and possible cyber attacks
- inability to use the digital ruble abroad until other countries issue their own digital currencies and agree to convert one digital currency to another

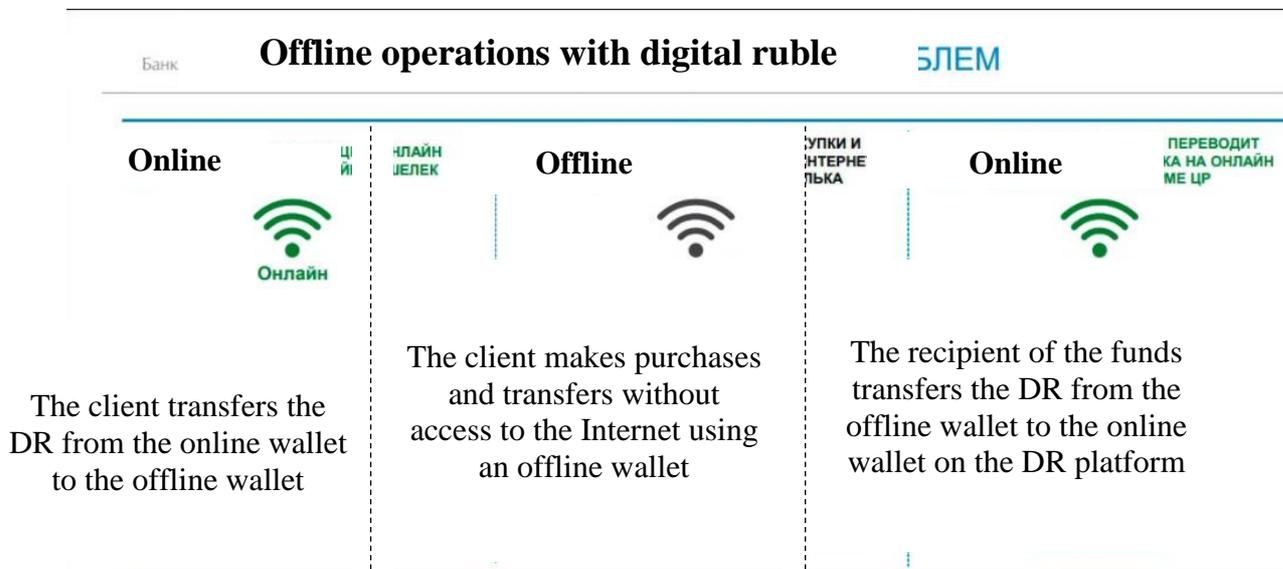
- there is no interest on the account balance
- the introduction of the digital ruble will require high costs

So, both individuals and legal entities will be able to use the digital ruble. E-wallets will be opened by credit institutions. They will act as intermediaries between the Central Bank and its clients. Credit organizations will be able to attract and work with clients, open wallets and top them up, and execute orders for transfers.

As mentioned earlier, the digital ruble will make it possible to pay for goods and services online and offline. Bank customers will be able to open wallets on the platform via mobile banking applications. They will also perform operations there. To do this, users need to request the bank to transfer the amount from the current account to the wallet for digital rubles.

Online payment using the digital ruble will be similar to cashless payments. The client needs to make a request to exchange non-cash money for digital rubles. As soon as digital rubles appear in the client's wallet, they can be used.

The offline payment process is shown in the (picture 1) [12].



To perform offline transactions, in addition to the online wallet, the client will be opened a second wallet in digital rubles directly on the client's mobile device

Picture 1. Offline operations with digital ruble

Last autumn, the Central Bank announced that it wants to introduce the digital ruble in Russia very soon, the technology and policy for its usage is almost complete.

For further research it is necessary to distinguish digital Ruble from cryptocurrency. First of all, unlike the same bitcoin, the new ruble will have a single-issue center - the Central Bank of Russia. Soo digital currency will have the support of trustful monetary institutions (major banks and corporations) that will be responsible for ensuring financial stability of the technology. Digital Ruble will be issued centrally, while cryptocurrency relies on decentralized system of connected computers

using blockchain technology. Another difference is that Digital Ruble will have the exact value as 'real' Ruble, meanwhile any cryptocurrency (Bitcoin, Ethereum, etc.) are a whole new currency that are valued different from national currencies.

The digital ruble will be a full-fledged currency along with cash and non-cash money. You can use it through a wallet like Yandex.Money or WebMoney, both online and offline.

However, there is still no clear information on how this will work. But very recently, the Central Bank published a report, and the situation cleared up a bit. The central bank wants to issue a digital ruble based on a two-tier model:

1. First level. The central bank creates and issues the digital ruble. He sets the rules of the system and controls its operation.

2. Second level. Here ordinary banks are connected, for example, "Sberbank" or "Tinkoff". They exchange non-cash money at the Central Bank for a digital ruble, so that people can then use it. Regular money works on a similar principle. The Central Bank prints them and distributes them to banks. Then this money goes to individuals and businesses. In this regard, the digital ruble is not much different.

In practice, in order to get digital currency, a person should register on a special platform and open a wallet through your bank's application. To replenish the account, exchange non-cash for a digital ruble. If one buys in a store for digital rubles, they show the QR code to the seller. If there is a need to transfer to someone – the only thing to do is to click on the "transfer" button in the wallet. In addition, digital rubles can be used to pay for goods and services where there is no bank terminal or the access to the Internet. [2]

Why the Central Bank of Russia needs digital ruble?

The main reason is to hedge against sanctions. Now the Russian Federation depends on the foreign transfer system SWIFT. If the country is cut off from it, then there will be problems in the economy. To avoid this, Russia needs its own digital currency, which it can switch to on occasion.

In addition, the Central Bank wants to follow the trend of the 21st century - cash is gradually becoming a thing of the past, and more and more people are paying with cards. China, Japan, the United States and a number of European countries have either already launched a digital currency or are preparing to do so.

On the whole, the idea with the digital ruble is getting positive response from the population. You can pay without the Internet, just like with cash. To do this, you must first prepare the required number of digital rubles in your wallet. This ruble will be distributed directly, by passing commercial banks. Consequently, the commissions will be lower. Also, it will become more difficult for criminals to launder money or finance terrorists.

“Transactions with the digital ruble are easier and better tracked along the entire chain, from emission to the end user”, says Maxim Krupyshev, CEO of the CoinsPaid ecosystem [3]. In his opinion, this is beneficial primarily for supervisory authorities and regulators.

“The digital ruble means more control over transactions, transparency for supervisory authorities and more security of assets, as well as fewer ways to evade taxes and cash out proceeds from crime,” Krupyshev emphasized.

Nevertheless, some representatives of banks of Russia do not see digital ruble as something that is going to bring national economy to the bright future. They simply do not understand its purpose or what benefits is it going to bring to the banks. “I’m not up to the end why is it necessary. From the initiators of the project, I hear only general words about digitalization ”- says Vladimir Senin, Deputy Chairman of the Board of Alfa-Bank. [2]

The main advantage of the digital ruble will be the complete transparency of money transfers on the blockchain and the possibility of convenient interactions with authorities on any type of reporting. As for businesses, the introduction of the digital ruble for financial organizations will be a kind of strength test.

Analysts explain that it will require the creation of additional infrastructure [3]. Secondly, it will significantly increase competition within the segment of transfers and payments, which traditionally brought significant guaranteed profits to banks.

When will it all work? The Central Bank outlined the following terms:

1. December 2021. The programmers, together with the Central Bank, will create a prototype of the platform that is needed to run the system.
2. January 2022. Under the digital ruble, you need to write laws, rules, regulations. This will also be done by the Central Bank.
3. 1st quarter of 2022. The central bank will begin testing a prototype of the digital ruble platform along with conventional banks.

If everything goes according to plan, then the new ruble will appear already in 2022-2023. The idea, of course, is appealing, but in what form it will reach a full-fledged launch is unknown. And will it be so popular as to stop people carrying cash?

Nevertheless, there is a possibility that Digital Ruble will not be trusted by citizens. This new technology may be seen like the government is trying to get into people’s pockets.

Now, user data on monetary transactions is stored in ordinary banks. In order for government agencies to gain access to them, some reason is needed. In the case of the digital ruble, there is no need for a reason - all data will be stored, in fact, by the state. If it considers your actions suspicious, then they can block the money in two accounts.[3]

In addition, people may be forced to use the digital ruble more often. For example, as it happens with the MIR card: beneficiaries and state employees are obliged to open it in order to receive salaries and money from the state.

All in all, although the idea seems innovative and expected to bring some simplification into transactions of Russian people, this concept is still being developed. Right now, there are no clear answers on digital ruble. Nevertheless, this reform will definitely bring Russian financial system on a new level.

International Experience of Digital Currencies

Turning to the global experience of implementing digital currency, it can be said that some countries are a little bit further. According to the Bank for International Settlements (BIS), 80% of central banks are exploring the prospects of launching their own digital currency. At the same time, some of them are already developing or even testing Central bank digital currency (CBDC), that refers to the virtual form of a fiat currency. It is an electronic record of a country's national currency. CBDC is issued and regulated by the nation's monetary authority or central bank. Therefore, it is backed by the full faith and credit of the issuing government. A year earlier, there were 70% of them. Among them are the financial regulators of the European Union, Iran, Israel, South Africa, Australia, New Zealand, Hong Kong, Thailand, Japan, China and others.

For example, the U.S. currency held in different bank deposits in digital form already constitutes about nine-tenth of the whole money supply, while the remainder is in physical form. Last year several congressmen asked the Federal Reserve System (FRS) to hurry up with the digital dollar. However, the regulator was not going to start it then. Philadelphia Fed President Patry Harker said that the launch of CBDC by central banks of different countries is inevitable within the next five years, but the United States is not interested in being the first because the risks are too big.

New Zealand's central bank, in turn, is discussing the probability of launching a currency in electronic form, which is considered to become a potential tool in monetary policy of the country. According to the research done by MYOB company [3], New Zealand will be ready to refuse cash in ten years. Therefore, the decreasing usage and availability of physical currency makes the digital currency issuing more probable. For sure, the process of transition to digital form of currency would take a lot of time given the complications and require few phases approach, but the government considers it as a support for New Zealand dollar.

While some countries are only at the discussion stage of the possibility of digital currency issuing, others already made steps toward it. For instance, the Bahamas Sand Dollar project is one of the first CBDC implemented projects in the world. Sand dollars are islands' fiat currency, which are issued and regulated by the Central Bank of the country. Moreover, they are integrated with the island

nation's payment networks. Today, there are six financial institutions for Sand Dollar thanks to which citizens can register and receive the Sand Dollar wallet.

Presently let us proceed to China's answer to the world changes in computerized economy. Digital yuan (e-CNY) may be a cash-like e-money that would be essentially utilized for retail installments within the nation. The venture begun from propelling numerous pilot programs held by the e-CNY working team in 2014 in different towns. Individuals could receive free CBDC through winning the lottery and make a wallet utilizing as it were their versatile phone number. Those e-CNY may be spent at local shops to test the work. The reason of e-CNY presentation relates to development of competitive computerized cash like bitcoins and other CBDC. Furthermore, by making a cash-like computerized cash accessible for all individuals, China needs to modify its current payment framework.

The e-CNY is completely supported by the People's Bank of China (PBOC) and put into operation by installment service suppliers. Such framework permits more prominent anonymity and gives way better individual data assurance, however still keeps adequate records for following illicit exercises such as money laundering and tax avoidance. The PBOC chose to characterize e-CNY as cash in circulation, or as M0 within the language of central banks. Defining e-CNY as M0, instead of M1 or M2, features a number of implications:

Firstly, e-CNY will be a liability of the PBOC. According to the Chinese money related framework, M0 implies direct liability from the PBOC, whereas M1 and M2 comprises of specific liabilities from commercial banks. From this explanation it can be claimed that e-CNY will be completely risk free. Secondly, no interest can be paid on e-CNY. Interest can be paid on M1 or M2 which is bank deposits, but not on M0 which is cash. This is significant since the majority of digital monetary forms, counting a few CBDCs currently being considered, have not ruled out interest payments. Thirdly, the digital wallets that uses e-CNY will not be considered as bank accounts. In conclusion, only banks are able to change over e-CNY into bank deposits and vice versa. e-CNY will be considered as M0 since it likely can anticipate disintermediation of banks. By characterizing e-CNY as M0 and forbidding interest payments, the PBOC likely envisages as it were a constrained sum of e-CNY in circulation to supplant cash, but not to supplant bank deposits.

According to the PBOC, the e-CNY will adopt a two-tier structure. From an e-CNY user's perspective, though, the system actually has more than two layers (Figure 1).

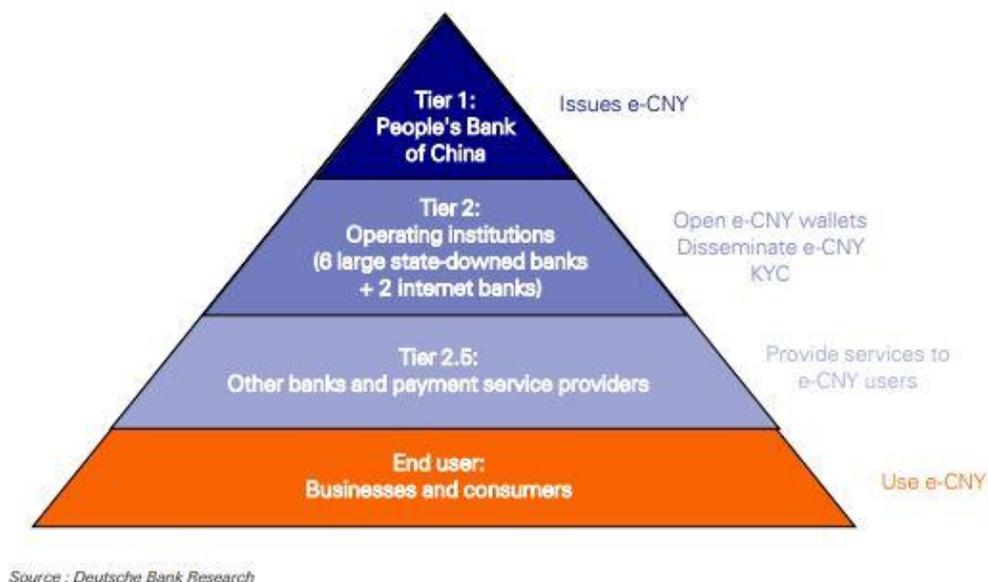
The e-CNY structure

Figure 1. The e-CNY structure

The PBOC plays an important role in e-CNY. For opening an account, it is necessary to go to one of the tier two institutions. Tier 2 institutions so far include the six biggest banks owned by state, and two online banks (WeBank and MYBank). This process is available both online and offline. When the account is opened, the user can use a range of different services provided not just by the issuing bank, but also by many other banks and payment service providers. These are called "tier 2.5" institutions, which are not able to carry out e-CNY exchanges but can provide payment and other services to e-CNY users. At the lowest level are merchants, consumers and corporates. Peer-to-peer e-CNY transfers are not complicated to do among consumers, but merchants will probably cooperate with tier 2 or tier 2.5 institutions to set up infrastructure for receiving e-CNY payments online and offline. According to this structure, the PBOC delegates most responsibilities to the tier two institutions. Therefore, tier two institutions will offer customer service and preserve customer privacy, fulfill KYC duties, and invest in the hard and soft infrastructure for retail e-CNY use. Such system will be costly for tier two institutions but will be welcomed nonetheless because they will have the opportunity to join the payment business, which is otherwise dominated by internet companies.

The PBOC describes e-CNY's privacy protection capabilities as "controllable anonymity". According to China Chief Economist, Yi Xiong, the e-CNY provides the option for its users to conceal their identity from counterparties, while allowing law enforcement (rather than individual government units) to have the ability to track illegal transactions. e-CNY's anonymity feature will complicate the process of information collection for online platforms.[4]

More probably, the e-CNY will be officially rolled out in 2022. Its recent pilot programs showed quite advanced results in application. The e-CNY will likely have influential changes to

China's digital payment sector. It gives an opportunity for China's big banks to enter the business segment that is dominated by big tech firms nowadays. Moreover, the e-CNY is expected to turn China's digital privacy protection into a new level, but the impact on monetary policy transmission will likely be small at least in the short-term period. A successful e-CNY roll-out could also accelerate the speed of currency digitalization on the global scale. Wide usage of e-CNY in China will probably lead to other central banks seeing it as both proof of the feasibility of CBDCs and a signal of increased competition, meaning them to multiply their inputs in developing their national digital currencies.

Comparison of Russia and China in terms of digital currency policy

In China, work on the project was launched back in 2014, and in 2020, the authorities began public testing of the currency, called DCEP (e-CNY), in several cities. China plans to fully start using DCEP by the 2022 Olympic Games in Beijing.

Dmitry Volkov, technical director of the international crypto exchange CEX.IO, also recalled the example of Sweden, where cash accounts for only 1.3% of GDP. For comparison: in the USA — 8.2%, in Russia – is 9.9% of GDP and in the eurozone — 10.9%. [13] The creation of the Swedish digital currency (e-krona) began in 2017 and a pilot project was launched in February 2020 with the aim of showing how e-krona can be used by the public in addition to existing cash and electronic money.

In January, the central Banks of Canada, England, Japan, Sweden, Switzerland, as well as the European Central Bank together with the Bank for International Settlements joined together to exchange experience in exploring options for using digital currencies.

It is also worth noting that the international dollar payment systems SWIFT and CHIPS are becoming obsolete, their calculations are too slow and expensive. This fact also plays in favor of the introduction of a digital currency.

Now we will proceed with a short comparison of Russian and Chinese digital currencies. We have chosen China as the major object of this study due to the fact that Chinese cryptocurrency seems to be the most studied and tested by the Government, now it is almost ready for its immediate launch. Thus, emphasizing on similarities and differences between digital Ruble and Yuan, Russian government's stage of readiness to start Digital currency technology could be assumed. Last but not least, China and Russia are strategic partners, so maybe both digital currencies will eventually be used together within partnership of two countries' economies.

In Russia, as in China, when introducing digital currency, it is supposed to use a two-tier retail model, which suggests that the issue of digital currency will be carried out by the Central Bank. Direct work with clients (individuals and legal entities) will be carried out through financial organizations.

When launching the digital ruble, an economically important innovation is the expansion of direct access of economic agents to the obligations of the Central Bank, and not to new forms of money.

Another common feature of the digital currencies of China and Russia is the ability for users of the digital ruble to pay offline (China tested at the end of 2020 in Suzhou).

In general, it is worth recognizing that the Bank of Russia is very reasonable and pragmatic in its approach to the development and implementation of a digital platform in Russia in terms of borrowing the experience of China, Sweden and a number of other countries that have launched their pilot projects on the introduction of digital currency.

However, apart from all common features, Russian Government have not yet implemented any pilot programs of Digital Ruble, while China is doing it frequently and in large amount.

Intermediate conclusion on Digital Ruble and forecast

It is important to note that with the help of a well-thought-out digital ruble model and effective legislation, it will be possible to stimulate economic growth: companies will be able to tokenize their assets and attract additional liquidity for business development, organize a reliable and transparent method of collective financing (crowdfunding) for investments.

Also, speaking about the advantages of introducing a digital ruble, it is important to note that each digital ruble will have its own unique code that can be tracked by the regulator in the financial system. At the moment, paper or non-cash money does not have such a property. This effective tool will be able to contribute to the fight against corruption — the colored money allocated for the needs of state orders or budget expenditures can be monitored, and non-targeted transactions with their use can be blocked. On the other hand, it is critical that Central Banks will be able to access huge amounts of data on the population and their finances.

Moreover, there is an opinion among market participants that the digital ruble in the version proposed by the Central Bank of Russia does not have significant advantages over existing forms of payments and settlements. In their opinion, the main risk of a digital currency is the creation of a threat to the stability of the financial system. In any of the provided models of functioning of the digital ruble, an outflow of liquidity is inevitable. For example, if a client of a commercial bank wants to take out a loan in digital rubles in the amount of 1 billion rubles, the credit institution will issue money and reduce the balance by the appropriate amount, which will have to be replenished. If you borrow from the Central Bank, this will lead to an increase in the cost of funding and an increase in interest rates for customers. And with the rise in the cost of loans, small and medium-sized businesses and the population will suffer first of all.

An alarming moment is the creation of a single-tier banking system by the Central Bank. In the digital ruble project, the Central Bank will act as an issuer, platform operator and wallet holder.

The appearance of such a serious monopolist on the market may lead to a reduction in the market for commercial banks and the replacement of the entire innovative and progressive logic of the blockchain system with an outdated centralized logic of supervision and control. This poses a threat from the Central Bank to the financial services market.

The complexity of the situation lies in the fact that the need to create digital assets has matured in a digital society, and today it is important to create the right logic for the circulation of digital currencies in order to ensure further growth and development of the financial system. Otherwise, the digital ruble project threatens to become an expensive and inefficient undertaking that will ruin innovation in the bud and throw us back into the past for decades. After all, the costs of ensuring the cybersecurity of the digital ruble platform alone are estimated today at 20-25 billion rubles.

The emergence of the digital ruble will lead to the redistribution of funds of citizens and enterprises between cash, funds in bank accounts and electronic wallets in digital rubles. This will have an impact on the needs of banks to conduct transactions with the central bank, which will need to be taken into account when setting up the operational procedure of monetary policy, and it is also important to take into account to ensure financial stability.

Over time, the introduction of the digital ruble may contribute to strengthening the transmission mechanism of monetary policy, given that as the digital ruble spreads, financial accessibility and financial services coverage of a wider range of users may increase.

If we talk about cross-border transactions, the appearance of a CBDC in one country can lead to a reduction in transaction costs for currency conversion, which can create prerequisites for rapid capital inflows. If legal restrictions do not prevent the purchase of CBDC by foreign citizens or if CBDC will have anonymity, then the demand for such a currency may grow, stimulating its strengthening. The latter may become a challenge for the currencies of countries with consistently low inflation. At the same time, the emergence of CBDC, for example, in one of the developed countries may stimulate the emergence of its own CBDC or alternative solutions around the world. In this case, emerging market countries with less stable national currencies will be exposed to higher risks of a rapid exit from assets denominated in national currencies, especially during times of high uncertainty in financial markets ("flight to safety"). This in itself can stimulate them to create their own CBDC analogue. In general, the emergence of CBDCs available to individuals and legal entities from other countries, on the one hand, may increase the problem of volatility of capital flows, and on the other, the problem of the currency of savings in emerging markets.

Taking into account the acceleration of the digitalization of the economy against the background of the pandemic, the regulator admitted that the digital ruble "can become a new convenient additional means of payment for both buyers and sellers, including in remote, sparsely

populated and hard-to-reach territories where access to financial infrastructure is limited. Thanks to the digital ruble, the coverage of the population with financial services will increase, which will become more accessible, which will eventually improve the quality of people's lives." [1] For example, it will get rid of "payment slavery". By this we mean protective tariffs and limits on transfers within the framework of the Fast Payment System, which some banks have established. For example, Sberbank cannot transfer more than 50 thousand rubles a day through the SBP without commission.

In addition, the Central Bank expects that the launch of the digital ruble will be an incentive for "innovations both in the field of retail payments and in other areas and will support the development of the digital economy. And reducing the dependence of users on individual providers will increase the stability of the country's financial system."

The long-term growth prospects of this initiative will bring significant economic value over a period of time in industries such as finance, healthcare, manufacturing and will stimulate further innovation in the country.

The introduction of a digital currency can minimize the chain of intermediaries in payments. Which will not only make them cheaper, but also make them faster and easier. Now, every time a buyer pays for goods by bank transfer, using a card, intermediary banks are connected to the payment between him and the seller, who are responsible for processing and transmitting customer data. This is called acquiring, and banks charge acquiring commissions to sellers for its provision. They, in turn, directly depend on the size of the interbank commission, which is set by payment systems. The dispute has been going on for a long time: business representatives ask the Central Bank to influence banks and reduce acquiring fees, banks defend their position. The regulator went to limit commissions against the background of the pandemic, but this measure ended and credit institutions returned acquiring rates to the pre-pandemic level.

Vladislav Martynov, Vice president of the Russian Association of Cryptocurrencies and Blockchain, previously called for giving commercial banks the maximum number of functions when implementing the digital ruble project in order to avoid a critical flow of funds from commercial banks to the Central Bank accounts. In his opinion, it is commercial organizations that should conduct digital wallets of citizens. [13]

It can be assumed that it is more likely that if the regulator of the Russian Federation takes a progressive decision on this issue and gives preference to a model that stimulates the development of innovations, new consumer properties of money and healthy competition in the financial market, it can be argued that the process of introducing the digital ruble will be faster and more efficient.

Conclusion

All in all, digital ruble may be evolved into a major technology that will start a new era in electronic economy. On the one hand, it may lead to a rapid increase and growth of electronic

transactions with e-wallets. As a result, this may become a great incentive for a lot of and active communications between businesses. Especially it might be a great help and an engine for developing of national economy. It is known that Small and middle businesses in Russia suffer greatly from old-fashioned and obsessively difficult bureaucracy when it comes to any transactions between firms, so entrepreneurs try to avoid it using Cryptocurrency and other “illegal” money. Digital ruble may be a solution of this problem.

Another possible positive outcome of implementing digital ruble is reducing of shadow economy and illegal transactions. Such a notion as “Dark web” is a relatively new aspect of the Internet, and the state has no particular tools to deal with it. Introducing a proper policy that will construct necessary limitations and possibilities among digital ruble may finally help to stop “Dark web” from expanding.

As for citizens that do not consider themselves as financial specialists or businessmen, influence of Digital ruble (as well as other new things that are created with the help of the Net) is unpredictable. During last few decades we learned that the internet and anything “online” is a complete chaos. Taking Bitcoin or most resent GameStop case (when a group of people on the Internet decided to start buying the company’s stocks “for fun” and made prices of the securities rocket) [11] as an example, we can see, that the fate of digital economic events cannot be regulated by the Central Bank. Possible outcomes are the following: there might be a brief flash of interest from younger generations; people might find Digital ruble a waste of time due to lack of understanding (online credit cards are still on demand); elderly people will definitely need guidance; Digital ruble may be inly used by businesses.

One of probable ways for the Russian government to figure out the future of Digital Ruble is to conduct an experiment of launching the technology in a small scale. Chinese government has already created a detailed and almost complete policy of digital Yuan. Their experiments helped them to understand the best solution. Currently, Chinese digital currency is almost completely ready for the official launch. Russian Government definitely needs to follow the steps of China and start using the technology for final studying. It is crucial to forecast al; possible scenarios in order to avoid failure.

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